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Llywodraeth Cymru
Welsh Government

Eich cyf/Your ref
Ein cyf/Our ref SF/EH/04310/14

Dafydd Elis-Thomas AM
Chair Environment and Sustainability Committee

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13th February 2014

Dear Dafydd

Thank you for your letter of 16 January seeking clarification on a reference contained in my response to the Committee of 20 December.

On 6 November the Committee received evidence from several organisations and representatives, including Professor Stuart Cole. I replied to a number of issues raised by the Committee in my letter of 20 December. One quote within this response was attributed to Professor Peter Jones and Doctor Scott Le Vine.

I attach a clarified response to your Query 8 at Annex A, in which now includes the omitted quote from the Paper "On the Move" by Professor Jones and Doctor Le Vine, and also correctly attributes the second quote to the Department for Transport's command paper, Action for Roads.

A handwritten signature in black ink, appearing to be 'Edwina Hart', written in a cursive style.

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Annex A

Welsh Government Response to Query 8 Raised by the Environment and Sustainability Committee 13 November 2013

Q8) A number of witnesses raised concerns about the data used for the forecasting of traffic growth. They highlighted that traffic has plateaued in recent years, yet the forecast is showing an increase in demand. Could you provide further detail on how these figures have been calculated?

The M4 Corridor around Newport Consultation Document¹ shows observed and forecast traffic levels on the existing M4. This shows substantial growth occurring in the late 1990s, followed by a generally flat profile prior to the economic downturn in 2007/2008, which was further affected by the major road works on the M4 in 2009 and 2010. Following the completion of these road works, traffic volumes have risen back to around the 2005 pre global recession level. 'TEMPRO' (Trip End Model Presentation Program) forecasts show growth from 2011 onwards.

Forecasts are made in accordance with the Welsh Government WeITAG and Department for Transport WebTAG guidance (see www.dft.gov.uk/webtag). Calculation methodology is explained as follows.

Traffic surveys were carried out between March and May 2012 to enable comparison with forecast traffic flows and update the M4 traffic model. Attached at Annex B is a copy of "Figure 7.2: 2012 Traffic Flows and Urban Motorway Operating Conditions" from the M4 Corridor around Newport WeITAG Appraisal Report Stage 1 (Strategy Level). This shows that in 2012 the M4 at Newport was experiencing traffic flows associated with operational problems, resulting in frequent traffic congestion, which could increase the risk of incidents and accidents occurring.

The M4 traffic model was validated using the 2012 information. Further information on the traffic model can be found in the 'M4 Corridor, Newport, Local Model Validation Report (LMVR), Draft 1', November 2012². Traffic forecasts were prepared for the then anticipated opening year of the proposed M4 Corridor around Newport Options in 2020 and the design year of 2035 as required by the Design Manual for Roads and Bridges. Car trips were factored using the Department for Transport's National Trip End Model (NTEM), as set out in the TEMPRO version 6.2 program. The growth in goods vehicle trips, both light and heavy vehicles, was based on the forecasts contained in the National Transport Model produced by the Department for Transport. Variable demand modelling has been deployed using DIADEM (Dynamic Integrated Assignment and Demand Modelling) to produce the model forecasts, in accordance with WebTAG unit 3.10 advice. It should be noted that traffic forecasts at this strategic stage of option assessment are based on a number of assumptions. More details of such assumptions are documented in the 'New M4 Project, Magor to Castleton, Traffic Forecasting Report', Arup, November 2012, which is available at www.m4cem.com.

With regard to recent and future traffic forecasts your attention is drawn to recent research⁵ led by Professor Peter Jones at University College London, who was referred to in Professor Cole's evidence to the Committee.

This research is reported in the Paper "On the Move³" which contains the following quote which is relevant to strategic roads like the M4:

"Commentators have used the national car traffic figures to explore the hypothesis that mileage per capita has 'peaked'. But the grand total hides quite different experiences from one part of the country to another, ranging from the South West region, where car traffic

¹ Figures 4 and 5, draft Plan Consultation Document, available at www.m4newport.com.

² LMVR available on www.m4cem.com.

³ On the Move, December 2012, written for the RAC Foundation, the Office of Rail Regulation, Independent Transport Commission and Transport Scotland by a research team led by Professor Peter Jones at University College London.

growth continued systematically until the onset of the recession in 2008, to London, where car traffic levels have been falling since 1998. Crucially, the report concludes that if company car mileage is discounted, then there has been a pattern of continuing strong growth in private car use for those aged 30 and over, outside London, up to the start of the economic downturn. This group represents approximately 70% of the population of driving age in Great Britain.

Therefore the notion that car traffic peaked in the mid-2000s is at best an oversimplification.

Many of the changes noted in the report relate to the rate of car and rail use per person. Yet on top of this transport planners need to account for marked population growth. Over the next 20 years or so the number of people inhabiting the British Isles is predicted to swell, again with large regional variations. Any fall in the rate of travel per head by a particular type of person may be offset by a growing number of people of that type.”

Furthermore, in July 2013, the Department for Transport published its command paper entitled *Action for Roads: a network for the 21st century*⁴. The following are quotes from that paper:

“Even under our lowest growth forecasts we would expect traffic growth to cause major increases in congestion, greater delays and more unpredictable journeys. Without action, growing demand will place unsustainable pressure on our roads, constraining the economy, limiting our personal mobility and forcing us to spend more time stuck in traffic. This will mean more pollution and more frustration for motorists...”

“...by 2040 traffic on strategic roads will have grown by 46%, based upon central estimates of population growth, economic growth and the decline in the cost of motoring. In situations where the economy grows faster than expected, where the costs of motoring fall and population grows more quickly, this could mean traffic could grow by as much as 72%. If economic forecasts were downgraded, if population growth stagnated and if motoring technology did not develop as fast as predicted, the increase would be smaller. However, the minimum forecast increase, 24%, is still a substantial rise on current levels.”

⁴ Action for Roads: A network for the 21st Century, Department for Transport, July 2013 (Cm 8679).

Annex B

Figure of Traffic Flows and Urban Motorway Operating Conditions

(extract from m4 Corridor around Newport WelTAG Appraisal Report Stage 1 (Strategy Level))

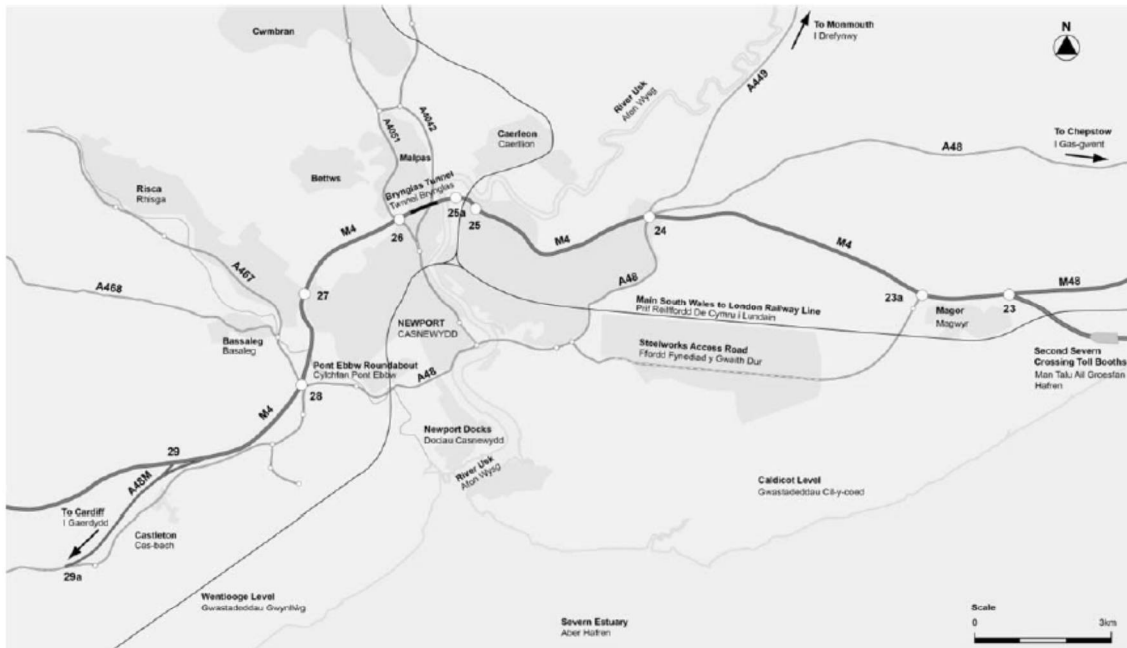
Welsh Government

M4 Corridor around Newport
WelTAG Appraisal Report Stage 1 (Strategy Level)

Figure 7.2: 2012 Traffic Flows and Urban Motorway Operating Conditions

Location	2012 AADT	DMRB Urban Motorway Capacity ¹⁹ Veh/hr	Sept 2012 ~ Highest Peak % Flow to Capacity	
			Average Weekday Peak	Maximum Weekday Peak
J23a to J24	79,300	5600	70.2%	78.3%
J24 to J25	93,400	5600	80.2%	87.2%
Brynglas Tunnels	70,100	4000	85.7%	95.6%
J26 to J27	104,400	5600	86.2%	94.2%
J27 to J28	103,400	5600	96.6%	103.3%
J28 to J29	104,200	5600	92.1%	100.2%

Flow to Capacity	Operational Conditions
< 80%	Operating within capacity
80% to 100%	Operational problems occurring
> 100%	Severe operational problems



¹⁹ Design Manual for Roads and Bridges Volume 5, Section 1, Part 3, TA 79/99 Amendment No.1, Traffic Capacity of Urban Roads, Table 2, May 1999