

December 2013

# Submission to the Welsh Government

in response to

**Consultation Document**

**WG19741:**

**M4 Corridor Around Newport**



**cyfeillion  
y ddaear  
cymru  
friends of  
the earth  
cymru**

## Summary

The consultation is invalid for the following reasons:

- The traffic forecasts which are the sole rationale for the alternatives considered are fundamentally and fatally flawed
- The Welsh Government's modelling fails to take consideration of fuel costs or the impact of major public transport investment, and is therefore invalid
- The Welsh Government has no evidence or data relating to congestion, which is the over-riding reason given for new highway infrastructure
- What little data is made available in support of the case is rife with preferential selection
- The underpinning for the plan or programme is a suite of problems for which no substantive revision has taken place since at least 2007, and which predates the peak in road transport of 2007
- The use of data does not comply with the Directive's requirement for 'current knowledge' to be used
- The appraisal of alternatives is flawed and the 'reasonable alternatives' considered are inadequate, particularly through excluding public transport, junction closures, these measures in combination and the Blue Route
- Sustainable development receives no meaningful consideration
- The selection of environmental objectives is flawed
- There are serious, substantive errors in the prediction of environmental effects
- An apparent routing error exists that underplays the amount of SSSI land lost to the preferred route by 10 ha (14%), and renders the consultation unlawful

The consultation documents are fundamentally and fatally flawed. The consultation must be withdrawn.

Without prejudice to the preceding, there is no justification for building a new motorway-class road south of Newport. The only option of those presented that is rational is therefore the 'do minimum' option.

## Introduction

1. Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment<sup>1</sup> (the SEA Directive) applies to a wide range of public plans and programmes. The Directive is transposed by Regulations<sup>2</sup>. Plans and programmes in the sense of the SEA Directive must be prepared or adopted by an authority (at national, regional or local level) and be required by legislative, regulatory or administrative provisions. The Welsh Government has stated that this SEA is required under the terms of the Directive<sup>3</sup>.

2. The objectives of the SEA Directive are defined, in particular, in Article 1:

“The objective of this Directive is to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment”.

3. Plans and programmes are defined in Article 2(a):

“For the purposes of this Directive:

(a) “plans and programmes” shall mean plans and programmes, including those co-financed by the European Community, as well as any modifications to them:

- which are subject to preparation and/or adoption by an authority at national, regional or local level or which are prepared by an authority for adoption, through a legislative procedure by Parliament or Government, and
- which are required by legislative, regulatory or administrative provisions”.

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<sup>1</sup> European Parliament and Council, 27 June 2001, [Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment](#)

<sup>2</sup> Legislation, 2004, [The Environmental Assessment of Plans and Programmes \(Wales\) Regulations 2004](#), 2004 No. 1656 ( W. 170)

<sup>3</sup> Welsh Government, November 2012, [M4 Corridor Enhancement Measures SEA Environmental Report](#), page 4

## Traffic forecasts and actual traffic volumes

1. One of the repeated failures of the Welsh Government's consultations has been the paucity of evidence offered by the Welsh Government to support its assertion that congestion and traffic volumes are a problem in the M4 area around Newport.
2. Critical to this failure has been the Welsh Government's portrayal of traffic around Newport as being of relentlessly increasing scale:  
*"The more congested road conditions become, the greater the risk of incidents and accidents occurring. In the future, the situation is expected to deteriorate further"*<sup>4</sup>.
3. An apparent reason for this misapprehension appeared in an earlier stage of the consultation process:  
*"A current understanding of the transport problems on the M4 corridor is then considered, originating with the problems established in a WelTAG planning Stage workshop held in October 2007"*<sup>5</sup>.
4. The theoretical underpinning of the Welsh Government's reasoning is therefore six or seven<sup>6</sup> years out of date, and pre-dates the decline in traffic numbers seen since 2007. This in itself should not be problematic, because the Welsh Government could simply have updated its modelling as time went by.
5. However the Welsh Government has failed to update its reasoning, presumably because in so doing it would be forced to recognise that the underpinning theory of the programme had been discredited by unforeseen changes in traffic patterns.
6. This lends weight to the contention that the Welsh Government is pre-disposed towards infrastructure interventions.
7. The consultation workshops of 13, 15 and 20 March 2012 were opened by Martin Bates, the Welsh Government's M4 CEM Project Director. His opening remarks are quoted as follows:  
*"To set the scene I am going to repeat a quotation from the Minister with responsibility for Transport, Carl Sargeant, who said "We're all aware that congestion is a problem on this part of the M4, so easing the flow on the M4 between Magor and Castleton is a key priority for the Welsh Government and a commitment in the prioritised National Transport Plan."*<sup>7</sup>
8. The Welsh Government has no congestion statistics or indeed means of measuring congestion. A statistician at the Department for Transport confirmed to Friends of the Earth Cymru that the Welsh Government has no congestion statistics, nor has it made contact with the Department for

<sup>4</sup> <http://m4newport.com/assets/issue-m4-draft-plan-consultation-document.pdf> page 9

<sup>5</sup> <http://www.m4cem.com/downloads/reports/ISSUE%20Report%20Stage%201%20Problems%20and%20Goals.pdf> page 1

<sup>6</sup> <http://wales.gov.uk/about/foi/responses/dl2013/octdec/transport1/atn7891/?lang=en>

<sup>7</sup>

[http://www.m4cem.com/downloads/reports/Consultation%20Workshop%20Report%20Newport%20March%2013th%202012\\_for%20publication.pdf](http://www.m4cem.com/downloads/reports/Consultation%20Workshop%20Report%20Newport%20March%2013th%202012_for%20publication.pdf) page 4

Transport's department that is piloting a scheme for measuring congestion.

9. The apparent priority of the Welsh Government – tackling congestion – has no basis in evidence.
10. The Welsh Government tries to portray traffic numbers as a corollary for congestion. Traffic numbers cannot be a corollary for congestion because it is possible to have very high traffic numbers moving at high speed without congestion. Likewise, very low traffic numbers can cause congestion if there are a few slow-moving vehicles (HGVs overtaking, for example) or a crash.
11. The principal serial uncorrected bias in the Welsh Government's consultation – that of problems relating to congestion (for which the Welsh Government has no data) – occurs extensively throughout the documents and is given as the purpose of making infrastructure investment in the area around Newport thus:  
*"problems with congestion and unreliable journey times have been a fact of life on the M4 around Newport for many years"*<sup>8</sup>.
12. The phrase "fact of life" is a statement of opinion deliberately used to suppress challenge of its baseline assumption and is unsupported by data.
13. In 2007, when the WeITAG planning stage workshop took place, an assumption of increasing traffic would not have been irrational. However, data from recent years have shown the assumption of never-ending increases in road traffic to be a fallacy (Figure 1 in this document)<sup>9</sup>.

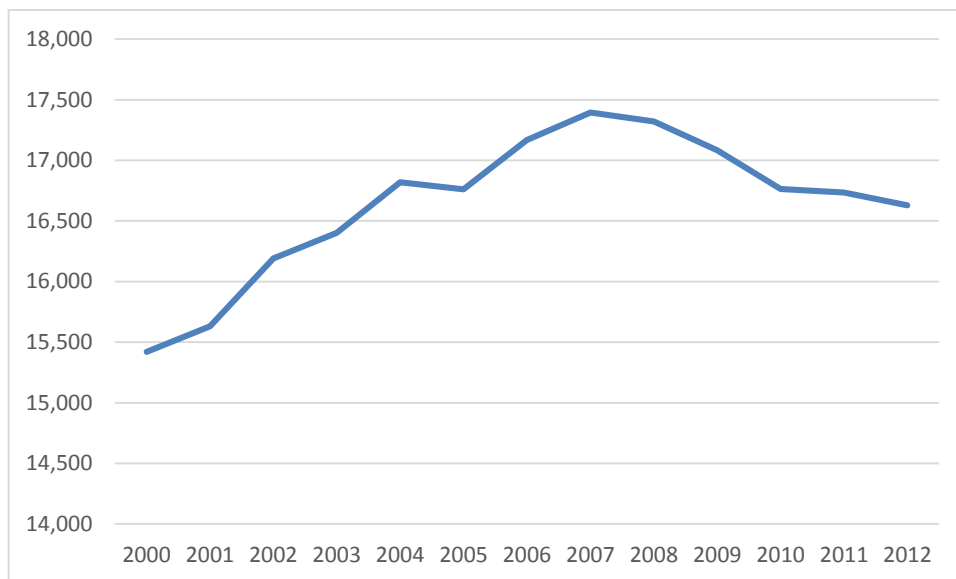


Figure 1. Traffic volumes in Wales (million vehicle miles)<sup>10</sup>

<sup>8</sup> <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf> page 7

<sup>9</sup> Department for Transport, 2012, [Motor vehicle traffic \(vehicle kilometres\) by local authority in Great Britain, annual from 1993](#)

<sup>10</sup> <https://www.gov.uk/government/publications/road-traffic-estimates-in-great-britain-2012> TRA8901.xls

14. There has been a sequential year-on-year decrease in traffic in Wales for the five years since the peak of traffic in 2007. Traffic volumes in Wales are now 4.4% lower than they were in 2007.
15. Motorway traffic has declined even further than overall traffic volumes<sup>11</sup>.
16. The forecast for growth in the Welsh Government's consultation document has already been shown to be in excess of actual flows for 2012 and 2013<sup>12</sup>.
17. Observers will note that the decrease in vehicle traffic volumes predates the recession. Thus, while there may be an additional recessionary component to the decrease in traffic volumes, the decreasing trend itself is independent of the economic fortunes in Wales.
18. The facts outlined above contrast with the Welsh Government's assessment in the consultation document accompanying the SEA, which claims, based on an unspecified 12-hour monitoring period:  
*"The results show that traffic levels on the motorway have remained near constant over the seven year period... Overall traffic levels on the M4 around Newport have remained largely static from about 2006/2007 despite the economic downturn and road works on the M4, with more recent signs of growth"*<sup>13</sup>.
19. This is one of a number of possible conclusions to draw from the data depicted in the consultation document. One might equally say "traffic has decreased year-on-year for five years". The use of this limited data range is a clear example of preferential selection of data by the Welsh Government in order to strengthen the case for infrastructure interventions.
20. The Welsh Government claims that:  
*"Analysis shows that in 2012 during week day peak periods (also known as 'rush hour'), traffic flows approach 100% of capacity along sections of the M4 around Newport"*<sup>14</sup>
21. What the government *means* is that during the busiest times of the day, traffic flows in 2012 were at a maximum of 93.7% of design capacity. At all other times of the day – other than for an hour or so in the morning and in the afternoon – traffic flows were below this figure (although the Welsh Government has chosen not to reveal this information).
22. This is, again, preferential selection of data that is intended to support the case for infrastructure interventions.
23. The Welsh Government preferentially selects its data once again in Figure 4 by comparing an 'average September weekday'<sup>15</sup>. It seems peculiar, to say the least, to use this metric when empirical data on traffic is available from Office for National Statistics (see Figure 1 in this document).

<sup>11</sup> <http://wales.gov.uk/docs/statistics/2012/121220sb1272012en.pdf> page 3

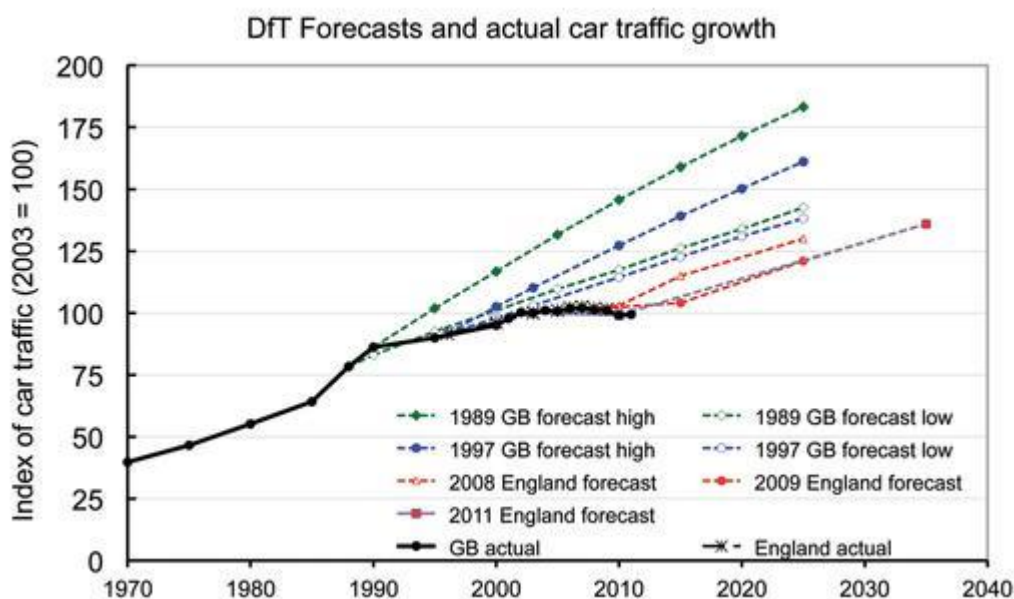
<sup>12</sup> <http://www.iwa.org.uk/en/publications/view/227> page 03

<sup>13</sup> <http://m4newport.com/assets/issue-m4-draft-plan-consultation-document.pdf> page 10

<sup>14</sup> <http://m4newport.com/assets/issue-m4-draft-plan-consultation-document.pdf> page 9

<sup>15</sup> <http://m4newport.com/assets/issue-m4-draft-plan-consultation-document.pdf> page 10

24. Likewise in Figure 6, the Welsh Government uses ‘a typical week in May 2013’<sup>16</sup>, travelling in one direction between two junctions on the M4. This, like Figure 4, is anecdotal evidence unsuited for use in a public consultation document, and the Figure and the subjective interpretation that follows should be excised from the consultation.
25. Likewise, Figure 7 is anecdotal evidence and should be excised. No evidence is presented to justify the statement:  
*“traffic volumes have risen back to the 2005... level”*<sup>17</sup>.
26. No evidence has been presented that the proportion of journeys of greater or less than 20 miles (Figure 8) is unusual. Given that the Welsh Government has no empirical data on congestion, this Figure is in any case irrelevant.
27. The principal reason for the consultation recommending infrastructure interventions to the M4 around Newport – that of congestion and increasing volume of traffic – has no basis in evidence.
28. As we will see below, this lack of evidence has not stopped the Welsh Government from eliminating non-infrastructure options from the consultation.
29. Traffic forecasting by the Department for Transport has been risible<sup>18</sup>:



30. Professor of Transport Policy Phil Goodwin comments:  
*“The figure you see above is the result so far, for car traffic, showing successive downwards revision of the forecasts as for 25 years car traffic stubbornly refused to behave according to expectations. The revisions were of the form ‘growth later’, not ‘less growth... anybody, just anybody, looking at*

<sup>16</sup> <http://m4newport.com/assets/issue-m4-draft-plan-consultation-document.pdf> page 11

<sup>17</sup> <http://m4newport.com/assets/issue-m4-draft-plan-consultation-document.pdf> page 12

<sup>18</sup> <http://www.bettertransport.org.uk/campaigns/roads-to-nowhere/ltt-130412>

*this graph is going to think that there is a downside risk of the long term traffic flows being substantially less than the forecasts, as they have continually been for at least the last quarter of a century*<sup>19</sup>.

31. The Welsh Government does not forecast traffic numbers for Wales<sup>20</sup>. However, the Department for Transport did make such a projection for Wales in 2011<sup>21</sup>.
32. The DfT's projection of growth in traffic is shown in the table below.

	2003	2010	2015	2020	2025	2030	2035
2011 Forecast (billion miles)	16.3	16.5	17.3	19.1	20.5	21.9	23.2
% increase on base year (2011 forecast)		1.2	6.1	17.2	25.8	34.4	42.3
Annual increase needed to meet forecast			1.35	1.86	1.79	1.76	1.72

33. Over the period 1993-2012 the average annual growth rate was 1.11%<sup>22</sup>.
34. Yet again, the Department for Transport forecasts appear to be out of kilter with reality.
35. Actual traffic volumes in Wales are shown in Figure 1 in this document.
36. Friends of the Earth Cymru has calculated a 'back-cast' based on factors that mimic the forecasted growth in traffic volumes by the Welsh Government (Figure 2 in this document).

<sup>19</sup> <http://www.bettertransport.org.uk/campaigns/roads-to-nowhere/ltt-130412>

<sup>20</sup> Personal communication, Henry Small, 27 November 2013

<sup>21</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/4244/road-transport-forecasts-2011-annex-miles.xls](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/4244/road-transport-forecasts-2011-annex-miles.xls)

<sup>22</sup> <https://www.gov.uk/government/publications/road-traffic-estimates-in-great-britain-2012> TRA8901.xls



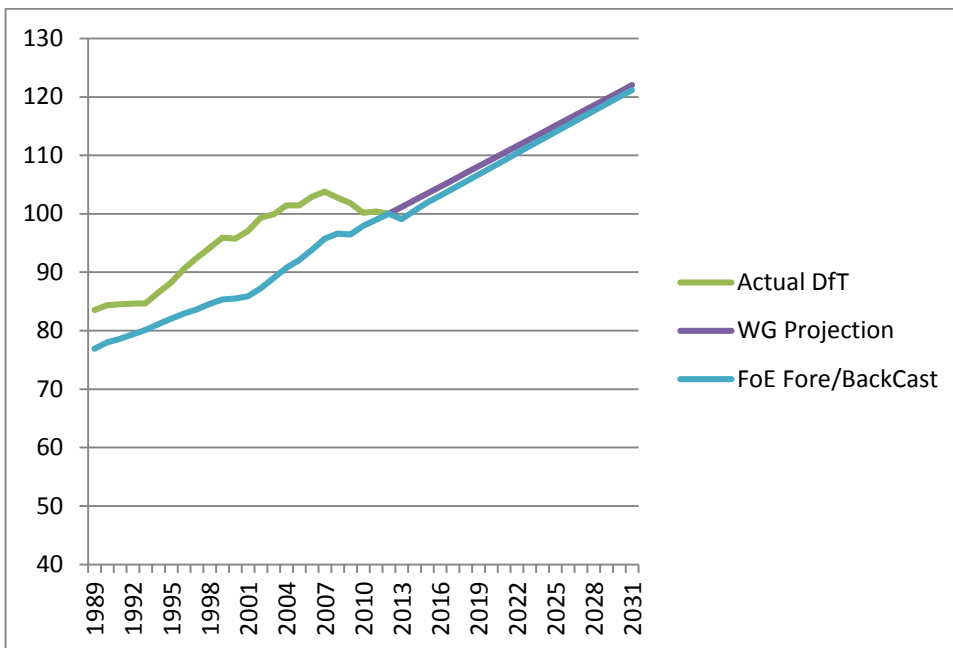


Figure 2. A back-cast using factors that mimic the Welsh Government's forecast for traffic growth

37. The model used by the Welsh Government appears to be seriously deficient, with factors as yet unaccounted for having a major impact on the forecast.
38. By 2012 the distance travelled in a car (as either driver or passenger) had decreased by 9.7% since 2002 to 5,214 miles per person per year<sup>23</sup>. People have now reduced the number of travel trips to fewer than the number they took in 1972/73<sup>24</sup>; at 954 this is the lowest figure on record.
39. The National Travel Survey provides insights into the reasons that people may not wish to drive: *"The NTS monitors the reasons why people are choosing not to drive and the likelihood that non-licence holders will acquire a licence. Overall, the most common reasons mentioned for not learning to drive were 'cost of learning to drive' (32%), 'not interested in driving' (29%) and 'family and friends drive me when necessary' (29%). In younger age groups, cost factors remain the main barrier to learning to drive. Of those aged 17-20, 59% mentioned 'cost of learning to drive' as a reason, 46% said the 'cost of insurance' and 42% said 'cost of buying a car'. When asked for the main reason the majority of 17-20 year olds said 'cost of learning to drive' (35%). Of all non-licence holders the majority (60%) said that they never intend to learn to drive'<sup>25</sup>.*
40. It should be noted that the average number of cars per household has decreased to 1.13 and is now at its lowest level since 2005<sup>26</sup>.

<sup>23</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/35603/nts0309.xls](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/35603/nts0309.xls)

<sup>24</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/200157/nts0101.xls](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/200157/nts0101.xls)

<sup>25</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/243957/nts2012-01.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/243957/nts2012-01.pdf) page 4

<sup>26</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/35586/nts0205.xls](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/35586/nts0205.xls)

41. 24 per cent of households in Wales in 2011/12 own no car or van, up from the lowest figure of 21 per cent in 2009/10<sup>27</sup>.

42. Further:

*“Changes in car usage tend to be affected by wider economic factors, such as the state of the economy and fuel prices, which influence car ownership and the trip behaviour of car owners. Increases to the cost of motoring could be expected to have a negative effect on car use”<sup>28</sup>.*

43. The National Travel Survey conclusions are borne out by recent statistics. In 2012-13 just 59,260 driving tests were conducted in Wales, the lowest figure since records began in 2001-02<sup>29</sup>. The figure is a 32% reduction from the peak of 87,037 in 2006-07.

44. The M4 consultation document makes reference to the ‘global recession’<sup>30</sup>, with the implication that this alone is responsible for the reduction in traffic volumes. GDP in the UK is shown in Figure 3 in this document.

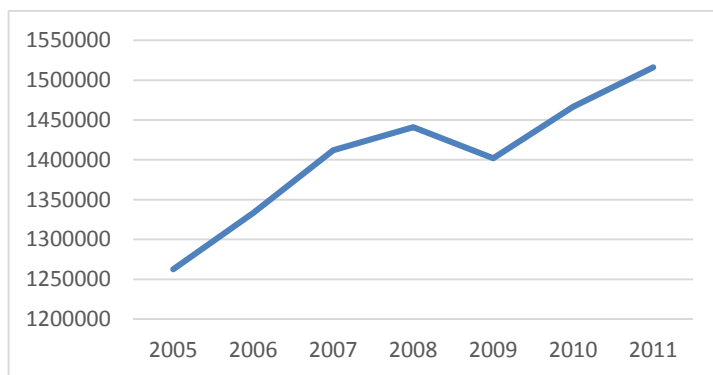


Figure 3. GDP in the UK (£ million at current prices)<sup>31</sup>

45. The UK economy contracted from 2008-09 but increased in every other year from 2005 to 2011.

46. It is impossible to reconcile the continued reduction in traffic with the Welsh Government’s contention that the contracting economy is responsible. Clearly other factors are at play than the ones the Welsh Government is assuming will result in substantial traffic growth.

## Transport modelling

47. The forecasts for growth in traffic used by the Welsh Government are based on the UK Government Department for Transport’s National Trip End Model.

<sup>27</sup> <http://wales.gov.uk/docs/statistics/2013/131022-people-vehicle-licensing-vehicle-ownership-2012-en.xls> Table 1

<sup>28</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/243957/nts2012-01.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/243957/nts2012-01.pdf) page 6

<sup>29</sup> <http://wales.gov.uk/docs/statistics/2013/131022-people-vehicle-licensing-vehicle-ownership-2012-en.xls> Table 5

<sup>30</sup> <http://m4newport.com/assets/issue-m4-draft-plan-consultation-document.pdf> pages 10-11

<sup>31</sup> <http://www.ons.gov.uk/ons/rel/naa1-rd/united-kingdom-national-accounts/the-blue-book--2012-edition/united-kingdom-national-accounts---blue-book--2012-edition.pdf> page 56

48. Guidance for the model makes clear the factors that are not taken into consideration:

*“5.2.1. For any movement where there is a choice of modes, the proportion of travellers choosing each mode ('modal split') is liable to change over time. Within a trip-end modelling framework, there are three possible reasons for such change:*

*a - Changes in the generalised cost of travel for the different modes (whether money cost, parking availability, speed, journey quality, or other factors).*

*b - Changes in the disutility that people attach to different elements of generalised cost, even when those elements do not appear to change. The principal effect here is that as people get richer, a fixed real money cost has a diminishing effect as a deterrent to travel. But this category also potentially includes the impact of changes in "taste". For example, if cycling becomes increasingly fashionable, then the disutility of spending time on a bicycle may reduce, even if all the measurable characteristics of cycling remain unchanged.*

*c - Changes in demographic totals, which will have an effect even if the behaviour of each category of people and the costs that they face remain the same. For example, if elderly people make more use of bus than the general population, then an increase in the proportion of elderly people would be expected, other things being equal, to lead to increasing bus use.*

*5.2.2. The above comprehensive modelling framework is not affected by the existence of a target or declared policy for modal shift. Such a policy can only be effective if it leads to a change in costs or in perception of costs. Although it is important to ensure that models are consistent with observed trends, any observed trend in modal split is likely to be in essence some combination of these three factors.*

*5.2.3. TEMPRO models only the impact of (c), the demographic factors. They can be expressed as being a reference case at constant generalised cost and constant value of time, while allowing for the expected changes in car ownership as people become richer. It is then for local models to take account of:*

- *Generalised cost changes by each mode;*
- *Other impact of rising incomes - represented as increasing travellers' value of time over time, leading to longer trips and a shift towards the more expensive modes;*
- *Any local policy action to influence travellers' "taste" for different modes<sup>32</sup>.*

49. Of the three factors (cost of travel, disutility and demographic change), *“TEMPRO models only the impact of... the demographic factors”*. Changing cost of travel is not covered, and the costs of motoring *“need to be taken into account separately”<sup>33</sup>*.

50. The petrol price in the UK has risen from 77.8p per litre in April 2004 to 141.7p per litre in April 2012<sup>34</sup>, or an increase of 82%. This substantial change in cost of travel is unaccounted for by the

<sup>32</sup> <http://www.dft.gov.uk/webtag/documents/expert/unit3.15.2.php#052>

<sup>33</sup>

[http://webarchive.nationalarchives.gov.uk/20121204115212/https://www.dft.gov.uk/tempro/files/NTEM62\\_Guidance.pdf](http://webarchive.nationalarchives.gov.uk/20121204115212/https://www.dft.gov.uk/tempro/files/NTEM62_Guidance.pdf)  
page 66

<sup>34</sup> [http://www.ons.gov.uk/ons/publications/re-reference-tables.html?newquery=\\*&newoffset=75&pageSize=25&edition=tcm%3A77-267317](http://www.ons.gov.uk/ons/publications/re-reference-tables.html?newquery=*&newoffset=75&pageSize=25&edition=tcm%3A77-267317) Table ENV 0105

Welsh Government. The modelling also takes no account of future fuel price increases. Any further increase would further suppress traffic volumes.

51. It is conceivable that the Welsh Government is taking into account forecast vehicle efficiency in reducing the impact of price on future traffic modelling. However, fuel consumption for cars in real-world driving in 2011 was 21% greater than that assumed from testing (and presumably used by the Welsh Government in its modelling)<sup>35</sup>. Some studies put this discrepancy at 35%<sup>36</sup>. These flaws in testing *vis a vis* real life have major implications for assumptions being made by governments on forecast improvements in fuel efficiency by the vehicle fleet in general.

52. In fact, the assumptions used by the Welsh Government in calculating future improvements in fuel efficiency are so flawed that the European Commission is replacing the current 20-year-old testing procedure with a new one in 2014 which it is hoped:

*“will enable the gap between declared and actual fuel consumption to be reduced thus providing more reliable information to the consumers and legislators”<sup>37</sup>.*

53. Factors causing uncertainty in relation to transport supply in the model include:

- *“New road schemes/road improvements;*
- *New passenger transport schemes/passenger transport improvements;*
- *Road space reallocation (e.g. introduction of bus lanes);*
- *New/improved cycle facilities;*
- *New/improved pedestrian facilities;*
- *Parking supply;*
- *Park and ride schemes; and*
- *Traffic management schemes”<sup>38</sup>*

54. It should be noted that many of these ‘factors causing uncertainty’<sup>39</sup> apply to the proposed M4:

- Additional railway stations, some with Park and Ride facilities, which are likely to have a reductive effect on M4 traffic.
- The South Wales Metro, which is highly likely to have a reductive effect on M4 traffic, and to which funding has been allocated.
- New/improved walking and cycling environment as a result of the Active Travel Act, which is likely to have a reductive effect on M4 traffic, and is highly likely to be commissioned.
- Traffic management schemes in the vicinity of Brynglas Tunnels which smooth traffic flow. It is not clear what effect this has on traffic volumes, although the impact on congestion is highly likely to be reductive.

<sup>35</sup> <http://www.theicct.org/fuel-consumption-discrepancies>

<sup>36</sup> <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+WQ+E-2013-000307+0+DOC+XML+V0//EN>

<sup>37</sup> <http://www.europarl.europa.eu/sides/getAllAnswers.do?reference=E-2013-000307&language=EN>

<sup>38</sup> <http://www.dft.gov.uk/webtag/documents/expert/unit3.15.5.php> section 1.4.15

<sup>39</sup> Some factors have apparently been considered, including dualling of the A465 and electrification of the south Wales mainline – see <http://wales.gov.uk/about/foi/responses/dl2013/octdec/transport1/atn7891/?lang=en> – however the level of consideration received does not appear to be extensive

55. No detailed analysis has been undertaken of these factors. The SEA simply notes that cumulative effects of the proposed plan or programme have already been identified through the SEA of the National Transport Plan:

*“In particular, the following corridor-related effects on the east-west corridor in south Wales were identified in Section 5.3 of the NTP SEA:*

*““The proposals to dual sections of the A465 Heads of the Valleys Road could result in traffic using this route as an alternative to the M4 which coupled with the proposed package of measures to improve the efficiency of the M4 in South East Wales could result in increased long distance traffic flows through this corridor. The electrification of the Great Western Mainline would provide an improved long-distance alternative, whilst improvements proposed for local rail services provide opportunities to reduce commuting related car use in this corridor””<sup>40</sup>.*

56. The paragraph quoted by the Welsh Government in the SEA under current consultation does not exist in the SEA Statement<sup>41</sup>, nor the Addendum<sup>42</sup> to which reference is made in section 5.3 of the SEA Statement. It is conceivable that the quote comes from the SEA that accompanied the draft National Transport Plan, published in August 2009. However an exhaustive search online has failed to reveal the SEA or the Welsh Government quote.

57. No matter: the Welsh Government concludes that:

*“The SEA of the draft Plan has not identified any reason to alter these conclusions and has not identified any additional cumulative effects with the NTP”<sup>43</sup>.*

58. Further:

*“1.5.11 The transport supply aspects of the without-scheme case should be based on the uncertainty log. However, there may be circumstances where it is clear that transport conditions without the project are such that further improvements to the transport system are likely. Where that is the case, these improvements should be included even if they weren't identified in the list of transport changes. However, this kind of without-scheme improvement should not involve large expenditures (up to say 20% of the proposed scheme cost). This would run the danger of severely distorting the appraisal. Where this is an issue, the improvements should be redefined as an alternative with-scheme case”<sup>44</sup>.*

59. So high-cost transport system improvements – such as electrification of the mainline, the south Wales metro, and dualling of the A465, “run the danger of severely distorting the appraisal”.

60. It is unclear from the statement of cumulative impacts referred to above, nor from the information on the Welsh Government’s website<sup>45</sup>, how much analysis has been undertaken of the potential impact of these factors on the proposed plan.

<sup>40</sup> <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf> page 93

<sup>41</sup> <http://wales.gov.uk/docs/det/publications/100329seaen.pdf>

<sup>42</sup> <http://wales.gov.uk/docs/det/publications/100329seaaddendum.pdf>

<sup>43</sup> <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf> page 93

<sup>44</sup> <http://www.dft.gov.uk/webtag/documents/expert/unit3.15.5.php>

<sup>45</sup> <http://wales.gov.uk/about/foi/responses/di2013/octdec/transport1/atish7891/?lang=en>

61. The traffic forecast used by the Welsh Government – which is the sole justification for making infrastructure interventions:
- Uses a model discredited by transport academics
  - Runs the risk of “severe distortions” resulting from a failure to take account of high-cost infrastructure interventions since at least 2009<sup>46</sup>
  - Takes no account of fuel costs, which guidance states “need to be taken into account separately”, and which by some analyses could entirely erode the projected increase in traffic

## Safety

62. No evidence is provided that the M4 around Newport is unsafe, although the consultation document tries to infer that to be the case. This is despite our previous consultation response that pointed out: *“The Welsh Government’s consultants have kindly provided Friends of the Earth Cymru with crash data from 2009 and 2010. These reveal that there were **substantially fewer crashes in 2009 and 2010 than in any other year** for which information is available (i.e. from 2002 to 2008)... Using the most recent crash statistics we have shown that **the junctions under examination are substantially safer than the UK motorway average**, and in some cases stunningly so. This is partially conceded in the Appendix to the consultation document<sup>47</sup>. The safety case is therefore unproven<sup>48</sup>.*

## Problems

63. The Welsh Government has not taken the opportunity to modify the goals and objectives of the M4 Corridor around Newport, using the following rationale: *“17 problems were identified; which encompassed issues of capacity, (network) resilience, safety and sustainable development. It is considered that the problems have not changed since 2012. 15 goals were identified and each one aimed to address one or more of the problems. As the problems have not changed there was no need to revisit the goals<sup>49</sup>.*
64. Even considering just one of the problems identified, namely safety (see above), the Welsh Government is wholly unjustified in stating that “the problems have not changed”.
65. The 15 objectives proposed for the plan or programme were adopted as a result of consultation with a limited number and range of stakeholders in 2007 (not 2012)<sup>50</sup>.

<sup>46</sup> We are unable to judge whether or not sufficient consideration was made due to the 2009 SEA being unavailable

<sup>47</sup> Page 56: “However, in 2010, the first complete calendar year with a 50 mph speed limit and average speed cameras, there were 40 personal injury accidents on the M4 between Magor and Castleton. This compares to an average of 74 personal injury accidents per year for the period 2003-2007.

<sup>48</sup> [http://www.foe.co.uk/sites/default/files/downloads/m4\\_consultation\\_response.pdf](http://www.foe.co.uk/sites/default/files/downloads/m4_consultation_response.pdf) page 12

<sup>49</sup> <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf> page 9

<sup>50</sup> <http://www.m4cem.com/downloads/reports/ISSUE%20Report%20Stage%201%20Problems%20and%20Goals.pdf> pages 2-3

<http://www.m4cem.com/downloads/reports/ISSUE%20Report%20Stage%201%20Problems%20and%20Goals.pdf> page 1

66. Article 5(2) of the SEA Directive requires that “*current knowledge and methods of assessment*” be used in order to determine reasonable alternatives. The SEA consultation has not used statistics that are up to date, nor methods of assessment that are rigorous. These failures have led the Welsh Government to propose a plan that has discounted non-infrastructure alternatives, and together mean that Articles 5(1) and 5(2) have been breached.
67. The original list of problems to be solved by the M4 CEM, and substantively unchanged by the current SEA, was “*outlined for the public in a brochure distributed in April 2006*”<sup>51</sup> and first appears in the M4CEM process in a highway planning workshop held in 2007<sup>52</sup>. It is therefore seven years out of date. Listed below are the problems listed in the SEA, and reasons why they are not based on evidence or are otherwise irrational.

<b>Problem</b>	<b>Concerns</b>
Regular congestion at peak times over extended periods.	Welsh Government has no congestion statistics. Wholly unsubstantiated by evidence; Welsh Government approach partially discredited by Welsh Government <sup>53</sup>
The M4 around Newport is used as a convenient cross town connection for local traffic, with insufficient local road capacity.	No evidence provided that 40% of journeys 20 miles or less is an unusual figure; data date from 2005 and are out of date. Junction closures would appear to be the solution to this problem, and are acknowledged by Welsh Government to be effective at reducing traffic on the M4 <sup>54</sup> .
HGVs do not operate efficiently on the motorway around Newport.	No evidence provided
There is insufficient capacity through some of the Junctions (e.g. 3 lane capacity drops to 2 lane capacity).	Sufficient capacity is related to congestion, of which no measure is available, or traffic numbers, which are declining
The 2-lane Brynglas tunnels are a major capacity constraint.	Sufficient capacity is related to congestion, of which no measure is available
The M4 cannot cope with increased traffic from new developments.	No modelling provided of traffic generated by new developments; no description of what is meant by ‘cannot cope’
Difficulties maintaining adequate traffic flows on the M4 and alternative highway routes at times of temporary disruption; alternative routes are not able to cope with M4 traffic.	The same is true of most roads; alternative routes anywhere in the UK are unlikely to be able to cope with motorway traffic because they are not motorways

<sup>51</sup> <http://wales.gov.uk/about/foi/responses/dl2013/octdec/transport1/atish7891/?lang=en>

<sup>52</sup> <http://www.m4cem.com/downloads/reports/ISSUE%20Report%20Stage%201%20Problems%20and%20Goals.pdf>  
page 1

<sup>53</sup> Extensively discredited by Friends of the Earth Cymru in our July 2012 response. Welsh Government consultation document page 22 “However, traffic congestion will not simply disappear as a result of capacity increase”.

<sup>54</sup> <http://www.m4cem.com/downloads/reports/M4%20CEM%20Stakeholder%20Workbook.pdf> page 33

The road and rail transport system in and around the M4 Corridor is at increasing risk of disruption due to extreme weather events.	The same is true of all roads and railways
When there are problems on the M4, there is severe disruption and congestion on the local and regional highway network.	The same is true of all motorways
The M4 requires essential major maintenance within the next 5-10 years; this will involve prolonged lane and speed restrictions, thus increasing congestion problems.	The same is true of most roads; maintenance of existing highways does not of itself necessitate highway infrastructure development elsewhere; no congestion data available
There is insufficient advance information to inform travel decisions when there is a problem on the M4.	Solution is to provide better advance information, not build new highway infrastructure
The current accident rates on the M4 between Magor and Castleton are higher than average for UK motorway.	Friends of the Earth Cymru research indicates this is untrue; these sections of motorway are safer than average, as confirmed by Welsh Government <sup>55</sup>
The existing M4 is an inadequate standard compared to modern design standards.	This is not a problem if it causes no problems
Some people's driving behaviour leads to increased accidents (e.g. speeding, lane hogging, unlicensed drivers).	Highway infrastructure development is unlikely to change people's driving behaviour for the better
There is a lack of adequate sustainable integrated transport alternatives for existing road users	Highway infrastructure development is unlikely to improve this
Traffic noise from the motorway and air quality is a problem for local residents in certain areas	Highway infrastructure development is unlikely to improve this; or will create a problem for local residents elsewhere
The existing transport network acts as a constraint to economic growth and adversely impacts the current economy.	No evidence provided to back up this assertion

68. Despite Friends of the Earth Cymru having contested – and rebutted – several of the ‘problems’ through our consultation responses of July and December 2012 the Welsh Government appears to have determined that not one of our rebuttals has enough merit to reconsider the objectives. This is despite the Gunning principles<sup>56</sup> requiring the Welsh Government to have “conscientiously” taken account of the product of consultation.

69. If the problems have been discredited it follows that the objectives of the plan or programme are contested. But given that both the objectives of the plan or programme are contested and:

<sup>55</sup> See footnote on page 10 <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf>

<sup>56</sup> <http://www.adminlaw.org.uk/docs/18%20January%202012%20Sheldon.pdf> page 2



*“SEA objectives are used to help show whether the objectives of the plan or programme are beneficial for the environment”<sup>57</sup>,*

it is logical to conclude that the SEA objectives may not be asking the correct questions of the plan or programme. In short, the SEA objectives are invalid because the Welsh Government has failed to substantively update the ‘problems’ and therefore the objectives since at least 2007.

70. Our supposition that the Welsh Government failed to take proper account of consultation responses that contested the government’s application of evidence is strengthened by the participation report published by the Welsh Government in August 2013:

*“90 respondents made comments about the data presented in the Consultation Document. Criticisms related to the age of the data used and... that incorrect assumptions about continuing traffic growth were used”<sup>58</sup>.*

71. We consider that the Welsh Government has failed to take meaningful account of the evidence provided by Friends of the Earth Cymru, and others, throughout this process, and that its insistence that the problems are the same as those raised in 2012, unfettered by our challenges and evidence to the contrary, not least in relation to safety, and by evidence available to the Welsh Government and not previously raised by us and others, is unlawful.

72. The entire basis of problems on which the M4 CEM is based is legitimately disputed, yet the public had no opportunity to challenge the problems because they were generated prior to public consultation.

73. Additional factors that the Welsh Government appears to have failed to consider include:

- The Department for Transport’s 2011 projections of road traffic for Wales suggested an increase of traffic from 16.5 billion miles in 2010 to 17.3 billion miles in 2015<sup>59</sup>. With the information available to the Welsh Government by the publication date of the SEA, it should have been obvious that this projection was unlikely to be met.
- Traffic volumes have continued to decrease while economic growth has occurred, casting further doubt on the assumptions made by the Welsh Government’s modelling of future traffic growth
- A substantial number of other transport schemes in south Wales – including the South Wales Metro – that will have a reductive effect on traffic in the region.

74. Welsh Government SEA guidance provides for a ‘hierarchy of alternatives’:

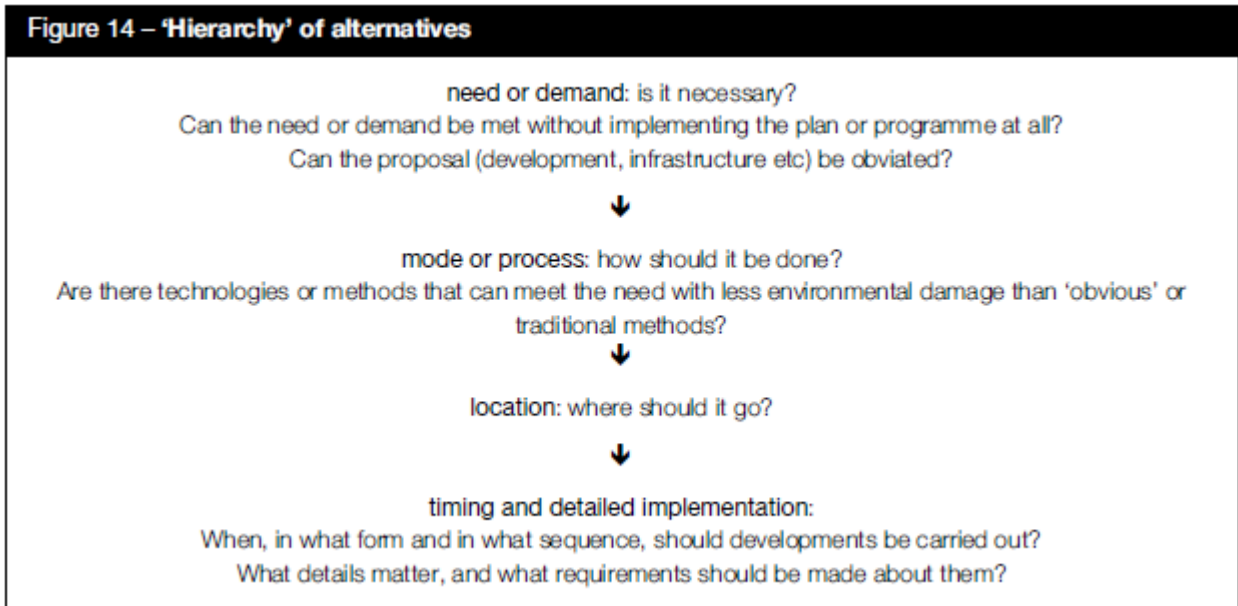
*“Obviation of demand is often environmentally and socially better than providing for demand or rationing consumption through price or limited capacity... . Obviation is not the same thing as*

<sup>57</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/7657/practicalguidesea.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf) page 28

<sup>58</sup> <http://www.m4cem.com/downloads/reports/ISSUE%20FOR%20PUBLICATION%20M4%20CEM%20Participation%20Report.pdf> page 45

<sup>59</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/4244/road-transport-forecasts-2011-annex-miles.xls](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/4244/road-transport-forecasts-2011-annex-miles.xls)

*restricting or thwarting demands which may simply lead to the displacement of a problem: it is better seen as looking for different, more sustainable, means to achieve human quality of life ends*<sup>60</sup>.



- 75. Obviation of the proposal has not been properly considered because the ‘problems’ have not been reassessed and the goals of the plan or programme are therefore invalid.
- 76. We consider the Welsh Government to have failed to take adequate consideration of factors that should have led to a reassessment of the objectives of the plan or programme.
- 77. We also consider that the Welsh Government has failed to take consideration of its own guidance in not making efforts to consider whether or not the preferred plan is necessary through failing to reappraise the problems since at least 2007.
- 78. The significance of this failure of the Welsh Government to reassess the problems cannot be overstated. If there is no evidence for many of the problems, or if they can be alleviated by means other than the proposed motorway, then the whole planning process adopted by the Welsh Government is fundamentally flawed. The SEA is invalid.

**Appraisal**

- 79. We are surprised by some of the assumptions made in the appraisal of the alternatives on their likely economic, social and environmental impacts.

Criterion	Concern – road alternatives
Transport economic efficiency	The Welsh Government has no measure of congestion. The Welsh Government has published no analysis of value for money.

<sup>60</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/7657/practicalguidesea.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf) pages 68-69

Greenhouse gas emissions	The Welsh Government has published no evidence that reducing congestion reduces vehicle emissions.
Transport safety	The Welsh Government has published no evidence that the existing motorway is unsafe. No evidence as to why reduced congestion and delays would provide benefits to transport safety. No evidence to support the contention that “on completion of the new road it is likely that the total number of accidents on major roads in Newport would fall” <sup>61</sup> .
Personal security	The Welsh Government has published no evidence to indicate that reduced delays are linked to reduced perceptions of vulnerability to crime.
Physical fitness	Unclear how a scheme that “is unlikely to lead to any changes in travel by active modes” <sup>62</sup> will have a positive impact on physical fitness.
Equality, diversity and human rights	The Welsh Government has published no evidence to suggest how equality is improved by massive investment in road transport. Evidence indicates the opposite; expenditure on petrol and diesel is much greater in high-income households, and car ownership much lower in low income households <sup>63</sup> . And people on low incomes are disproportionately dependent on the services that are eroded by interest payments on public debt.

<b>Criterion</b>	<b>Concern – do minimum</b>
Transport economic efficiency	The Welsh Government has no measure of congestion, nor any analysis demonstrating that business performance is impacted as a result.
Greenhouse gas emissions	The Welsh Government has published no evidence that reducing congestion reduces vehicle emissions. Difficult to conceive Welsh Government reasoning that greenhouse gas emissions will be worse under do minimum scenario than under road-building.
Transport safety	The Welsh Government has published no evidence that the existing motorway is unsafe.
Physical fitness	Unclear how physical fitness is worse under ‘do minimum’ than under road building scenarios.
Equality, diversity and human rights	Unclear how equality, diversity and human rights are worse under ‘do minimum’ than under road building scenarios.

80. So, for example, there is no published evidence for coming to any conclusion on Transport Economic Efficiency criterion, yet the road alternatives see major positive ratings while ‘do minimum’ has a major negative rating.

81. Given the propensity for anecdotal evidence – or, indeed, an absence of evidence – the Welsh Government’s assessments must be treated with extreme caution.

### **Strategic Environmental Assessment and sustainable development**

82. The objectives of the SEA Directive include the promotion of sustainable development<sup>64</sup>.

<sup>61</sup> <http://m4newport.com/assets/issue-m4-draft-plan-consultation-document.pdf> page 39

<sup>62</sup> <http://m4newport.com/assets/issue-m4-draft-plan-consultation-document.pdf> page 34

<sup>63</sup> <http://naturaiaethwr.wordpress.com/2013/11/11/treth-tanwydd/>

<sup>64</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/7657/practicalguidesea.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf) page 20

83. The Welsh Government's sustainable development scheme is set out in "One Wales: One Planet"<sup>65</sup>.
84. Within the lifetime of one generation (by 2027)<sup>66</sup>, the Welsh Government says:  
*"we must... organise the way we live and work so we can travel less by car wherever possible"*<sup>67</sup>.
85. A sustainable Wales is one where:  
*"Walking and cycling are much more commonplace. There is greatly enhanced provision for cyclists and pedestrians within towns and cities, with improved walking and cycling networks, as well as better street design and traffic management measures. There are fast, reliable, affordable public transport services connecting major settlements. There are frequent, reliable mass transit services within cities and more heavily urbanised regions. There is a coherent network of sustainable transport options within rural Wales. Travel Plans are part of all new developments. All employers develop and implement Travel Plans. The 'school run' has been replaced by organised school transport or group walking/cycling. Petrol and diesel prices remain high, engine efficiency has increased with the widespread take-up of hybrid vehicles. People buy smaller, more efficient cars, and lift-sharing is a common way of travelling. The carbon content of transport fuels has reduced. The rate of growth in air travel has slowed down and it is no longer regarded as a necessity"*<sup>68</sup>.
86. The SEA consultation document<sup>69</sup> makes no mention of sustainable development, other than as a category of problems to be solved and a recognition that SEA contributes to the promotion of sustainable development.
87. It is difficult to conceive that the Welsh Government genuinely wishes this process to contribute to the promotion of sustainable development, not least because by 2027 government policy requires that we must travel less by car wherever possible.
88. The five shared principles of sustainable development among the governments of the UK are<sup>70</sup>:
- Living within environmental limits;
  - Ensuring a strong, healthy and just society;
  - Achieving a sustainable economy;
  - Promoting good governance; and
  - Using sound science responsibly
89. The infrastructure options presented by the Welsh Government do not help us live within environmental limits.

<sup>65</sup> <http://wales.gov.uk/docs/desh/publications/090521susdev1wales1planeten.pdf>

<sup>66</sup> The lifetime of one generation is defined by the Welsh Government as "by the time our children are grown up". We have taken this to mean a period of 18 years. The One Wales: One Planet document was published in 2009.

<sup>67</sup> <http://wales.gov.uk/docs/desh/publications/090521susdev1wales1planeten.pdf> page 18

<sup>68</sup> <http://wales.gov.uk/docs/desh/publications/090521susdev1wales1planeten.pdf> page 21

<sup>69</sup> <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf>

<sup>70</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/7657/practicalguidesea.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf) page 21

90. Given the lack of accessibility to private road transport for the poorest in society, and the overwhelming evidence<sup>71</sup> that richer people make more use of private road transport than poorer people, it is difficult to see how the infrastructure options presented contribute to a strong, healthy and just society.
91. The Welsh Government has presented no evidence that the infrastructure options will help achieve a sustainable economy.
92. Good governance depends in part on open consultations that take account of representations made. The Welsh Government's previous SEA consultation was unlawful. We consider this consultation to be so flawed as to be unlawful and the Welsh Government to have failed to conscientiously consider previous consultation responses from ourselves and others that have challenged the case for new infrastructure.
93. Responsible use of sound science includes the use of up-to-date evidence on which to base policy. This SEA singularly fails to do so.
94. We contend that the Welsh Government has failed to consider sustainable development to any meaningful degree in the SEA consultation.
95. The M4 consultation document devotes one page to sustainable development<sup>72</sup>. The Welsh Government considers sustainable development to relate exclusively to economic growth, air pollution and noise. The assertions in the one sentence that mentions carbon emissions have already been contested by Friends of the Earth Cymru in previous consultation<sup>73</sup>.
96. Either the Welsh Government's understanding of sustainable development is not as defined in its own Sustainable Development Scheme<sup>74</sup>, or this consultation does not comply with the Welsh Government's definition.

### **Strategic Environmental Assessment – reasonable alternatives**

97. Regulation 12(2)(b) sets out a requirement for SEA to consider alternatives<sup>75</sup>.
98. Welsh Government guidance states that:  
*“up the hierarchy’ thinking could suggest a wider, and more sustainable, range of alternatives than hitherto considered. Stakeholders may usefully be involved in the generation and assessment of both strategic and more detailed alternatives through consultation. Demonstrating that there are choices to be made is an effective way of engaging stakeholders in the process. The alternatives*

<sup>71</sup> See <http://naturaiaethwr.wordpress.com/2013/11/11/treth-tanwydd/>, for example

<sup>72</sup> <http://m4newport.com/assets/issue-m4-draft-plan-consultation-document.pdf> page 14

<sup>73</sup> [http://www.foe.co.uk/resource/consultation\\_responses/m4\\_consultation\\_response.pdf](http://www.foe.co.uk/resource/consultation_responses/m4_consultation_response.pdf) pages 8-9

<sup>74</sup> <http://wales.gov.uk/docs/desh/publications/090521susdev1wales1planeten.pdf>

<sup>75</sup> <http://www.legislation.gov.uk/ukxi/2004/1633/regulation/12/made>

*considered throughout the process must be documented and reasons given on why they are or are not taken forward*<sup>76</sup>.

99. The Welsh Government's public transport assessment demonstrated that up to 3% traffic reductions could be realized on the M4 around Newport with a set of public transport improvement measures with a capital cost of £300 million<sup>77</sup>. This assessment does not include the South Wales Metro, which has recently received £62 million of capital allocation<sup>78</sup>, and which will have a reductive effect on M4 traffic.
100. The Welsh Government has excluded public transport from consideration despite conceding that there exists:  
*"Uncertainty as to the success in achieving behavioural changes to result in a modal shift to more sustainable modes of travel"*<sup>79</sup>.
101. The Welsh Government has shown that the *partial* closure of just one motorway junction could result in a 5% reduction in peak traffic through the Brynglas Tunnels (widely regarded as the most restricted point on the M4 around Newport)<sup>80</sup>.
102. Alternative options that relate solely to 'common measures', 'public transport measures' and 'junction closures' (and these measures in combination) should have been included in the SEA, because the objectives of the plan or programme have not been shown to be unachievable using a combination of these measures.
103. The Welsh Government's rationale for failing to include public transport measures is:  
*"because the Welsh Government has commissioned a separate study and report on proposals to develop a metro system for South East Wales"*<sup>81</sup>.
104. This does not appear to be a robust rationale, not least because as discussed previously, the South Wales Metro is of a scale as to be likely to have a significant impact on traffic forecasts.
105. The Welsh Government has also failed to consider the Blue Route<sup>82</sup> promoted by Professor Stuart Cole and endorsed by the Institute of Welsh Affairs and the Chartered Institute of Logistics and Transport.
106. This is despite Professor Cole's contention that the Blue Route would meet all of the objectives of the proposal or plan, with:
- Far less environmental impact
  - Significantly less expenditure (approximately one-third the cost)

<sup>76</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/7657/practicalguidesea.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf) page 69

<sup>77</sup> <http://www.m4cem.com/downloads/reports/Issue%20Public%20Transport%20Overview%2012.03.12%20revised.pdf>

<sup>78</sup> <http://www.walesonline.co.uk/business/business-news/edwina-hart-gives-backing-south-6225251>

<sup>79</sup> <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf> page 95

<sup>80</sup> <http://www.m4cem.com/downloads/reports/M4%20CEM%20Stakeholder%20Workbook.pdf> page 33

<sup>81</sup> <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf> page 15

<sup>82</sup> <http://www.iwa.org.uk/en/publications/view/227>

- A timeline for completion considerably sooner than the preferred option
- Capacity for upgrades should they prove necessary
- Much broader support in civil society

107. It is also despite a number of NGOs, including Friends of the Earth Cymru, writing to the Minister in August with an entreaty to not proceed with the consultation until such time as the Blue Route could be included in the suite of options under appraisal.

108. The Welsh Government has also closed off any alternatives that are not either motorways south of Newport, or 'do minimum'. In reality the infrastructure alternatives selected are so similar as to be analogous. There are no effective choices for stakeholders to make other than to support or oppose a motorway south of Newport.

109. Welsh Government guidance states that:  
*"In conducting SEA, Responsible Authorities must appraise the likely significant environmental effects of implementing the plan or programme and any reasonable alternatives"*<sup>83</sup>.

110. Further:  
*"At this stage it may be possible to drop some alternatives from further consideration and document the reasons for eliminating them. Justifications for these choices will need to be robust, as they can affect decisions on major developments... Throughout this part of the assessment, it may be necessary to revisit earlier tasks such as the collection of baseline information, as new information and issues emerge"*<sup>84</sup>.

111. Regulation 12(3) of the Environmental Assessment of Plans and Programmes (Wales) Regulations 2004 stipulates that the Environmental Report must contain the information set out in Schedule 2. Clause 8 of Schedule 2 is:  
*"An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties encountered in compiling the required information"*<sup>85</sup>.

112. The two justifications given in the SEA for the options appraised are:

- The M4 CEM WeITAG Stage 1 (Strategy Level) Appraisal concluded that the options were appropriate
- The consultation resulted in public support for a motorway to the south of Newport<sup>86</sup>

113. It is the opinion of Friends of the Earth Cymru that insufficient reasoning has been provided for selecting the alternatives dealt with.

<sup>83</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/7657/practicalguidesea.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf) page 30

<sup>84</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/7657/practicalguidesea.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf) page 31

<sup>85</sup> <http://www.legislation.gov.uk/wsi/2004/1656/made>

<sup>86</sup> <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf> page 14

114. The Welsh Government’s more detailed reasoning for selecting the alternatives it has chosen to subject to strategic environmental assessment appears to be found in an entirely different document, the WeITAG Appraisal Report Stage 1.
115. The assessment is based on previous iterations of option appraisal, which themselves failed to include reasonable alternatives<sup>87</sup>.
116. Furthermore, the assessment was not open to consultation even though its conclusions<sup>88</sup> are based on a highly subjective set of assumptions related to performance of the options appraised, against a suite of transport planning objectives which were themselves not open to consultation.
117. It is also good practice, supported by the Welsh Government, to set out the other alternatives considered and the reason they were rejected<sup>89</sup>. The Welsh Government has failed to do this.
118. It is the view of Friends of the Earth Cymru that the SEA consultation is deficient in:
- Failing to consider reasonable alternatives (including the ‘Blue Route’<sup>90</sup>, and alternatives relating to ‘common/complementary measures’, ‘public transport measures’, ‘junction closures’, and these measures in combination)
  - Failing to provide adequate reasoning for the alternatives the Welsh Government has chosen to subject to strategic environmental assessment
119. The objective of the SEA Directive is:  
*“to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development”<sup>91</sup>.*
120. The SEA consultation undermines this aim, because it is facilitating significant damaging development by excluding reasonable alternatives that could meet the scheme’s objectives without environmental damage of the same scale as the alternatives subject to consultation.

**Strategic Environmental Assessment – environmental objectives**

121. The environmental objectives chosen raise a number of concerns (see Table).

<b>Environmental objective of draft plan</b>	<b>Concerns</b>
General comment	No objective or subjective ranking of objectives. So climate change adaptation is of the same scale of

<sup>87</sup>

[http://www.m4cem.com/downloads/reports/Issue%20M4%20Corridor%20Around%20Newport%20WeITAG%20Appraisal%20Report%20Stage%201%20\(Strategic%20Level\).pdf](http://www.m4cem.com/downloads/reports/Issue%20M4%20Corridor%20Around%20Newport%20WeITAG%20Appraisal%20Report%20Stage%201%20(Strategic%20Level).pdf) pages 25-27

<sup>88</sup>

[http://www.m4cem.com/downloads/reports/Issue%20M4%20Corridor%20Around%20Newport%20WeITAG%20Appraisal%20Report%20Stage%201%20\(Strategic%20Level\).pdf](http://www.m4cem.com/downloads/reports/Issue%20M4%20Corridor%20Around%20Newport%20WeITAG%20Appraisal%20Report%20Stage%201%20(Strategic%20Level).pdf) pages 49-75

<sup>89</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/7657/practicalguidesea.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf) page 36

<sup>90</sup> <http://www.iwa.org.uk/en/publications/view/227>

<sup>91</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32001L0042:EN:HTML>



	importance as climate change mitigation, even though strong, early action outweighs the costs <sup>92</sup>
General comment	Social objectives over-represented compared to environmental objectives as compared to example given in statutory guidance <sup>93</sup> . Objectives 5, 6, 10 and 11 are primarily social criteria.
Improved air quality in areas next to the existing M4 around Newport	Ignores air quality in areas next to new infrastructure
Reduce GHG emissions per vehicle and/or person kilometre	Does not read across to NTP SEA objective “reduce transport related GHG emissions”. Proposed environmental objective could lead to substantial increase in GHG emissions. Contrary to climate policies <sup>94</sup> and sustainable development policy <sup>95</sup>
Effective adaptation measures to climate change are in place	As described by the consultation, relates almost exclusively to protecting the proposed infrastructure from climate impacts. Ignores potential impacts of infrastructure on adaptation for existing environment.
Reduce disturbance to people from high noise levels... within the existing M4 corridor	Ignores disturbance in areas next to new infrastructure. Aggregate noise and vibration highly likely to increase with increased traffic at faster speeds.
Improved access to all services and facilities	Duplication with the Health Impact Assessment <sup>96</sup> , which is a more appropriate location and covers this issue in more detail
Protect and promote everyone’s physical and mental wellbeing and safety	Duplication with the Health Impact Assessment. The SEA notes “A Health Impact Assessment is being undertaken, which includes an appraisal of health impacts of the Black Route...” <sup>97</sup>
Ensure that diversity, local distinctiveness and cultural heritage are valued, protected, celebrated and enhanced	Difficult to see why this is an SEA consideration rather than some of the other alternatives given in guidance

## Strategic Environmental Assessment – prediction of effects

122. Welsh Government guidance states:

*“quantification is not always practicable, and qualitative predictions can be equally valid and appropriate... However, qualitative does not mean ‘guessed’. Predictions need to be supported by evidence, such as references to any research, discussions or consultation which helped those carrying out the SEA to reach their conclusions. The Environmental Report must document any difficulties such as uncertainties or limitations in the information underlying both qualitative and*

<sup>92</sup> [http://news.bbc.co.uk/1/shared/bsp/hi/pdfs/30\\_10\\_06\\_exec\\_sum.pdf](http://news.bbc.co.uk/1/shared/bsp/hi/pdfs/30_10_06_exec_sum.pdf) page i

<sup>93</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/7657/practicalguidesea.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf) pages 65-66

<sup>94</sup> <http://wales.gov.uk/docs/desh/publications/101006ccstratfinalen.pdf> page 33

<sup>95</sup> <http://wales.gov.uk/docs/desh/publications/090521susdev1wales1planeten.pdf> page 18

<sup>96</sup> [http://www.m4newport.com/assets/issue-m4-hia\\_publication.pdf](http://www.m4newport.com/assets/issue-m4-hia_publication.pdf) page 37

<sup>97</sup> <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf> page 58

*quantitative predictions. Assumptions, for instance about underlying trends or details of projects to be developed under the plan or programme, need to be clearly stated*<sup>98</sup>.

123. The 2012 Strategic Environmental Assessment considered that a motorway to the south of Newport (Highway Infrastructure Option A) would have ‘major negative’ impacts on biodiversity, soil, water, material assets, cultural heritage and landscape/townscape<sup>99</sup>.
124. Major negative impacts are defined as being:  
*“Likely to affect the whole, or large part of the... Programme area. Also applies to effects on nationally or internationally important assets. The effects are likely to be direct, irreversible and permanent. The magnitude of the predicted effects will also be major”*<sup>100</sup>.
125. The current (2013) Strategic Environmental Assessment considers that the impact of a motorway south of Newport on biodiversity, soil, water and material assets are now ‘minor negative’<sup>101</sup>, defined as being:  
*“likely to be limited to small areas within the M4 Corridor around Newport, or limited to small groups of people and receptors. Option would have a minor adverse effect on the environment but is not considered to be significant”*<sup>102</sup>.
126. There is no apparent justification for this significant shift in reducing the impact of a motorway to the south of Newport. SEA guidance requires mitigation measures to be taken into consideration during the preparation of the plan or programme<sup>103</sup>.
127. This SEA consultation does not give a rational explanation as to why the mitigation measures presented are so superior to those considered during the 2012 SEA that they downgrade many of the predicted effects from *“direct, irreversible and permanent”* to *“not significant”*.
128. The Welsh Government’s rationale for this downgrading is as follows:  
*“no motorway south of Newport was considered as part of the 2012 proposals. The proposals did however include “Highway Option A: additional high quality road to the south of Newport” The 2012 Strategic Environmental Assessment (SEA) type assessment considered this highway option individually with the other alternatives which formed part of M4 CEM at that time. The September 2013 SEA includes the Environmental Report required in accordance with the Regulations. This*

<sup>98</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/7657/practicalguidesea.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/7657/practicalguidesea.pdf) pages 31-32

<sup>99</sup> <http://www.m4cem.com/downloads/reports/M4%20CEM%20SEA%20Environmental%20Report%20&%20Appendices.pdf> page 80

<sup>100</sup> <http://www.m4cem.com/downloads/reports/M4%20CEM%20SEA%20Environmental%20Report%20&%20Appendices.pdf> page 56

<sup>101</sup> <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf> page 91

<sup>102</sup> <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf> page 36

<sup>103</sup> As stated on page 41 of the SEA consultation <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf>

*report appraises the environmental impact of all parts of the draft Plan, whose main element is a proposed motorway south of Newport, its reasonable alternatives and a Do-Minimum scenario*<sup>104</sup>.

129. The conclusion that a “high quality road to the south of Newport” has no relationship to a dual carriageway or motorway to the south of Newport is surprising, not least because:

- The dual carriageway (red route) option in the 2013 SEA consultation is referred to as a “high quality road to the south of Newport”<sup>105</sup>
- It follows a very similar, if not identical, route to that outlined in previous iterations of the M4 project, including the M4 CEM

130. The biodiversity impacts outlined in the SEA (“not significant”) also do not concur with those stated in the consultation document (“large adverse impact”)<sup>106</sup>. It could be surmised that the Welsh Government would wish respondents to the consultation to think that it were seriously concerned about biodiversity impact, while the environmental assessment shows otherwise.

131. The Welsh Government has assessed the following environmental impacts of the dual carriageway (high quality road to the south of Newport) alternative as being identical to those of the preferred option (a motorway to the south of Newport)<sup>107</sup>:

- Greenhouse gas emissions
- Climate adaptation
- Biodiversity
- Population
- Human health
- Soil
- Water
- Material assets
- Cultural heritage
- Landscape and townscape

132. However, without prejudice to our case that the preferred option is analogous to Option A in the 2012 SEA consultation, even were we to assume that the Welsh Government had justification for this down-grading in impact, its judgement is highly questionable. It is not credible, for example, that: *“The net benefit [of the preferred option of a motorway south of Newport] for biodiversity is considered to be positive in the long-term”*<sup>108</sup>.

133. The Welsh Government’s conclusions are all the more surprising when it also states that: *“insufficient information is available at this strategic stage to identify and evaluate the risk to biodiversity that the draft Plan, or a reasonable alternative, may pose”*<sup>109</sup>.

<sup>104</sup> <http://wales.gov.uk/about/foi/responses/dl2013/octdec/transport1/atish7891/?lang=en>

<sup>105</sup> <http://www.m4newport.com/assets/issue-m4-habitats-regulations---publication---a1.pdf> page 19

<sup>106</sup> <http://m4newport.com/assets/issue-m4-draft-plan-consultation-document.pdf> page 53

<sup>107</sup> <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf> pages 91-92

<sup>108</sup> <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf> page 57

<sup>109</sup> <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf> page 95

134. The flawed criteria used in the environmental objectives have naturally led to some contested findings. So the fact that the criterion related to air quality is related solely to existing infrastructure means that despite a likely overall increase in air pollution as a result of a new road (because of increased induced traffic<sup>110</sup>), the motorway option receives a highly beneficial rating<sup>111</sup>. The rationale seems to be that air pollution will be reduced as a result of a new motorway, when the reverse is likely to be the case.
135. The Welsh Government gives a positive rating for air pollution while conceding that there is: *“Uncertainty surrounding the changes in air quality and noise nuisance associated with the different measures”*<sup>112</sup>.
136. Likewise, the claim that in the short to medium term *“there could be a reduction in greenhouse gas emissions”*<sup>113</sup> following building of a new motorway to the south of Newport cannot be objectively supported, is unsubstantiated by the Welsh Government, and is flatly contradicted by evidence from the Department for Transport.
137. Evidence supplied by the Department for Transport clearly shows that new road-building is associated with an increase in greenhouse gas emissions<sup>114</sup>.
138. In not one of the cases noted by the Department for Transport has additional road capacity led to anything other than a substantial increase in emissions.
139. Using the A46 Newark-Widmerpool improvement as the nearest approximation to the proposed draft plan, we have an additional 877 tonnes of greenhouse gases per mile of additional lane capacity in the opening year.
140. If we conservatively<sup>115</sup> assume that opening year additional greenhouse gases stay constant over time, and that the proposal is for 6 additional lanes each of length 14 miles then we could calculate the additional greenhouse gas emissions to be 73,668 tonnes per year.
141. The proposed motorway crosses five SSSIs and a Special Area of Conservation, yet is awarded only minor significant impact on biodiversity<sup>116</sup>.
142. The proposed motorway *“would aim to meet the needs of all groups of people”*<sup>117</sup>. Most people in the lowest income quintile do not own cars/vans<sup>118</sup>. It is therefore difficult to reconcile the

<sup>110</sup> <http://www.vtpi.org/gentraf.pdf>

<sup>111</sup> <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf> page 43

<sup>112</sup> <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf> page 95

<sup>113</sup> <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf> page 47

<sup>114</sup> <http://www.highways.gov.uk/foi/increased-road-capacity-and-greenhouse-gas-emissions/>

<sup>115</sup> Making the assumption that induced traffic will not increase as time goes by, or that any increase will be compensated by improved fuel efficiency of vehicles

<sup>116</sup> <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf> pages 56-57

<sup>117</sup> <http://m4newport.com/assets/issue-m4-sea-environment-report---publication---c2.pdf> page 64

<sup>118</sup> <http://naturiaethwr.wordpress.com/2013/11/11/treth-tanwydd/>

assertion that the needs of poorer people will be met (including the significant improvement foreseen in the Equality Impact Assessment for people who are economically inactive, and with high levels of deprivation<sup>119</sup>) with the low levels of car ownership in these groups.

143. The downgrading of impacts from “direct, irreversible and permanent” to “not significant” has been discussed above. Categories it relates to include biodiversity, soil, water and material assets.

### Strategic Environmental Assessment – cumulative impact

144. The Welsh Government has only considered cumulative impacts of the draft plan or programme in conjunction with the National Transport Plan, the South East Wales Regional Transport Plan and the Wales Spatial Plan. The obvious outlier in terms of “other policies, plans and programmes” is the South Wales Metro. This plan, for which partial funding has been allocated, is anticipated to increase by 60% the number of people who can easily access public transport<sup>120</sup> and to:

*“address the region’s existing transport problems – including congestion at key points on the road network (M4 J32-34, Newport and the A470 into Cardiff) and minimise the need for further congestion measures”<sup>121</sup>.*

145. Given that one of the principal achievements of the South Wales Metro will be to minimise the need for further congestion measures, the Welsh Government has unlawfully excluded a major factor in its consideration of means of reducing congestion.
146. Further, given that peak time (rush hour) congestion is the biggest purported problem to be solved by the draft plan or programme, the Welsh Government has been remiss in excluding consideration of this major public transport scheme.

### Strategic Environmental Assessment – route error

147. The line of the M4RR, as set out in the documentation<sup>122</sup>, is different from the legally-protected line (the TR111) in the Newport Local Development Plan (dated April 2012), and the Newport Unitary Development Plan<sup>123</sup>.
148. Newport Council has confirmed the protected route on their plans as that provided by the Welsh Government when serving the statutory notice pursuant to Article 19 of The Town & Country Planning (Development Management Procedure) (Wales) Order 2012.
149. The 2013 consultation version of the map reduces the length of the highway within the SSSI by a distance in the region of 1.5 km as compared to the validated TR111 version.

<sup>119</sup> [http://www.m4newport.com/assets/issue-m4-eqia\\_publication.pdf](http://www.m4newport.com/assets/issue-m4-eqia_publication.pdf) page 46

<sup>120</sup> <http://wales.gov.uk/docs/det/publications/131021metroen.pdf> ES4

<sup>121</sup> <http://wales.gov.uk/docs/det/publications/131021metroen.pdf> ES4

<sup>122</sup> <http://www.m4newport.com/assets/tr-111-plan-2006.pdf>

<sup>123</sup> [http://www.newport.gov.uk/stellent/groups/public/documents/plans\\_and\\_strategies/cont712753.pdf](http://www.newport.gov.uk/stellent/groups/public/documents/plans_and_strategies/cont712753.pdf)

150. The 2013 consultation states that the preferred route is:  
*“A new section of 3-lane motorway to the south of Newport following the protected (TR111) route (Black Route)”*<sup>124</sup>.
151. The 2013 consultation states that 8.5 km of the preferred option crosses SSSI land, resulting in the loss of up to 60 ha<sup>125</sup>. Assuming that the road would follow the TR111 route rather than the mapped route in the documentation, it would cross in the region of 10 km, with a land take of up to 70 ha.
152. It appears that the consultation has misled the public about the scale of SSSI land that will be lost as a result of the preferred route.

## Conclusion

153. The consultation is fatally flawed and must be withdrawn.

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<sup>124</sup> <http://m4newport.com/assets/issue-m4-draft-plan-consultation-document.pdf>

<sup>125</sup> <http://m4newport.com/assets/issue-m4-draft-plan-consultation-document.pdf> page 32