

**PROPOSED HEYSHAM TO M6 LINK ROAD  
CALLED IN PLANNING APPLICATION**

**Planning Inspectorate reference:**

**APP/Q2371/V/07/1200928 and**

**APP/Q2371/V/07/1200929**

**ADDITIONAL NOTE**

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**for**

**Transport Solutions for Lancaster and Morecambe (TSLM)**

**24.7.2007**

## Summary

1. This note has two purposes. First, it addresses a question raised by the Inspector during my cross-examination of Mr Cleave on 13.7. 2007, namely whether the validity and assumptions of the traffic forecasts are a matter for the Inquiry or simply a matter of 'following instructions' from the DfT.
2. Secondly it adds some extra information which has become available or known after the start of the Inquiry, provided by Lancashire County Council which, while not changing the main content of my argument, enables me to express parts of it in a more compact and summarised manner.
3. I submit that the matters in my evidence are proper considerations for the Inquiry, seeking to support this by detailed quotations from the DfT guidance, in particular that LCC has not followed the guidance in relation to the relevance and effects of transport policies which will affect traffic levels.
4. Recently available evidence confirms more clearly that the proposed scheme interrupts, but does not reverse, the forecast long term decline in traffic speeds, which overall are expected to be by 2025 worse than they were in 2001.
5. Comparison of the observed and forecast traffic flows between 2001 and 2010, assuming they are correct, indicates that the second half of the decade is forecast to have a very substantial reduction in traffic growth, which makes the assumed resumption of higher growth in the period 2010 to 2025 less plausible. This analysis is supported by data provided by LCC for Lancaster itself, where little or no growth in traffic has been observed for nine years. This also makes the forecast increases in traffic in Lancaster – the largest source of congestion which the proposed link is supposed to relieve – less likely.
6. Some sensitivity tests taking account of some but not all these factors reduces the estimated benefit-cost ratio of the link by 45%, with further reductions likely from other effects not yet taken into account, including any policy interventions specifically targeted on the congested areas and times of day, and other factors addressed by other witnesses.

## **Introduction**

7. This note has two purposes. First, it addresses a question raised by the Inspector during my cross-examination of Mr Cleave on 13.7. 2007, namely whether the validity and assumptions of the traffic forecasts are a matter for the Inquiry or simply a matter of ‘following instructions’ from the DfT.
8. Secondly it adds some extra information which has become available or known after the start of the Inquiry, provided by Lancashire County Council which, while not changing the main content of my argument, enables me to express it in a more compact and summarised manner.

## **Relevance of traffic forecasts and consequent benefit cost calculations to the Inquiry**

9. I submit that in this case the assumptions underpinning the forecasts and appraisal results are a legitimate and indeed essential matter for the Inquiry, on the arguments that:
  - the DfT Webtag procedures are not simply a matter of ‘following instructions’ but explicitly give discretion and judgement on some important matters to adopt methods and assumptions which are in accordance with local conditions. On those aspects where judgement is allowed locally to decide what assumptions to adopt, it must logically follow that the exercise of that judgement is subject to scrutiny, or otherwise it would be arbitrary and uncontrolled.
  - on some matters explicit guidance has been given in Webtag that has not been followed by the Promoters. In these cases the observation that this is the case is a relevant matter to report to the Secretary of State.
  - on some matters there are (or at present appears to be) inconsistencies between data used from different sources, or between data and assumptions, or between forecasts and observations. It would seem sensible that where there are such inconsistencies they must be relevant, even if they have arisen from apparently following official advice.

10. If some or all of these principles are accepted, then their application in practice is shown in the four quotations from Webtag shown in Figure 1. (There are very many more quotations along similar lines. The full text of the two most relevant chapters of Webtag may be examined to check that I have not taken them out of context).

**Figure 1 Extracts from Webtag**

**Extract from TAG Unit 2.1, December 2004, para 1.6.2**

*Policy Instruments (TAG Unit 2.3)* sets out a wide range of policy instruments that may be relevant in studies covering both urban and inter-urban techniques. When assessing options it is important to consider all aspects of possible impacts. For example, one of the major causes of motorway congestion is the use made of these roads by local traffic, diverting to avoid congestion on local roads caused by even more local traffic. If some of these very local car journeys could be transferred to cycle, foot or public transport, this could provide some relief of the motorway congestion. In addition, where inter-urban routes bypass or provide access into urban areas, then urban instruments may be used to complement inter-urban techniques. Generally options that reduce the need to travel are likely to be more sustainable than those that cater to travel demand.

**Extract from TAG unit 2.5, December 2004, para 1.2.13**

The way in which this 'overall net value' is derived is by **judgement**. The person assessing the 'overall net value' - the 'assessor' - is required to derive their own estimate by exercising their own judgement about the relative importance of the various impacts - the costs and benefits shown in the table of impacts in the AST. Thus, different people may come to different conclusions about the 'overall net value' of an option, depending upon the weights which they attach to the impacts

**Extract from Tag 3.1.1 June 2003, para 1.2.3 5**

As far as mode is concerned, given a multi-modal context, it can be expected as a minimum that car, public transport and non-motorised modes will need to be distinguished. Whether further distinctions need to be made will depend on the particular circumstances of the study: for example, if there is interest in cycling, it will certainly be necessary to separate cycle and walk among non-motorised modes. The choice between public transport 'sub-modes', where it exists, may be treated explicitly in the demand model or at the assignment level.

**Tag 3.9.2 para 2.1.1 April 2004**

2.1.1 Appraisal of major schemes must be undertaken relative to an appropriate do-minimum case. An understanding of the current situation and *the range of likely future situations should inform the definition of the do-minimum and do-something cases*. The key issues to consider both now and in the future are:

transport and other policies affecting transport, in particular land-use issues;

opportunities and constraints on transport provision;

travel demand patterns and levels of service; and

transport related problems.

It is agreed that LCC has not attempted to forecast the effects of the scheme on other modes, and has not informed the definition of do-minimum and do-something scenarios by consideration of 'likely future situations' and other policies affecting transport. This is shown in the following exchange, which in the absence of a verbatim transcript I believe to give an accurate sense of parts of the cross-examination of Mr Cleave on 13<sup>th</sup> July.

PG: So you made no attempt to forecast the effects of the scheme on other modes?

NC No

PG: Do you have any knowledge of the % of total journeys taken using other modes? What proportion of people use public transport? Or figures for cycling, pedestrians?

NC I don't know, Mr Worthington may have them. We could look at that, there have been a lot of initiatives in this area.

PG: But they are not part of the appraisal? There was no attempt to see if the scheme helps or harms user of other modes?

NC No, not quantitatively. Qualitatively, it says in the ES that it should help.

PG: Let's move to 'Plan B'. Are there any alternatives to what the forecast offers us? Without the scheme, conditions get worse and worse, and with a road, some routes get better, then get worse and worse. Is it realistic (forgetting about whether it's standard practice or not) that county & urban authorities would do nothing to seek to help solve congestion in the absence of the scheme?

NC: No, we would carry on trying to put improvements in, but we're getting to the end of what can be achieved without the scheme.

PG: So there would be attempts, but they would fail?

NC: Yes, I think so. There are limited places you could put bus lanes. There has been a massive cycling push in the area (Cycling Demonstration Town). The park and ride site needs a new in-coming bus lane, which isn't viable without the scheme.

PG: So without the scheme, traffic & congestion are just going to get worse and worse & worse indefinitely?

NC: The area will suffer considerably. Economic growth on the peninsula is already pretty low, people already go and shop in Preston & Kendal rather than fighting their way into Lancaster, people commuting rat-run through inappropriate routes including Halton village & bridge, and some people go to Junction 35 to travel south on the M6! I've attended public consultations, listened to people's concerns, people can't easily move about the conurbation.

PG: So you don't feel that 'Smarter Choices' or road pricing has any impact on travel - things will just keep getting worse and worse and worse?

NC: Smarter Choices has been employed for years but there is a limit to what you can do.

PG: And you've reached the limit with that?

NC Yes

11. In the evidence of Adrian Worthington presented on 13.7.2007, on the other hand, Lancashire County Council has already confirmed that at least some of these policies are already being implemented, and their assessment is not yet completed. However Mr

Worthington cites figures of car use reductions which have been achieved in other areas which are entirely consistent with the ones I cited from national sources, namely a potential reduction in the range 10% to 20% of traffic.

12. What seems to be agreed now is that the effect of such measures on traffic levels has not been included in the forecasts of traffic from which the scheme's benefits have been calculated. This provides a biased estimation. I assert that the DfT Webtag guidance is that such policies should be implemented, and their effects included in the forecasts.
13. (For avoidance of misunderstanding, it might be objected that the guidance says only firmly committed projects should be included in the do-minimum description. This relates to specific infrastructure projects such as bypasses, intersection designs, etc. However the *policies* which are, or are 'likely' to be in operation should inform the forecasts in all cases).

**Do traffic conditions get better after the scheme opens?**

14. In my original proof of evidence I went to some length to show that, if the LCC forecasts were correct, they expected a long term continual decline in the speed of movement in the area, interrupted, but not reversed, by the scheme. After the scheme opened, I suggested, there was a temporary improvement but then a renewal of the decline. In examination of Mr Cleave's evidence in chief, he 'refuted' this claim, saying that the 'do-something case was consistently better than the 'do-minimum case' throughout the appraisal period.
15. Logically, it is quite possible for the do-something to be better (or less bad) than the do-minimum, but still worse than the present situation and getting worse year by year. This is indeed shown in the new figures in Table 1, provided by Mr Cleave at my request.

**Table 1 Showing Traffic Speeds in 2025, with the scheme, mostly slower than 2001, and getting worse.**

**COMPLETION OF HEYSHAM TO M6 LINK**

**Summary of Average Modelled Network\* Speeds (Km/hr)**

	BASE 2001	DO MINIMUM		DO SOMETHING	
		2010	2025	2010	2025
AM (07:00-10:00)	75.5	73.2	70.3	78.3	76.4
INTER (10:00-16:00)	69.9	65.2	61.0	68.7	64.9
PM (16:00-19:00)	61.9	57.9	54.2	60.6	57.3
12-HOUR (07:00-19:00)	68.4	64.4 (-6%)	60.5 (-12%)	67.9 (-1%)	64.5 (-6%)

\* Full network as detailed in LMVR, July 2005

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16. These show clearly (as I had suggested in my Proof of Evidence) that after opening of the link, traffic conditions get progressively worse from 2010 to the last modelled year 2025. For the inter-peak, PM peak, and 12-hour figures 2025 with the link is worse than 2001 was. For the AM peak, it is marginally better, but on a downward trend heading back to the 2001 conditions.
17. It is not under dispute that the model shows the ‘do-something’ case to be less bad than the ‘do-minimum’ case. My point is different, namely that the link is only expected to interrupt, not reverse, a long term anticipated deterioration in travel speeds. Overall, speeds will be worse in 2025 than they were in 2001. It is this prospect that makes the adoption of other transport policies not only desirable, but ‘likely’ (or indeed, virtually inevitable), and therefore makes forecasting their effects essential.

## **Is traffic in fact growing at the forecast rate?**

18. In my evidence I raised the question of two roads in Lancaster where traffic forecasts suggested increases, even though recent observed traffic levels showed decreases and the roads were described as close to, or over, capacity. Now we have further figures available from Lancashire County Council we can make a further assessment of this question with a much bigger sample of roads. The figures available from LCC are shown in the Annex, and compare the most recent observed flows with the modelled flows for 2001, and the forecasts for 2010 and 2025. Highlights of this comparison are as follows.

- The traffic forecasts for 2001 to 2010 suggest an average increase for the modelled roads of 13.1%.
- Of the overall increase of 13.1%, 9.3% had already taken place (for the network as a whole) in the period 2001 to 2005. Therefore it must follow (if the figures are correct) that the implied forecast growth from 2005 to 2010 is 3.5% in total, or a reduction from over 2% a year in the first four years, to a little over 0.6% a year in the latter five years, a very substantial reduction in the growth rate. This is not implausible, as it is consistent either with a network where the crucial links are close to capacity, or where traffic reduction policies are starting to pay off, or both.
- In this context a suggested resumption of a higher rate of growth in the period 2010 to 2025, than is implicitly forecast for 2005 to 2010, seems anomalous.

19. The question then naturally arises, is there any actual evidence of such a slowing of the traffic growth rate? Further evidence on this is available in figures provided by LCC of observed traffic counts within central Lancaster for a longer period.

20. Traffic counted at 15 locations in the city centre of Lancaster in 1998 gave 153386 vehicles, and by 2006 this had declined<sup>1</sup> slightly to 152463 vehicles. This is shown in Table 2. (Separate records for each counting location have also been published by LCC, as shown in Figure 2). These do strongly support the suggestion that traffic growth has

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<sup>1</sup> Note that this is not an indicator of the commercial attractiveness or otherwise of the city centre, for which travellers by bus and on foot also have to be included.

slowed substantially, and may even have halted, within Lancaster. Residents of the City suggest to me that this is more likely to be due to the high existing level of congestion than active policy intervention, which has so far been at a low level and with its main impacts still to be seen. In either case, however, it does support the argument that forecast increases in traffic within Lancaster, whose relief is a very major source of the estimated benefits of the link, are likely to be exaggerated. It also suggests, in line with contemporary thinking on urban transport, that there is likely still to be significant relief to be gained across the network from policy interventions.

Table 2 Observed traffic in the centre of Lancaster 1998 to 2006

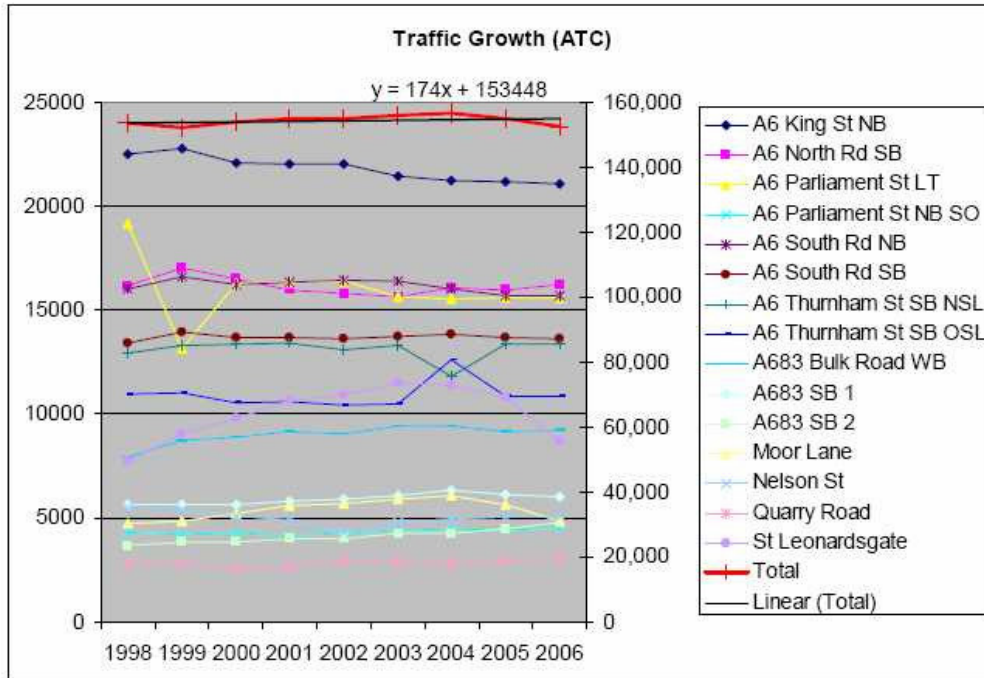
**TABLE 8.9: Average Yearly Traffic Flow Data 1998 - 2006**

	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>
Total	153,386	152,211	153,777	155,041	154,767	155,834	156,628	154,758	152,463

(from Transport Assessment CNN Lancaster, Centros Miller 11 May 2007, page 69)

Figure 2 Traffic at separate counting points 1998 to 2006

**FIGURE 3.2 Traffic Growth in Lancaster Town Centre Area for the Past 9 Years**



(from Transport Assessment Appendices CNN Lancaster, Centros Miller 11 May 2007)

**What would the effect be of including more realistic traffic policies in the appraisal?**

21. No assessment has been made of the effect of including any policies which are specifically aimed at easing congestion in the most sensitive places (such as pricing or public transport priority) or times of day (such as school and workplace travel plans) or people most likely to respond (such as individual travel advice). The closest we have, however, is an assessment of the effect of an across the board zero traffic growth rate. Since this is by definition not targeted at problem areas, it would have less impact than a similar change in overall traffic which had arisen from targeted policies.
22. Even so, new figures provided by LCC show that the across-the-board zero growth assumption reduces the benefit cost ratio substantially.

23. This is shown in the note Zero Growth Post-2010: Economic Appraisal, 06.07.2007. If zero traffic growth is assumed from 2010, but otherwise the same assumptions as in the case reported to the Inquiry, the estimated Benefit-Cost Ratio reduces from 7.65 to 5.45. However, at the same time a suggested separate adjustment has been made to allow for the increases in project cost, so far (in the Note Link Road and P&R Economic Appraisal, 12.03.07, inquiry document 1.57). This (separately) has the effect of reducing the BCR to 5.94.
24. If we put both effects together, across-the-board zero growth and higher costs would have the effect of reducing the BCR to a figure in the region of 4.2, a loss of some 45%, before taking account of the differential effect which appears to be taking place in Lancaster, and the impact of any targeted policies designed to reduce congestion by traffic reduction where the problem is greatest. (And also not taking into account recent developments in freight policy, or changes in the anticipated number of jobs<sup>2</sup>).
25. We cannot estimate the effects of this by back-of-envelope methods: it needs detailed modelling. But it has been established that quite modest and approximate changes in the assumptions make a disproportionately large effect on reduction on the estimated net benefit. Remembering that the largest proportion of the estimated benefit still relies on the unmodelled and unforecast maintenance of high congestion for the years 2025 to 2069 (while the costs are real, and close), the BCR case for the road is very much weaker than had previously been stated. I note that there are also other similar effects likely from other changes which are the subject of discussion in other notes, such as reduced employment benefit and impacts of changes in freight plans.

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<sup>2</sup> If it is true that faster travel generates jobs, then it must be true that slower travel suppresses them, and the net effect of the slowing of traffic over the period 2001 to 2025 would be to reduce employment not increase it.