



A folly in the making -

SEMMMS A6- MANCHESTER AIRPORT RELIEF ROAD

Independent critiques reveal

- ◇ **A wrong hypothesis**
- ◇ **wrong assumptions**
- ◇ **wrong traffic data**
- ◇ **wrong solution that will not solve congestion**

Plus

- ◇ **A weak business case,**
- ◇ **The loss of a Green Belt divide/ urban sprawl**
- ◇ **Worsening air quality/ climate change concerns**

A CONTRARY CASE

resulting from analyses

commissioned by the

**North West Transport
Roundtable (NW TAR) &**

**Campaign for
Better Transport (CfBT)**

with papers by

Keith Buchan

Professor Alan Wenban-Smith

**The Campaign to Protect
Rural England (CPRE) and**

Friends of the Earth (FOE)

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SEMMMS A6-Manchester Airport Relief Road

CONTENTS

	Page
Acknowledgements	3
Introduction	5 & 6
Executive Summary/ Key findings	7 - 9
A critique focusing on traffic & public transport modelling by Keith Buchan	11 - 34
A critique focusing on the economics of the business case by Professor Alan Wenban-Smith (his pagination i-25)	36 - 63
A critique focusing on the environmental scoping report by Jackie Copley, CPRE	65 - 80
A critique focusing on climate change and air quality by Helen Rimmer, FOE	82 - 93
Conclusion: An appeal to government and the promoting local authorities	94

Annexes

Responses to the SEMMMS A6-Manchester Airport consultation by:

CPRE Lancashire Branch	95
Friends of the Peak District	99
Friends of the Earth	106

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LILLIAN BURNS

Convenor

North West Transport Roundtable

Greater Manchester Transport Resource Unit,
St. Thomas Centre,
Ardwick Green North,
Manchester, M12 6FZ.

e: BrLlIn@aol.com

Website: www.nwtar.org.uk

SIAN BERRY

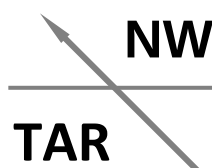
Road Campaigner

Campaign for Better Transport

16 Waterside,
44-48 Wharf Road,
London, N1 7UX

e: sian.berry@bettertransport.org.uk

Website: www.bettertransport.org.uk





This photograph was uploaded onto the Styal page of 'yourlocalweb.co.uk' website by Keith Williamson

Productive Green Belt used for agricultural and grazing surrounds much of Manchester Airport. The image above shows a field at Styal approaching the airport from the east. The image below shows a footpath by Beech Farm off Styal Road which leads to a pedestrian bridge over the Styal-Manchester railway line. The fields in both cases would be lost to make way for the western end of the SEMMMS A6- Manchester Airport Road if it were built.

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A folly in the making: SEMMMS A6-Manchester Airport Relief Road

INTRODUCTION

WHO WE ARE

The North West Transport Roundtable (NW TAR) is one of eight regional roundtables which operate under the auspices of the Campaign for Better Transport. We are an umbrella body whose main purpose is to promote sustainable transport, sustainable land use and healthy lives. We engage in transport and planning work at all levels, including participating in public inquiries and examinations in public. We do not participate in direct action but seek to persuade decision makers to take on board environmental considerations by well-reasoned arguments.

The Campaign for Better Transport (CfBT) was established as Transport 2000 nearly 40 years ago. An independent charity, its goal is to achieve better public transport and improved conditions for walking and cycling for the sake of communities and the environment. It works to achieve this by lobbying national and local government, publishing research work, fielding speakers for many events and engaging in a wide variety of fora. CfBT's predecessor, T2000, set up the Transport Roundtables around the UK during the late 1990s.

WHY WE COMMISSIONED THIS REPORT

Environmental Non-Governmental Organisations (NGOs) such as Transport 2000 (CfBT's predecessor), the Campaign to Protect Rural England (CPRE) and Friends of the Earth (FOE) felt vindicated in 1994 when the government's leading independent transport advisory body, the Standing Advisory Committee on Trunk Road Assessment (SACTRA) published its seminal report 'Trunk Roads and the Generation of Traffic'. These NGOs had long maintained that building new roads was unsustainable because, apart from other environmental consequences, the new road space simply generated more traffic movements than would not otherwise have existed without them. SACTRA confirmed this was the case and the government accepted their report.

SACTRA went on to produce another seminal report two years later, 'Transport & the Economy', which showed that there is no automatic connection between building major new transport infrastructure and economic benefits – especially in a well developed country with a mature economy such as the U.K. This was also accepted by government. As a result, economic impact assessments became a regular feature of transport planning. Together, these reports prompted a major re-think in the approach to transport planning with more emphasis on sustainable modes and 'smart choices' and the Department for Transport (DfT) accepted that a number of 'smart choices' or 'soft measures' could, cumulatively, produce very impressive outcomes. It is therefore puzzling and disappointing that there has been an about-turn by central and local government during the economic crisis of the early 21st century. Road building is seriously back on the agenda despite more awareness of knock-on environmental implications and commitments in the interim to carbon reduction, in an effort to kick start the economy.

This report was commissioned to examine proposals by three local authorities (Stockport Metropolitan Borough, Cheshire East Council and Manchester City Council) to build the A6 to Manchester Airport Relief Road (A6-MARR). This would comprise the A555 Manchester Airport Western Link Road, the A555 Manchester Airport Eastern Link Road and a short northern section of the former A523 Poynton Bypass. Economic benefit is a key argument for building A6-MARR.

A significant aspect to this particular road-building proposal is that, if it became a reality, it would be just the first part of a new, interconnecting, network of roads in South East Manchester/ North East Cheshire. The other constituent parts would be the remainder of the Poynton Bypass, (now re-named the Poynton-Woodford Relief Road), which would include the A523 Poynton to Macclesfield Improvement (previously a separate scheme) and the A6 Stockport North-South Bypass which includes the Stepping Hill Link. This is not our hypothesis, it is the avowed intention of the local authorities concerned. The Cabinet of the new Unitary Authority of Cheshire East committed just under £1m. in September 2012 to preparatory work on the Poynton-Woodford Relief Road and have confirmed that it would stretch as far south as the Macclesfield Silk Road (incorporating the Poynton to Macclesfield Improvement). Stockport MBC have consistently re-confirmed their support for a major north-south bypass of the town over the years and the Greater Manchester Combined Authority have allotted a proportion of their transport fund to it to match promised government funding. All the proposed new roads, which would be co-dependent, were examined in some depth in the South East Manchester Multi-Modal Study (SEMMMS) which reported in 2001. Hence, all these roads are referred to as 'SEMMMS'.

The SEMMMS report recommended that all the roads remitted to it should be built with the exception of the Poynton to Macclesfield Improvement which was then removed from the Macclesfield Local Plan. However, it advised that the remaining schemes should be constructed to a lower standard than was remitted to them. (The A6 Stockport Bypass was remitted at motorway standard and all the other roads were remitted as grade separated dual carriageways). It also recommended that a number of complementary public transport and other measures should be put into place as part of an integrated approach. One such complementary measure, designed to attract the high car-owning population of South East Manchester/ North East Cheshire out of their cars and onto rail was that there should be a Macclesfield-Manchester train service at 20-minute intervals. This never materialised.

The NW TAR and CfBT are very conscious of the fact that aspirations for new roads take on a momentum of their own. We are also very aware that the traffic models which were the foundation of all the multi-modal studies predicted high traffic growth that has not happened. SEMMMS was one of the first multi-modal studies to report and its base-line information is now very much out of date, dating back 15 and more years. Yet it would appear to still be the main platform on which the local authorities are pushing forward. We felt that this should be queried, especially in the light of renewed enthusiasm for road building. We therefore commissioned two of the country's top transport planning specialists to carry out an analysis of the traffic modelling and the business case and called on two of the North West region's environmental NGO officers to make contributions as well. This is the report of their findings.

LILLIAN BURNS & SIAN BERRY

EXECUTIVE SUMMARY:

KEY FINDINGS FROM THE CfBT/ NW TAR INSPIRED INVESTIGATION

These are the key findings from the Campaign for Better Transport/ North West Transport Roundtable inspired investigations.

Traffic & Public Transport Modelling

No reliable picture has been presented by the modelling of current or future travel conditions. However, even as far as it goes, it predicts additional congestion and increased carbon emissions. It is apparent that building the new road would not restore conditions to what they are now. In other words, the scheme would not solve anything. The other key points are:

- Due to major changes since the SEMMMS final report was produced, the modelling carried out then and therefore the findings are no longer relevant.
- Current modelling and forecasting is based on the road scheme alone and is not capable of comparing solutions across different modes of transport
- The model is inconsistent and pre-dates the recession and many public transport initiatives such as the Northern Hub.
- The majority of 'benefits' accrue due to longer distance traffic, not local traffic as is the stated purpose of the scheme.
- There are unanswered questions about how known new and proposed developments have been included in the traffic model.
- There is a lack of genuine sensitivity testing relating to assumptions about land use, parking, smarter choices and traffic stability forecasts.
- There are major questions over whether the 'Area of Influence' is too small and therefore whether longer distance impacts are picked up.
- New forecasts and model runs are needed to reflect the lack of traffic growth and the availability of new policy instruments since 2001.

The Economics of the Major Scheme Business Case

The business case has serious weaknesses. They are:

- The strategic approach is based upon peripheral greenfield development (ie. an unsustainable growth strategy) . This has serious impacts on surrounding centres.
- Better economic results have been achieved in continental cities through a combination of urban regeneration and investment in public transport.
- There is no guarantee the Manchester Airport City/ Enterprise Zone will attract its identified, niche target market, ie. occupiers that are both airport-dependent and

Greater Manchester linked. It is thus no more than an exercise in branding a property development than a serious response to real economic opportunity.

- Even if there was a determined strategy to limit users to the narrow target audience, there is no mechanism for doing so either through planning or as landlords
- The SEMMMS strategy was designed within the context of the N.W. Regional Spatial Strategy which focused development on urban areas and on regeneration. That context is about to be lost with the revocation of RSSs. However, SEMMMS itself is not a valid transport (planning) strategy and there is no spatial strategy that sits above it which calls for the type of peripheral development now being pursued.
- The £800+m of economic benefits attributed to the A6-MARR is not well-founded.
- Time savings account for 90% of economic benefits but their value is highly questionable. The actual value of time savings could be as little as 20% of that claimed.
- The 'benefits' are derived from comparing future projections - one with the scheme and one without. So, the time savings in this case are compared with 'do nothing'.
- The value of time savings disappears over time. In any event, other forms of economic benefit and any traffic growth gradually cancels it out and then convert into time losses.
- Under both scenarios presented – build the scheme or do nothing – congestion will increase and the economy decline. In other words, both represent deteriorations from the present, falsifying the implicit claim to real economic gain from the scheme.
- 70% of the scheme benefits accrue after 2032 which does not inspire confidence..
- The management/ delivery case is complex with many potential opportunities for it not to materialise in the manner envisaged.
- The Earn Back model of financing depends on the infrastructure being delivered but there is a delay between the call for money (during construction) and it coming on stream (following occupation of developments). The anticipated timescale between the two is 10 years, which is optimistic.
- There will be a hit on the existing baseline yield from business rates as a result of businesses relocating to the Manchester Airport City/EZ.

The Environmental Scoping Report

The Environmental Scoping Report is deficient for the following reasons:

- It makes no reference to the Regional Spatial Strategy which is still extant (and a legal entity).
- The approach is not one that is likely to tackle all likely effects on the environment and on social and economic factors as required by the National Planning Policy Framework (NPPF).
- It is not based on up-to-date information. Much data dates back to 2003.
- It has not drawn on the River Basin Management Plan as required by the NPPF.
- It has not called for the Sustainability Appraisal to follow DEFRA's Specific Impact Test.
- It lacks the detail required by the Design Manual for Roads and Bridges (DMRB).
- It makes no reference to the DfT's transport appraisal system, WebTAG.

- It presents no evidence to indicate that several options have been analysed in detail and these were whittled down from a longer list of potential solutions to identified problems. Investigative work appears to have been conducted on one road option and one alignment.
- Only some of the potential landscape impacts are acknowledged and Natural England's National Character Area profiles receive no mention.
- Sight lines are not asked for.
- Only one of Green Belt's five purposes is mentioned and there is no requirement for Green Belt loss to be quantified.
- There is no requirement for a breakdown of the grade of agricultural land that would be lost.
- There is no requirement for an assessment of the amount of hedgerows that would be lost or, particularly, for the amount of ancient hedgerows to be quantified.
- The subject of light pollution is inadequately covered.
- Air quality is inadequately tackled.
- The approach to the need for an early Health Impact Assessment is inadequate.
- Nature conservation and ecological requirements are approached in a less than robust manner.
- The Peak District National Park Authority does not appear to have been involved, contrary to the Duty to Co-operate.
- Many agreed and proposed developments of substantial scale do not appear to have been taken into consideration.
- The area covered by the Environmental Scoping Report is not sufficiently extensive.

Climate Change and Air Quality Impacts

- The cumulative climate change and air quality impacts have not been assessed.
- There is a lack of up-to-date traffic generation forecast for the Manchester Airport City/ EZ.
- The A6-MARR should not be assessed in isolation from other linked major development.
- There are clear instances in Air Quality Management Areas (AQMAs) in the south of Greater Manchester and Disley where the proposed road would worsen air quality levels that are already in breach of EU legal limits.
- The Business Case takes insufficient cognisance of potential effects on human health.
- The financial risk of the Local Authorities being fined for exceeding EU legal limits relating to air quality have not been taken into account in the business case.
- The business case admits that the scheme would lead to an increase in carbon emissions. Greater Manchester has committed to reducing emissions by 48% by 2020.



Photograph supplied by PAULA – Poynton Against Unnecessary Link Roads to the Airport

The important Green Belt that separates Woodford and Poynton in Cheshire East from Hazel Grove in Greater Manchester would be lost if the SEMMMS A6-Manchester Airport Relief Road was built. Both the image above and the one below- demonstrate the high water table that exists in this area.

Photograph of frozen water table supplied by PAULA



**A critique of the SEMMMS
A6-Manchester Airport Relief Road
traffic & public transport modelling
by
Keith Buchan
Metropolitan Transport Research Unit**

Report to NW TAR

Statement of qualifications and experience

This report has been prepared by Keith Buchan, Director of the Metropolitan Transport Research Unit (MTRU) a position he has held since 1991. Keith has an MSc in Transport Planning and Management and is a Member of the Institution of Highways and Transportation, and the Transport Planning Society (TPS).

Before setting up MTRU he worked for local authorities, including the Greater London Council, where he became Head of Highways Policy Division. This included responsibility for the London Area Transport Model and preparing the Annual Transport policies and Programmes. His work has included transport strategy, environmental impacts, modelling and forecasting, demand responsive transport, "new generation" bus priority, heavy vehicle studies and both urban and rural package and challenge bids. This has involved engagement with stakeholders including individual local businesses as well as their representative bodies. His work on road pricing including a state of the art report in 1991 (revised 1994) which involved collecting and analysing information from proposals in Singapore, Cambridge, Randstad, Stockholm and Milan. Studies into road freight pricing in Europe and application in the UK were published in 1996 and work for the companies involved in HGV pricing in Europe updated this study in 2011. He was a member of the EU Peer Review Group on reviewing LHV in 2010-2011.

With MTRU he has worked for a wide range of clients in the public and private sectors including DfT, TfL, Manchester and West Midlands PTEs, City of Nottingham, City of Cambridge, CPRE (in the North West and nationally), the then Countryside Commission, English Heritage, WWF, Nottingham Business partnership, Chelsfield, Westfield, and currently South Downs National Park Authority.

Keith was the consultant to the first green commuter plans in the UK in Nottingham in 1995 which helped to launch travel planning in the UK. In 2001 he helped set up the first TfL travel plan unit. He has undertaken travel planning work for Luton airport, BAA's UK operations and Heathrow Airport. He has also produced a series of tourism and aviation demand studies including the effects of UK "staycationing".

In 2008 he completed a major project on climate change and transport which was presented both to Government and the Climate Change Committee. Principles such as the use of continuous budgeting rather than distant single targets was analysed in detail and is now widely accepted, while proposals such as the introduction of a carbon related charge for vehicles at the point of purchase have also been adopted.

1 Introduction and the evidence base behind the current consultation

There are two important aspects to this commentary on the SEMMMS (South East Manchester Multi Modal Study) A6 to Manchester Airport Relief Road proposals and the transport appraisal published concurrently with the public consultation.

Solving transport problems

The first is a very simple one. What is the problem that the scheme is designed to solve, and how far has it solved it? As in the Treasury Green Book, and the detailed appraisal guidance from the Department for Transport (DfT), available on the web as Webtag, interventions should always be in relation to solving problems, and problems are defined in relation to overall objectives. Examples are that people should be able to travel safely, be able to access the services they need as well as employment opportunities, to travel without damaging the environment or adding to climate change. This is set out clearly in plain English in the opening sections of Webtag, Units 1 and 2. The flow diagram from Webtag is Annex 1 to this report.

The second is whether the modelling work undertaken has produced a reliable picture of current and future travel conditions, including the impact of new development as well as changes to the economy and the population.

If the modelling were accurate, and the problems predicted are not solved by the scheme being appraised, the scheme should not proceed and an alternative solution would have to be sought. If the modelling is not accurate, it is imperative that it is revised to correct its deficiencies.

In this case it is clear that the latest modelling predicts a lot of additional congestion compared to today caused by new development and growth, together with an increase in carbon emissions (after allowing for improvements in vehicle efficiency). It is equally clear that the road scheme proposed, together with public transport schemes now planned, does not restore conditions to anywhere near the present. In other words neither the future nor current problems of congestion nor that of carbon emissions are solved by the scheme, in fact they get worse compared to today. This is so obvious from the modelling it is surprising that it has not caused an immediate re-running of the option development process, as envisaged in Webtag. This has to include land use planning as well as transport, since both are within the policy remit of the local authorities and were a key feature of the first SEMMMS report in 2001, which is examined in more detail later.

What is the evidence base being used to justify the scheme?

In order to understand the current modelling and forecasting work, published in November 2012, a number of clarificatory questions were sent to the SEMMMS team, some of which have been answered. The list and current state of play are set out as Annex 2 to this report.

During the course of this, it was said very clearly that the team did not consider the published technical work, in particular the Business Case, as part of the consultation. Indeed, they say that the

forecasting and modelling work is the subject of discussion with DfT, and thus is subject to change on some of the issues we have identified for clarification.

This creates an unusual and very difficult position in relation to the consultation.

The first is this. Where is the Webtag consideration of alternative solutions to solve the transport problems, and when was it carried out? The answer to this must be the 2001 SEMMMS report. It does not appear that any comparable review of the alternatives has been undertaken. The 2001 SEMMMS modelling and forecasting is now well out of date and has been rerun at least once (2004/5 for the highway elements alone) before the current material was published in November 2012. There is thus no up to date comparison of the scheme with a best performing alternative.

Second there is the issue of the consultation itself, the majority of which concerns detailed junction design. This is in the context of the following statement in the current consultation options leaflet:

Why it is needed

There is currently no direct east-west transport link through south east Greater Manchester. The lack of this connection is contributing to congestion on major and minor roads. This means that people and goods cannot move easily, directly and efficiently through south east Greater Manchester. The congestion being created is constraining the local economy, affecting air quality in local areas and reducing access to key destinations. These problems will become significantly worse in the future if no action is taken. The A6 to Manchester Airport Relief Road has been identified as the best solution to address this problem, as part of the overall South East Manchester Multi-Modal Strategy (SEMMMS)."

In the first instance, it is necessary to correct the opening statement. There **are** direct east-west road links **through** South East Greater Manchester: the southern section of the M60 and the eastern end of the M56 combined and also the A560. The proposed A6-Manchester Airport Relief Road does not, for a significant part of its journey, run **through** Greater Manchester; it runs through the North Eastern part of the new Unitary Authority of Cheshire East.

In the second instance, it should be noted that the justification for the scheme, and the assertion that it solves the problems of congestion and air quality, relies on SEMMMS to provide its evidence base. In relation to the words "identified as the best solution to address this problem" the question is which evidence is being used? In fact, neither the 2004/5 revisions, nor the current published Business Case made any attempt to look at alternatives or across travel modes. The Webtag process of non-highway option comparison was thus carried out prior to 2001, using forecasts for car traffic growth that have proved to be completely unrealistically high. There has been no real assessment of anything other than the highway option since, as the analysis of the public transport content reveals.

The public transport content of the current Business Case

The current Business Case, in the Public Transport Validation Report (PTVR), Appendix B3 to the Business Case is very clear, saying

"The impacts on public transport users are expected to be small and the main focus of the modelling will be on the highway and demand models." (Para 1.2.2)

“As the main focus of the SEMMMS modelling is the demand and highway models, the validation of the public transport model has been less of a priority. While the public transport model has been included within the model system, it is purely to enable the assessment of the impact of the highway scheme on public transport and therefore it is not considered that the validation must be as rigorous as if it were for the assessment of public transport schemes.” (Para 2.2.1)

“As such, the area of influence of the scheme has been the main focus in the calibration and validation of the public transport model, with the full model area validation viewed as a secondary matter.” (Para 2.2.2)

However, Section 6 points out that

“As there was insufficient data available for the Area of Influence of the SEMMMS scheme to form complete screenlines and cordons, the TAG 3.11.2 matrix validation check has not been undertaken. Rather, a simple comparison of matrix size against other sources has been undertaken.” (Para 6.1.3)

This turns out to be a comparison of the public transport trips in the model with what might be expected from the population of the modelled area (said to be 10 million) using an average trip rate for all modes and thus not from the model at all.

In addition, there is the not insignificant matter of the number of modelled public transport trips. From the table in the PVTR, it appears that in the model, in the Greater Manchester area, there are about a third less than the actual recorded bus trips¹. This is even greater since rail and tram is included in the model figure. In addition, before the A6-Manchester Airport Road could be built, the Manchester Metrolink will be delivering a regular service between Manchester City Centre and Manchester Airport. Bus is of course currently the dominant public transport mode for local trips in the area, but this is a huge discrepancy and must cast doubt on the validity of the public transport element in the highway demand model.

It should also be noted that much of the data used for the public transport matrices originates in surveys carried out between 2001 and 2004, and the 2001 Census². Since then, public transport trips have increased and the Government has committed significant extra funding to heavy rail, as well as light rail, in the Manchester City Region. Meanwhile Cheshire County Council have accessed funding to carry out a £6m. improvement of Crewe railway station, which has a heavy rail connection to the airport. It is highly predictable that the percentage of public transport trips will certainly increase further once the trans-Pennine rail services to Manchester Airport are improved and the whole of the Northern Hub project is delivered. This will allow thousands of extra rail movements to criss-cross the north of England without having to funnel through the Piccadilly bottleneck.

In conclusion this section says that the results *“highly comparable to the PT mode shares suggested by TEMPRO”*.

¹ See Table 6.1 of the PTVR, and Table 1.8 of the November 2010 Greater Manchester Transportation Unit report 1580, which includes data for 2009, the model base year.

² See section 3 of the PTVR

TEMPRO is of course the building block of the land use and traffic forecasts and the implication must be that if the figures in the PTVR were adjusted to match the real public transport counts, they would not be at all comparable.

Because of this a simple table was requested from the SEMMMS team of the results from the model outputs as follows:

Mode share by public transport

	Manchester Airport	Area of Influence	Modelled area
Base Year			*
2017 Do Minimum			
2017 Core			
2032 Do Minimum			
2032 Core			

** There is a non-modelled estimate of 9% in the PT validation report*

This has not yet been provided.

The issue of the public transport content is important for two reasons:

1. The modelling is supposed to fully reflect mode choice in its forecasting of highway trips – if the PT figures are wrong the Highway figures will be suspect
2. There can be no update to the assessment of alternatives if public transport is poorly represented in the current Business Case modelling, let alone walking, cycling and Smarter Choices.

2 What did the original SEMMMS say about traffic growth, and are the forecasts still valid?

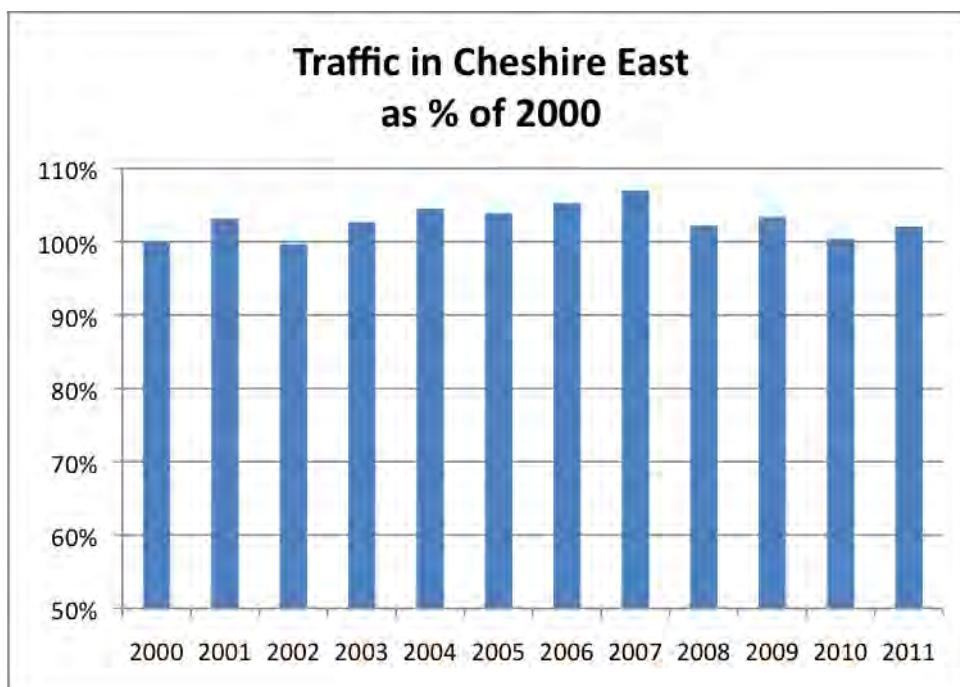
In the previous section we have set out an issue in relation to the lack of a multi-modal approach to the current Business Case and some worrying discrepancies in the public transport forecasts. It is also important to remember that the first SEMMMS report was produced in the context of strong underlying traffic growth, and that this did not materialise, locally or nationally. The national forecasts have been revised downwards since 2001 and are constantly under review.

This lack of traffic growth occurred prior to the recession, which has of course produced further downward pressure. The following table, reproduced from the Transport for Greater Manchester Highways Forecasting and Analytical Service (HFAS) show this quite clearly for the Greater Manchester area³. The most southerly part of the Area of Influence defined for the Business Case adjoins but is outside it.

³ HFAS 1657, October 2011, latest HFAS spreadsheet shows no change 2010/11 (HFAS 1694)

Table 3 National, Greater Manchester and Manchester Traffic Growth 1993- 2010			
	Manchester	Greater Manchester	National
1993	100	100	100
1994	103	102	102
1995	102	102	104
1996	101	102	105
1997	102	103	105
1998	103	103	105
1999	99	104	105
2000	98	103	105
2001	92	102	105
2002	91	102	105
2003	92	103	105
2004	91	103	106
2005	91	102	105
2006	91	102	106
2007	89	102	104
2008	87	100	103
2009	88	99	103
2010	85	97	102
Index: 1993 = 100			

In addition, the DfT undertakes traffic counts in East Cheshire, although the count sites have been changed over the last decade. Using the 145 sites for which data is available for all years, the following chart has been prepared. This shows, even on roads outside the Greater Manchester area, traffic has not exhibited the rates of growth expected in the SEMMMS 2001 report.



It is also worth remembering that according to the latest Census, Greater Manchester has seen an 8% increase in population between 2001 and 2011. The lack of traffic growth despite this is quite likely to be related to the strong policies on sustainable travel and land use planning in the LTPs as well as national trends. For example, travel to the centre of Manchester by sustainable modes has grown in the peak and off peak, and car use has fallen, between 2002 and 2011.

This is shown in the table below, again from HFAS.

Table 20 Car and Non-Car Trips into Manchester Key Centre										
Time Period	Year	Car	Bus	Rail	Met	Cycle	Walk	Total	% Car	% Non-Car
07:30-09:30	2002	31955	25254	16612	6301	509	5279	85910	37	63
	2005	32567	24696	16743	6556	562	5723	86847	37	63
	2006	32958	25071	17950	6048	470	7485	89982	37	63
	2009	27021	24615	20753	6716	1102	8877	89084	30	70
	2010	27402	23418	21638	6448	1143	9599	89648	31	69
	2011	26801	22438	23330	6832	1190	9207	89798	30	70
	2010/2002	0.84	0.89	1.40	1.08	2.34	1.74	1.05		
10:00-12:00	2002	17560	11415	6287	2408	184	3000	40854	43	57
	2005	16159	11655	6429	2451	234	3713	40641	40	60
	2006	18541	13079	6938	2801	139	3528	45026	41	59
	2009	15452	15379	10012	3450	466	5320	50079	31	69
	2010	15386	13851	9343	2947	321	5583	47431	32	68
	2011	14595	14809	11651	2695	368	5063	49181	30	70
	2010/2002	0.83	1.30	1.09	1.12	2.00	1.69	1.20		

What is clear is that any forecast based on traffic growth should be open to challenge as to why it goes against the clearly established traffic stability in the wider urban area, and decline in the centre.

This has been accompanied by overall growth in the number of trips – in other words not as a result of the recession. This is vastly different from the context for traffic forecasting which underlies SEMMMS and seems to be assumed for the current business case. This currently assumes a 10% increase in traffic between 2009 and 2017. Looking at the decade following on from the original SEMMMS report, there is no evidence that a baseline forecast should include any traffic growth.

Further details of the SEMMMS 2001 report are given in Annex 3.

The baseline traffic and TEMPRO

The national traffic forecasts are based on estimates of trips generated locally, using the DfT tool TEMPRO (Trip End Model Presentation Program). In this case, TEMPRO has been adjusted to allow for the new development predicted.

Thus the local forecast for the total trips from new and existing development, which form the basis for the national traffic forecasts, are constrained in the Business Case model to the regional totals from TEMPRO. This has an important purpose. The TEMPRO system is designed to ensure consistency across schemes to avoid a situation in which every individual scheme is optimistic about development and added together produce a national total that is completely implausible. It works as follows.

TEMPRO uses local zones and predicts a level of growth in trips for each of them but does not deal with individual developments. When specific new development is added to a zone so that the TEMPRO total is exceeded, trips in other zones have to be reduced so that the national total is not exceeded. This is usually done by reducing trips from zones close to the new development. It is clear from this description that the forecaster has to be very careful not to reduce development in other zones unrealistically – an example in this case could be lowering the amount of development in other areas of Greater Manchester to allow growth close to the airport.

There are very serious implications from this, including differences in mode split and in regeneration of other local areas. The danger is that the future economy is predicted to one with a pattern of development and public transport use which is more car based than intended, will cause the regional carbon reduction targets to be breached, and will reduce the viability of the GM public transport networks. This would be against the published objectives of at least the Greater Manchester local authorities.

In this case the text implies that the constraints have been applied locally, but no information is provided which would show where the balancing reductions have been applied.⁴ Nor does there appear to be a reference case based on TEMPRO with no adjustments, as set out in Webtag. This would probably produce very different traffic forecasts in the Area of Interest (AoI).

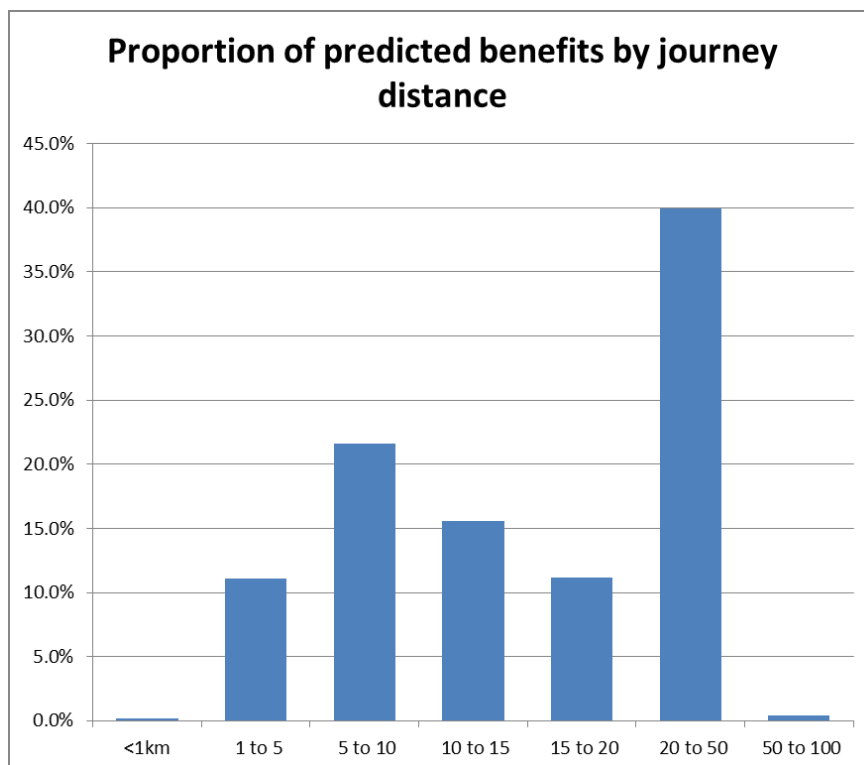
For this reason questions were asked of the SEMMMS team specifically on TEMPRO and how it was applied. It is quite possible that this will be changed as a result of the DfT discussion with the team and so far details have not been provided. It is an issue that will need to be examined closely, and means the consultation lacks crucial information.

Is the road for local traffic or longer distance commuters and other travellers?

Another specific issue which has arisen is the question of where the benefits of the scheme are in terms of shorter versus longer distance trips. The model output is shown in the following chart.

⁴

Data requested



This is particularly relevant for two reasons:

1. It appears to contradict the original justification for a local and not a strategic road scheme, as set out in SEMMMS and agreed by subsequent Secretaries of State
2. It suggests that the area over which the scheme has an influence is significantly larger than the Area of Influence (AoI) in the Business Case. This is because much of the predicted benefit (>52%) is from longer distance journeys over 15 kilometres. These are the ones most likely to benefit from the Northern Hub initiative, electrification schemes which have committed funding and the plans to build a fourth platform at Manchester Airport rail station.
3. These longer journeys are in excess of the width of the AoI and suggests that even if all the shorter trips which benefit were within the AoI, there would still be a need to analyse exactly where the benefits were falling. This is not dealt with in the social distribution analysis in the Business Case but is critical in terms of whether the scheme meets its local objectives.

3 Further Modelling Issues and Summary

Modelling is always complex and requires detailed examination. We set out below five main areas which we have started to explore pending the results of any revisions to the Business Case:

1. How well the modelling describes the existing travel patterns across all modes
2. Whether the traffic model has taken into account likely mode choices for travellers to the airport once the new Metrolink service is open, trans Pennine services have been electrified and the Northern Hub has been delivered
3. What development has been included in the traffic forecasts for the future appraisal
4. How far traffic levels have been changed to reflect uncertainty in overall economic growth, population and employment
5. How far traffic levels have been changed to reflect different policy choices on both land use and development
6. Whether the assumptions used for the model are realistic, for example in terms of recent trends in traffic or the relocation of employment within the Greater Manchester area or the proposals by Stockport and Cheshire East Council to establish new settlements along the route of the A6-Manchester Airport Relief Road (at the Woodford Aerodrome site and Handforth East, respectively).

It is difficult to be more detailed at this stage since the process of clarification is not complete, and the modelling may well be revised following receipt of comments from DfT and from reviews such as this report.

Our current concerns under the five headings can be summarised as follows.

1 Modelling accuracy

The current modelling is not fully multi-modal and the consultation contains assertions based on the 2001 MMS report, in turn based on older data.

There is thus no up to date systematic analysis against identified objectives and problems, as set out in Webtag, and no up to date consideration of other solutions.

This particularly unfortunate since the assumptions on traffic growth used in 2001 have proved to be incorrect and there is good local data which shows traffic falling for at least part of the Aol.

There is no walking or cycling in the demand model, this conceals the real impact of locating the new development in the planned locations and serving them by the proposed road scheme.

The public transport forecasts are not robustly validated and thus mode choice and the impacts of the scheme are again not well represented. This means the road traffic predictions will not be robust.

In particular the mode split predicted by the model for areas where it is currently measured, such as central Manchester and surrounding areas including Stockport, is not shown for the modelled base year or future years.

Some of the DfT guidance has not been followed, for example there is no options report⁵ nor was an analysis of time costs and savings by size (See Webtag References, Annex 4 attached to this report). In response to a question, the raw data to produce such an analysis was provided and this has been used for the Economic Report for NW TAR which accompanies this one.

The Area of Influence (AoI) is relatively small, and this is surprising considering that the benefits from the scheme are mainly to longer distance traffic. In the current business case over half of the benefits come from journeys which are longer than the diameter of the AoI. This is unexplored in the Business Case.

2 *Changes in development assumptions for the appraisal*

The inclusion of different specific developments is guided by the Uncertainty Log – this is in fact a log of the likelihood of developments from the approved to the “idea” stage. The classifications used in Webtag⁶ are:

1. **Near certain:** The outcome will happen or there is a high probability that it will happen.
2. **More than likely:** The outcome is likely to happen but there is some uncertainty.
3. **Reasonably foreseeable:** The outcome may happen, but there is significant uncertainty.
4. **Hypothetical:** There is considerable uncertainty whether the outcome will ever happen.

The log for this appraisal is provided as Appendix B7.

The log is used to provide three scenarios for different levels of development: Pessimistic (less), Core, and Optimistic. The content from the log can be varied, but Webtag says that the Core Scenario should be based in the first instance on the first two categories above.

There are two key comments. The first is that log itself needs to be checked and we assume that a revised version will appear shortly. The second is that the scenarios are sufficient to test the robustness of the core proposal. There should be genuine sensitivity testing, for example a TEMPRO reference case and a case in which all traffic growth factors are minimised (while remaining plausible).

3 *Variation in other base line assumptions for traffic forecasting*

Leading on from the previous point, it is clear that Webtag envisages that variations in the underlying economic and population growth assumptions should be used to test the robustness of the appraisal. It is not clear whether this has been done.⁷ They should incorporate stable or falling levels of traffic⁸ justified locally and similar to those emerging in other cities across the UK⁹.

⁵ A specific requirement for this is in draft but referred to in other parts of webtag. The principle of generating and assessing options to solve problems is in the existing guidance flowchart.

⁶ Unit 3.15.5, Para 1.4.5 and following table

⁷ Data requested

⁸ Data requested

⁹ These are currently the subject of DfT research into forecasting and actual differences in traffic growth between cities and other areas.

4 *Variation in policy assumptions for traffic forecasting*

Again Webtag states that alternative approaches should be tested as part of the appraisal process, but there is also the issue of how policy changes are reflected in forecasts. Some further guidance has been issued by DfT on Smarter Choices, but there is no evidence that this has been used.

5 *Realism of forecasts*

As well as checking the TEMPRO changes for realism, the whole issue of how realistic the traffic growth forecasts in this report really are. As the economic assessment, done in parallel with this transport report, shows, the majority of benefits are in the far distant future, but start with significant growth of 10% in the period between 2009 (base year) and the opening year of 2017.

4 Conclusions and Recommendations

Conclusions

The modelling and forecasting context has changed radically since the SEMMMS 2001 report. It should not be relied upon for the current consultation, in particular that this scheme is the best solution to the problems of congestion, air quality and climate change.

The modelling and forecasting published concurrently with the consultation in the Business Case is focussed on the road scheme alone and is not capable of comparing solutions across modes.

The Business Case is not yet finalised and the material which should underpin the consultation is subject to change.

An initial analysis of the Business Case shows serious problems, including:

- Inconsistency between stability and decline in traffic locally, pre-dating the recession
- Serious inaccuracies in the public transport model used to show the impact of the current road scheme including mode share and total number of trips
- A majority of benefits accrue to longer distance traffic, not local traffic as is the stated purpose of the scheme
- No account appears to have been taken of the Northern Hub initiative and the impact this, and electrification schemes, will have on longer distance journeys
- Unanswered questions over how the new developments have been included in the model, especially in relation to TEMPRO
- Lack of genuine sensitivity testing, including assumptions on land use, policies including limiting parking and Smarter Choices, and a traffic stability forecast
- Questions over whether the Area of Influence is too small and fails to pick up longer distance impacts.

For these reasons the statement that this scheme is the only solution to local problems is not accurate and has no recent evidence which supports this claim.

Thus the current consultation is misleading and premature.

Recommendations

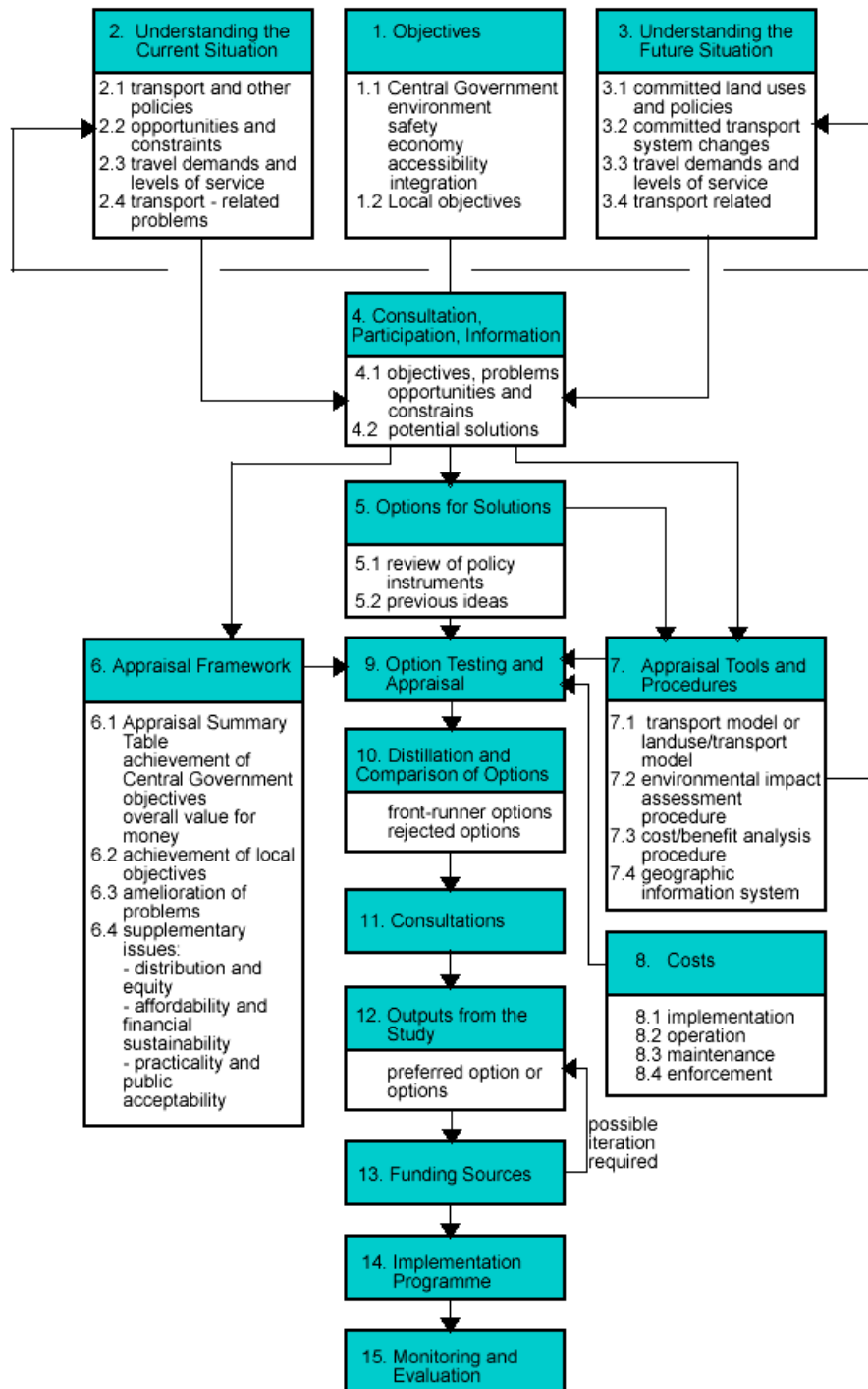
New forecasts and model runs should be undertaken to reflect the lack of traffic growth and the availability of new policy instruments since 2001.

The consultation should be withdrawn until this work is complete.

The work should be undertaken in a transparent manner to ensure that any future consultation is on a sound basis.

Annex 1

Webtag Unit 1.1, Figure 1



Annex 2, as sent by email

Technical data requests following on from published documentation.

- 1 Analysis of time savings by size including both negative and positive. **TUBA output supplied**
- 2 Analysis of negative and positive changes in cost by the standard 16 sectors (net changes in cost are already provided). **Not received yet**
- 3 Provision of the model results for the Base Year equivalent to a missing column in Tables 5.1 and 5.2 in the Forecasting Report. **Received**
- 4 Provision of the annual benefits over the 60 year time period, at present there are two snapshot years only, in Tables 3.9 – 3.12 in the Economic Assessment Report. **TUBA output supplied**
- 5 Provision of more mode split information, there is an estimate in the PT validation report but not the modelled results. For example, we would want to be able to fill in the following table:

Table 1
Mode share by public transport

	Manchester Airport	Area of Influence	Modelled area
Base Year			*
2017 Do Minimum			
2017 Core			
2032 Do Minimum			
2032 Core			

- There is a non-modelled estimate of 9% in the PT validation report

Not received

- 6 Details of the realism testing of the estimated matrix at the zone level. Analysis of the change in trip distance is provided, but given the significant problem in using the original survey-based matrix there may be significant issues about how realistic the productions and attractions are in relation to the existing developments. **Not received**
- 7 Confirmation that the carbon results are for the wider modelled area and include webtag predicted improvements in vehicle efficiency. **Confirmed**
- 8 Clarification of the model zoning and level of simulation. It appears that the AoI is a full link and junction congested assignment model, but I am not sure how far the buffer zone extends and how this and the external zones are modelled. Please direct me to a section with map if I have missed it. **Not received**
- 9 Confirmation that no allowance has been made for HS2 or full Northern Hub schemes in the public transport schemes in any of the scenarios. **Confirmed**

Thanks for your help

Keith Buchan

8th January 2013

As at 24th January 2013

Annex 3

South East Manchester Multi Modal Study (SEMMMS) revisited

As part of the series of multi-modal studies (MMS) which followed the New Approach to Transport Appraisal (NATA) in 1998, SEMMMS, which publishes its report in 2001, showed some of the recurring features of that process. Although they were supposed to be objectives led rather than problem led, they tended to be based on corridors which had already been studied in direct relation to a road scheme rather than starting without any preconceptions. This meant that surveys and modelling were often focussed on the road route related areas. The multi-modal elements could sometimes feel like add-ons rather than part of a fresh look at transport problems.

Thus the outputs tended to be packages with road schemes - in the case of SEMMMS a lower scale set of road schemes than first proposed, with a series of ideas for improving sustainable modes. However, in common with other MMS, there was an attempt to set out strategic objectives. In many ways the MMS process as a whole could be seen as transitional, in which road schemes were still the main output, but other modes were beginning to be considered, and this in turn suggested that new ways of forecasting and modelling would be required.

It is worth saying that policies such as travel planning, either at destinations (for example Green Commuter Plans) or resident based (such as the Sustainable Towns) and now usually referred to as "Smarter Choices", had not yet been fully defined, nor had the scale of their impacts been assessed. Thus they were not included in any meaningful way in modelling terms, although they were present in many of the MMS strategies. The competition between sustainable modes and road transport was not well modelled either, in particular walking and cycling was often left out altogether. These modes did get some recognition in the MMS through the objectives led process. However, it was unusual for their improvement to be allowed to influence the level of road traffic demand. The current strength of the revival in rail use for passenger and freight (notwithstanding the recession) had not been established and was not factored in to the MMS plans.

On the other hand, several MMSs considered road user charging, and it was sometimes seen as an essential prerequisite for the success of any package. SEMMMS preferred a strong land use approach to encourage sustainable travel, backed up with limits on levels of parking. This was also considered essential for the package to succeed. This was confirmed in the

The overall picture is of progress towards a more genuinely multi-modal approach, but with key elements missing in terms of representing sustainable modes, and significant compromise caused by the fact that the studies' key purpose was to deal with road schemes which had been on hold and then "remitted" to the MMS.

The SEMMMS strategy and proposals

This picture is reflected in SEMMMS, for example the Final Report¹⁰ is clear that,

"7.4 The genesis of SEMMMS was the removal of three road proposals from the Government's programme. These were:

¹⁰ SEMMMS Final Report, September 2001

- *the A6(M) Stockport North South Bypass;*
- *the A555 Manchester Airport Link Road West (MALRW);*
- *the A555/523 Poynton Bypass.”*

It goes on to recommend lower scale versions for all three, but with important qualifications, saying in para 7.7,

“Rather, it is recommended that the study area local authorities develop smaller and more appropriate scale road proposals along the protected alignments. These should be designed to provide relief for the study area communities affected by inappropriate through traffic, but not to provide a new strategic route of regional and potentially national significance.”

[N.B. There was a further separate scheme remitted – the A523 Poynton to Macclesfield Improvement but the SEMMMS final report did not find a case made for this and said in para 7.10:

It is judged, at this stage, that such improvements can be achieved through on-line (or close to line) improvements” and it left the decision-making process on this to the then Cheshire County Council].

The road schemes that were sanctioned were put together in a package with:

- Improvements to Metrolink (including a link between Stockport and the Airport) and feasibility studies for further extensions
- Development and extension of Quality Bus Corridors and bus priority
- Small scale rail service improvements pending implementation of regional improvement
- “Taking forward” a Western Link from Manchester Airport, which would continue from the Airport rail spur, and pass under the Airport before joining the Chester — Altrincham Line
- A feasibility study of an eastern rail link to the airport

In addition, there are a set of proposals around “behavioural change” which include:

- Public information campaigns
- Co-ordination and promotion of travel plans
- Promotion of Safe Routes to Schools
- Proactive measures such as Travel Blending (similar to home-based travel planning)

In terms of managing demand, the report is very clear about the importance of land use planning, saying in para 7.62 that,

“The transport strategy must be complemented by appropriate land-use policies that support the promotion of more sustainable travel patterns. Indeed, inappropriate land use developments have the potential to undermine some, or all, of the recommended strategy and erode the benefits will it bring.”

On the subject of where development should take place, and the use of limiting parking in new developments to control demand, it goes on to say, in paras 7.63 and 7.64,

“There should be a presumption against development adjacent to the proposals for new roads along the protected alignments of the remitted schemes which form part of this strategy. Any developments that do proceed must be subject to rigorous sequential tests based on a hierarchy of national, regional and local economic and community importance that demonstrate that no alternative site is suitable and available and that transport impacts of the development are acceptable. The implication of this recommendation is that developer funding is not a suitable way of promoting the road elements of the strategy. There also is a concern that any inappropriate development (as defined, say, by a process of sequential tests) close to the M56 and/or M60 will result in traffic diverting from the motorway to local roads, which in turn could undermine the strategy. In this context, it is important to note that both the M56 and the M60 form part of the Network of Long Distance Strategic Routes defined in (draft) Regional Planning Guidance.”

Accompanying land-use policies to support the strategy, there should be a consistent set of parking standards applied to new developments across the study area, framed within the conurbation and regional context, to seek to minimise the use of the car and promote the use of public transport, walking and cycling.”

Finally it recommends regeneration through town centre action plans, saying in para 7.65,

“The promotion of established village, district and town centres offers the opportunity to encourage a more sustainable pattern of movement by encouraging the use of local facilities. Underpinning current national planning guidance and policy is a view that there is a causal link between the extent that urban centres are used, and their accessibility and intrinsic quality: if people use local centres more frequently, accessing them on foot, cycle or by bus, they will use car-dependent centres and facilities less and thus travel less by car.”

Overall the SEMMMS message is clear: the highways have been reduced in scale and should not play a regionally significant role, this is combined with a wide range of proposals, both to promote sustainable modes and to avoid strategic road capacity being created. Locational policy is seen as a key part of the transport policy.

This was reflected in the then Transport Minister's response to the SEMMMS report, which confirmed the need for:

- Strict enforcement of land use policy to promote development decisions which reduce car dependent
- Urban regeneration that maximises the attractiveness and potential of existing centres for employment, retail and leisure opportunities.¹¹

¹¹ See SEMMMS8 progress report March 2002

SEMMMS modelling

After the SEMMMS Strategy was approved by Government in March 2002 there followed a large scale highway modelling and forecasting exercise, based on the road schemes, for detailed submission to DfT. This was in relation to what is referred to as the “New Relief Road” (NRR) scheme, and is shown on the map below, reproduced from the 2005 Local Model Validation Report (LMVR).



Figure 1.2
SEMMMS New
Relief Road

The model did not include a validated mode split model or any pedestrian or cycling elements. The results were used for an economic appraisal and then submitted to the DfT for funding. These documents are not readily available (some only in hard copy) but were accessed by MTRU in relation to a study on the Manchester Airport Enterprise Zone (MAEZ).

The original reports were completed for submission in 2004, but there were serious issues raised by the DfT with the accuracy of the model in reproducing today's traffic flows. This was confirmed for this report by inspecting the validation data in the LMVR. The traffic forecast also seemed unrealistically high. DfT asked that a review should be undertaken on both. This was done, and new model validation and forecasting reports were produced in 2005. It is this material which it is assumed it is to be replaced by the current Business Case published in November 2012. Even after revisions, there appear to have been remaining validation problems, although not to the extent of those in the 2004 version.

In fact, funding was not made available for the NRR, but in the pre-budget report of November 2008, a sum of up to £165million was identified, *“dedicated to creating a new road link between Manchester Airport and the A6”*¹².

In the 2011 MTRU report, the need for an update was set out, and the following elements were listed as requiring attention:

1. Highway network and accompanying zones better suited to sustainable modes and town centres
2. Full consideration of trip generation from different employment and housing locations
3. Incorporation of travel plans (Smarter Choices) in the demand management effects
4. Recognition of the growing public transport role and its competition with travel by car
5. Understanding of how traffic growth has slowed down (even before the recession) and what the implications are for any future schemes
6. Understanding of the residual traffic generation, either by changing destination (redistribution) or making more trips (generation).

As far as can be seen from the documentation so far, some additional work has been undertaken under items 2 and 6. The rest are still not represented in the appraisal published to date.

To illustrate why this is necessary, the traffic forecasts in SEMMMS, which covered 2003 to 2011 (made in 2005) have been compared to actual traffic flows as recorded for the GM Local Transport Plan¹³. Before doing so, it is worth saying that the 2004 traffic forecasts were clearly far too high, based on national trends and already out of line with local data available at the time, and LTP predictions. These showed that flows were, and would continue to be, relatively stable. In order to provide what was called a *“half way house”*, half the growth in the 2004 report was assumed for the 2005 report¹⁴.

The Airport was treated, however, as a special case. This was for the reason that passengers were expected to grow strongly and were based on a throughput of 30million by 2013. Thus the original 2004 Airport growth forecast was rolled forward into the 2005 report.

It is very clear that this compromise does not reflect what actually happened:

- Nationally
- In Greater Manchester overall
- In Stockport town centre
- At the airport

Nor is this a product of the recession, as an examination of the traffic data illustrates.

¹² SEMMMS Progress Report 2006/7 to 2007/8, jointly produced by the six local authorities

¹³ A series of monitoring reports by the Greater Manchester Transportation Unit, including GMTU 1580 (overall) and GMTU 1587 (Stockport), HFAS 1654 and 1694

¹⁴ SEMMMS3 Forecasting Report June 2005, Section 5.8

This reflects a change in circumstances which is only partly caused by the recession. There are several important factors, none of which are likely to return to pre-recession conditions in the foreseeable future.

- *Direct cost of road use:* oil prices have raised the marginal cost of motoring, without introducing road pricing, but mimicking some of its impact. Over the next 20-30 years this effect will slowly decline as much more fuel efficient vehicles are purchased, but this is outside most of the current model periods.
- *Local mode switching:* congestion, travel planning, and an improved public transport offer, have supported a clear switch of mode for many car users. This is true across all GM town centres as well as in the city centre. It represents a success for LTP2.
- *Longer distance mode switching:* while car traffic has grown slowly then declined, rail use has continued to grow, linked to more reliable and frequent services, including the intercity route between London and Manchester.
- *Non-motorised modes:* cycling was 17% higher in 2009 than in 2005 (LTP2 baseline). Walking seems to have declined by about 3% over the same period, although this is an NTS derived figure and thus sample sizes were low.
- *Airport passengers declining:* the Aviation White Paper forecasts are clearly far too high and the long term effects of the oil price rise have yet to fully work through the system. Manchester Airport passenger traffic will be well below the levels assumed in the SEMMMS forecasts, and in 2011 not much different from 2003.

Conclusions on SEMMMS and highways

It is interesting to note that, while the aviation and traffic forecasts were out of date almost as soon as they were completed, the SEMMMS strategy, which has underpinned the Local Transport Plan, is still of some value. In particular, the clear links between levels of demand, land use planning, and parking limits, continue to be highly relevant.

In fact, quite a number of initiatives have proceeded without the road schemes, and the core justification for them, that congestion would grow if they were not built, has faded as traffic has stabilised and fallen (not only as a result of the recession). The am peak journey time surveys, undertaken as part of LTP monitoring¹⁵, show a 5% improvement over the last five years. This covers all modes on a sample of 15 target routes. This suggests that the deterioration in journey time in the SEMMMS analysis, itself predicated on rising levels of traffic, has not and will not occur. This in turn means that the economic benefits, based on saving time, will not occur either.

Overall the SEMMMS highways schemes analysis has been overtaken by events including the success of many of the LTP actions in increasing the attractiveness and use of sustainable modes.

Resurrecting the scheme as part of a car intensive Enterprise Zone would undermine this success rather than supporting it. Such an approach would be against what is set out as the overall SEMMMS transport and land use strategy.

¹⁵

GMTU Report 1580, Table 1.21

Annex 4

Relevant extracts from Webtag

1 Unit 2.1, para 1.4.4

1.4.4 It is important to ensure that the approach to planning data forecasts is broadly consistent between studies. To ensure that this is achieved, forecasts of population, households and employment published by the DfT in the TEMPRO database should be used as a reference case. In cases where a land-use/transport interaction model is used, study-specific forecasts of planning data will be generated by the model. Forecasts should also be prepared using the TEMPRO data as a benchmark. The differences between the modelled forecasts and the TEMPRO data should be displayed and the implications of the differences explored and reported.

2 Unit 3.5.2, para 1.3.8

Travel Time Savings

1.3.8 Following the NATA Refresh, April 2009, travel time savings should be split into six bands according to the magnitude of the saving:

- Less than -5 minutes;
- -5 to -2 minutes
- -2 to 0 minutes
- 0 to 2 minutes
- 2 to 5 minutes
- Greater than 5 minutes.

3 Unit 2.1

Step 2.4: Current Transport-Related Problems

1.3.10 The analysis of the current problems on the transport system is a crucial step. It brings into sharper focus the issues at which the study should be aimed. As explained in Objectives and Problems ([TAG Unit 2.2](#)), there is little or no material difference, in concept, between a comprehensive set of quantified objectives and a comprehensive set of problems identified by relating conditions to thresholds.

1.3.11 Problems may be analysed at very broad or very specific levels. At the broad level, a problem may be identified where it is judged that an objective is not being met. 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.

1.3.12 Problems may be identified in a number of ways, including:

- by consulting people about their perceptions of the problems, both those that they encounter when travelling and those which result from other people travelling (see Step 4 below);
- through discussions with representatives of the regional and local authorities and the transport providers to gain an understanding of the transport and planning professional's perceptions of problems with the transport system (also see Step 4 below);
- by conducting audits of specific elements of the transport system in order to gain a deeper understanding of the roles performed and to analyse the extent to which the expected aims are not met; and
- by analysing outputs from the transport model in comparison with thresholds so as to enable the geographic display of the worst conditions on a consistent numerical basis across the study area.

Unit 3.15.5

1.4.5 The uncertainty log should include an assessment of the uncertainty of each individual input by placing it into one of four categories. In deriving this uncertainty measure the analyst should use the table below as a starting point. Many of the uncertainties will be local in nature, so drawing on local knowledge and experience to reach a final categorisation will be important. Where analysis covers a wide geographical area, it is likely to be sufficient to focus on the area in the vicinity of the scheme being considered. The values derived should be justified with a short piece of explanatory text.

Classification of Future Inputs:

Probability of the Input	Status
Near certain: The outcome will happen or there is a high probability that it will happen.	- Intent announced by proponent to regulatory agencies. - Approved development proposals. - Projects under construction.
More than likely: The outcome is likely to happen but there is some uncertainty.	- Submission of planning or consent application imminent. - Development application within the consent process.
Reasonably foreseeable: The outcome may happen, but there is significant uncertainty.	- Identified within a development plan. - Not directly associated with the transport strategy/scheme, but may occur if strategy/scheme implemented. - Development conditional upon the transport strategy/scheme proceeding. - Or, a committed policy goal, subject to tests (e.g. of deliverability) whose outcomes are subject to significant uncertainty.
Hypothetical: There is considerable uncertainty whether the outcome will ever happen.	- Conjecture based upon currently available information. - Discussed on a conceptual basis. - One of a number of possible inputs in an initial consultation process. - Or, a policy aspiration.



Photograph supplied by PAULA

Mill Hill Hollow, January 2013. All the trees in the images above and below are in the line of the A6-MARR

Photograph supplied by PAULA



**A critique of the
economics of the SEMMMS
A6-Manchester Airport Relief Road
business case
by
Professor Alan Wenban-Smith
Urban & Regional Policy**

SEMMMS: A6 to Manchester Airport Relief Road:
A review of the economics of the Major Scheme Business Case

Final Report
to Campaign for Better Transport (CfBT) and
North West Transport Activists Roundtable (NW TAR)

25 January 2013

Urban & Regional Policy

48 St Agnes Road
Birmingham
B13 9PN

Tel 07977 859411

e-mail alanwenbansmith@pobox.com

SEMMMS - A6 to Manchester Airport Relief Road: a review of the economics of the Major Scheme Business Case

Contents

1. Introduction		
	<i>Statement of experience</i>	1
	<i>Scope</i>	2
	<i>Structure</i>	3
	<i>Summary of conclusions</i>	3
	<i>Strategic</i>	3
	<i>Economic</i>	4
	<i>Delivery</i>	4
	<i>Commercial/financial</i>	5
2. Costs		6
	<i>Introduction</i>	6
	<i>Design options and uncertainties</i>	6
	<i>Mitigation and complementary measures</i>	7
	<i>Risks and optimism bias</i>	7
3. Benefits		
	<i>Issues</i>	9
	<i>How economic benefits arise from time-savings</i>	9
	<i>Quantification and valuation of benefits</i>	9
	<i>Critique of EAR valuation of benefits</i>	11
	<i>Ultimate beneficiaries</i>	11
	<i>Equilibrium modelling</i>	11
	<i>Short time-savings and losses</i>	12
	<i>Valuation of time-savings</i>	13
	<i>Appraisal period and discount rate</i>	14
	<i>Accidents, Vehicle operating costs, Conclusions</i>	14
	<i>Wider economic benefits</i>	15
4. Business Case		17
	<i>Strategic Case</i>	17
	<i>Economic Case</i>	19
	<i>Management/Delivery Case</i>	20
	<i>Commercial and Financial Case</i>	20
Appendix 1: Valuation of time-savings by year (2017-2076)		22
Appendix 2: Effect of reweighting time losses		25

A6 to Manchester Airport Relief Road: an economic review of the Major Scheme Business Case

2 Introduction

Statement of qualifications and experience

- 2.1 This report was prepared by Alan Wenban-Smith. He holds the degrees of MA (Cambridge), MSc (Toronto) and DipTP (Newcastle) and is sole proprietor of the Urban & Regional Policy consultancy. He is a member of the Royal Town Planning Institute (MRTPI), has been a member of the RTPI's Policy, Practice and Research Committee since 2005, and is also the RTPI's representative on the Board of the Transport Planning Society. He was Visiting Professor of Planning at Newcastle University (1997-99) and at Birmingham City University (2005-12).
- 2.2 Alan Wenban-Smith has held senior local authority planning posts in the North East and Birmingham, including lead responsibilities for transport, planning, urban regeneration, economic development and regional policy in both areas. He led regional and metropolitan planning and transport consortia in the West Midlands, producing the first (national) integrated transport 'Package' bids for the conurbation (forerunner of LTPs), the first Regional Planning Guidance and the first Regional Transport Strategy. He was an external adviser on transport research to DoT and DETR from 1995-98.
- 2.3 As a consultant Alan Wenban-Smith has worked with Cambridge-based economic development consultants SQW (formerly as a Director and more recently as an associate), transport consultants MVA (where he acted as Planning Adviser from 1996 onwards), and in his own name as Urban & Regional Policy. He has spoken and written extensively on linking transport policy to other aspects of urban and regional policy. He has been a frequent witness on housing and transport matters to parliamentary Select Committees from 1996-2012, and was a special Adviser for the ODPM Select Committee examination of the South East Growth Areas in 2002/3.
- 2.4 Recent projects he has undertaken which are particularly relevant to the present case in terms of location and/or subject matter include the following:
- 2012: Ellesmere Port to Helsby Rail Study – a review of potential of a light-weight rail link (for Cheshire West & Chester Council, with Parry Associates);
 - 2011: Manchester Airport City and Enterprise Zone –a review of the economic case (for CPRE-NW, with Metropolitan Transport Research Unit (MTRU));
 - 2009-10: Mersey Gateway Bridge – a review of the economic case and PLI witness (for NW TAR and FOE);
 - 2009: High Speed Rail – report on complementary measures for regional development (for Greengauge21, the HSR public interest group);
 - 2008: London Land Use Transport Integration model – chaired and reported on Peer Group Review (for Transport for London);
 - 2006: Advice on Implementation Plans for Regional Spatial Strategies (for English Regions Network, with MVA);
 - 2004-2012: Bexhill-Hastings Link Road – reviews of business case and PLI witness (for CfBT and Hastings Alliance);

- 2003/4: *'Integration of RTSS with spatial planning policies'* - principal author and main researcher (for DfT, with MVA).

Scope

- 2.5 Urban & Regional Policy has been commissioned by the Campaign for Better Transport (CfBT) and the North West Transport Activists Round Table (NW-TAR) to research the economic aspects of the Major Scheme Business Case (MSBC) for the A6 to Manchester Airport Relief Road (A6-MARR), submitted to the government by the Greater Manchester consortium of local authorities. The brief requires review and report on the MSBC itself, and on the following Appendices:
- Appendix A: the evolution of A6-MARR within the South East Manchester Multimodal Strategy (SEMMMS)
 - Appendix B6: the Economic Assessment Report (EAR)
 - Appendix E the detailed cost breakdown of the scheme;
 - Appendix F: the Project Initiation Documents (part of the Delivery Case)
 - Appendix G: technical notes on inflation and optimism bias assumptions
 - Appendix J: the outline Benefits Realisation Plan
 - Appendix N: notes on the derivation of Employment and GVA Benefits; and
 - Appendix O: an independent Cost Report by EC Harris.
- 2.6 Another consultant (MTRU) is simultaneously reviewing and reporting on:
- Appendices B1-7: the technical transport and appraisal model design, validation and output reports
 - Appendix C: the completed Appraisal worksheets
 - Appendix J: the outline Benefits Realisation Plan
 - Appendix L: a technical note on the rationale for the scheme and details of alternative highway scenarios assessed as part of the business case.
- 2.7 A connected study is also to be carried out into Appendix D, the Environmental Scoping Report.
- 2.8 The following appendices to the MSBC are not specifically allocated within this scheme:
- Appendix H: Balfour Beatty's independent surveyor's report into 'buildability', rates quantities and prices
 - Appendix I: a report on Complementary Measures and Mitigation Measures
 - Appendix K: the Communications Strategy (included within Appendix F)
 - Appendix M: an assessment of the Social and Distributional Impacts of the scheme.
- 2.9 The MSBC itself runs to 129 pages, and the appendices listed in para 1.5 run to over 300 pages more. While the remaining material was not central to the work reported here, there was an occasional need to check within them – for example in considering the basis of benefits attributed to user time-savings (Appendices B1-7), mitigation of adverse impacts (Appendix I). Similar considerations applied to the need to co-ordinate between the studies being carried out in parallel. This further material is of at least equal volume.

- 2.10 This large volume of mostly highly technical material was posted on the SEMMMS A6-MARR website in mid-November, four weeks after the consultation opened. This has obviously placed at a significant disadvantage those, like CfBT and NW TAR, who have sought to comment within the consultation period ending on 25 January. It has inevitably also influenced the approach taken in this report. In particular, while seeking to cover all the elements of the brief, the focus of this review is primarily on the Economic Assessment Report (Appendix B6), because this is the source of the main economic arguments for the scheme put forward by its promoters.

Structure

- 2.11 The remainder of the report is in three main Sections:
- a) **Section 2** reviews the costs of the scheme, based upon the material in Appendices E, G and O, paying particular attention to areas of uncertainty (eg where design options are still open or where independent reviewers have made reservations), and to the treatment of risk and optimism bias.
 - b) **Section 3** reviews and critiques the benefits that have been ascribed to the scheme, based mainly on the materials in Appendices B6, J and N, paying particular attention to those elements that form the largest proportions of the quantified benefit (primarily those based upon user time-savings), or are most important to the strategic argument for the scheme (employment and productivity, wider economic benefits such as agglomeration, and regeneration of disadvantaged or run-down areas).
 - c) **Section 4** reviews and critiques the MSBC in the light of the evidence of the preceding sections, following for this purpose the 'Five Cases' approach mandated by DfT:
 - Strategic Case: the fit with wider public policy
 - Economic Case: the value-for-money
 - Commercial Case: the commercial viability
 - Financial Case: the affordability
 - Management Case: the deliverability.

In addition to the material reviewed earlier, this draws on Appendix F. In accordance with the brief, and mindful of the limitations of time and resources already mentioned, the emphasis is mainly on the first two elements – the strategic and economic cases.

Summary of conclusions

- 2.12 Collecting these general observations under the DfT's 5 cases headings - 1.11 (c) above - serious weaknesses are summarised below (more detail is given in Sections 3 and 4).

Strategic case

- 2.13 The strategic approach to growth set out in the MSBC is predicated upon exploitation of several major greenfield sites around the Airport and environs. 'Growth' is thus defined in terms of the construction and occupation of new commercial premises. This fails to appreciate the displacement effect of excessive peripheral development on existing centres and communities.

- 2.14 There are other reasons for believing that large-scale peripheral development supported by major road schemes, such as proposed here, represents a suboptimal strategy. Better economic results have been achieved in a wide range of continental cities through a combination of urban regeneration and investment in public transport.
- 2.15 The argument put forward for large-scale development at and around the Airport depends upon such locations being especially attractive to airport-related development, and that such development would be particularly beneficial to the greater Manchester economy. This requires the space to be occupied by tenants having *both* an over-riding need to be co-located with the Airport, *and* strong linkages into the economy of Greater Manchester. The evidence suggests that this is in fact a very narrow niche. Moreover, there is no mechanism (whether of landlord or planning control) capable of delivering such a result. The Manchester Airport City/ Enterprise Zone development is thus an exercise in branding a property development rather than a serious response to a real economic opportunity.
- 2.16 It should also be noted that the A6-MARR is claimed to fall within the strategic transport case set out in SEMMMS. However, the spatial strategy which is the context of SEMMMS has been abandoned: the legislative basis of the Regional Spatial Strategy (RSS) which embodied it is being repealed, and the development proposals for the Airport City (and other developments in the area) represent a diametrically opposed spatial approach.

Economic case

- 2.17 The £800+m of economic benefit attributed to the A6-MARR scheme is not well-founded. Time savings account for over 90% of economic benefits identified in the appraisal, but this value is not robust and its strategic significance is unclear, because:
- a) The EAR is argued as though the output of the appraisal is benefits to transport (and so to the economy *compared with the present*. This not so: the time-savings are a *comparison with doing nothing*. A 'benefit' can thus be generated as easily from a poorly-performing 'do nothing' as from a well-performing scheme.
 - b) There is little evidence offered on which to base a conclusion, but such as there is suggests that congestion will be getting worse under both these scenarios. With or without the A6-MARR scheme, the projections imply that congestion will increase and the economy decline compared with the present. The scheme, and the spatial strategy of which it forms part, therefore fails in its main aims.
 - c) The low discount rate and assumed growth in earnings means that over 70% of the benefit over the 60-year appraisal period accrues after the end date of the modelling (2032). Little confidence can be attached to such estimates.
 - d) The recently provided figures on the distribution of *time-savings* and *time-losses* show (in addition) that without a dubious and un-evidenced assumption about the relative value of losses and gains, the user benefits would be only about 20% of the levels claimed.
 - e) The value of time-savings is lost over time, and although these time-savings may be converted into other forms of benefit, there is only a sparse account of the central economic issues of who ultimately benefits and how.
 - f) In any case, once all the initial time- savings have been taken up into other forms of economic benefit, the anticipated further traffic growth will generate time-losses.

These will be converted into economic losses, which in time will cancel out any remaining economic benefits. This is not taken into account.

Management/delivery case

- 2.18 A huge amount of detail is provided concerning possible approaches to potential delivery issues. However, it is in the nature of delivery that unexpected problems arise in the course of implementation, so are difficult to deal with in advance. It is difficult therefore to comment, except to say that too complex a plan can impede the necessary responsiveness and flexibility to events.

Commercial/financial case

- 2.19 Local financing depends on an 'Earn back' arrangement: local authorities will be able to retain for a period of time any additional business rates generated by new development and apply these revenues to funding the necessary infrastructure. There are clearly at least two major risks associated with this deal:
- a) The infrastructure money will all have to be spent before any additional rate revenues arise – and the full rate revenues will only be forthcoming once property is both built and occupied. The paper on Gross Value Added (GVA) and jobs (Appendix N) speaks of a 10 year period for development to 'mature' (and this is perhaps optimistic, given the scale of developments proposed). There could be a long gap between the call on funds by contractors and the availability of these funds.
 - b) More seriously, to the extent that the new developments are occupied by businesses displaced from existing centres (whether existing businesses moving, or new businesses that would have otherwise located there), there will be a hit on the baseline rate yield. Given the lack of leverage to ensure additionality, this is a very real risk. It is not clear where this risk will be borne: by the local authorities or by the Treasury, but the question is crucial to the commercial/financial case.

3 Costs

Introduction

- 3.1 The broad cost headings for the A6-MARR scheme are summarised in Figure 2.1 below from Chapter 5 of the MSBC and Appendices E, G and O. I am not qualified to comment on the engineering detail of the cost estimates provided, but underlying these estimates are assumptions about design options and complementary and mitigation measures. In addition there are surrounding risks with potential impact on costs, such as the effects of development delays on financing costs and the level of optimism bias. These are commented on below.

Figure 2.1: Summary of costs (£m, 2010 Q2 prices)

Cost heading	Cost (out-turn)	Comments
Preparation costs (2010/11- 2014/15)	6.806	£4.844m up to 2012/13
Construction (inc Network Rail, Service Diversions and employers costs)	121.076	
Complementary and mitigation measures	5.232	
Land acquisition (inc LA land and other fees and compensation)	20.019	£3.01m LA land MCC, MAG, SMBC, CEC
Risks (Claims, construction and land risks)	44.252	
Scheme total	190.945	inc £0.365m allowance for Poynton-Woodford Relief Road (formerly A523 Poynton Bypass)
With inflation from 2010 Q2 to year that cost is incurred	230.360	Out-turn prices, MSBC, Table 5.6.
With optimism bias (27% on future spend) ¹	289.985 ²	Appendix E, Table 3
Future lighting and maintenance cost increases	14.2	EAR para 3.11 & Table 3.2
NPV of costs, expressed in 2002 prices	173.882	EAR para 3.17 & Table 3.4

Source: MSBC, Appendix E

¹ Note: the reduction from recommended 44% optimism bias is justified by reference to risk mitigation undertaken, as described in Appendix G, Section 3.3

² Note: the equivalent figure given in the EAR (3.13-14) is £297.5m, which includes £14.2m for longer-term maintenance and lighting

Design options and uncertainties

- 3.2 Section 2 of the MSBC provides a physical description of the scheme. Within this, options remain to be decided in the following locations:
- Detailed junction options in some locations “*will be considered in the light of public consultation*” (MSBC, 2.9). The following junctions with A6-MARR are specifically mentioned:
 - Woodford Road: either an underpass or a staggered signalised junction at ground level (MSBC, 2.11);
 - A5149 west of Poynton: either a new at-grade signalised gyratory or a cross-road arrangement (MSBC, 2.12);
 - Bramhall oil terminal: alternative options to accommodate the future Poynton-Woodford Relief road (MSBC, 2.13);

- A5102 Woodford Road: options are a signalised gyratory or a double-T junction (MSBC, 2.14);
- A555: to N and S the junction of the A34 with Stanley Road will be improved by either signalisation plus expansion of the existing roundabout or construction of a signalised cross road arrangement in the same location (MSBC, 2.14);
- Styal Road: further consultation with Network Rail and utilities to finalise design managing capacity while minimising costs of diversions and bridgeworks.

3.3 Thus 6 out of the 12 junctions that are proposed to be built or modified are subject to further design work. This seems a substantial level of uncertainty.

Mitigation and complementary measures

3.4 The intended mitigation measures (MSBC, 2.20-2.24 and 2.31-2.32) include:

- The provision of new safety measures for cyclists and pedestrians along the A6 between Hazel Grove and Whaley Bridge;
- Enhancement of existing networks for cyclists, pedestrians and equestrians;
- Public realm improvements (eg in Bramhall District Centre);
- Modest traffic management proposals, such as traffic calming in Handforth and Wythenshawe and signing in the latter to discourage Airport and through traffic;
- Possible future traffic calming in Poynton if monitoring shows this is needed; and
- Junction remodelling to optimise the operational capability of existing junctions, such as at the A34/A538 junction in Wilmslow, to offset predicted delays to A34 traffic.

3.5 Complementary measures (MSBC, 2.25-2.30) are proposed, particularly in the areas of Heald Green, Hazel Grove and Styal Road to:

- Increase reliability and efficiency of existing bus services on congested routes, such as the A6 through Hazel Grove;
- Provide sections of bus priority to further enhance bus services; and
- Reassess phasing of signal junctions across the network to account for the changes in traffic flows.

3.6 Mitigation of the impact of the new road itself, and complementary action to mitigate the effects elsewhere feature prominently in the scheme justification and discussion of impacts. However, as can be seen from Table 2.1, the resources proposed to be allocated to these purposes (£5.2m) are small in relation to the scale of the project and the long list of measures proposed. This clearly represents a risk both to public acceptability and cost.

Risk and optimism bias

3.7 There is extensive discussion of risk and optimism bias in the MSBC. As noted in Table 2.1, the provision for risk amounts to some £45m (2010 Q2 prices), while the provision for

optimism bias is set at 27% (~£60m). While these are substantial amounts, they may not be sufficient:

- a) The 'Earn back' financing model for a large proportion of local funding depends upon additional business rate revenue from development that is enabled. This is discussed below (paras 4.14-15), and it is pointed out that there are major risks concerning both the timing of any revenue and their additionality. Any shortfall would add to the financing costs in ways that do not seem to have been considered.
- b) The optimism bias on costs has been set at 27% rather than the normal 44% on the argument that the cost risks have been managed and mitigated to this degree. The uncertainties discussed in this report suggest that this is itself an optimistic view.
- c) The EAR states that a 44% optimism bias has been employed for the purpose of calculating Net Present Value (NPV) of costs. However, no workings are given to allow this to be checked: this is not straight forward because there are major differences in price base and scope.

4 Benefits

Issues

How economic benefits arise from time-savings

- 4.1 Over 90% of the quantified economic benefit identified by the Economic Assessment Report (EAR, Appendix B6) is accounted for by user time-savings (EAR, table 3.6), so this is clearly where any critique of the MSBC must concentrate. However, it is well-known that the time-savings enjoyed when a new road scheme opens are not retained unaltered. A new pattern of travel becomes established, which reflects the initial improvement in accessibility, but generates additional traffic that eats into the initial time-savings. Indirect benefits such as output, jobs, and development depend on this conversion¹⁶, and the processes involved shape the wider economic and social outcomes of the scheme:
 - a) Some processes are quite short-term (such as a changed route or mode choice for an existing trip); some may be medium-term (eg for households, different destination choices for shopping and leisure; for businesses, changed supply chains or customer catchments); while some are more major, strategic and generally longer-term (for individuals, the possibility of longer-range commuting influences choices of where to live and/or job choices; for businesses the equivalent choices about where to locate).
 - b) Some processes deliver benefits to individual travellers (such as a shorter commute, or a wider choice of housing and leisure opportunities); some to businesses producing goods and services (wider labour markets supply chains and customer catchments; and some to developers and property owners (higher rents and opening up of new development sites).
- 4.2 The form taken by the benefits, and how they are distributed between individuals and sectors, is obviously of great importance to the economic case for any particular transport investment. Current UK transport appraisal practice is based upon the theoretical proposition that in a 'perfect market' the **total** economic value of the initial time-savings that have been lost is preserved in the new pattern of location, interaction and travel that results (however long and tortuous the chain of causation and however diverse the outcomes). Department for Transport (DfT) policy advice, particularly that contained in the DfT's Web-based Transport Appraisal Guidance (WebTAG), is with limited exceptions (dealt with later) based upon this 'perfect market' assumption.
- 4.3 The scheme promoters have gone to some lengths to ensure that the MSBC is compliant with WebTAG. In most respects they have succeeded in this, so the critique presented here is inevitably to some extent a critique of WebTAG itself. This does not make it a 'fringe' position: many respected expert commentators have expressed fundamental concerns about the DfT's long standing approaches to appraisal, and these concerns are drawn on here.

Quantification and valuation of benefits

- 4.4 There are several serious difficulties with the WebTAG approach:
 - a) The information about distribution of benefits between groups of beneficiaries, and the form they ultimately take, is limited and mostly indirect.

¹⁶ SACTRA (1999), 'Transport and the Economy' at para 24 states: "... in general the value of direct transport benefits must decline if indirect economic benefits are to grow"

- b) The amount of time saved (or lost) is estimated from the difference between transport model forecasts of journey-times between pairs of origins and destinations, with and without the scheme being evaluated. These differences are aggregated and valued at different rates as 'work' or 'leisure' time, using base-line travel surveys and the main activities ('land-use') in each zone. Problems arising include:
- The equilibrium models routinely used (as in this case) to estimate trip numbers and timings have a bias towards serving the continuation of past trends, and towards large-scale schemes.
 - Traffic models typically have 100+ zones, giving 10,000+ OD combinations, and so most travel time differences are small – so small as to be indistinguishable in many cases from the normal variability of journey times. There is no empirical evidence of any value at all attaching to these: the practice effectively rests upon an appeal to theory ('Surely it must be worth something?') combined with a pragmatic need for some way of prioritising schemes and of adding up the impacts of combinations¹⁷.
 - The differences generally include at least some that are negative – time losses. The original data used to justify the WebTAG approach showed no value attaching to time-savings of less than 5 minutes, and that time losses are valued at 4 times the rate of time-savings of the same size¹⁸ (a conclusion that would be supported by behavioural economics). This would decimate the apparent benefit of many schemes, but current practice is that they can be cancelled out against time gains at the same rate¹⁹. This procedure also helps avoid the question of the value of small time-savings by taking them out of the equation altogether.
- c) The value that can be attached to an aggregate of slices of time representing differences from a theoretical 'do nothing' case (positive or negative, however derived and of whatever size) is similarly open to question:

¹⁷ Mackie, P.J., Fowkes, A.S., Wardman, M., Whelan, G., Nellthorp, J. and Bates J. (2003), 'Values of travel time savings in the UK', Institute for Transport Studies and John Bates Services, Department for Transport, London. For example:

"27. The issue of the valuation of small time changes has always been a difficult one, and these difficulties have not been resolved. This is not because of inadequacies in the research design. We recognise that the Department remains in the position of basing its values for the small time changes, which are characteristic of many schemes and policies, on extrapolation from the values found for larger time savings. This is less than ideal, but we believe that, considering both theory and evidence, a constant value per minute is more defensible than any alternative."

.....

"50. It is one thing to say what the evidence is for the variation in the value of travel time-savings with respect to economic, social and trip characteristics. It is another to make recommendations for the application of this evidence in modelling and appraisal practice. There may be reasons of principle for overriding or moderating what the evidence says. Also there may be relevant practical issues - considerations of data collection, cost-effectiveness, auditing and control of the appraisal process impinge on what can be recommended. These considerations may vary according to circumstances - good practice in the context of a very significant scheme or policy intervention may differ from what is required for routine scheme appraisal or comparison between scheme options."

¹⁸ this was for leisure time – no empirical evidence was offered for work time

¹⁹ Bates, J. and Whelan, M. (2001) *UK Value of Time Working Paper 1: Report on size and sign of time savings*, Institute for Transport Studies, University of Leeds

- In many real-life situations, the effect is not that actual time is saved compared with the present, but that delays get worse more slowly than they might otherwise do.
 - The value of work time-saving is taken as equal to employment costs to businesses. Valuing as 'clock time' what is not in fact real time at all is a heroic leap.
 - Where alternative direct estimates of economic impact are made – eg in regeneration areas – they often cannot identify more than 10% of the benefits inferred from time-savings.
- d) The low discount rates currently used mean enormous weight is given to unknown (and unknowable) events up to 60 years off. This is well beyond the reliable range of any of the transport models in use (more like 10-15years). In the present case, benefits identified for 15 years after opening (to 2032 – already ambitious) are continued at the same rate for a further 45 years (to 2076), and account for over 70% of the total NPV.

- 4.5 We conclude that while WebTAG may be a useful tool to allow DfT to prioritise small and medium-sized schemes, it does not provide an appropriate evaluation framework for strategic decision-making. For A6-MARR there are wider economic, social and environmental implications (indeed the strategic case depends critically on these), and it is clear that the WebTAG methodology is not fit for this purpose.

Critique of EAR valuation of benefits

- 4.6 Limited information is provided in the EAR about many of the issues raised above. As already noted, over 90% of the benefits quantified by the EAR are accounted for by user time-savings (EAR, Table 3.6). The issues raised in general terms above give rise to serious concerns about the adequacy and robustness of these estimates. These concerns are not allayed by the evidence offered in support of the MSBC, in the EAR or elsewhere, which is reviewed in the rest of this Section.

Ultimate beneficiaries

- 4.7 The initial time-saving benefits have been allocated to businesses, commuters and 'others', and to geographical 'sectors' of the study area (Appendix Table 1, below), by calibrating the base-year and future-year trip forecasts to travel and land-use survey data. The implicit assumption is that the groups and sectors enjoying the initial time-savings are the same as those enjoying the ultimate economic and social outcomes. This is not necessarily – or even probably – the case. For example, an initial time-saving to a business, allowing an initial increase in productivity and profit, will in time be reflected in a higher rent to the ultimate benefit of land-owners and developers. Similar considerations apply to the wider housing choices made available to individuals, and to all the other downstream processes discussed in 3.2.

Equilibrium modelling

- 4.8 The conventional four-stage transport model used meets WebTAG requirements, but is not dynamic. Equilibrium is assumed at the base year, and the establishment of a new equilibrium at each forecast year, which leads to a bias in favour of large schemes and the status quo. In addition, the model is not able to take account of the changes in locational choices that the improvements to the transport system themselves bring about. These

are represented by inputting into future land-use patterns the new developments assumed to result, but these are also input to the 'do nothing' comparator²⁰.

- 4.9 A wide range of commercial and housing developments that would have an impact upon traffic flows in the SEMMMS study area are at various stages in the planning process²¹:
- a) Airport and Enterprise Zone related developments, now including a 50 ha 'World Logistics Centre';
 - b) Housing and associated facilities at Handforth East: 1800 homes in the draft Local Plan, with potential for a further 500 expansion;
 - c) Housing and employment at the former BAE Woodford Aerodrome: 750-850 homes.
- 4.10 However, the locational choices becoming available are not limited to new developments: changes in patterns of accessibility affect the whole stock of buildings, new and existing. Since the turnover of existing stock typically provides 90% of the housing market in anyone year (and generally an even higher proportion of commercial property) this is not a trivial problem.
- 4.11 While a Land-Use/Transport Interaction (LUTI) model might help understand the implications, such models are still some way from offering a solution to the appraisal problem²². As it stands, therefore, both the transport and economic forecasts resulting can be regarded as offering only crude indications of possible direction and order of magnitude of change. The implied levels of detail and precision are spurious.
- 4.12 A further problem for a strategic scheme like this is the WebTAG-mandated convention that the impact of the scheme is isolated by comparing projections with and without the scheme under review ('Do Something' vs 'Do Nothing' – (DS/DN)). Two serious defects arise from this procedure:
- a) The comparison being made is between two future states, both of them hypothetical, so that a 'benefit' can be generated as easily from a poorly-performing 'do nothing' as from a well-performing scheme. Without specific evidence there is no way of telling the difference. The rhetoric of the EAR credits the scheme, but the limited information that is available suggests that a poorly-performing 'Do Nothing' is at least as likely (this is reviewed later in this section).
 - b) The other key issue is the inappropriateness of treating a major strategic transport scheme in isolation in the first place. The evolution of cities and their transport infrastructure has long been recognised as a symbiosis, and the validity of any major intervention depends greatly on what complementary actions are undertaken. In this case, the spatial context inherited from SEMMMS and the RSS has been scrapped.

Short time-savings and time losses

- 4.13 No information is provided in the EAR on the distribution of time-savings and losses by size, and the analysis follows WebTAG in not making any differentiation in value per unit

²⁰ This introduces significant bias into time-savings calculated against this base, since developments may be included which could not be accommodated on the 'do minimum' network without excessive congestion.

²¹ The treatment of these developments in the transport modelling is discussed in the MTRU report

²² A Wenban-Smith and T van Vuren (2009) 'Using transport models in spatial planning: issues from a review of the London LUTI model', European Transport Conference, Amsterdam

of time. However, extracting information about sign and size distribution from the model outputs is relatively easy, and is required by WebTAG²³.

- 4.14 Given the tentative nature of the research conclusions on the subject²⁴ this is a sensible test of the robustness of the model results. A high proportion of small time-saving, or time losses to any significant set of travellers, would indicate a lack of robustness. In point of fact, there are entire sectors suffering substantial time losses at both 2017 and 2032, notably between Hazel Grove and Disley, and between Manchester Airport and areas to the West, NW and SW of the study area (EAR, Appendix C). Individual time-losses will necessarily be much more pervasive.
- 4.15 A late response to a data request has provided this information, discussed in Appendix 2, has confirmed that this point has major implications. User benefits could be reduced to as little as 20% of those put forward in the EAR on this issue alone.

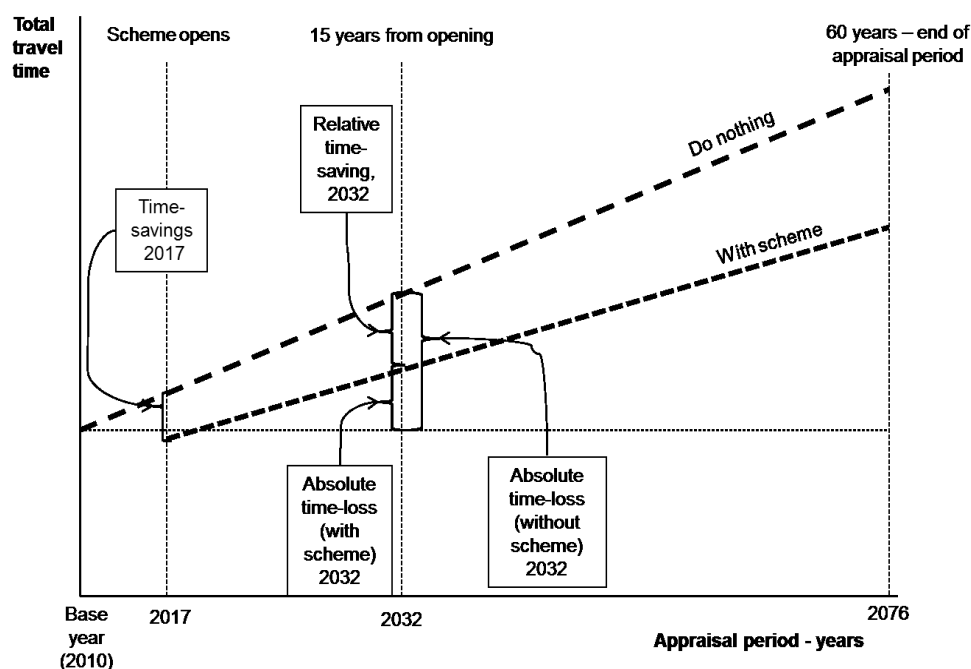
Valuation of time-savings

- 4.16 In addition to the problem of how many of the time-savings were too small to be reliably valued at all, there is a difficult issue of how to interpret the value of time that is not 'clock time', but the difference between two forecasts ('with scheme' and 'do nothing'). If congestion gets worse in both cases, how does this affect economic growth? The implication is there would be economic decline in both cases, but more without the scheme than with it. It is not by any means obvious that decline and growth are mirror images (see discussion of time-savings and losses above and in Appendix 2), but even if this is right, it suggests both are poor strategic choices.
- 4.17 The forecasts for 2017 and 2032 demonstrate that this is not an academic issue. Relative time-savings are worth £13.786m annually in 2017 and £18.414m in 2032 (EAR Appendix C, both expressed as NPV (2012?) in 2002 prices). Given that traffic is projected to increase over the period, what this shows is not that 2032 will be £4.7m pa better than 2017, but that 'do nothing' will, to this extent, be even worse than building A6-MARR. This problem is illustrated in Figure 3.1 below.

²³ WebTAG 3.5.3 'Calculation of User Benefits', paras 3.1.16-17 requires as a minimum gains and losses in six bands: 0-2 minutes, 2-5 minutes and >5 minutes

²⁴ Mackie et al (2003) 'Values of travel time savings in the UK', Institute for Transport Studies and John Bates Services, Department for Transport, London.

Figure 3.1: Travel time and time savings over the appraisal period



- 4.18 In the short-to medium-term the theory set out in paras 3.1 and 3.2 above implies that the initial time-savings are converted to other forms of economic benefit. But these time-savings will at some point be exhausted. For the rest of the appraisal period there will be time-losses compared with the baseline. The longer-term economic implication of this is that time-losses will from that point start to eat into economic benefits (whatever their form). Any benefit thereafter will only be relative to 'do nothing', not to the present.

Appraisal period and discount rates

- 4.19 The EAR follows the WebTAG conventions of a 60-year appraisal period, with a discount rate of 3.5% for the first 30 years and 3.0% thereafter. As regards time-savings, the appraisal procedure is implemented by the Department's own proprietary software (TUBA). This makes it difficult for others to unpack the detail, but Appendices 1 and 2 of this report present an attempt to do so in order to illuminate some of the critical implications of the long appraisal period and low discount rates. More in-depth and detailed discussion of the transport modelling and results are in the report from MTRU.
- 4.20 The total value of time-savings (compared with 'do nothing') calculated there (£866m) is somewhat higher than that given in the EAR (£832.5m), which could be the result of slightly different methodology, and not thought to be significant to the point that follows. What is striking is that the low discount rate, combined with assumptions about income growth, means that only about 30% of the estimated benefit arises in the first 30 years. The overwhelming bulk of the benefit arises so far in the future as to be beyond the range of even the most optimistic modeller.

Accident benefits

Higher speeds on the new roads with more congestion and lower speeds on the rest (compared with the 'do nothing') change the distribution of accidents, with 13 more fatalities and 56 more 'serious' casualties, but 1,387 fewer 'slight' casualties. The overall benefit (NPV) of £16m (EAR Table 3.5) implies a value judgement about the trade-off between slight casualties on one hand, and deaths and serious injuries on the other.

Vehicle operating costs

- 4.21 Vehicle operating cost (VOC) savings are a small component of the overall impact – £47.5m (NPV), or around 5% of the total. Interestingly, virtually the whole of this benefit is enjoyed by business users, as a small benefit to commuters is cancelled by an almost equal disbenefit to 'others'. This reflects the probability that the new roads are serving businesses such as those in the proposed Enterprise Zone and logistics hub. Once again it must be stressed that these are comparative, not absolute values: VOCs will rise compared with the present under both scenarios.

Conclusions on EAR analysis

- 4.22 For all the above reasons, the appraisal reported on in the EAR (MSBC Appendix B6) cannot be relied upon as providing a sound strategic case for A6-MARR. Indeed, taken at face value, it shows that neither the 'with scheme' nor the 'do nothing' scenarios arrest the worsening congestion in the study area. This fatally damages the implied EAR claim that the scheme will generate an economic benefit *compared with the present situation*, and particularly casts doubts on the estimates of GDP and productivity growth that depend on time-savings.

Wider economic benefits

- 4.23 WebTAG at one time allowed wider economic benefits arising from imperfect market effects such as agglomeration to be estimated as a simple 10% uplift of the 'perfect market' results already reviewed. This option is not appropriate to a scheme such as A6-MARR, which relies on such strategic effects for its main justification. It is in any case no longer available in the current version of WebTAG guidance on wider economic benefits (WebTAG 3.15.4, August 2012).
- 4.24 The MSBC relies rather on the GVA and employment benefits set out in MSBC Appendix N. Very little detail is provided on the methodology (and no author is credited), but para 1.3 states: *"The core method investigates how changes in the connectivity to businesses and labour offered by different locations as transport supply changes could potentially affect Gross Value Added (GVA). GVA is essentially equal to employment multiplied by labour productivity. The approach is therefore based on estimating the impact of connectivity enhancements on:*
- the change in the distribution and levels of employment within Greater Manchester and Cheshire East based on changes in access to different markets; and
 - the change in productivity levels based on changes in travel costs."
- 4.25 It has already been noted that since a LUTI model has not been used, the first factor (the level and distribution of employment) is a direct input. Employment changes are generally taken from DfT's national TEMPRO data set, and it appears that this has been updated to reflect the new development within the Airport City Enterprise Zone, assuming it is built and occupied over a 10-year timescale (Appendix N, Table 3). It is not clear whether this employment has been added to TEMPRO control totals, or whether all other values have been adjusted downwards to accommodate the new jobs within them.

The course taken obviously has a major impact on traffic generation, and is discussed further in the MTRU report.

- 4.26 The second factor, the change in productivity, is derived from the time-savings already commented upon above. There is no detail on how this has been done, and there is no reference to agglomeration, but it appears simply to reflect reduced business costs from, lower congestion.
- 4.27 As a refinement, a 30% allowance is made for reduction in the benefit arising from the additional congestion arising from the extra jobs (Appendix N, paras 3.6-3.9); *"One of the consequences of changes in economic activity is likely to be changes in levels of congestion and crowding across the transport network. This would feed back into different travel conditions and have a second round effect which dampens the benefits of the initial connectivity change considered"*.
- 4.28 A number of points need to be made in relation to this analysis:
- a) As with the time-savings calculations, the quantified benefit is not relative to the present day, but represents the difference between the two future scenarios, 'do something' and 'do nothing'.
 - b) Insofar as it depends upon the quantification and valuation of the time-savings themselves, it is open to exactly the same severe criticisms.
 - c) The underlying employment numbers are an input, not an output. The bulk of this input is DfT's TEMPRO data set, which depends heavily on incorporating past trends. Amongst these is the pattern of urban dispersion, driven in large measure by the investment that has taken place in the major road system. There is thus a strong element of circularity in using TEMPRO to project future needs – especially for roads.
 - d) No reference is made in the paper to agglomeration (or any other imperfect market effects), so it is not clear that the employment and GVA benefits projected are not simply the downstream result of conversion of time-savings, and therefore already included in the EAR estimates.
- 4.29 These criticisms reinforce the conclusion reached regarding the EAR estimates (3.4-3.17 above). Thus while the construction of A6-MARR may be better in economic terms than doing nothing, neither makes sense without a more consistent spatial context than that provided by the sum of the development ambitions being promoted. There is no evidence that either would deliver sustained growth compared with the present, nor can much confidence even be placed on the scale of the estimated differences between them.
- 4.30 More broadly, and as further detailed in the accompanying MTRU report, appreciation of the displacement risk was integral to the SEMMMS strategy claimed by the MSBC as its context: *"The transport strategy must be complemented by appropriate land-use policies that support the promotion of more sustainable travel patterns. Indeed, inappropriate land use developments have the potential to undermine some, or all, of the recommended strategy and erode the benefits will it bring."* (SEMMMS 7.62).
- 4.31 SEMMMS's view of 'inappropriate development' is highly relevant to the location, nature and selection process of development associated with the scheme: *"There should be a presumption against development adjacent to the proposals for new roads along the protected alignments of the remitted schemes which form part of this strategy. Any developments that do proceed must be subject to rigorous sequential tests based on a hierarchy of national, regional and local economic and community importance that demonstrate that no alternative site is suitable and available and that transport impacts of the development are acceptable."* (SEMMMS 7.63). There is little evidence that attention has been paid to any of these crucial tests.

5 Business Case critique

Strategic Case

- 5.1 The strategic objective of the SEMMMS A6-MARR, as presented in the MSBC, is essentially economic: *"Increase employment and generate economic growth by providing efficient surface access and improved connectivity to, from and between Manchester Airport, local, town and district centres, and key areas of development and regeneration (e.g. Manchester Airport Enterprise Zone) ... remove the current capacity constraints and substantially improve surface access to the airport. This will enable the Airport and the Enterprise Zone to deliver the envisaged growth in jobs and economic output."* (MSBC p10)
- 5.2 The central economic role accorded to Manchester Airport and Enterprise Zone (MAEZ) was set out in the Manchester Airport City Development and Infrastructure Framework (MAC-DIF)²⁵. The chain of reasoning was:
- a) There are specific high value added uses for which the connectivity offered by a site directly linked to an international airport is critical to competitiveness;
 - b) Such uses are internationally mobile, so that if Manchester does not offer a suitable location they will go elsewhere (such as Amsterdam, Barcelona and Dusseldorf);
 - c) Such uses would utilise the strengths of the Greater Manchester knowledge economy thus contributing 'cluster' benefits of competitiveness and productivity to South Manchester, the City Region, and beyond;
 - d) There would be employment benefits to depressed neighbourhoods in the vicinity (particularly Wythenshawe) as well as a stimulus to Manchester City Centre and the connecting corridor.
- 5.3 This chain of reasoning was examined in my contribution to the MTRU report on MAEZ commissioned by CPRE²⁶. The conclusions of that examination were that:
- a) 'Airport critical' uses may well be more limited, and their airport connectivity criteria less exacting than claimed²⁷;
 - b) A wider benefit to the local economy requires uses with strong functional linkages *both* to the Airport *and* to the local economy. This might be quite a limited niche.
 - c) In contrast, the list of potential occupiers put forward in the MAC-DIF is broad and all-encompassing (including co-located logistics, business space, science and research, and other uses such as hotel, ancillary leisure/retail uses and residential development.
 - d) The relaxed planning regime of an EZ would not be able to limit uses even to this list, nor (on experience elsewhere) would public landlord control be an effective alternative
 - e) At best, any economic benefit would come from the increase in choice of Business Park style locations in the wider area. Given the range of such property already available in the area this benefit would be modest.
- 5.4 This highlights a fundamental strategic choice facing Manchester (and other UK cities): whether growth in productivity and output is best promoted by maximising the opportunities for new property development, or whether growth is better pursued by

²⁵ Divers Jonas Deloitte (2011), *'Manchester Airport City Development and Infrastructure Framework'*, Report for Manchester City Council and Manchester Airport Group

²⁶ MTRU (July 2011), *'Analysis of the Manchester Airport City Enterprise Zone'*, Chapter 1

²⁷ eg a need to be within 15-30 minutes travel rather than to be physically contiguous

way of a more holistic approach to the wider spectrum of locational opportunities offered by the conurbation as a whole.

- 5.5 This issue has been central to the public policy debate around the development of Greater Manchester for decades, most recently at the Public Examination of the NW Regional Spatial Strategy. The Panel Report proposed criteria for location of major economic development, which were not (in the Panel's view) met by the Airport location, because of the disbenefits of displacement from locations better able to contribute to economic agglomeration and urban regeneration, and the impact on transport demand, environment and Green Belt²⁸. Following this the NW Development Agency reviewed its priorities²⁹, but the Airport location did not rate a place on its final list of 36 locations – although it has been put forward energetically many times over the past 20 years.
- 5.6 The long-continuing fall-out from the 2008 financial crisis underlines the need to avoid undue dependence on property development as the main driver of growth. While RDAs have been abolished by the present Government and RSSs are in the process of being revoked, the evidence in support of a more broadly-based strategic locational policy remains. There is also strong evidence of this from wider European experience
- 5.7 Provincial cities in many parts of continental Europe, especially in Germany, have over many decades enjoyed a genuinely integrated style of transport and land-use planning, favouring compact, liveable cities supported by high levels of public transport investment (Atkins, 2001). From Figure 4.1 it can be seen that they also enjoy higher levels of productivity (GDP/head) relative to their national average. The Cabinet Office report from which this figure comes states that 78% of English jobs are in city travel to work areas³⁰. A simple calculation shows that a shift in productivity differences from 10% below national average (par for the UK outside London) to 10% above (achieved by many of their continental equivalents) would be worth over £100bn pa to the UK economy.

Figure 4.1 Productivity, UK vs European cities (GDP/capita for 8 highest performing non-capital cities in UK, Germany, France, Spain and Italy – relevant national average = 0% in each case)



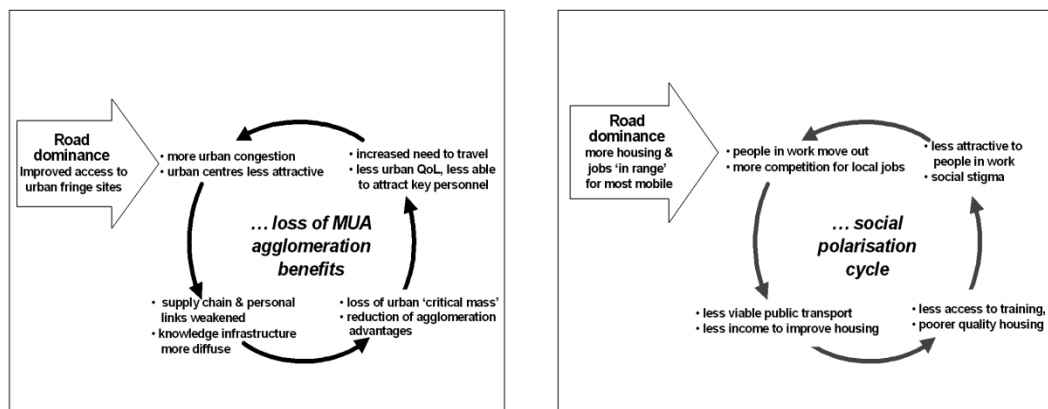
²⁸ RSS Policy W2 and Panel Report paras 4.68, 5.41, 5.42, 7.48

²⁹ Lambert Smith Hampton Property Solutions and Ekogen (May 2010) 'Market outlook for strategic regional sites', Report for NWDA

³⁰ Cabinet Office/BIS/CLG (2011) *'Unlocking Growth in Cities'*

- 5.8 In summary, the strategic approach to growth set out in the MSBC is predicated upon exploitation of several major greenfield sites around the Airport and environs. 'Growth' is thus defined as the construction and occupation of new commercial premises. This fails to appreciate the effects of excessive peripheral development on existing centres and communities. As well as the purely physical dispersion embodied in fringe development and inner city decline, there is a much greater volume of locational choices within the existing stock of buildings, both homes and commercial³¹. In reality, only some of the new occupancy is genuinely additional, the rest being direct or indirect displacement from elsewhere. In addition, since new development draws to itself investment in new infrastructure and services, changes in patterns of economic activity and social structures are further amplified.
- 5.9 The result of such a shift in patterns of economic activity is a potential loss of economic 'critical mass' and the related agglomeration benefits³², while the equivalent effect on patterns of residence is social polarisation as better-off people live further out and commute longer distances. Both effects (illustrated in Figure 4.2 below) undermine productivity in Major Urban Areas (MUAs), while at the same time driving further traffic growth; both are imperfect market effects, neglected by DfT appraisal methodology.

Figure 4.2: Road dominance, economic agglomeration and social polarisation



Economic Case

- 5.10 It has been demonstrated that even if the promoter's figures are accepted at face value the value for money offered by the scheme is only 'good' relative to a 'do nothing' baseline that is even worse. In summary:
- Although most of the user time-savings are identified with business users, the strong likelihood is that the main ultimate recipients of any economic benefits will be land-owners and developers. A net benefit to the local economy depends not just on the new development enabled finding occupiers, but also that these are not simply displacing activity from elsewhere;
 - The limited scope of the transport modelling provides no information on the inevitable consequences for different locational choices throughout the whole

³¹ About 90% of annual home moves are 'churn' of existing stock, and only about 10% new build

³² A Wenban-Smith (2008), *Transport and urban spatial policy*, Town Planning Review, **79**(4), vii-xiv

- building stock, which could seriously undermine productivity improvement through agglomeration;
 - c) There is not enough information on the size of time-savings and time-losses to have confidence in how much value there is, even to transport users in the short term;
 - d) The existence of any accident benefit depends on a view about whether more deaths and serious injuries are really compensated for by fewer slight injuries;
 - e) Medium/longer-term traffic growth is likely to wipe out any short/medium term effects on accessibility, and hence the earlier economic benefits;
 - f) The 60-year appraisal period nevertheless permits a 15-year projection of relative benefit to be carried forward for a further 45 years, grossly inflating the total.
- 5.11 There is no doubt that transport investment plays a crucial part in the longer-run physical, social and economic evolution of cities. However, since the 1960s at least, the emphasis on user time savings has meant transport appraisal has been poorly integrated with land-use planning and has tended to favour road investment over public transport.
- 5.12 WebTAG evolved as a tool to allow DfT to prioritise small and medium-sized schemes. As long as a transport investment has relatively little in the way of wider or longer-term impacts it does not matter as much if the evaluation process is narrow and short-term, because it is only the relative performance within the sphere of transport that matters. But in the case of A6-MARR there are wider economic, social and environmental implications on which the strategic case critically depends. It is clear that the WebTAG methodology is not fit for purpose as an evaluation framework for strategic decision-making. The loss of the spatial context formerly offered by RSS makes this deficiency even more critical.

Management/delivery Case

- 5.13 A huge amount of detail is provided concerning possible approaches to potential delivery issues. However, it is in their nature that delivery problems arise in the course of implementation, so are difficult to deal with in advance. It is difficult therefore to comment, except to say that too complex a plan can impede the necessary responsiveness and flexibility to events.

Commercial/Financial Case

- 5.14 The overall cost of the A6-MARR is put at £290m, the funding of which is projected to be £165m from Government and £125m through the Greater Manchester Transport Fund. The MSBC states that the local contribution will be funded by the three participating authorities (Manchester, Stockport and East Cheshire) through the 'Earn back' model, agreed in principle with the Government as part of its March 2012 'Deal for Manchester'. No further detail is given in the MSBC³³.
- 5.15 It is understood that the form of the 'Earn back' arrangement is that local authorities will be able to retain for a period of time any additional business rates generated by new development and apply these revenues to funding the necessary infrastructure. There are clearly at least two major risks associated with this deal:

³³ MSBC states (para 5.25) "Detailed discussions are continuing with Government officials in respect of the detailed arrangements for the Earn Back model which will be the subject of a further report to the Combined Authority over the next few months."

- a) The infrastructure money will *all* have to be spent before *any* additional rate revenues arise – and the full rate revenues will only be forthcoming once property is both built and occupied. The paper on GVA and jobs (Appendix N) speaks of a 10 year period for development to 'mature' (and this is perhaps optimistic, given the scale of developments proposed). There could be a long gap between the call on funds by contractors and the availability of these funds.

More seriously, to the extent that the new developments are occupied by businesses displaced from existing centres (whether existing businesses moving, or new businesses that would have otherwise located there), there will be a hit on the baseline rate yield. Given the lack of leverage to ensure additionality, this is a very real risk. It is not clear where this risk will be borne: by the local authorities or by the Treasury, but the question is crucial to the commercial/financial case³⁴.

³⁴ Curiously, only £65.37m of the £125m local contribution is identified in the MSBC (Table 5.6), and this is almost all phased 2012/3-2015/16 – well before any business rate revenue can be expected

Appendix 1: Value of Time (£'000) by year 2017-2076, Core scenario, discounted to 2012, at 2002 prices

Year	Work VOT growth (% pa) ¹	Non-work VOT growth (%pa) ¹	Combined VOT growth ²	Discount rate (%) ³	Overall discount ⁴	NPV 2012, 2002 prices (£'000)	Additional benefit from worsening base ⁵	Total NPV each year	Sum of NPVs to date (£'000)
2012	0.00%	0.00%	0.00%	3.5%	3.50%				
2013	1.28%	1.02%	1.20%	3.5%	2.30%				
2014	1.98%	1.58%	1.85%	3.5%	1.65%				
2015	2.30%	1.84%	2.16%	3.5%	1.34%				
2016	2.33%	1.86%	2.18%	3.5%	1.32%				
2017	2.13%	1.70%	1.99%	3.5%	1.51%	13,786	0	13,786	
2018	1.63%	1.30%	1.53%	3.5%	1.97%	13,578	527	14,106	
2019	1.64%	1.31%	1.54%	3.5%	1.96%	13,310	1,055	14,365	
2020	1.64%	1.31%	1.54%	3.5%	1.96%	13,049	1,582	14,631	
2021	1.85%	1.48%	1.73%	3.5%	1.77%	12,793	2,110	14,903	
2022	1.76%	1.41%	1.65%	3.5%	1.85%	12,567	2,637	15,204	
2023	1.77%	1.42%	1.66%	3.5%	1.84%	12,334	3,165	15,499	
2024	1.89%	1.51%	1.77%	3.5%	1.73%	12,107	3,692	15,800	
2025	1.80%	1.44%	1.69%	3.5%	1.81%	11,898	4,220	16,118	
2026	1.82%	1.45%	1.70%	3.5%	1.80%	11,682	4,747	16,429	
2027	1.83%	1.46%	1.71%	3.5%	1.79%	11,472	5,275	16,747	
2028	1.85%	1.48%	1.73%	3.5%	1.77%	11,267	5,802	17,069	
2029	1.87%	1.49%	1.75%	3.5%	1.75%	11,068	6,330	17,398	
2030	1.88%	1.50%	1.76%	3.5%	1.74%	10,875	6,857	17,732	
2031	1.90%	1.52%	1.78%	3.5%	1.72%	10,685	7,385	18,070	
2032	1.91%	1.53%	1.79%	3.5%	1.71%	10,502	7,912	18,414	256,271
2033	2.03%	1.62%	1.90%	3.5%	1.60%	10,322	7,777	18,099	
2034	2.15%	1.72%	2.01%	3.5%	1.49%	10,157	7,652	17,810	
2035	2.15%	1.72%	2.01%	3.5%	1.49%	10,006	7,539	17,545	

SEMMMS A6-Manchester Airport Relief Road: Critiques commissioned by NW TAR & CfBT, Jan 2013

2036	2.15%	1.72%	2.01%	3.5%	1.49%	9,858	7,427	17,284
2037	2.08%	1.66%	1.95%	3.5%	1.55%	9,711	7,316	17,028
2038	2.08%	1.66%	1.95%	3.5%	1.55%	9,560	7,203	16,763
2039	2.18%	1.66%	2.02%	3.5%	1.48%	9,412	7,091	16,503
2040	2.18%	1.74%	2.04%	3.5%	1.46%	9,272	6,986	16,258
2041	2.21%	1.74%	2.06%	3.5%	1.44%	9,137	6,884	16,021
2042	2.31%	1.84%	2.16%	3.5%	1.34%	9,006	6,785	15,791
2043	2.31%	1.84%	2.16%	3.5%	1.34%	8,885	6,694	15,579
2044	2.21%	1.76%	2.07%	3.5%	1.43%	8,766	6,605	15,371
2045	2.21%	1.76%	2.07%	3.5%	1.43%	8,641	6,510	15,151
2046	2.14%	1.71%	2.00%	3.5%	1.50%	8,517	6,417	14,934
2047	2.14%	1.71%	2.00%	3.5%	1.50%	8,390	6,321	14,711
2048	2.14%	1.71%	2.00%	3%	1.00%	8,264	6,226	14,491
2049	2.14%	1.71%	2.00%	3%	1.00%	8,182	6,164	14,347
2050	2.14%	1.71%	2.00%	3%	1.00%	8,101	6,103	14,204
2051	2.04%	1.63%	1.91%	3%	1.09%	8,020	6,042	14,062
2052	2.07%	1.65%	1.94%	3%	1.06%	7,933	5,977	13,909
2053	2.07%	1.65%	1.94%	3%	1.06%	7,848	5,913	13,761
2054	2.07%	1.65%	1.94%	3%	1.06%	7,765	5,850	13,615
2055	2.07%	1.65%	1.94%	3%	1.06%	7,683	5,788	13,471
2056	2.07%	1.65%	1.94%	3%	1.06%	7,601	5,727	13,328
2057	2.08%	1.66%	1.95%	3%	1.05%	7,520	5,666	13,186
2058	2.08%	1.66%	1.95%	3%	1.05%	7,441	5,606	13,047
2059	2.08%	1.67%	1.95%	3%	1.05%	7,363	5,547	12,910
2060	2.09%	1.67%	1.96%	3%	1.04%	7,286	5,489	12,775
2061	2.17%	1.73%	2.03%	3%	0.97%	7,210	5,432	12,641
2062	2.17%	1.73%	2.03%	3%	0.97%	7,140	5,379	12,519
2063	2.17%	1.73%	2.03%	3%	0.97%	7,071	5,327	12,398
2064	2.17%	1.73%	2.03%	3%	0.97%	7,002	5,275	12,278

2065	2.17%	1.73%	2.03%	3%	0.97%	6,934	5,224	12,159	
2066	2.17%	1.73%	2.03%	3%	0.97%	6,867	5,174	12,041	
2067	2.17%	1.73%	2.03%	3%	0.97%	6,801	5,124	11,924	
2068	2.17%	1.73%	2.03%	3%	0.97%	6,735	5,074	11,809	
2069	2.17%	1.73%	2.03%	3%	0.97%	6,670	5,025	11,695	
2070	2.17%	1.73%	2.03%	3%	0.97%	6,605	4,976	11,581	
2071	2.17%	1.73%	2.03%	3%	0.97%	6,541	4,928	11,469	
2072	2.17%	1.73%	2.03%	3%	0.97%	6,478	4,880	11,358	
2073	2.17%	1.73%	2.03%	3%	0.97%	6,415	4,833	11,248	
2074	2.17%	1.73%	2.03%	3%	0.97%	6,353	4,786	11,139	
2075	2.17%	1.73%	2.03%	3%	0.97%	6,291	4,740	11,031	
2076	2.17%	1.73%	2.03%	3%	0.97%	6,230	4,694	10,924	866,440

Notes

1. Value of time (VOT) growth rates from WebTAG 3.5.6 (Oct 2012), Table 3b
2. Overall VOT growth weighted by proportion of work/non-work benefits in EAR Table 3.7
3. Discount Rates: 3.5% for first 30 years, 3% thereafter (EAR/WebTAG)
4. Overall discount rate = (time discount) - (growth in VOT value)
5. NPV of £18.414m in 2032 (EAR Appx C) implies worsening of 'do nothing' comparator by £7.912m between 2017 and 2032. this is carried through

Sources

VOT 2017	13,786	£'000 pa, NPV 2012, 2002 prices	Source: EAR Appendix C, Time benefits 2017
VOT 2032	18,414	£'000 pa, NPV 2012, 2002 prices	Source: EAR Appendix C, Time benefits 2032
Work VOT	34.12	£/hour, 2010 prices.	Source: WebTAG 3.5.6, Table 1
Commuting VOT	6.46	£/hour, 2010 prices.	Source: WebTAG 3.5.6, Table 2
'Other' VOT	5.71	£/hr, 2010 prices.	Source: WebTAG 3.5.6, Table 2
Non-work:	45.94%	time in total savings	Source: EAR Table 3.7

Appendix 2: Effect of reweighting time losses

The original stated preference data on which the value of non-business time-saving rests showed no value attaching to time-savings of less than 5 minutes, and also that time losses were rated as disbenefits equal to 4 times the value of a similarly sized time-savings. The authors of the DfT-sponsored research put forward the theory that this discrepancy could be explained by a 'bias towards the status quo', offered sophisticated statistical arguments for correcting such bias³⁵ and concluded (on essentially pragmatic grounds) that an equal and opposite valuation of losses and gains should be used in transport appraisal. However, this runs counter to both the empirical evidence (limited though it may be), and also to behavioural economics which suggests that people do rate the loss of a benefit currently enjoyed much more highly than a hypothetical future benefit.

DfT offers no evidence (in either direction) regarding the equivalent issue in valuation of business time, where its position rests entirely on economic theory. However, there is evidence that recent major highway improvements have only had small impacts. In 2011 the Highways Agency published a meta-analysis of 58 major schemes evaluations, which found the average time saving during peak period to be 3 minutes. Major road freight operators have addressed the problem of uncertainty in relation to 'just in time' deliveries, by understand how the network performs under congested conditions and managing their fleets accordingly.

The Table below applies the 4 times multiplier to the very substantial time losses shown in the TUBA output data. The result is to reduce the net benefit over the appraisal period is reduced from £914m to £175m.

Alternative total time-savings benefits 2017-2076, by size of time-saving or loss (£'000s, 2002 prices, discounted)

Vehicle	User type	>5 mins lost	2-5 mins lost	0-2 min lost	0 -2 min saved	2-5 mins saved	>5 saved	Total value
Car	Business	-953	-6325	-44290	127693	59101	72381	
Car	Commuter?	-1846	-3959	-16458	83315	51461	60981	
Car	Other?	-1828	-19388	-73303	191915	92788	88817	
LGV	Freight	-1061	-6151	-30991	84322	42171	36034	
OGV2	Business	-766	-9993	-19587	47862	19463	58686	
Standard calculation		-6647	-47625	-192225	556388	274634	329556	914081
Time losses re-weighted		-26588	-190500	-768900	556388	274634	329556	174590
<i>Source: TUBA output supplied by Stockport MBC, 21 January 2013</i>								

³⁵ Bates, J. and Whelan, M. (2001) *UK Value of Time Working Paper 1: Report on size and sign of time savings*, Institute for Transport Studies, University of Leeds



Photograph supplied by PAULA

Above - a still, winter's view towards the Parish Church at Poynton, (steeple in the distance) across the fields that would be crossed by the roads and below – the North Cheshire hunt crossing the same fields on Boxing Day 2011

Photograph supplied by PAULA



**A critique of the SEMMMS
A6-Manchester Airport Relief Road
Environmental Scoping Report
by
Jackie Copley
CPRE**



SEMMMS A6 to Manchester Airport Relief Road:
Review of the Environmental Scoping Report
(Appendix D of the Major Scheme Business Case)

Final Report

January 2013

Prepared by:

Jackie Copley MRTPI MA BA(Hons) PgCert

Planning Officer

Lancashire Branch of the Campaign to Protect Rural England

Office 2

Springfield House

41-45 Chapel Brow

Leyland

PR25 3NH

Tel: 07718 070750

Email: jackie.copley@cprelancashire.org.uk

Statement of Qualification & Experience

1. This report was prepared by Jackie Copley. I have been a Member of the Royal Town Planning Institute since November 2000. I have a Masters in Town & Regional Planning (Leeds Metropolitan University 1999) and Bachelor of Arts in Town & Country Planning (1993) and Postgraduate certificate reading Urban Design (Salford University 2012).
2. I have worked as a Planning Officer for Manchester and Salford City Councils when I contributed to urban regeneration projects in Hulme, Ordsall, Salford Quays and Seedley & Langworthy. I was responsible for a range of environmental, economic development, planning, and community focused projects contributing to the enhancement of some of the worst performing wards in the respective local authority areas.
3. In private consultancy I held senior roles for Roger Tym & Partners and Atkins working within the fields of planning, regeneration and economic development. I worked for a wide range of public, private and partnership clients on the full spectrum of planning issues. As part of this work I was involved in making the case for large infrastructure projects and also for the coordination of environmental assessments.
4. Since September 2012 I have held the position of planning officer for the Lancashire Branch of the Campaign to Protect England (CPRE) In that capacity I have worked with 26 authorities across Lancashire (including Greater Manchester and Merseyside) to progress draft Local Plans and have offered advice to the public across a wide range of rural planning matters.

Report Purpose

5. To progress a review by CPRE Lancashire Branch of the Environmental Scoping Report that was submitted as Appendix D of the Major Scheme Business Case (pdf.457mb) for the SEMMMS A6 to Manchester Airport Relief Road (A6-MARR) dated February 3rd 2010.
6. Key areas of focus are:
 - a. Whether the report contains all the aspects it should and in sufficient detail.
 - b. Whether the report is sufficiently up to date.
 - c. Whether the report follows best practice.
 - d. Whether the scope/breadth of the scoping report is appropriate when the A6 to Manchester Airport Scheme would be part of the wider network of SEMMMS road schemes³⁶ and due to its proximity to the following major schemes:
 - i. Manchester Airport Enterprise Zone (World Logistic Hub and other significant developments, such as a terminal for High Speed 2);

SEMMMS - South East Manchester Multi Modal Study. The roads remitted to the study were the: A6 Stockport North-South Bypass (inc Stepping Hill Hospital Link Road), A555 Manchester Airport Eastern Link Road (MAELR); A555 Manchester Airport Western Link Road (MAWLR); A523 Poynton Bypass and A523 Poynton to Macclesfield Improvement

- ii. Plans by Stockport MBC for a Woodford Garden Village (850 dwellings plus employment uses) at former BAe Woodford Aerodrome site immediately south of the A6-Manchester Airport Road; and,
- iii. Plans by Cheshire East Council for a major new settlement at Handforth East at the junction of the already built part of the A555 Airport Link Road with the A34 in addition to another of the SEMMMS roads - the interconnecting north-south Poynton-Woodford Relief Road (the former A523 Poynton Bypass)

STATUTORY REQUIREMENTS

Environmental Regulation - EIA Directive

- 7. The Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of certain public and private projects on the environment, as amended, known as the 'EIA' (environmental impact assessment) Directive, requires that an environmental assessment be carried out by the competent authority for certain projects which are likely to have significant effects on the environment by virtue, inter alia, of their nature, size or location, before development consent is given. Appendix I of Directive 85/337/EEC states that an assessment is obligatory for projects listed, which are considered as having significant effects on the environment. These listed projects include roads of four lanes or more (of at least 10 km).
- 8. The Major Scheme Business Case, Appendix D: Environmental Scoping Report states in paragraph 1.1.2 that 10km of the relief road would comprise sections of new road. The road would be dual carriageway and, consequently, four lanes. The Environmental Scoping Report therefore concludes that an EIA procedure is a mandatory requirement for this proposed development. CPRE Lancashire agrees with this conclusion.

EIA - English Law

- 9. The Council Directive 85/337/EEC has been translated into English Law via the Town & Country Planning Act 1999 and Section 105 of the Highways Act 1980 as amended by the Highways (Assessment of Environmental Effects) Regulations 1988, the Highways (Assessment of Environmental Effects) Regulations 1994, the Highways (Assessment of Environmental Effects) Regulations 1999 and the Highways (Environmental Impact Assessment) Regulations 2007.

Regional Spatial Strategy

- 10. Three years ago when the A6-MARR Environmental Scoping Report was written the North West Regional Spatial Strategy (NW RSS), the North West of England Plan, was the statutory strategic spatial planning document and at the time of preparing this analysis of it, it still is. Therefore this document should be referenced as part of the Environmental Scoping Report. (In any event, even if/ when the NW RSS is revoked, this will not invalidate all the work that went into it, nor the fact that it has framed the planning process in the region).

11. On the subject of new roads, the NW RSS says:
"It is now widely accepted that constructing new roads to accommodate future traffic growth is neither environmentally nor economically sustainable. The emphasis should therefore be on increasing the role of public transport together with making best use of existing highway infrastructure through the development of effective strategies for network and demand management" (para. 8.3)
12. The Glossary definition in the NW RSS of 'Sustainability Appraisal' is:
"Appraisal of plans, strategies and proposals to test them against the four broad objectives set out in the government's sustainable development strategy 'Securing the Future' published in 2005 and the aims of the Regional Sustainable Development Framework – Action for Sustainability (AfS)".
13. CPRE Lancashire Branch supports the ruling of the North West Regional Spatial Strategy Panel who said in their report of March 2007 that Manchester Airport should not become a commercial hub in its own right. Concern was expressed that, if it did, it would detract economically from Manchester City centre and surrounding towns and impact on the Green Belt. This view is upheld by the attached independent report about the whole Enterprise Zone concept and potential fall-outs from it by the Metropolitan Transport Research Unit ('Analysis of the Manchester Airport City Enterprise Zone', July 2011³⁷) which CPRE endorses.

GUIDANCE

National Planning Policy Guidance

14. The National Planning Policy Guidance (NPPF), like the RSS, references the UK Sustainable Development Strategy and also the United Nations resolution on sustainable development.

It says:

"Resolution 42/187 of the United Nations General Assembly defined sustainable development as meeting the needs of the present without compromising the ability of future generations to meet their own needs. The UK Sustainable Development Strategy 'Securing the Future' set out five 'guiding principles' of sustainable development:
living within the planet's environmental limits,
ensuring a strong, healthy and just society,
achieving a sustainable economy,
promoting good governance and
using sound science responsibly"
(NPPF page 2, 'Achieving Sustainable Development')

³⁷ Analysis of the Manchester Airport City Enterprise Zone', July 2011
<http://www.cprelancashire.org.uk/uploads/reports/MAEZ%20MTRU%20print%20july.pdf>

15. The NPPF requires that:

*"A sustainability appraisal which meets the requirements of the European Directive on strategic environmental assessment should be an integral part of the plan preparation process and **should consider all the likely significant effects on the environment, economic and social factors**"* (para 165, our highlighting)

16. It also requires that:

*"Planning policies and **decisions should be based on up-to-date information about the natural environment and other characteristics of the area including drawing, for example, from River Basin Management Plans**"* (para. 165, our highlighting)

17. The Scoping Report makes no mention of River Basin Management Plans. However, the Environmental Assessment itself must do, particularly as part of the route follows Norbury Brook and much of the area suffers from a high water table.

EIA Guidance

18. There is plenty of other EIA guidance available, such as a comprehensive step-by-step guide provided the Department of the Environment, Farming and Rural Affairs (DEFRA) that supports the Treasury Green Book³⁸ by highlighting the importance of trying to identify all costs and benefits including environmental. This identifies the following impacts to be assessed:

- Air quality – Will the policy option impact significantly on air quality?
- Biodiversity – Will the policy option change 1) the amount or variety of living species, 2) the amount, variety or quality of ecosystems?
- Adapting to climate change – Will the policy option be vulnerable to the predicted effects of climate change?
- Landscape – Will the policy option involve any material change to the appearance of the landscape or townscape?
- Noise and nuisance – Will the policy option affect the number of people exposed to noise or the levels to which they're exposed?
- Waste management – Will the policy option lead to a change in the financial costs or the environmental and health impacts of waste management?
- Water including flood risk – Will the proposal change 1) the degree of water pollution, 2) levels of abstraction of water or 3) exposure to flood risk?

³⁸ http://www.hm-treasury.gov.uk/data_greenbook_index.htm The Treasury Green Book, 2003: The Green Book is HM Treasury guidance for Central Government, setting out a framework for the appraisal and evaluation of all policies, programmes and projects. It sets out the key stages in the development of a proposal from the articulation of the rationale for intervention and the setting of objectives, through to options appraisal and, eventually, implementation and evaluation. It describes how the economic, financial, social and environmental assessments of a proposal should be combined and aims to ensure consistency and transparency in the appraisal process throughout government.

19. The Environmental Scoping Report makes little reference to adapting to climate change and this is not itemised on the proposed Environmental Statement structure. (Refer to separate report by Helen Rimmer, North West Friends of the Earth Campaigner).

DEFRA - The Sustainable Development Specific Impact Test

20. DEFRA has also produced *The Sustainable Development Specific Impact Test*³⁹ which usefully shows whether or not the option presented are compatible with sustainable development. It involves a 2-stage approach. Stage 1: Environmental Standards - The Impact Assessment helps establish whether there are any significant environmental impacts using the Wider Environmental Specific Impact Test. The legal and statutory standards are often a proxy for 'true', but usually unknown, ecological thresholds and the findings of the Wider Environmental test can be compared to the list of statutory standards to identify whether any are relevant.
21. If the test identifies that your proposal may contribute to breaching environmental standards you should notify the Government Department which has legal responsibility for the threshold and seek advice on how to account for the impact, whether to inform statutory bodies of the risk and to identify mitigating or compensating actions where appropriate.
22. Stage 2: Intergenerational impacts - understanding the impacts of our actions on future generations is a key aspect of assessing the sustainability of policy proposals. General advice on taking account of Sustainable Development impacts in policy appraisal, is offered by the Natural Environment Economics team.
23. DEFRA also has useful Guidelines for Environmental Risk Assessment and Management, 'Green Leaves II', published in November 2011 jointly by DEFRA and Cranfield University that would support this Environmental Impact Assessment.

Design Manual for Roads and Bridges Volume 11 Environmental Assessment Section 2 Environmental Impact Assessment

24. This Advice Note sets the context for Environmental Impact Assessment in relation to Strategic Environmental Assessment, Assessment of Implications on European Sites and Transport Appraisal. It provides the general principles and guidance for undertaking Environmental Impact Assessments and describes three levels of assessment i.e. Scoping; Simple; and, Detailed.

³⁹ <http://www.defra.gov.uk/corporate/about/how/policy-guidance/sd-impact/>

25. The level of assessment undertaken must be fit for purpose and appropriate to the potential for the project to cause significant environmental effects. It is our belief that as the scoping report has not provided sufficient detail and is therefore not fit for purpose.
26. Experience has shown that where major projects have failed to seek a scoping opinion serious problems have often emerged later on. The Institute of Ecology and Environmental Management (IEEM) sets out clear guidance and good practice for conducting scoping reports.
27. For the sake of clarity, we spell out in more detail below the areas of detail missing from the Environmental Scoping Report.

Department for Transport's Transport Appraisal System/Consideration of Alternative Options

28. The Environmental Scoping Report makes no reference to the Department for Transport's transport appraisal website WebTAG (Web-based Transport Appraisal Guidance) either in relation to over-arching 'Environment' objectives or in relation to the conduct of transport studies.

29. The overview for the Environment Objective of WebTAG explains:

The Environment Objective aims to protect the built and natural environment. This includes reducing the direct and indirect impacts of transport facilities and their use on the environment of both users and non-users. The environment impacts of concern include noise, atmospheric pollution of differing kinds, vibration, formal intrusion, severance and impacts on the countryside, wildlife, ancient monuments and historic buildings and so on. While some of these can be readily quantified, others such as severance are much more difficult to define and analyse. More recently, the Environment Objective has been defined more widely to include reduction of the impact of transport on the global environment, particularly through emission of carbon dioxide, but also by consumption of scarce and non-renewable resources.

The Environment Objective has 10 sub-objectives that reflect the various impacts of concern:

- *to reduce **noise***
- *to improve **local air quality***
- *to reduce **greenhouse gases***
- *to protect and enhance the **landscape***
- *to protect and enhance the **townscape***
- *to protect the **heritage of historic resources***
- *to support **biodiversity***
- *to protect the **water environment***
- *to encourage **physical fitness***
- *to improve **journey ambience**"*

30. In order to achieve the Government's objectives when considering transport interventions, the guidance includes or provides links to advice on how to:
 - set objectives and identify problems;
 - develop potential solutions;
 - create a transport model for the appraisal of the alternative solutions;
 - and how to conduct an appraisal which meets the Department's requirements.
31. A comprehensive study should have referenced this important tool, which includes advice on the modelling and appraisal appropriate for major highway and public transport schemes.
32. TAG Unit 2.1 of the DfT's WebTAG appraisal guidance sets out the exhaustive overall approach that should be adopted before embarking on a major transport strategy or plan. It should begin with an examination of problems and the setting out of objectives, problems and constraints. This should lead to the production of a list of potential solutions which are gradually whittled down after increasingly detailed scrutiny. There should then be a very detailed analysis of a final few credible alternative propositions (as opposed to simply alternative alignments to the option of building a road). This should include the carrying out of environmental assessments on each of the final 'contenders' to enable the distillation of them to a 'preferred option'. It is all too apparent from reading the environmental scoping report that different options have not been appraised in detail and scoped. There has been one option and one alignment for it. This is wholly unsatisfactory and it is poor practice.

Impacts on Landscape and Settlements

33. Quoting from the Design Manual for Roads and Bridges, para. 4.4.1 of the SEMMMS A6-MARR Environmental Scoping Report accepts that, as a rule, major road schemes "*will generally have an impact on the landscape character of the area*". Paragraph 4.4.8 acknowledges just some of the specific impacts – severance in respect of landform composition, planting structure and settlement and land use and also loss of hedgerows. However, there is no reference to the National Character Areas (NCAs) recognised by Natural England.
34. Whilst Manchester Airport at the extreme western end of the proposed scheme lies within NCA 55 (Manchester Conurbation), the bulk of the scheme falls within NCA 61 (Shropshire, Cheshire and Staffordshire Plain) and the far eastern end at Hazel Grove lies within NCA 54 (Manchester Pennine Fringe).
35. Features typical of NCA 61 are "*a gently rolling plain with only gentle changes in elevation between 20m and 50m*" (para. 2.2), small field patterns populated by small farms, mature hedges and also meres and mosses as this NCA forms a watershed for several river systems. Woodland cover is low – only 4% (compared to a national average of 11%) and the dominant land use is grassland for grazing (51% of farm holdings in 2009 were based predominantly on livestock) and cereal production.

36. The Manchester Pennine Fringe is described in its NCA profile as occupying *“the transitional zone between the open moorlands of the Dark Peak and Southern Pennines and the densely populated urban conurbation of Manchester”*. And, it explains: *“Because of its proximity to urban areas, the countryside continues to be well used by local people. It provides sensory environments that allow public participation, understanding and enjoyment of the natural environment and that provides benefits for health and wellbeing”* (page 12). Describing the area to the east and south of Hazel Grove it says: *“At the southern end of the profile area cattle grazing and dairy farming start to become evident”* (page 8). It goes on to speak of the *“wide range of benefits to society ... collectively known as ‘ecosystem services’* that the Manchester Pennine Fringe provides, highlighting food provision and water availability.
37. In order to establish the full impacts of major infrastructure proposals on landscapes and settlements it is necessary to carry out sight line exercises. These do not appear to have been done yet or commissioned. They need to be. It needs to be established if the new road could be seen from the Peak District National Park, from Lyme Park and/or from ‘The Edge’ at Alderley – or from any other high points in the vicinity. There also needs to be a proper impression/ understanding of the visual impacts where the road will be grade separated – most notably where it will cross the West Coast Main Railway Line. The promoting authorities have produced a video of a motorist’s view when driving along the new road, but no similar impression of what the road would look like when viewed from settlements, footpaths and viewing places. This must be included in a comprehensive environmental assessment

Green Belt Loss

38. The Environmental Scoping Report merely acknowledges, in paragraph 4.4.5, that *“Substantial sections of the corridor are Green Belt”* and references one of the functions of Green Belt, ie. prevention of the coalescence of settlements. It does not, however, quantify how much Green Belt would be lost, nor require that it should be specified and nor does it flag up how narrow the Green Belt is in this corridor or make it apparent that, if the road was built, it would effectively transgress all five Green Belt purposes. These are:
- *“to check the unrestricted sprawl of large built-up areas;*
 - *To prevent neighbouring towns merging into one another;*
 - *To assist in safeguarding the countryside from encroachment;*
 - *To preserve the setting and special character of historic towns and*
 - *To assist in urban regeneration by encouraging the recycling of derelict and other urban land”*
- (NPPF, para. 80)

39. This is a key area of concern for CPRE as an organisation as it was instrumental in Green Belt designations to protect the countryside some 58 years ago. The Scoping Report only includes a couple of fleeting references, and does not acknowledge that Green Belt is afforded special protection. This is clearly inadequate.

Agricultural Land Loss

41. There are several references to the loss of agricultural land but no assessment of the quality/ grade of the land concerned and no requirement that there should be. High grade farmland is a valuable asset and should not be developed over without any assessment of what is being lost.
42. According to the Natural England National Character Area profiles, the bulk of the area through which the proposed road would run, ie. 70%, is Grade 3 (which is good enough to grow potatoes). A much smaller proportion (17%) is Grade 4 in the Cheshire plain area, although the majority of the land in the Manchester Urban Fringe Area is Grade 4.
43. It makes the Scoping Report not only inadequate, but unthorough not to include a reference to the grade of agricultural land that would be lost.

Hedgerow Regulations 1997

44. In Line with the Hedgerow Legislation 1997, a comprehensive audit of hedgerows threatened by this development is required. (Paragraph 4.4.1 does acknowledge there will be some impact on hedgerows but does not require this to be quantified). In particular it is necessary to identify where ancient hedgerows would be lost. We are not convinced that the level of detail is sufficient.
45. CPRE has long campaigned to protect hedgerows as they are of great benefit to the landscape and biodiversity and provide environmental benefits. The beauty of hedgerows in the landscape should be retained for future generations to enjoy. Benefits of hedgerows to the environment are:
- A review of the environmental services provided by Environmental Stewardship in England has revealed that hedgerow options provide a great number of services.
 - Hedgerows play a particularly important role in conserving and protecting farmland and woodland birds and mammals.
 - Hedgerows help to prevent fields from losing soil, because they reduce the erosion caused by wind and they act as a barrier to water-borne run-off.

- Hedgerows act as a barrier between polluting fertilisers, pesticides and sediment and watercourses.
- Hedgerows regulate water supply for crops.
- Hedgerows regulate the rate of flow of water within different areas.
- Hedgerows provide firewood – a renewable fuel – for people in the immediate area.
- Hedgerows in urban areas provide sustainable drainage, they reduce the amount of air pollution, and they provide a habitat for urban wildlife. They also make a huge improvement to the look and feel of built-up areas.

Increase in Light Pollution

46. The Environmental Scoping Report does not adequately reference light pollution from the proposed scheme. Even in the depths of the countryside, genuine dark starry nights are becoming harder and harder to find. Road lighting breaks into the darkness, illuminating the surrounding area, and potentially disrupting local people's sleep. Our quality of life is being reduced by light pollution. Manchester Airport already has an adverse impact on light pollution locally and this development would worsen the problem.

Air Quality

47. The impact of the proposed SEMMMS development on reducing air quality needs to be more fully understood. (Refer to report by Helen Rimmer, North West FOE Campaigner).

Absence of a Health Impact Assessment

48. The Environmental Scoping Report (Section 4.13) refers to the need for a Health Impact Assessment (HIA) to be produced to support the planning application. It goes on to state that the purpose of the HIA will be to consider impacts on public health in the local and wide community. CPRE contend it is poor practice for this important body of evidence to be absent at this stage, especially as fatalities are expected to increase. Such research must be carried out to inform the decision making process.

Nature Conservation: range of work and timing

48. A key issue raised by the preliminary consultation with statutory consultees of the Environmental Scoping Report (Section 1.3) was to consider any concerns regarding the ecological assessment for the scheme due to presence of protected species such as great

crested newts and mammals (Natural England, rECOrd, GMEU, Mammal Review, Manchester City Council).

50. Certain endangered species such as brown hare and barn owl are not mentioned in the Environmental Scoping Report and this seems to be a glaring omission. We understand these species are present across the locations (such as Woodford Aerodrome – according to BAe's former environmental consultants) and that they will be directly affected if the development proceeds. The Biodiversity Action Plans (BAP) covering Greater Manchester, Cheshire and Stockport highlight the potential for the following BAP habitats and protected and notable.
51. Furthermore, the DMRB indicates a requirement to consider the following potential ecological impacts:
- The direct loss of habitats through land-take;
 - how road schemes potentially create a barrier and divide habitats or wildlife corridors;
 - the potential for road kill through species trying to cross a road where foraging routes and habitats have been lost or severed; the effects on wetlands, aquatic environments and drainage patterns through disruption to the local hydrology;
 - the effects on birds and mammals through constructing major road structures; the effects of road lighting, pollution runoff, spray and lighting; and disturbance caused during construction.
52. We assess that not only did the field surveys take place too long ago, i.e. a decade ago in 2003, they took place in bad weather and were therefore hampered. In conclusion the Scoping Report is arguably out of date and did insufficient assessment on the above bullets and insufficient assessment to adequately show the potential impacts on designated and non-designated sites, key habitats and habitat-types, and protected and notable species.
53. It is difficult to understand how the Major Scheme Business Case (Table 5.2 Breakdown of Costs) can quantify the financial cost to mitigate loss to the environment at £0.87 million when it has not undertaken the preliminary work adequately. The level of research and reporting falls below expectation. (See further comments on this in para. 53).
54. It is apparent from the outset that this document has not been updated since it was written about three years ago. In the third para. of the Introduction (para. 1.1.3) it states that the planning application for the scheme is to be submitted in the autumn/ winter of 2010.

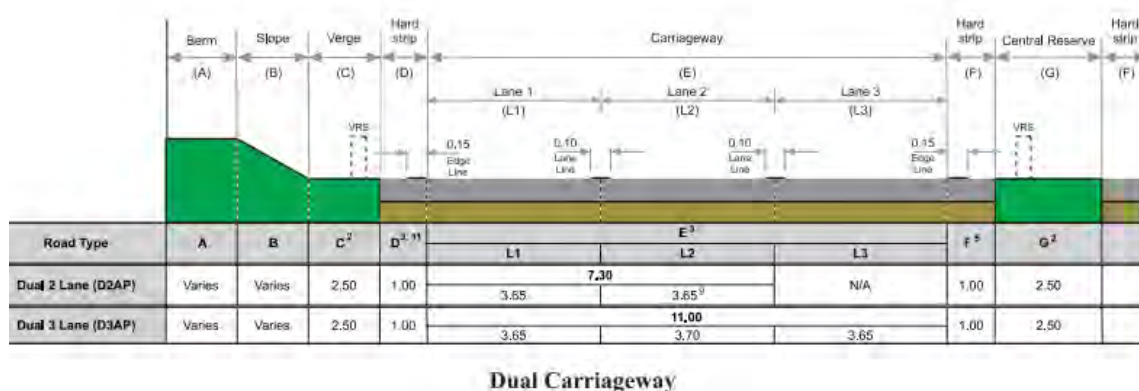
Duty to Co-operate Requirement

55. All Local Authorities now have a Duty to Co-operate with each other in the production of their plans and particularly when development aspirations they have could impact on adjoining areas. There is no sense from this scoping report that the Peak District National Park planning authority, which could experience deleterious traffic and landscape impacts, has been involved.

Environmental Mitigation

56. The A6-MARR Scoping Report speaks of the need to address both cultural heritage and historical landscape impacts if the scheme is built (paragraphs 4.3.9 – 4.3.16, inclusive). This is entirely appropriate. However, here again, there is no reference to Natural England's National Character Areas. Most tellingly, if a cross-reference is made to the main 'Major Scheme Business Case' document, dated 12.11.12, it reveals that the intention is to allocate a mere £872,000 for environmental mitigation (Table 5.2, page 95). Bearing in mind that the A6-MARR scheme would be 10 km. in length, this suggests a totally inadequate resource allocation to cover the costs of environmental mitigation, which is clearly a vitally important subject.
57. The Design Manual for Roads and Bridges shows that the width of a standard dual carriageway (see Figure 1.0 – Dual Carriageway widths advised by the DMRB below), not including any landscaping is 19.1 metres. It is proposed that this dual carriageway would have a segregated cycleway. Basing the width on 20 metres, therefore, would be extremely conservative. But, taking that as a baseline, would mean that only £87 per 20 sq. km. has been allowed to replace lost biodiversity and habitats, provide wildlife corridors, replace hedgerows and ponds, etc. and to provide bunding and landscaping. This is insufficient to adequately mitigate the required environmental loss caused by the road development.

Figure 1.0 – Dual Carriageway widths advised by the DMRB⁴⁰



⁴⁰ <http://www.dft.gov.uk/ha/standards/dmr/vol6/section1/td2705.pdf>

CONCLUSIONS

58. Our independent review of the Environmental Scoping Report: Appendix D of the Major Scheme Business Case of the A6-MARR dated February 3rd 2010 found it to be useful in concluding the proposed major development is of sufficient scale to warrant an Environmental Impact Assessment and an Environment Statement in accordance with legislation. That said, we believe the report is deficient due to the following:

- i. It makes no mention of or reference to the North West of England Plan – the Regional Spatial Strategy (RSS). If and until it is revoked, this is a statutory document which must be complied with.
- ii. It has not adopted an approach which would ensure the Sustainability Appraisal will tackle all the likely effects on the environment and on social and economic factors as required by the NPPF.
- iii. It is not based on up-to-date information with the significant amount of data dating back over a decade to 2003.
- iv. It has not drawn on the River Basin Management Plan, as required by the NPPF.
- v. It has not called for the Sustainability Appraisal to follow DEFRA's Specific Impact Test.
- vi. It lacks the detail required by the Design Manual for Roads and Bridges.
- vii. It makes no reference to the DfT's transport appraisal system, WebTAG.
- viii. It does not present any evidence to indicate that several options have been analysed which were whittled down from a longer list of potential solutions to identified problems. Investigative work appears to have only been carried out on one option – a road – and on one alignment and the work appears to date back over a decade to 2003.
- ix. It only acknowledges some of the potential landscape impacts and does not reference Natural England's National Character Area profiles.
- x. It does not ask for sight lines to fully understand impacts on landscapes and settlements
- xi. It only references one of the five purposes of Green Belt and does not require that the area of impacted Green Belt should be quantified
- xii. It does not require any breakdown of the grade of agricultural land that would be lost

Jackie Copley's critique

xiii. It does not ask for the amount of hedgerow loss to be assessed or, particularly, for the amount of ancient hedgerow loss to be quantified.

xiv. It fails to adequately cover the subject of light pollution.

xv. It inadequately tackles air quality.

xvi. Its approach to the need for an early Health Impact Assessment is woefully inadequate

xvii. It appears to approach nature conservation and ecological requirements in a less than robust manner.

xviii. The Peak District National Park Authority do not appear to have been involved under the

Duty to Co-operate and no sight lines appear to have been commissioned.

xix. No cognisance appears to have been taken of the following:

- i. expansion plans at Manchester Airport Enterprise Zone,
- ii. proposals by Cheshire East Council to build the interconnecting Poynton-Woodford Relief Road (formerly known as the A523 Poynton Bypass and the Poynton to Macclesfield Improvement),
- iii. the possibility of a High Speed 2 station,
- iv. the development of a Woodford Garden Village on the former BAe site for 750-850 houses, plus a school and some employment,
- v. proposals by Cheshire East Council for a new settlement at Handforth East alongside the A555, which would be for 2,300 houses plus schools, leisure and religious facilities, and,
- vi. The area covered by the Environmental Scoping Report does not seem to be extensive enough for the wider environmental impacts to be captured.

59. It is the conclusion of CPRE that this scoping report is not fit for purpose. The breadth of it is wholly inadequate and it has not followed best practice.



This photograph was uploaded onto the hazel-grove.co.uk website, a part of the CiviC Network, in June 2006

The image above shows the bridge over Norbury Brook taken from the bottom of Old Mill Lane, Hazel Grove and the one below is of winter sunshine over Ox Hey Fields, near the A6 at Hazel Grove, the eastern end of the route

This photograph was uploaded onto the hazel-grove.co.uk website, a part of the Civic Network, in 2007



**A critique of the SEMMMS
A6-Manchester Airport Relief Road
approach to air quality & climate change
by
Helen Rimmer
Friends of the Earth**



January 2013

The A6 to Manchester Airport Relief Road: Climate change and air quality impacts

Prepared by:
Helen Rimmer
North West Campaigner
Friends of the Earth
60 Duke St
Liverpool
L1 5AA

Statement of qualifications and experience

This report was prepared by Helen Rimmer, North West Campaigner for Friends of the Earth. I have a BSc (Hons) in Geography (Leeds University) and MProf in Sustainable Development (Middlesex University/Forum for the Future).

I have worked as a Campaigner for Friends of the Earth England, Wales and Northern Ireland since 2008, holding the post of North West Campaigner since January 2010. My role involves advocating policies for sustainable development at local and regional levels, supporting our national campaigns on climate change and sustainable development through advocacy at the regional level, and working with community groups in the North West on environmental campaign issues including advising on planning matters.

I have worked in policy roles for the public sector including as a Policy Analyst for the Sustainable Development Commission and a Sustainable Development Officer for the North West Regional Assembly. I have worked as a Community Officer on environmental regeneration projects for Groundwork West London.

The A6 to Manchester Airport Relief Road: Climate change and air quality impacts

Introduction

1. This is a critique of the approach to air quality and climate change that has been adopted by the local authorities promoting the SEMMMS A6 to Manchester Airport Relief Road. It examines the need to meet relevant legislation and target commitments, particularly in respect of carbon reduction, and it considers the health and equality impacts of failing to combat existing poor air quality and cut greenhouse gas emissions.

About the scheme

2. The A6 to Manchester Airport Relief Road (A6-MARR) is a west-east section of the South East Manchester Multi Modal Study (SEMMMS) network of roads, some of which date back decades in their genesis. The network includes other currently non-funded road proposals – the A523 Poynton Bypass (recently re-named the Poynton-Woodford Relief Road), the A6 Stockport North-South Bypass (Hazel Grove to M60 at Bredbury) and the Stepping Hill Link Road⁴¹. The A6-MARR scheme is promoted by three local authorities Manchester City Council and Stockport Metropolitan Borough Council - both of which are part of the Greater Manchester Combined Authority - and Cheshire East Council.
3. The promise of government funding for half the cost of the A6-MARR scheme was removed following the Comprehensive Spending Review in 2010, but it was subsequently then prioritised and the partial funding was re-instated in the Autumn Statement of 2011, with £165 million promised from central government, and the remaining costs to come from local contributions via the Greater Manchester Transport Fund.
4. Since the original SEMMMS study which was completed in 2001, there has been no full up-to-date review of the need for the A6-MARR against other non-road building options to address congestion problems, despite a national flattening out in traffic growth, changes to travel patterns, new legislation on air quality and climate change, and new evidence emerging to drive policy decisions, for example on the urgency for action on climate change.
5. In addition to the wider network of SEMMMS schemes referred to above, the A6-MARR is close to other major infrastructure schemes which would affect traffic levels and air quality and carbon emissions, including Manchester Airport City Enterprise Zone, plans for Woodford Garden Village on land at the former Woodford Aerodrome site south of the A6-MARR⁴², and plans for a major new settlement east of Handforth at the junction of the A555 and the A34⁴³.

⁴¹ <http://www.semmms.info/140683/433764/semmmsstrategyreport>

⁴² <http://www.stockport.gov.uk/services/business/regendevelopment/regeneration/tcandmajordev/woodfordaerodromesite/woodfordsitedocs>

⁴³ http://cheshireeast-consult.limehouse.co.uk/portal/planning/cs/town_strategies/handforth

Air Quality Policy context

6. Air pollution is a serious problem in the UK, and reduces life expectancy by an average of seven to eight months, with equivalent annual health costs estimated to be up to £20 billion a year⁴⁴. Road transport is a major source of air pollution, and is estimated to be responsible for £5 - £11 billion per annum of the wider costs of transport in urban areas⁴⁵.
7. The European Commission has declared 2013 as the year of air, with new proposals on improving air quality across Europe to be developed this year. The EC cites a dramatic rise in traffic on roads as one of the key contributors to air pollution, which is cited as the main cause of lung conditions such as asthma, with twice as many sufferers today compared to 30 years ago, and as the cause of over 350,000 premature deaths in the EU every year⁴⁶. Children are particularly at risk, with epidemiological studies for the World Health Organisation showing that symptoms of bronchitis in asthmatic children increase in association with long-term exposure to NO₂.⁴⁷
8. Legal standards for ambient air quality are set out in the 2008 Ambient Air Quality Directive, EC Directive 2008/50/EC, which prescribes limits for a number of concentrations of pollutants that affect public health, including particulate matter (PM₁₀ and PM_{2.5}) and nitrogen dioxide (NO₂)⁴⁸. For NO₂, which is the main pollutant of concern in the A6-MARR scheme area, these ceilings are expressed as an annual limit value of an annual mean concentration of no more than 40 µgm-3, and an hourly limit value of no more than 18 hourly exceedances of 200 µgm-3 in a calendar year.
9. The 2008 Directive was transposed into English law through the Air Quality Standards Regulations 2010⁴⁹ and the Government's National Air Quality Strategy⁵⁰. Under the Environment Act 1995 Part 4, local authorities are also required to review air quality in their area and introduce Air Quality Management Areas (AQMA) in locations where air quality objectives are not met and to set out measures to reduce concentrations of air pollutants⁵¹. An AQMA has been declared for Greater Manchester, parts of which overlap with the A6-MARR scheme. Twelve AQMA have been declared in Cheshire East including in Disley, to the south east of the A6-MARR. Comment on the implications of the scheme on these AQMA is contained in the next section.

⁴⁴ UK Air Quality Strategy, published on 17 July 2007

www.defra.gov.uk/environment/airquality/strategy/index.htm

⁴⁵ Air pollution: Action in a Changing Climate, 2010, Defra

<http://www.defra.gov.uk/publications/2011/04/13/pb13378-air-pollution/>

⁴⁶

http://ec.europa.eu/research/infocentre/article_en.cfm?id=/research/headlines/news/article_13_01_16_en.html&item=Infocentre&artid=28973

⁴⁷ <http://www.who.int/mediacentre/factsheets/fs313/en/index.html>

⁴⁸ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:152:0001:0044:EN:PDF>

⁴⁹ <http://www.legislation.gov.uk/ukxi/2010/1001/contents/made>

⁵⁰ <http://www.defra.gov.uk/publications/files/pb12654-air-quality-strategy-vol1-070712.pdf>

⁵¹ <http://www.defra.gov.uk/publications/files/pb13566-laqm-policy-guidance-part4-090302.pdf>

10. The UK Air Pollution report 2011 found that annual mean concentrations of NO₂ beside busy urban roads frequently exceed 40 µg m⁻³, the limit value set by the European Union to protect human health⁵². The report showed that the Greater Manchester agglomeration had locations with measured or modelled mean NO₂ concentrations higher than the 40 µg mean limit.
11. The EU Directive 2008/50/EC stipulates that compliance with the NO₂ limit values should have been achieved by 01/01/2010, but allowed Member States to postpone this attainment date until 01/01/2015 provided air quality plans are established demonstrating how the limit values will be met by this extended deadline.
12. The Greater Manchester Local Transport Plan 3 (LTP3) acknowledges that the 2010 requirements for NO₂ concentrations have not been met, but does not set out how transport planning decisions will enable the 2015 deadline to be met⁵³. Despite the focus on meeting EU limits on NO₂, the Greater Manchester Air Quality Strategy and Action Plan⁵⁴ 'made very little difference' (LTP3 section 9.3) to NO₂ concentration at most road side locations. Greater Manchester is not due to meet legal NO₂ limits until 2020, which puts the UK, and in turn Greater Manchester authorities, at risk of large fines of up to £300 million⁵⁵. The LTP3 acknowledges that 'financial penalties may have a significant impact on future budgets' yet nowhere in the Business Case is this financial and legal risk taken into account.
13. The 2011 UK Air Pollution report also shows that the Manchester South air quality monitoring station on Styal Road near the western end of the A6-MARR scheme recorded four days of exceedances for ozone concentrations⁵⁶. Ozone is a harmful air pollutant and potent greenhouse gas, which can be transported large distances by weather.
14. The Greater Manchester LTP 3 Air Quality Strategy and Action Plan states that detailed assessment and air quality modelling is being carried out by the Greater Manchester Transportation Unit through the Greater Manchester Emissions Dispersion project (Para 2.4)⁵⁷ to provide a forecast for emissions for 2015/16, yet this is not referred to in the Business Case or Environmental Scoping Report for A6-MARR.

Scheme impacts on air quality

15. Overall air quality impacts have been appraised to be 'beneficial' despite significant negative impacts in certain locations including within Air Quality Management Areas.

⁵² http://uk-air.defra.gov.uk/library/annualreport/air_pollution_uk_2011_issue_2.pdf

⁵³ http://www.tfgm.com/journey_planning/LTP3/Documents/Greater_Manchester_Local_Transport_Plan_Core_Strategy.pdf

⁵⁴ http://www.tfgm.com/journey_planning/LTP3/Documents/Air-Quality-Strategy-and-Action-Plan.pdf

⁵⁵ <http://www.guardian.co.uk/environment/2010/jun/03/uk-warning-london-air-quality>

⁵⁶ http://uk-air.defra.gov.uk/library/annualreport/air_pollution_uk_2011_issue_2.pdf

⁵⁷ http://www.tfgm.com/journey_planning/LTP3/Documents/Air-Quality-Strategy-and-Action-Plan.pdf

16. Table 4.3 (p 69) of the Business Case appraisal of impacts states that the scheme will affect air quality in AQMAs, with 1003 and 3899 properties experiencing worsened air quality, including 507 properties that experience an exceedance of the annual mean NO₂ limit. 10,147 properties overall will experience a deterioration in PM₁₀ and 27,521 a deterioration of NO₂.
17. Appendix M includes an assessment of the air quality impacts on residential areas. This shows the scheme would have adverse impacts in Woodhouse Park and Wythenshawe which are in close proximity to Manchester Airport, Cheadle Hulme, areas to the south of Hazel Grove and Bramhall close to the scheme, and along the A6 route through High Lane and Disley.
18. Communities in and around Stockport town centre are predicted to receive a beneficial impact on air quality. The Social and Distributional Indicator analysis predicts that those living in the most deprived areas will receive the highest proportion of beneficial impact, although it is not clear in absolute terms to what extent these areas will still experience poor air quality.
19. The scheme will cause extra traffic at locations in air quality management areas already exceeding EU limits on NO₂. The analysis of traffic impacts in Appendix B shows the most significant increases in flow are on the A6 Buxton Road south of its junction with SEMMMS, the A555 Manchester Airport Eastern Link Road, the M56 South of Junction 5 and the M56 Spur, and the A34 Handforth/Wilmslow Bypass to the M60.
20. The Greater Manchester AQMA covers sites that will be impacted by the proposed road, including near Macclesfield Road and Buxton Road at Hazel Grove, A34/A555, B5359/A555 western end, and the Wythenshawe/M56 and Wythenshawe/Brownley Road.
21. High levels of NO₂ which exceed legal EU limits are regularly recorded in the Greater Manchester AQMA. For example, according to recent figures on the local air quality website, high levels of NO₂ were recorded at both the Manchester South and Hazel Grove monitoring stations during January 2013: 66 mg/m³ NO₂ on 11/01/2013 at Styal Road, Manchester South, near Manchester Airport, and 66mg/m³ NO₂ at Hazel Grove on 09/01/2013⁵⁸.
22. There are twelve AQMAs in Cheshire East, with traffic accounting for the main source of pollutant emissions across the local authority area⁵⁹. This includes an AQMA at the A6 Market Street, Disley, an area along the A6 at Disley from the crossroads with Buxton Old Road in the west to the junction with Redhouse Lane in the east. All twelve AQMAs have been declared for breaches of the annual mean objective for NO₂. The AQMA along the A6 Market Street in Disley was also declared for exceedances of the hourly mean objective for NO₂. Diffusion tube monitoring in Disley for 2012 shows exceedances of annual mean air quality limits for NO₂⁶⁰. The traffic modelling for the A6-MARR shows an expected increase in traffic in Disley and an adverse impact on air quality from the

⁵⁸ www.greatairmanchester.org.uk/greatair/default.aspx

⁵⁹ Local Air Quality Strategy for Cheshire East Council, 2010, Cheshire East Council

⁶⁰ http://www.cheshireeast.gov.uk/environment_and_planning/environmental_health/local_air_quality/what_is_pollution_like_near_me/diffusion_tube_monitoring/interactive_map/disley.aspx

scheme (Appendix M Fig 3-13)⁶¹. This would therefore lead to additional air pollution in an area where existing NO₂ limits are breached.

23. EU air quality legislation is clear that limits must be met everywhere in an air quality management zone, and air quality cannot be worsened where pollution is already over EU legal limits, as is the case with the Greater Manchester AQMA and Cheshire East's AQMA at Disley. Any new development granted in an area with pollution levels already breaching limits, that would worsen air quality, would leave the UK at risk of large financial penalties.
24. In addition to the economic risk of fines, a worsening of air quality will of course have negative health impacts on residents. A Health Impact Assessment should have been prepared to consider the air quality impacts on residents and provide evidence to inform decision-making, but has been absent at this important stage of consultation.
25. It is also important to note the limits of the traffic forecasting, which does not consider induced traffic. Induced traffic occurs when a greater volume of traffic is generated as a result of extra road capacity, and evidence of this has been well documented⁶². If induced traffic is not fully included in the assessment of the scheme, the traffic and resultant air pollution and carbon emissions will be underestimated.

Climate Change Policy context

26. The evidence is clear about the urgency of reducing climate-changing greenhouse gas emissions⁶³. The Intergovernmental Panel on Climate Change concluded in March 2012 that, globally, evidence suggests that climate change has led to changes in climate extremes such as heat waves, record high temperatures and, in many regions, heavy precipitation in the past half century⁶⁴. 2012 also saw a record low for arctic sea ice, a sensitive indicator of climate change⁶⁵. In its latest annual progress report, the Committee on Climate Change, the government's independent advisors and statutory body reporting to Parliament on greenhouse gas emission reductions, found that the pace of measures needed to reduce emissions in the UK needs to increase fourfold to meet legal targets⁶⁶.

⁶¹ Disley figures (accessed at the exhibition for the road scheme) for the base traffic year are 24,500, for 2017 without the road 25,900, and for 2017 with the road 30,500

⁶² Goodwin, P. Empirical evidence on induced traffic; Transportation Vol 23 Issue 1 1996; SACTRA report 1994, Trunk Roads and the Generation of Traffic concluded that 'induced traffic can and does occur, probably, quite extensively' (para 10) and 'the economic value of a scheme can be overestimated by the omission of even a small amount of induced traffic' (para 12) <http://www.dft.gov.uk/publications/trunk-roads-and-the-generation-of-traffic/>; Beyond Transport Infrastructure: Lessons for the future from recent road projects

<http://www.transportforqualityoflife.com/u/files/Beyond-Transport-Infrastructure-fullreport%20July2006.pdf>

⁶³ http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf

⁶⁴ http://www.ipcc.ch/news_and_events/docs/srex/srex_press_release.pdf

⁶⁵ <http://www.metoffice.gov.uk/news/releases/archive/2012/sea-ice-minimum>;
<http://www.metoffice.gov.uk/research/news/sea-ice-2012>

⁶⁶ http://hmccc.s3.amazonaws.com/2012%20Progress/CCC_Progress%20Rep%202012_bookmarked_single_s_1.pdf

27. The Climate Change Act 2008 introduced a binding reduction target requiring the UK to reduce its emissions by at least 80% by 2050 against 1990 levels and a reduction of at least 34% by 2020⁶⁷. It also introduced a long-term framework for managing emissions through a system of national carbon budgets, which place caps on the total quantity of greenhouse gases permitted in the UK over a specified time.
28. The Government set out plans for achieving the emissions reductions committed to in the first four carbon budgets up to 2027 in The Carbon Plan published in December 2011⁶⁸. Emissions for the transport sub-sector, which accounts for 24% of overall UK emissions, are dominated by the car: 58% car, vans 12%, Heavy Goods Vehicles 17%. The Plan sets out that sustainable travel choices are a key element of the Government's strategy for de-carbonising travel.
29. A report by the Committee on Climate Change in 2012 concluded that local government is key to meeting national greenhouse gas emission targets, and the sector has the potential to significantly impact on the UK's scale and speed of emissions reductions⁶⁹. It highlighted the influence local authorities have over key emitting sectors including surface transport, and the importance of designing and implement local sustainable transport plans, enhancing public transport and promoting sustainable travel, and land-use planning that delivers sustainable patterns of development.
30. At the regional level, the North West Climate Action Plan and refresh set out a vision for a low carbon and well adapted region by 2020⁷⁰. The action plan sets out that by 2020 public transport and car sharing are the mode of choice for many journeys and walking and cycling will be preferred for short journeys. As a result of this approach, which clearly excludes road-building, the action plan says that road congestion and health will be improved.
31. At the sub-regional level, the Greater Manchester Climate Strategy was launched in July 2011, setting out a plan to build a low carbon economy by 2020 and reduce collective carbon emissions by 48%.⁷¹
32. The 'Mini-Stern' for Manchester found that inaction on climate change could cost the Greater Manchester economy £20 billion by 2020⁷².

⁶⁷ <http://www.legislation.gov.uk/ukpga/2008/27/contents>

⁶⁸ <http://www.decc.gov.uk/assets/decc/11/tackling-climate-change/carbon-plan/3702-the-carbon-plan-delivering-our-low-carbon-future.pdf>

⁶⁹ <http://www.theccc.org.uk/news/press-releases/1184-local-government-is-key-to-meeting-national-emissions-targets-17th-may-2012->

⁷⁰ http://www.grabs-eu.org/membersArea/files/NW_England.pdf and North West Climate Change Plan, 2006

http://www.4nw.org.uk/downloads/documents/nov_06/nwra_1163093027_North_West_Climate_Change_Acti.pdf

⁷¹ http://www.manchester.gov.uk/info/500117/green_city/3833/climate_change_and_energy/1

⁷² http://www.deloitte.com/assets/Dcom-UnitedKingdom/Local%20Assets/Documents/UK_GPS_MiniStern.pdf

33. Cheshire East Council has produced a Carbon Management Plan which sets out how it will reduce emissions from its own operations⁷³. Tackling climate change is a priority of the council's Corporate Plan 2010-2013⁷⁴ and a key aim of the Sustainable Community Strategy, "Ambition for All"⁷⁵. It has signed up to the Nottingham Declaration on Climate Change, a pledge which is intended to demonstrate a council's commitment to addressing issues of climate change.

Scheme impacts on climate change

34. Table 4.3 appraisal of impacts shows that the scheme will lead to an increase in carbon emissions over a 60 year period of approximately 10,300 tonnes. The scheme has been appraised to have a 'neutral' impact on climate change emissions, yet in the context of the UK's legal commitment to reduce greenhouse gases by at least 80% by 2050, in line with climate science, an actual increase in carbon emissions over a 60 year period is a very negative outcome in terms of climate change impacts.
35. The Business Case states that other measures which would have a positive impact on carbon reduction – such as new bus services and modal shift to cycling – have not been included in modelling and 'more than mitigates the small modelled increase in carbon emissions'. It would inform appraisal of the contribution of the scheme to carbon reduction objectives if it were possible to compare this with the greenhouse gas impacts of a public transport improvement and cycling and pedestrian infrastructure only option, without the A6-MARR, though non-road options have already been discounted.
36. Furthermore, the A6-MARR has been considered in isolation from other linked planned major infrastructure schemes and therefore cumulative emissions have not been forecast. In particular, the lack of up to date traffic generation forecasts for the expansion of the Manchester Airport City Enterprise Zone, which is central to the strategic economic case made for the A6-MARR, does not allow a true climate change impact assessment to be carried out.
37. Notwithstanding the flaws in traffic modelling and the consideration of the scheme in isolation from other linked major infrastructure which would be likely to give rise to higher greenhouse gas emissions than forecast, taken at face value the scheme's claims to have a negligible change in overall emissions show that the scheme will therefore make no contribution towards the three councils' core objectives for 'lower carbon emissions' (Business Case para 3.12 and Tables 3.2 to 3.4) and the commitment to reduce carbon emissions in line with UK Government targets, as set out in Greater Manchester LTP3. This raises the question of whether such significant sums of public money should be spent on a scheme which will make, at best, no contribution towards lowering carbon emissions and in fact lead to an increase.

⁷³ Cheshire East Carbon Management Plan, 2011, Cheshire East – accessible from: http://www.cheshireeast.gov.uk/environment_and_planning/sustainability.aspx

⁷⁴ Cheshire East Corporate Plan 2010-2013 – <http://modern.gov.cheshireeast.gov.uk/ecminutes/Published/C00000283/M00003213/AI00009155/AppendixCorporatePlan0106.pdf>

⁷⁵ Cheshire East Sustainable Community Strategy: Ambition for All – <http://modern.gov.cheshireeast.gov.uk/ecminutes/Published/C00000241/M00003094/AI00009347/787CECommunityStrategy0707.pdf>

38. The Environmental Scoping Report has not considered climate change adaptation. The UK Climate Change Risk Assessment 2012 states that transport infrastructure may face an increased risk from river flooding⁷⁶. There are two main areas with flood risk within the scheme area, at the confluence of Norbury Brook, Poynton Brook and Lady Brook, and the area surrounding the River Dean and Spath Brook. The Business Case states that 'a detailed flood risk and drainage study is being undertaken' – this should have been completed and presented as part of the consultation and to inform the decision-making process, including future risks.

Alternative sustainable transport solutions

39. Alternative non-road options to address congestion problems, which could also make greater contributions towards meeting carbon reduction and air quality targets, have not been considered and appraised. This is despite new legislation on climate change and air quality having come into force, and new evidence on the scale and urgency to tackle the problems, since the SEMMMS process started.
40. Measures aimed at promoting sustainable travel modes would contribute to both climate change and air quality objectives, and tackle congestion. Defra's 2010 document, Air Pollution: Action in a Changing Climate, sets out the need to align air quality and climate change strategies in order to identify options with the highest economic returns⁷⁷.
41. When considering overall economic benefits of transport infrastructure schemes, there is clear evidence that cycling infrastructure schemes in particular provide some of the highest returns on investment when considering overall economic benefits⁷⁸. The Business Case states that the pedestrian and cycle route adjacent to the new road will support 'the step-change in provision of infrastructure for non-motorised modes required to encourage more people to choose cycling and walking as an alternative to the car' (para 2.19) yet nowhere is this backed up by evidence, nor is the option of a new path and cycleway without the road presented and appraised. Furthermore, the cost benefit analysis indicates a public transport disbenefit due to modal shift from bus to car.
42. Smarter Travel Choices is a generic term used for 'soft' measures to cut car traffic not involving the building of 'hard' new transport infrastructure. Evidence shows such programmes are cost-effective and successful methods of encouraging behaviour change towards low-carbon healthier travel⁷⁹. The Committee on Climate Change estimates that a national roll out of Smarter Travel Choices would save about 2.9 MT CO₂ per annum⁸⁰.
43. Options for public transport improvements, cycling and pedestrian infrastructure improvements and for encouraging behaviour change through Smarter Travel Choices should be fully developed and appraised before a new road is pursued.

⁷⁶ <http://www.defra.gov.uk/environment/climate/government/risk-assessment/>

⁷⁷ <http://www.defra.gov.uk/publications/2011/04/13/pb13378-air-pollution/>

⁷⁸ Department for Transport, 2010, Cycling Demonstration Towns Development of Benefit-Cost Ratios

⁷⁹ http://www.foe.co.uk/resource/briefings/ltp_stc_briefing.pdf

⁸⁰ CCC "Meeting Carbon Budgets, July 2010" (page109)

http://downloads.theccc.org.uk/0610/pr_meeting_carbon_budgets_chapter4_progress_cutting_surface_transport_emissions.pdf

Conclusion

44. The cumulative climate change and air quality impacts of the SEMMMS road schemes and future planned major development which interacts with the A6-MARR have not been assessed. There is a lack of up to date traffic generation forecasts for growth of the Manchester Airport City Enterprise Zone, which is central to the strategic economic case made for the A6-MARR. Air quality is already poor around the airport and there is planned expansion of the Enterprise Zone – if the new road is built it would be more likely that the Enterprise Zone is accessed by car-driving commuters. With high potential significant impacts and risks the environmental impact of the A6-MARR should therefore not be assessed in isolation of the other linked major development.
45. There are clear instances in Air Quality Management Areas in the south of the Greater Manchester AQMA and in the Disley AQMA where the proposed road would worsen air quality levels that are already in breach of EU legal limits. The Business Case takes insufficient account of the potentially damaging effects of the road proposal on human health and a Health Impact Assessment has yet to be conducted. In addition to the negative health impacts on affected communities, there is a clear risk of substantial fines for failure to meet legal EU air quality targets and for planning new development which would worsen air quality. These fines could be passed on to local authorities, but this financial risk has not been taken account in the Business Case.
46. The Business Case states that the scheme will make no contribution to reducing carbon emissions, and in fact would lead to an increase in carbon emissions. Due to the lack of consideration of induced traffic generated from new road capacity there is likely to be a far higher climate impact. In the context of the UK's legally-binding target of at least an 80% reduction in carbon emissions by 2050, and the Greater Manchester authorities' commitment to reduce emissions by 48% by 2020, the scheme should therefore not be pursued and alternative options for reducing congestion and simultaneously contributing towards climate change and air quality targets must be preferred.

CONCLUSION - An appeal Government & the Local Authorities to re-think

This report has demonstrated beyond doubt that the SEMMMS A6 to Manchester Relief Road is based on shaky hypotheses, incorrect assumptions, a deeply questionable business case and inadequate traffic and public transport data. It has also shown that, to date, the potential environmental and landscape consequences of building the road have not been properly taken into account. Nor has adequate weight been given to the loss of the Greater Manchester/ North Cheshire Green Belt in a particularly fragile area - a factor that would lead to urban sprawl. Previously asserted economic benefits have yet to be proven and any there may be need to be seriously weighed against environmental and social disbenefits. These include potential impacts on the Peak District National Park. Here we would particularly draw attention to Appendix 2 which is the response to the SEMMMS A6-Manchester Airport Relief Road consultation by Friends of the Peak District.

We conclude that it would be a folly to proceed any further with the A6-MARR, especially as – in doing so – induced new traffic movements channelled along new corridors would bring on the development of the remaining SEMMMS roads. This report has gone a long way to proving that the SEMMMS roads are not necessary and should not be progressed.

The environmental NGOs involved in the production of this report – the Campaign for Better Transport, the North West Transport Roundtable, the Campaign to Protect Rural England and Friends of the Earth – appeal to the Government not to part-fund this road and to the Local Authorities to have a serious re-think.

The SEMMMS roads were a product of the last century when it was believed that traffic growth would continue to rise exponentially. This has not happened. Traffic growth has flattened out for many years. In addition, there has been - and there continues to be - significant investment in public transport in the Manchester City Region. The success of the Metrolink has proven that if a high quality public transport offer can be put before the public, more people will take it up. Soon the Metrolink will reach Manchester Airport. Even without sufficient investment, heavy rail usage has grown enormously in recent years and now the Northern Hub commitment will vastly increase the number of train journey options, and reduce travelling times, throughout the North of England. Plans are in hand for a fourth platform at the airport rail station and Crewe station, from which journeys to the airport can be made, is having a major re-fit. The wheels are in motion in the sub region to deliver a major modal shift. The currently promoted new road and the other roads it would prompt should not be allowed to happen. They would constitute a backwards step in that modal change. The voice of reason is calling. Stop road-building plans in South East Manchester and North East Cheshire now – before it is too late.

Appendix 1

CPRE Lancashire Branch response to the A6-MARR consultation



Springfield House

Office No2
41-45 Chapel Brow
Leyland
Lancashire
PR25 3NH

Telephone 07718 070750

www.CPRELancashire.org.uk

*Working locally and
nationally for a beautiful
and living countryside*

SEMMMS Project Team,
Stockport Council,
Stopford House (Fred Perry),
Stockport, SK1 3YQ.

24 January 2013

Dear SEMMMS team,

CPRE Lancashire Branch Comments on SEMMMS A6-Manchester Airport Relief Road Consultation

The Campaign to Protect Rural England (CPRE) Lancashire Branch would like the following comments to be taken into account as part of our response to the SEMMMS A6-Manchester Airport Relief Road consultation, along with the critique by the branch planning officer of the scheme's Environmental Scoping Report (published as Appendix D to the Business Case) and the independent paper produced for CPRE by Keith Buchan and Associates on the Manchester Airport Enterprise Zone. The two documents appended here are also part of the composite submission made to this consultation by the North West Transport Roundtable (NW TAR) and the Campaign for Better Transport (CfBT).

1. Introduction

- 1.1. CPRE exists to promote the beauty, tranquillity and diversity of rural England by encouraging the sustainable use of land. We work to protect, promote and enhance our towns and countryside to make them better places to live, work and enjoy and to ensure the countryside is protected for now and future generations.
- 1.2. Nationally, CPRE has had a long-standing interest and involvement in the designation, maintenance and use of the Green Belt across the country as a whole.
- 1.3. CPRE also has an established position on transport issues. We support sustainable transport and believe traffic growth should be controlled and reversed through policies which aim to reduce car journeys. Road building damages the landscape. Increased traffic levels mean more carbon emissions/ more air and noise pollution.

Patron
H.M The Queen

President
Sir Andrew Motion

Chief Executive
Shaun Spiers

Registered Charity number 1089685

**CPRE Lancashire is an independent charity
Registered charity number 5291461**

Chairman
Rob Dorpmann

2. CPRE'S stance on the A6 – Manchester Airport Relief Road

- 2.1. CPRE Lancashire Branch strongly objects to the proposed A6 to Manchester Airport Relief Road. It believes **(1)** the proposed road would create new and unsustainable traffic movements and there is no guarantee the road would specifically deliver economic benefits, **(2)** that the business case and traffic modelling data which have been lodged with government do not make the case for the road and are flawed, **(3)** that the road would close up the Green Belt between Greater Manchester and Cheshire East and lead to development sprawl in the urban fringe. We also believe that if this road is progressed it is more likely the remaining SEMMMS roads would be built. Yet the foundation for them no longer exists due to the flattening out of traffic growth.
- 2.2. Taking the points above in the order they are made.
- 2.3 **(1)** On the questions of unsustainability and economic benefits, CPRE subscribes to the findings of the Standing Advisory Committee on Trunk Road Assessment (SACTRA) which government accepted in the 1990s. Their report *Trunk Roads and the Generation of Traffic* (1994) proved that creating new highway space generates more traffic movements. (This applies even in times of flattened-out growth. Because a new road or roads are provided, people are more likely to favour using their car than public transport, they are more likely to take on longer commutes, more likely to send their children to schools further away from home, more likely to shop at out-of-town venues and more likely to take their leisure over a wider area).
- 2.4 SACTRA's follow-on report *Transport and the Economy* (1996) concluded that, in a mature economy such as that which exists in the U.K., there is no automatic guarantee major transport infrastructure will bring economic benefits. They pointed out that roads are two-way entities and can just as easily suck a workforce away from an area to jobs elsewhere as lead to businesses re-locating. In this instance, the positioning of an Enterprise Zone at the airport is being held up as a key reason for building the A6-Manchester Airport Road – even though there are already road and heavy rail links and light rail is due to reach the airport in the near future. Rather than a new road to the airport CPRE would much rather see a fourth platform at Manchester Airport railway station, the re-opening of Baguley railway station and regular bus services to the airport from areas of unemployment such as Wythenshawe.
- 2.5 **(2)** As far as the business case for the A6-Manchester Airport Relief Road and the traffic modelling appendices are concerned, CPRE endorses the findings of two leading transport/planning experts, Keith Buchan and Professor Alan Wenban-Smith, who conducted analyses into them on behalf of the North West Transport Roundtable and the Campaign for Better Transport. They have, very effectively, rebutted the case submitted to government on behalf of Stockport MBC, Cheshire East Council and Manchester City Council.
- 2.6 Keith Buchan highlighted, amongst other things, how inaccurate the traffic modelling proved to be that was the basis for SEMMMS study and, similarly, how inaccurate the up-dated forecasts were in 2005. Traffic growth overall has in fact flattened out and therefore there is no case based on capacity need. Alan Wenban-Smith pointed out that 90% of the claimed economic benefit of the road was based on cumulative time savings and both pointed out that there were no feasible options that were compared against it – merely a 'do nothing' option. This comes on top of the report that Keith Buchan and Associates (which included Professor Wenban-Smith) produced about the Manchester Airport Enterprise Zone and other Enterprise Zones in this country and overseas. They showed in that report that claims for large numbers of new, long term jobs were, in the main, unsubstantiated (many are displaced jobs) and those jobs which are created evaporate as soon as the Enterprise Zone status is removed from an area. CPRE therefore believes it is time to draw back from road building plans that were sanctioned over a decade ago and which have not stood the test of time.

- 2.7 **(3)** The Green Belt between Hazel Grove and Bramhall in Stockport (Greater Manchester) and Poynton (in Cheshire East) and between Cheadle Hulme in Stockport (Greater Manchester) and Handforth (in Cheshire East) is particularly narrow. If the A6-Manchester Airport Relief Road was built, it alone would decimate these fragile areas, let alone associated development that always springs up along new roads, starting with the unfarmable pockets of land that are created.
- 2.8 CPRE would go so far as to suggest that building the road could potentially be unlawful on the grounds that it would severely harm the ability of the Greater Manchester/ North Cheshire Green Belt to fulfil its statutory purposes – specifically separation. Moreover, it causes adverse environmental and social impacts, specifically concerning landscape value, heritage, ecology, air quality and local amenity.
- 2.9 The National Planning Policy Framework (NPPF) states as a Core Planning Principle that land in Green Belt should be protected. Paragraph 79 states “**the Government attaches great importance to Green Belts**. *The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence.*” The NPPF re-endorses the five purposes of Green Belt. Consequently, any such development in this area would be inappropriate.
- 2.10 CPRE’s transport policy principles highlight a number of potential harmful effects on the quality of life that can result from unsuitable transport interventions. All apply in this case. They are:
- damage to the landscape
 - loss of land for food and recreation
 - loss of tranquillity and increased noise and vibration
 - air, light and water pollution
 - road casualties (the number of fatalities would increase with this scheme) and fear of speeding traffic
 - community severance
 - impacts on flood plains and water table
 - damage to wildlife and natural habitats
 - encouraging development to sprawl along road corridors
 - loss of character, distinctiveness and sign clutter and litter
- 2.11 CPRE believes that as a nation we should be aiming to reduce the need to travel through better planning, reduce dependence on cars and achieve modal shift, reduce greenhouse gas emissions and retain as much agricultural land as possible in order to feed ourselves. We believe it is important for our society to respect environmental limits. We assert that this road is not necessary and it is not sustainable and, if it were built, it is likely to lead to the building of other roads which were sanctioned through the SEMMMS study. Since that took place, the expected growth in traffic has not materialised and the UK has adopted a Climate Change Act and signed up to a raft of international commitments to reduce carbon emissions. It is time to draw back from road building plans that were sanctioned over a decade ago and which have not stood the test of time. We urge the local authorities that are promoting the A6-Manchester Airport road (and associated roads) to drop them and to seek more sustainable options.

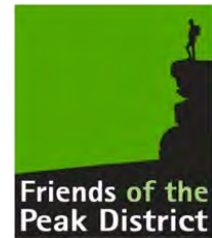
Yours faithfully,



Rob Dorpman
Chairman

Appendix 2
Friends of the Peak District response
to the A6-MARR consultation

Rt Hon Patrick McLoughlin
Secretary of State for Transport
Great Minster House
33 Horseferry Road
London
SW1P 4DR



37 Stafford Road
Sheffield S2 2SF
Tel: 0114 275 1649

mail@friendsofthepeak.org.uk
mail@cpresouthyorks.org.uk

Dear Secretary of State,

21-1-2013

SEMMMS A6 to Manchester Airport Relief Road Major Scheme Business Case

1. The Friends of the Peak District is the national park society for the Peak District and is run by the Peak District and South Yorkshire Branch of the Campaign to Protect Rural England (CPRE). We understand that the Business Case for the A6 to Manchester Airport Relief Road (A6-MARR) is with the Department for Transport (DfT) for assessment for programme entry. As the Friend's geographical remit is the Peak District National Park and wider Peak District, including High Peak, it has examined the A6-MARR Business Case with respect to its impact on these areas.

Summary

2. The Friends are extremely concerned that creating a west-east dual carriageway link road from Manchester Airport to the A6 near Hazel Grove, which lies adjacent to the western boundary of the Peak District National Park, would impact adversely on the Park by enabling and encouraging car and road freight traffic into and across the Park. The Business Case actively promotes cross-Park travel but has not presented the potential impacts of the scheme on the National Park. Until we have seen full examination of those impacts and how the authorities propose to mitigate any adverse impacts on the Park, we object to it, and therefore its entry into the DfT road programme.

President: Julia Bradbury

CPRE South Yorkshire and Friends of the Peak District are run by the Campaign to Protect Rural England, Peak District and South Yorkshire

for the countryside, for communities, for the future

www.friendsofthepeak.org.uk • www.cpresouthyorks.org.uk

Registered Charity No.1094975 Registered Company No. 4496754

Potential Impacts of the Scheme

3. The scheme would create a dual carriageway between the A6 near Hazel Grove and the M56 that *'will provide much-needed connectivity for key strategic routes into the North West and to Manchester Airport, including traffic from the A6, A523 and A34 - all of which are key routes for business, leisure travel and freight from Cheshire, Derbyshire, Staffordshire, Yorkshire and beyond'*. This is described as one of the three core strategic needs for the scheme in the Business Case (Executive Summary pages 9 and 12).
4. The scheme clearly intends to encourage cross-National Park car and lorry commuting⁸¹ to support economic growth in the Manchester City Region. The A6 is part of the national Primary Route Network and provides a strategic link between Greater Manchester and key towns in north Derbyshire including Buxton, Matlock and Chapel-on-le-Frith. It also serves New Mills and Whaley Bridge, and is a major access route for the Peak District National Park.
5. However, the A6 is the only cross-Park route mentioned and there is potential for traffic generation on the A619, A623, A57 and A624 due to long distance car commuting and freight movements. With the scheme in place the A619 and A623 corridor between the M1 at Chesterfield and the M60/M56/M6 would become an attractive alternative to the A50 or the A628 corridor. The scheme would also encourage visitor journeys in and out of the Park to be made by car rather than public transport.
6. Despite the explicit intention of the scheme to encourage cross-Park commuting no attempt has been made by the promoters to examine the impacts this would have on the special qualities of the Peak District National Park⁸². The Environmental Scoping Report did not identify the National Park as a major environmental asset requiring attention during scheme development. Consequently, the NATA worksheets (Appendix C) concerned with landscape, noise and air quality make no assessment of the impacts of increased traffic flows on existing roads near to or crossing the Park, or of the relief road itself (e.g. on views from Lyme Park). The Transport Appraisal appears to ignore the A6 east of Whaley Bridge and makes no assessment of the impacts of the traffic, including road casualties, that could be generated within/across the Park. This despite the fact that traffic increases of up to 33% in 2017 and up to 54% in 2032 are forecast⁸³ on the A6 Buxton Road where the National Park boundary is no more than 2 miles away and at one point (between High Lane and Disley) only yards away.
7. These are serious omissions given the statutory protection given to the National Park.

⁸¹ A6 to Manchester Airport Relief Road: Major Scheme Business Case (Programme Entry), paras 3.51 and 4.148

⁸² Outside the Park, the traffic increases on the A6 Buxton Road are forecast to increase substantially by up to 33% in 2017 and up to 54% in 2032. A package of mitigation measures is being developed between the A6 Hazel Grove to Whaley Bridge aimed at assisting pedestrian and cycle safety along this length of the A6. *'In parallel, CEC, SMBC, Derbyshire County Council, Peak District and TfGM will work together to develop a modal shift strategy for the A6 to Derbyshire which will complement the public transport enhancements the Scheme will secure in terms of increased reliability and efficiency of existing bus services in the corridor'*⁸². Business Case para 2.31

⁸³ Appendix B5 Forecasting Report Table 6.5 & para 6.14

Statutory requirements to consider the Peak District National Park (PDNP)

8. The National Park designation confers the highest status of protection for landscape and scenic beauty. The statutory purposes of National Parks⁸⁴ are:
 - i. to conserve and enhance the natural beauty, wildlife and cultural heritage of the National Parks; and
 - ii. to promote opportunities for the understanding and enjoyment of the special qualities [of the Parks] by the public.
9. This protection is reflected in the National Planning Policy Framework (NPPF). *'Great weight should be given to conserving landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to landscape and scenic beauty. The conservation of wildlife and cultural heritage are important considerations in all these areas, and should be given great weight in National Parks and the Broads'*⁸⁵.
10. With respect to transport planning the National Park Circular states⁸⁶ that *'environmental quality should be the primary criterion in the planning of road and traffic management.'* *'Any investment in trunk roads should be directed to developing routes for long distance traffic which avoid the Parks.'*
11. In other words, even though the scheme would require no new infrastructure or development within the Park the potential and intended traffic generation of the scheme requires formal appraisal of its impact on the Park. Section 62 of the Environment Act 1995 places a general duty on statutory undertakers and relevant authorities, such as the local authorities promoting this scheme (Cheshire East Council, Manchester City Council and Stockport Metropolitan Borough Council) and the Department for Transport, to have regard to the statutory purposes of National Parks when coming to decisions or carrying out their activities relating to or affecting land within the Parks. It has to be demonstrated that this duty has been carried out. The Friends can find no specific reference to meeting this requirement in the A6-MARR Business Case and its appendices.
12. A number of strategies seek to ensure these statutory requirements are met. The Peak District National Park Authority's Core Strategy (adopted 2011), Policy T1: Reducing the general need to travel and encouraging sustainable transport requires that *'conserving and enhancing the National Park's valued characteristics will be the primary criterion in the planning and design of transport and its management. Cross-Park traffic will be deterred. Modal shift to sustainable transport will be encouraged. The impacts of traffic within environmentally sensitive locations will be minimised. Sustainable access for the quiet enjoyment of the National Park, that does not cause harm to the valued characteristics, will be promoted. Demand management and low carbon initiatives will be sought where appropriate.'*

⁸⁴ Environment Act 1995, Section 61

⁸⁵ National Planning Policy Framework, 2012, para 115

⁸⁶ English National Parks and the Broads, UK Government Vision and Circular 2010, paras 84 & 85

13. Policy T2: Reducing and directing traffic requires that *‘Transport developments which increase the amount of cross-Park traffic or have other adverse effects on its setting and character, amenity and enjoyment will be opposed. Transport developments (including expansion of capacity, widening or a new route) that increase the amount of cross-Park traffic may be accepted but only where there is a demonstrable long term net environmental benefit within the National Park.’*
14. The East Midlands Regional Plan (2009), although in the process of being revoked, is still extant. Policy 8 Spatial Priorities for Development in the Peak Sub-area, requires authorities in their development and local transport plans, and economic development strategies in and around the sub-area to help to secure the conservation and enhancement of the PDNP, respecting the statutory purposes of its designation. In particular, *‘routes for long distance traffic should be developed to avoid the National Park. However, access to the National Park and across it by public transport and other non-car modes should be improved’*. Policy 44 which specifically deals with transport objectives in the Peak subarea requires modal shift away from road based transport including for the quarrying and aggregates sector. Transport linkages to the North West Region and the rest of the East Midlands, should be improved, particularly by public transport, whilst having due regard to the statutory purposes of the Peak District National Park.
15. Finally, Derbyshire County Council’s third Local Transport Plan aims to⁸⁷
- ‘Make the best use of what its got;
 - Efficient Heavy Goods Vehicle routeing e.g. aiming to avoid villages or the Peak District National Park;
 - Transfer of freight from road to rail;
 - Improve equality of opportunity to key services for residents and visitors to Derbyshire;
 - Reduce carbon emissions;
 - More people walking and cycling, with improved health, community and environmental benefits;
 - Continuing reductions in casualties.’
16. It is clear from the policies, strategies and plans above that the intention of the scheme to increase cross-Park traffic from Yorkshire and Derbyshire is unacceptable and must be addressed. In addition an assessment of the impacts of the scheme itself on views from the South West Peak, National Character Area 53, is required.
17. We also find it unacceptable that only the A6-MARR has been appraised. The original South East Manchester Multi-Modal Study (SEMMMS) promotes additional road building - the Poynton Relief Road (now the Woodford-Poynton Relief Road) and the A6 to M60 bypass. The scheme incorporates neither of these but would facilitate a connection with both (Business Case paras 3.94 & 3.96). In order to meet the claimed *‘long term public and elected member expectation that the whole of the Scheme including the Poynton and A6 bypasses will be delivered’* the Low Cost Alternative is rejected as politically unacceptable. This would create

⁸⁷ Derbyshire LOCAL TRANSPORT PLAN 2011 - 2026

effectively an outer ring road round the south east of Greater Manchester that would encourage yet more cross-National Park traffic.

18. In addition the base economic analysis (TUBA) presented in this Business Case does not include any benefits derived from possible future developments in the South Manchester Corridor. Only committed developments have been included within the core scenario (para 3.66), despite this being a corridor for large scale peripheral growth.
19. These omissions, which underplay the full impacts of the A6-MARR, require the scheme at the very least to be re-modelled, taking into account the full extent of the SEMMMS road schemes, future developments and the widest geography over which impacts would occur. However the scheme is unsustainable. As presented it would (i) increase carbon emissions (10,308t over 60 years), (ii) increase long distance commuting by car thereby favouring those who do not have to rely on public transport, undermining the use of public transport and of lower carbon modes, and increasing the risk of road accidents (iii) increase traffic impacts on local residents in the Park District and (iv) increase congestion on the A6. It therefore fails to meet the core transport objectives for Greater Manchester, as defined in its LTP3⁸⁸, and the objectives of the A6-MARR itself as presented in the Business Case (paras 3.88-3.89). It should be rejected in favour of urban regeneration and investment in public transport.

Economic Value of the Peak District National Park

20. By ignoring the impacts of the scheme on the Park the promoters have also failed to appreciate that both the economy and society depend on the Park's high quality environment for clean water and air, carbon storage, beautiful landscapes, and physical and spiritual refreshment opportunities. These are essential to our survival and would add up to substantial economic value, which has yet to be fully captured.
21. Nevertheless economic activity alone in the Park has significant value. The national parks in the Yorkshire and the Humber region (Yorkshire Dales, North York Moors and a small part of the Peak District) generate an estimated £1.8 billion in sales, and support 34,000 jobs and around £576 million of Gross Value Added (GVA)⁸⁹. The Peak District National Park itself contributed around £155 million to the regional GVA in 2007, and supports over 14,000 jobs across 2,800 businesses⁹⁰. More than two thirds of businesses in the National Parks believe that high landscape quality has a positive impact on their business performance. Over a quarter of businesses think a deterioration in landscape quality would seriously affect their business. The achievement of economic growth in Greater Manchester, to which this scheme is

⁸⁸ Greater Manchester's third Local Transport Plan 2011/12 - 2015/16. Its objectives are to:

- ensure that the transport network supports the Greater Manchester economy to improve the life chances of residents and the success of business;
- ensure that carbon emissions from transport are reduced in line with UK Government targets in order to minimise the impact of climate change;
- ensure that the transport system facilitates active, healthy lifestyles and a reduction in the number of casualties, and that other adverse health impacts are minimised;
- ensure that the design and maintenance of the transport network and provision of services supports sustainable neighbourhoods and public spaces and provides equality of transport opportunities; and
- maximise value for money in the provision and maintenance of transport infrastructure and services.

⁸⁹ Prosperity and Protection, CNP, 2006; http://www.cnp.org.uk/7_Publications.html

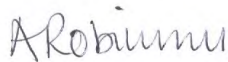
⁹⁰ Contribution of the PDNP to the economy of the East Midlands, SQWConsulting, 2008; <http://www.peakdistrict.gov.uk/contributiontotheeconomy.pdf>

purported to contribute, should not be at the expense of the National Park environment and its businesses.

Conclusions

22. During the preparation of the SEMMMS that proposed the network of roads that includes the A6-MARR, little attention was given to the impacts of the proposals on the Peak District National Park. This disregard for the substantial environmental asset within and adjoining the Greater Manchester City Region has persisted throughout the development of the SEMMMS schemes. The potential adverse impacts on the Peak District National Park of traffic generation on roads adjacent to, within and across the Park by the A6-MARR, have not been investigated and are likely to prove the scheme is unsustainable. Until we have seen full examination of those impacts and how the authorities propose to mitigate any adverse impacts on the Park, we object to it, and therefore its entry into the DfT road programme. However, as Greater Manchester's aspirations would be better achieved through urban regeneration and investment in public transport we urge DfT to reject the scheme as unsustainable.

Yours sincerely



Anne Robinson

Transport Campaigner

cc. Cheshire East Council; Manchester City Council; Stockport MBC; NW TAR; NW CPRE; PDNPA; CPRE Cheshire;

Appendix 3
Friends of the Earth response
To the A6-MARR consultation



North West Friends of the Earth
60 Duke St
Liverpool
L1 5AA

SEMMMS Project Team
Stopford House (Fred Perry House)
Stockport
SK1 3YQ

25 January 2013

Dear Sir/Madam

The A6 to Manchester Airport Relief Road consultation response

Please find enclosed a response from Friends of the Earth England, Wales and Northern Ireland to the SEMMMS: A6 to Manchester Airport Relief Road consultation.

Friends of the Earth is strongly opposed to the proposed A6 to Manchester Airport Relief Road (A6-MARR). The Business Case and accompanying appendices set out that the road would increase carbon emissions and worsen air quality in areas that are already breaching EU standards. This is unacceptable and poses serious legal and financial risks, in addition to the negative environmental and health impacts. The scheme goes against the stated strategic objectives of the three promoting authorities – Stockport Metropolitan Borough Council, Manchester City Council and Cheshire East Council – to reduce carbon emissions.

We set out in the attached briefing the air quality and climate change impacts of the proposed road.

In addition, we note further reasons below why the A6-MARR proposal should not proceed to the next stage and alternative options for reducing congestion and simultaneously contributing towards climate change, air quality and health objectives must be preferred.

An out-of-date proposal

There has been no up-to-date review of the need for the A6-MARR since the SEMMMS study was completed in 2001. In the ensuing time, there has been a national flattening out in traffic growth, changes to travel patterns, and new evidence and legislation on climate change and air quality. It is imperative that a full suite of options including non-road building, and public transport and active travel options only, are explored.

Narrow scope and appraisal in isolation of other major planned infrastructure

There are a number of major infrastructure schemes connected to the road proposal – including Manchester Airport City Enterprise Zone, development at Woodford aerodrome and Handforth East – which would cumulatively have a far greater impact on traffic flows and resultant environmental impact than has been considered and is set out in the Business Case.

The scheme promotes unsustainable patterns of development

The A6-MARR and the linked major infrastructure projects represent highly unsustainable development patterns encouraging car-based travel, and potentially displacing jobs and development from existing and more sustainably located centres. The Panel of the North West

Regional Spatial Strategy, which is yet to be revoked, concluded that Manchester airport should not become a commercial hub in its own right, as this would detract economically from Manchester city centre and surrounding towns, and is based on the exploitation of several major greenfield sites around Manchester airport and surroundings⁹¹. There is no evidence to back up claims the A6-MARR would benefit Wythenshawe by improving access to jobs at Manchester Airport City Enterprise Zone, as is a stated rationale for the road. Public policy and investment should be directed to urban regeneration, and improving economic inclusion by focusing on local economies and accessible and affordable public transport.

Significant loss of Greenbelt and agricultural land

Substantial sections of the scheme area are designated Greenbelt and agricultural land classed as the best and most versatile. The importance of increasing UK food production to enhance food security is recognised by the Department for Environment, Food and Rural Affairs, which has a key objective to 'support and develop British farming and encourage sustainable food production'⁹².

Ecological and biodiversity impact

There are populations of protected and notable species in the scheme area, including Great Crested Newt, badgers and bats. The scheme would result in a significant loss of valuable natural habitat including ancient woodland. The breeding and wintering bird surveys date back to 2003 and 2004 and are therefore out of date, and other endangered species present in the development location have not been included in the Environmental Scoping Report. The estimated environmental mitigation cost of £0.87 million is unreliable considering the omissions in the scoping report and remaining unknowns.

Accuracy of traffic modelling and economic forecasting

There are serious flaws in the accuracy of the traffic modelling and economic forecasting. Significantly it does not take account of induced traffic, evidence of which is well documented. Congestion is shown to increase with or without the road based on present levels, therefore the scheme fails in its main aim.

Financial risk and 'Earn Back'

The Earn Back model, via which local contributions to the cost of the road will be accessed, is little understood, indeed the Business Case states that 'Detailed discussions are continuing with Government officials in respect of the detailed arrangements for the Earn Back model' (para 5.25).

The road is predicated on future unknown additional business rates generated by new development, and it is possible such predicted revenues may not materialise.

There is also a great degree of uncertainty over the final cost of the road due to remaining design work and assessment of mitigation costs, plus potential fines for breaching EU legal air quality limits.

Please see further evidence regarding the climate change and air quality risks and how the road proposal conflicts with regional, national and European targets and legislation.

Yours sincerely

Helen Rimmer

⁹¹ RSS Policy W2 and Panel Report paras 4.68, 5.41, 5.42, 7.48

⁹² <http://www.number10.gov.uk/wp-content/uploads/2012/05/DEFRA-2012-Business-Plan.pdf>