

ALL/2/2P

Theme: Environmental Aspects

Proof of Evidence by

Keith Buchan

for the

MERSEY GATEWAY PROJECT

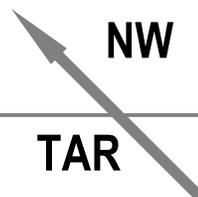
PUBLIC INQUIRY

on behalf of

The Alliance

comprising

the North West Transport Roundtable



and



May 2009

This proof of evidence relates to the implications of the following applications and proposed orders:

1. Planning application for full planning permission for works lying within Runcorn comprising improvements to the Central Expressway, Weston Link, the Weston Point Expressway and junction 12 of the M56 motorway, dated 31 March 2008.

Appeal references: APP/D0650/V/08/1203385/2095113 and APP/D0650/V/1203384/2095069

2. Planning application for full planning permission for works lying within Widnes comprising modifications of the northern approaches to the Silver Jubilee Bridge. Dated 31 March 2008.

Appeal reference: APP/D0650/V/08/1203386/2095114

3. Listed Building Consent Application for modifications to the Silver Jubilee Bridge, dated 31 March 2008.
4. The River Mersey (Mersey Gateway Bridge) Order (application under section 6 of the Transport and Works Act 1992 to the Secretary of State for Transport for an order under section 3(1)(b) of that Act).

Reference: TWA/08/APP/05

5. The A533 (Silver Jubilee Bridge) Road User Charging Scheme Order 2008.
6. The Halton Borough Council (Mersey Gateway – Queensway) Compulsory Purchase Order 2008.
7. The Halton Borough Council (Mersey Gateway – Central Expressway) Compulsory Purchase Order 2008.
8. The Halton Borough Council (A533 Central Expressway) Side Roads Order 2008.
9. The Halton Borough Council (A533 Queensway) Side Roads Order 2008.

1 Author

1.1 My name is Keith Alexander Buchan and this Proof is submitted as part of the advice provided to The Alliance, who are objectors to the scheme for a Mersey Gateway Bridge under consideration at this Inquiry. I have an MSc in Transport Planning and Management and I am a Member of the Institution of Highways and Transportation, and of the Transport Planning Society.

1.2 I have over 25 years of experience in transport planning, much of it for local authorities both as a senior officer and a consultant. Since 1990 I have been Director of the Metropolitan Transport Research Unit (MTRU). In this role I have undertaken projects for City, County and Regional authorities in the UK. This included extensive work on innovative bus schemes in the UK and Europe and travel demand planning (sometimes called smart choices or personalised travel planning). MTRU has also undertaken research for the DfT (and as DETR) on objectives led appraisal, accessibility planning, parking standards and PPG13. I have also worked for commercial companies, community groups and environmental interest organisations.

1.3 As far as climate change is concerned, I have recently completed a two year project on this in relation to transport policy (November 2008). Phase 1 proposals included a first year car sales tax on high emitters and the importance of carbon budgeting.

1.4 In 1996/7 I was a member of the Advisory Group for the 1997 National Road Traffic Forecasts and am currently a member of the DfT's Expert Group on reforming NATA (the New Approach to Transport Appraisal).

2 Introduction to the Proof

2.1 This Proof of Evidence deals with climate change. Amongst other things, it expands on the point made in my proof ALL/2/1P that the “Do Minimum” case as presented by the promoters of the MerseyGateway project *“is very unlikely to be acceptable to policy makers because it facilitates significant increases in carbon emissions”* (para. 2.2).

2.2 This Proof also sets out the new policy framework which is in place following passage of the Climate Change Act (CD/229) and the statutory advice published by the Committee on Climate Change.

Inquiry Theme 4

Climate Change: the requirements

3.1 Transport other than aviation is a “non-traded” sector, and is not within the EU carbon trading scheme. Thus it must provide its own pathway to carbon reductions. The non-traded sector as a whole will need to reduce emissions by 19% between 2005 and 2020. Allocations for individual sectors have not yet been set, but transport produces over half of the emissions from the non-traded sector and is one of the most responsive sectors to policy change. Further reductions will be needed to meet the ultimate aim of at least an 80% reduction in total emissions (traded and non-traded) by 2050. This latter target is also part of the Act.

3.2 The DfT response to the Climate Change Committee is scheduled for June, and the whole issue of how to deal with climate change in appraisal is the next subject to be dealt with by the NATA reform process¹. This follows on from some proposed revisions to NATA and the Assessment Summary Table (AST) published on 6th April. None of these have affected the need to test against a realistic alternative.

3.3 An appraisal should provide a test against policies on climate change as well as a simple carbon valuation. This is clear in other relevant regional policy documents, for example the Regional Spatial Strategy², and this Proof assesses the bridge scheme in the light of current policy, in particular highlighting the significant increases in emissions. From the evidence to hand, with the MGB in place, there is a 26 % rise in CO2 between 2006 and 2030.

¹ NATA Refresh: Appraisal for a Sustainable Transport System, DfT, April 2009

² See the North West of England Plan: Regional Spatial Strategy to 2021, September 2008 (CD/109) which has the key Spatial Principle: “Reduce Emissions and Adapt to Climate Change”

Climate Change impacts

4.1 Government policy on climate change has had a consistent direction for some time, but this has taken a more structured form with the passing of the Climate Change Act. This contained the requirement to set up a Committee on Climate Change (CCC), which in turn delivers advice to Government on the level of reductions needed. The Act contains two important milestones: a 26% reduction by 2020 and an 80% reduction by 2050. Both are compared to a base year of 1990.

4.2 However, achieving the targets at a specific date is insufficient to meet the challenge of climate change. This is because emissions stay in the atmosphere for considerable periods of time and it is in fact the total emissions within a given period which determine the degree of climate change. Thus achieving the target at the last possible moment while permitting high levels of emissions in the interim periods would fail to stabilise or slow the rate of growth of the level of greenhouse gas in the atmosphere.

4.3 For this reason, the Act specifies five year "budgets", starting in 2008. This allows some flexibility and adjustment, but keeps to a tighter reduction profile than the two target dates and creates a means of monitoring progress. The CCC has suggested budgets for the first three time periods, and Government will be responding in the summer.

4.4 One important and relevant distinction made by the CCC is between traded and non-traded sectors. Traded sectors include energy production and aviation. In these carbon credits are issued within an overall limit which reduces over time. The credits can be traded so that those who find it easy to reduce emissions will do so and sell their credits to those who would find it more difficult and costly.

This system has been piloted in the EU (Phase 1) and while it proved that trading could operate, the price of carbon was very low. This was because the number of permits issued was set far too high in response to pressure

from Member States. It remains to be seen whether the new system will work. Meanwhile the CCC has taken an optimistic view and 70% of reductions are forecast to flow from the traded sectors³.

4.5 Apart from aviation (and international shipping) transport is in the non-traded sector. This means that reductions will be policy led. The minimum which will be required from the sector as a whole is 19% between 2005 and 2020⁴. Transport is over half the non-traded sector.

4.6 The conclusion here is that there may be some variation in the 19% reduction, but this could be higher as well as lower. However, it is unthinkable that an increase in emissions would fit with Government or Regional Policy⁵.

4.7 This increase should be referred to in the AST and compared to the reductions set out in the CC Act and the CCC budgets. It should be noted that there is a qualitative difference between achieving targets which are absolute (as in the case of carbon reductions) and comparing marginal changes in costs between options. Thus the policy score should be major adverse, although this applies both to the Do Minimum and the Do Something. It may not apply to options which reduce emissions compared to 1990.

4.8 This approach is supported in webtag, Unit 2.1, para 1.3.11:

“For example, if an objective had been set to reduce emissions from transport to a specified level, and if emissions can be shown to be above that specified level, a problem of poor air quality can be said to exist. Thus, problems can be defined as unmet objectives.”

This Proof maintains that the failure to reduce carbon emissions is a major problem.

³ Climate Change Committee, The First Three Budgets, Summary and Recommendations, page 131.

⁴ Climate Change Committee, The First Three Budgets, Summary and Recommendations, Box 3.5 page 111 and Tables 3.4 and 3.5, page 132.

⁵ See Policy DP 9, The North West of England Plan Regional Spatial Strategy to 2021

Inconsistent but significant emission increases are forecast

4.9 There is one further issue which needs to be resolved, which is exactly how much emissions increase. Table 2 illustrates that the increases are significant both in the Air Quality Proof (HBC/11/1P) and the Transport Proof (HBC/8/1P), but are also different. The reason for this is that the Air Quality proof covers a smaller area, and may not include effects such as area wide re-routing to avoid tolls. The proposers have confirmed that the output from the traffic model gives the more complete picture. This is shown in Appendix AQ3 from HBC/11/2A where the localised study area for air quality is clear.

4.10 These figures show the extent of the failure to achieve national and regional policies on climate change. Instead of the national 19% reduction in carbon emissions between 2005 and 2020, there is an increase of 26-27%. This is the current best estimate for the transport network. It may be that transport has to achieve less than a 19% reduction, but given its importance the 26-27% increase would be virtually impossible to compensate for this in other parts of the non-traded sector. A simple sum illustrates the point. If transport is 50% of the non-traded sector, the rest would have to achieve a 72% decrease in emissions instead of 19%.

Table 2
Comparison of CO2 emissions from Air Quality Proof and Traffic Model

1 CO2 emissions from Table 12, Yvonne Brown Proof

2006	312,739							
	Do Min	Increase	as %	Do Som	Change/2006as %	Change/Do Min	as%	
2015	318,912	6,173	2.0%	305,246	-7,493	-2.4%	-13,666	-4.3%
2030	349,096	36,357	11.6%	340,808	28,069	9.0%	-8,288	-2.4%

Thus by 2030 CO2 emissions will have increased over 2006, even with the scheme, by 9%. A straight line interpolation to derive 2020 would produce an increase over 2006 levels of 1.4% as follows:

	317,100	4,361	1.4%
--	---------	-------	------

2 This can be compared with the TUBA model output used for the cost benefit analysis and AST

2006	1,211,271							
	Do Min	Increase	as %	Do Som	Change/2006as %	Change/Do Min	as%	
2015	1,285,996	74,725	5.8%	1,280,547	69,276	5.7%	-5449	0.42%
2030	1,536,320	325,049	26.8%	1,531,518	320,247	26.4%	-4802	0.31%
60 year period	89,973,334			89,681,988			-291,347	0.32%

4.11 Overall the conclusion is that the bridge proposal does virtually nothing to address what will be a completely unacceptable emissions increase by 2020 compared to today. It fails to make a contribution to achieving the carbon budgets which are about to become legally binding.

4.12 With or without the bridge significant additional action will be needed, and indeed the modelling undertaken is very helpful in highlighting this serious problem.