

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



Objection Ref OBJ0125

Llywodraeth Cymru
Welsh Government

File Ref WG/REB/OBJ0125-2 - FoE

**Response to Objector's Evidence: Gerald Kells on behalf of
Friends of the Earth Cymru in relation to the Committee on Climate
Change 2017 Update Report**

1. GROUNDS FOR OBJECTION

1.1. Details

- 1.1.1. Gerald Kells, on behalf of Friends of the Earth Cymru, 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. That has been considered alongside Friends of the Earth's Statement dated September 2016, which makes similar points. A rebuttal to the February 2017 and September 2016 statements has been provided¹.
- 1.1.2. Gerald Kells, on behalf of Friends of the Earth Cymru, submitted a further Statement of Evidence dated 3 July 2017 in relation to the Committee on Climate Change's Report of 29 June 2017 *Meeting Carbon Budgets: Closing the policy gap*. Gerald Kells has submitted the relevant Report to the Inquiry alongside his statement, which can be found as Public Inquiry Document 100².
- 1.1.3. The Welsh Government understands the evidence submitted within Gerald Kells's Statement dated 3 July 2017 to be based on the following:
1. Considers that the Committee calls for a reduction of 5% in travel demand below base line levels by 2030 in addition to technological improvements, which would conflict with the M4 Scheme given that Table 10.3 of Bryan Whittaker's evidence (WG1.2.6) suggests a growth in vehicle kilometres driven (VKD) levels. Concerned that the Scheme will generate additional traffic and suggests that the construction of the new road is likely to mitigate against achieving the Committee's goal by encouraging traffic growth.
 2. Considers that the impact on emissions of funding for new roads and road improvements should be carefully assessed.
 3. Considers that to achieve the reduction in travel demand identified by the Committee, significant intervention(s) would be needed including the public transport proposals identified in the Inquiry, demand management, and policies incentivising walking, cycling and usage of public transport.

¹ WG/REB/OBJ0125 - Friends of the Earth - Gerald Kells

² Meeting Carbon Budgets: Closing the policy gap 2017 Report to Parliament, Committee on Climate Change, June 2017

Suggests that this could have significant implications for the M4 traffic modelling.

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	3	2.2.3
2	2.2.2		

2.2. Matthew Jones (Chief Witness)

2.2.1. Response to **Point 1** (Considers that the Committee calls for a reduction of 5% in travel demand below base line levels by 2030 in addition to technological improvements, which would conflict with the M4 Scheme given that Table 10.3 of Bryan Whittaker's evidence (WG1.2.6) suggests a growth in vehicle kilometres driven (VKD) levels. Concerned that the Scheme will generate additional traffic and suggests that the construction of the new road is likely to mitigate against achieving the Committee's goal by encouraging traffic growth):

1. The first point to be made in relation to the Report is the general one that it contains advice to the UK government. The Committee also provides specific advice to the devolved administrations and has already provided advice to WG in relation to the design of Welsh carbon targets pursuant to the Environment (Wales) Act 2016 in April 2017 (ID 72). There are material differences between the UK and Wales in terms of the sources of carbon emissions. For instance, transport accounts for some 26% of UK greenhouse gas emissions (page 107 of the Report) but constitutes a significantly smaller proportion of Welsh greenhouse gas emissions being around 11% (see paragraph 4.2.1 of Tim Chapman's evidence (WG 1.13.1)). The recommendations made by the Committee are addressed to the UK government and relate to greenhouse gas emissions at the UK

level. Given the different patterns of emissions in Wales, seeking to apply quantitative recommendations addressed to the UK to Wales is misconceived.

2. Turning to **Point 1** the objection misquotes the Committee's requirement for *'National and local policies to reduce demand, to deliver car-km reductions of at least 5% below the baseline trajectory'* (Table 2, page 18 of the Report to Parliament 2017) as it omits the word 'trajectory'. The outcome to be attained by 2030 in terms of vehicle kms driven is to be 23% above 2010 levels by 2030. The 2016 indicator or target was +6% compared to an outturn of +7%. In other words, the actual increase in vehicle kms travelled in 2016 was slightly above the target and to that extent the target was missed. By contrast the failure to meet the target in terms of reducing road vehicle emissions was much more significant: the 2016 indicator was -9% as compared to an outturn of +3% i.e. there should have been a 9% reduction but instead there was 3% increase (Table 5.2, page 116 of the Report). This may explain why the Report highlights a shift to low carbon vehicles and not a reduction in the trajectory of vehicle kms as a particular priority. See page 14 where it is stated:

"Particular priorities are in low-carbon power generation, the shifts to low-carbon vehicles and to low-carbon heating and development of carbon capture and storage"

3. The Scheme has a number of impacts upon vehicle kms. In the first place it reduces journey length by 2.8km for traffic reassigning from the existing M4 between junctions 23 and 29. That is a reduction in vehicle kms along that stretch of the corridor of some 10% and is a significant benefit in terms of journey length. On the other hand it will encourage additional traffic. These tendencies pull in different directions insofar as aggregate vehicle kilometres are concerned and each is taken into account in Bryan Whittaker's evidence. Contrary to Mr Kells's statement the table in Mr Whittaker's proof which addresses changes in vehicle kilometres is Table 10.2. That is not directly comparable to the indicator in the Committee's Report because the base year is different, the length of the period is greater (23 years rather than 20 years for 2014 to 2037) and as already

pointed out in paragraph 1 the geographical scope is wholly different. The upshot, however, is that the Scheme leads to a very small decline in vehicle kms in 2022 and a very small increase in vehicle kms in 2037 compared to the Do Minimum situation. It is worth noting, however, that in terms of vehicle hours, which is addressed in Table 10.3 of Mr Whittaker's proof, there is a reduction in vehicle hours under Do Something compared to Do Minimum which indicates that traffic is less congested with the Scheme in place.

2.2.2 Response to **Point 2** (Considers that the impact on emissions of funding for new roads and road improvements should be carefully assessed).

1. The general principle being advocated by Gerald Kells in relation to the evidence of the Committee on Climate Change is that a reduction in traffic is needed in addition to improvements in vehicle technology, in order to reduce vehicle emissions. However, there is a third variable in addition to vehicle technology and vehicle kilometres which has an influence on aggregate levels of vehicle emissions. That third factor relates to traffic speed and congestion. It is accepted that building roads typically leads to additional traffic and additional vehicle kms. But as Mr Tim Chapman pointed out in his oral evidence the Scheme is unusual in that it is a bypass of an existing motorway which is shorter than the road being bypassed - usually bypasses are longer than the roads being bypassed. Furthermore, as the road being bypassed is congested the Scheme will relieve that congestion and therefore will reduce emissions from vehicles travelling along the corridor.
2. The impact of the Scheme on aggregate carbon emissions has been subjected to very careful assessment. An assessment, moreover, which goes beyond the metric of vehicle kms and also assesses the third variable namely traffic speed and effect of accelerations and decelerations which occur in congested conditions. The assessment therefore meets the recommendation in the Report that the impact of road-building on emissions should be carefully assessed.
3. The evidence presented to the Inquiry by Mr Bryan Whittaker on additional traffic, often referred to as 'induced' traffic, has been substantial. As set out in his evidence (WG1.2.6) at paragraph 16.8, he

explains that the Scheme's transport model directly takes into account the effect of 'induced' traffic. Public Inquiry Document ID 43 quantifies the scale of induced traffic projected to occur across various scenarios.

4. ID 43 outlines that the induced traffic across the Usk screenline has been forecast to be 4.2% in the Scheme's Core Scenario over an average day in 2037.
5. The carbon assessment takes into account the transport model results including induced traffic. The assessment and its results are covered in the evidence of Mr Tim Chapman (WG 1.13.1 to 1.13.4).
6. My evidence explains (WG1.1.1) that carbon emissions, as a result of both construction and the future operation of the highway network with and without the Scheme in place have been carefully considered in the context of relevant policy and legislative requirements. As set out in the published Carbon Report within the Environmental Statement (Document 2.3.2), the emissions estimated for the construction of the Scheme are a small fraction (1%) of the total emissions associated with the South Wales highway network by 2037, including those of vehicles using it.
7. Paragraph 15.3 of my evidence (WG1.1.1) explains that whilst there would be increased levels of traffic on the network at that time the reduction of stop-start traffic conditions as well as reduced journey lengths on the new section of motorway, would make those trips more efficient and lead to lower aggregate levels of tail-pipe emissions.
8. Mr Tim Chapman explains in his evidence (WG1.13.4) that having regard to the net annual carbon savings (user savings less operational carbon cost) the capital carbon incurred during construction, 2018 to 2022, would be repaid in 2072.
9. In his oral evidence Mr Tim Chapman explained that the analysis giving rise to carbon neutrality in 2072 was conservative in two respects. First, the SATURN results for 2022 and 2037 show that there were further carbon savings on the wider network (i.e. beyond the old and new M4). These savings, however, were not taken into account in assessing the year in which carbon neutrality would be achieved. Secondly, no account was taken of additional carbon emissions as a result of incidents. The impact of incidents is likely to be greater under the Do Minimum scenario

than under Do Something. Despite this conservatism the analysis shows that there would be a reduction in tail pipe emissions in every year from the opening of the Scheme.

10. The evidence of Mr John Davies (WG1.23.1) further considers climate change and greenhouse gases in his paragraphs 49 to 55. He considers the Scheme to be in line with the Welsh Government's approach to greenhouse gas emissions reductions by virtue of its design and the fact that it would achieve a reduction, albeit small, in annual user carbon emissions both in the opening and design years.
11. My Proof of Evidence (WG1.1.1) at section 15 addresses carbon and section 16 addresses matters of sustainable development in relation to the Scheme. A response has been provided to the evidence from Professor John Whitelegg⁵ and Kevin Anderson⁶ separately on these matters.
12. When taking into account the induced traffic and carbon assessment, the Scheme is in accordance with the trajectory of overall emissions reductions required by legislation and policy.

2.2.3 Response to **Point 3** (Considers that to achieve the reduction in travel demand identified by the Committee, significant intervention(s) would be needed including the public transport proposals identified in the Inquiry, demand management, and policies incentivising walking, cycling and usage of public transport. Suggests that this could have significant implications for the M4 traffic modelling):

1. The Metro is a long-term incremental programme to improve accessibility to public transport and cater for increasing demand for public transport. Other objectives for the Metro include supporting the economic function of the region and reducing the impact of transport on the environment. However, Section 9 of my evidence (WG1.1.1) explains that even a doubling of public transport usage in the Newport area would only achieve up to a 5% reduction in motorway traffic, which demonstrates that public transport measures would only reduce traffic using the motorway by a

⁵ WG-REB-OBJ0270.3 – Prof John Whitelegg

⁶ WG-REB-OBJ0270.4 - Prof Kevin Anderson

limited amount and would be insufficient to address the problems identified on their own.

2. As with the M4 Scheme, an overarching objective for the Metro is to deliver a high-quality, reliable, efficient, economically sustainable transport network. The M4 and Metro proposals are clearly complementary in helping the Welsh Government achieve its aspirations for an integrated and sustainable transport network that aims to transform the economic and social prospects of South East Wales and the country as a whole.
3. Both projects would help achieve the Welsh Government's aims and objectives by addressing different problems. Whilst the Metro would not address the transport related problems associated with the M4 around Newport, it would enhance connectivity across the region, provide easier access to employment across the region, offer development and regeneration benefits on key corridors and around key stations.
4. Indeed, a free-flowing M4 will be very beneficial for bus based public transport. In a relatively small city like Newport, buses must be a key part of any public transport strategy, including express buses using the M4, and reliability of buses is critically dependent on roads not being congested as a result of large numbers of cars rat-running through the city. So a congested M4 militates against an effective and reliable bus network through the city and its surroundings.
5. As such, alongside the South Wales Metro, the M4 Scheme has been identified as a key component of the Welsh Government's five year plan for a long-term, integrated and sustainable transport network for Wales.
6. Figure 5.3 of the Committee's Report (page 110) sets out that a modal shift of 5% is required between 2016 and 2030. Mr Bryan Whittaker has set out the extent of modal shift along the M4 corridor implied by a combination of public transport measures in ID 73. That analysis envisages a modal shift of up to 6%. These percentages are not directly comparable for a number of reasons. First, the time period is different. Secondly, the geographical scope is different. Thirdly, the orientation of travel is different – ID 73 focuses on east-west travel while the Committee is concerned with modal shift in all directions.

7. The predominant impact of the Metro on modal shift will be in respect of north-south travel movements and not east-west movements. The investment in public transport and active travel to which WG is committed is therefore commensurate with, if not in excess of, the magnitude of modal shift recommended by the Committee in terms of transport at the UK level.
8. The design of the Scheme also has regard to the desirability of encouraging modal shift e.g. with regard to enhancing access to the Glan Llyn Park & Ride and Severn Tunnel Junction station and encouraging active travel as set out in the evidence of Julia Tindale (WG 1.10.1).
9. In conclusion WG is committed to modal shift of the magnitude recommended by the Committee in its Report. While a combination of active travel and public transport measures would not adequately address the problems of congestion along the extant M4 the Scheme has been designed with a view to enhancing opportunities for active travel and facilitating the use of public transport.

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