

**Lancashire County Council Planning  
Application Reference: 11/05/1584  
Completion of the Heysham to M6 Link**

**Planning Inspectorate Reference:  
APP/Q2371/V/07/1200928 &  
APP/Q2371/V/07/1200929**

**Proof of evidence:  
Climate Change**

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**Evidence prepared for:**

**The Environmental and Sustainable Transport  
Alliance (ESTA)**

**Consisting of:  
The Campaign to Protect Rural England (CPRE)  
    Lancashire Branch and NW Regional Group  
Friends of the Earth (FOE) North West  
North West Transport Activists Roundtable (NW TAR)  
Sustrans  
Transport 2000**

**4<sup>th</sup> June 2007**

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## Summary

- 1 The HM6L proposal is a business as usual project that takes no account of the new policy imperative to reduce greenhouse gas emissions. It will frustrate the intentions of government policy in the area of climate change
- 2 The proposal to build the HM6L is contrary to established and emerging policy in the areas of sustainable development and climate change
- 3 The HM6L has been progressed and promoted as if the climate change debate had not existed, the Stern review not written, the draft addition to PPS1 not thought of and the Climate Change Bill not designed and promoted by the UK government as an international benchmark of the seriousness of our national commitment to reducing greenhouse gases
- 4 The HM6L is contrary to regional planning and climate  
5 change policies. The clearest expression of this is in the North West RSS EiP Panel Report, which explicitly states that proposals, schemes, and investment decisions should contribute to the regional target of reducing carbon emissions (Recommendation 3.10). The recommendations in this Report represent the most recent expression of policy intent in the Region, based on the most up-to-date scientific evidence and most recent consultation and testing, and should therefore be given particular weight with regard to topics such as climate change, where the evidence base and policy is developing so rapidly.
- 6 It would be perverse and illogical if the planning system were to move in the direction of having clear policies to deal with climate change (including reducing emissions) whilst at the same time granting planning permission to developments that add a significant extra burden of GHG to the national inventory
- 5 The HM6L is a test of the seriousness of UK climate change policy and of the capacity of the planning system to deliver that policy
- 6 This is especially the case given the finding that the HM6L CO<sub>2</sub> total is greater than the combined total of every other road scheme in the English LTPs
- 8 There is uncertainty around the quantification of CO<sub>2</sub> impacts as a result of an exaggerated DM forecast and an under-estimate of CO<sub>2</sub> levels in the 2010 and 2025 DS scenarios. CO<sub>2</sub> levels will be higher in both DS scenarios than quoted and the percentage increase on the DM scenario will be higher than the 5% that is quoted in Table 6.2.2

## 1 Introduction

- 1.1 My name is John Whitelegg and I am Visiting Professor of Sustainable Transport at Liverpool John Moores University, Professorial staff member of the Stockholm Environment Institute at the University of York and Managing Director of the transport consultancy, Eco-Logica Ltd. I have lived in Lancaster for 30 years and am a Lancaster City councillor. My evidence and appearance at this inquiry is in my capacity as a transport professional and a transport consultant
- 1.2 I am the author of ten books on transport and of reports on transport policy and practice including "Roads, Jobs and the economy", "Driven to Destruction: absurd freight movement and European road building", "Driven to Shop: transport intensity and the environment", "Freight transport, logistics and sustainable development" and "Traffic and Health"
- 1.3 I have presented evidence on various matters at the public inquiries into the Birmingham Northern Relief Road, the Broughton (Lancashire) Bypass, Heathrow Terminal 5, Manchester Runway 2, the Thames Gateway Bridge, Walton Bridge (Surrey) and the BAA appeal against the decision of Uttlesford District Council to refuse planning permission for the expansion of Stansted Airport
- 1.4 In this proof of evidence I will examine the case presented by Lancashire County Council for this road on climate change. I will also present evidence to this Inquiry on noise, air quality and accidents.
- 1.5 The policy context within which climate change discussion takes place has altered dramatically in the last two years and the Heysham M6 Link (HM6L) project has not taken any of this development on board and has proceeded as if the urgency and the importance of climate change debate did not exist. This is not acceptable.
- 1.6 The new policy context has a very clear audit trail:
  - PPS1, paragraph 13
  - The government's sustainable development strategy (March 2005)
  - The Stern Report (October 2006)
  - The draft planning and climate change supplement to PPS1 (December 2006)
  - The Climate Change Bill (March 2007)
- 1.7 The new policy imperative is very clearly constructed around the need to reduce greenhouse gases as a key component of the national effort to combat climate change. This imperative could not

have been contemplated during the long and tortuous history of the “Lancaster bypass” debate but it would be perverse in the extreme if at the very moment that the significance of the need to reduce greenhouse gases has been reflected in policy pronouncements we should now proceed with a large producer of greenhouse gases (GHG) and add to our GHG inventory. The perversity is magnified when set against the reticence of the promoting body to explore low carbon alternatives to the bypass that do not involve road building or additions to highway capacity

- 1.8 There may be an argument that such a weighty matter as climate change cannot be entertained within the confines of a single planning application and an Inquiry into that application. This question was dealt with in the opening submission to the Stansted Airport public inquiry on 30<sup>th</sup> May 2007 and I quote the relevant remarks with full acknowledgment to Paul Stinchcombe and Sarah Hannett of 4-5 Gray’s Inn Square:-

29. We invite you in particular, to reject the two arguments advanced in Mr Rhodes’ evidence<sup>1</sup> for ignoring the carbon emissions of the Appellant’s proposed increase in aviation: first, that climate change is not an issue to be addressed in individual planning applications because the effect on global temperatures of any individual proposal, even the thousand of additional flights that the Appellant proposes, would be insignificant; and second, that aviation emissions are properly to be addressed by other means in any event, the introduction of aviation into international carbon emissions trading as contemplated by *The Future of Air Transport Progress Report*<sup>2</sup>.

30. So far as the first argument is concerned, Mr Rhodes is simply wrong. The carbon emissions of any proposed development is manifestly a material planning consideration to be taken into account when deciding whether or not it should be permitted. Moreover, it is especially so in an application such as this, whereby permission is sought to increase aviation - known to be a major contributor to global warming. In particular, the proposed expansion at Stansted would emit in the range

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<sup>1</sup> Rhodes [BAA/1/A] at paras 14.8-20.

<sup>2</sup> [CD/88].

of 2.124m tonnes to 4.248m tonnes of additional CO<sub>2</sub>e (carbon dioxide equivalent)<sup>3</sup>. Quite simply, that has to be a relevant consideration to take into account, given the consistent thrust of every recent policy document - that global warming is a threat of such gravity that we must make decisions now to dramatically reduce emissions, not increase them incrementally.

31. Indeed, Mr Rhodes' first argument is a paradigm of the incrementalist approach which so threatens the environment. Rather than take into account the carbon emissions of all proposed developments, he would have us take into account the carbon emissions of none since individually they will make no measurable difference to world temperatures.

32. The Government will not achieve its carbon emissions targets that way. It might, however, if it decides not to pander to the unconstrained demand to fly, but seek instead to test rigorously any such proposal against the evidence adduced in each particular case of economic need and benefit.

Source:

Opening submission on behalf of Stop Stansted Expansion at the public inquiry on 30<sup>th</sup> May 2007. Planning Inspectorate ref: APP/C1570/A/06/2032278

1.9 I do not intend to discuss aviation or the Air Transport White paper in this evidence but I do want to emphasise the direct relevance and correspondence of the discussion at Stansted to a discussion about this bypass. It is of enormous significance to the UK effort and to the success of UK climate change policy that we very carefully weigh the climate change impacts of the proposal against the evidence of clear national need and the claim by Lancashire County Council that there is no alternative to the proposed development.

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<sup>3</sup> Figures calculated from those produced by the Appellant in Table 5.3 in Pratt's Appendices using the multipliers from the Stern Report [BAA/4/c].

This balancing or weighing would, in my view, lead to the rejection of a planning application for this bypass.

- 1.10 It is quite simply not possible to deliver a national reduction of 60% in GHG if the planning system adds an ever increasing load of GHG to the national inventory. To do so would be the equivalent of increasing the flow of water into the bath at the same time as adopting a policy that there should be no overflowing of water from the bath to the bathroom floor and to the downstairs rooms.

## **2 The policy audit trail**

### **2.1 PPS1**

- 2.1.1 PPS1 is clear on the significance of taking climate change very seriously through policies that reduce energy use and reduce emissions:

#### **KEY PRINCIPLES**

13. The following key principles should be applied to ensure that development plans and decisions taken on planning applications contribute to the delivery of sustainable development:
- (i) Development plans should ensure that sustainable development is pursued in an integrated manner, in line with the principles for sustainable development set out in the UK strategy. Regional planning bodies and local planning authorities should ensure that development plans promote outcomes in which environmental, economic and social objectives are achieved together over time.
  - (ii) Regional planning bodies and local planning authorities should ensure that development plans contribute to global sustainability by addressing the causes and potential impacts of climate change<sup>4</sup> – through policies which reduce energy use, reduce emissions (for example, by encouraging patterns of development which reduce the need to travel by private car, or reduce the impact of moving freight), promote the development of renewable energy resources, and take climate change impacts into account in the location and design of development.

- 2.1.2 The HM6L proposal will add to energy consumption and greenhouse gas emissions

## 2.2 The Sustainable Development strategy

### 2.2.1 The Prime Minister in his introduction to the UK Sustainable Development strategy of March 2005 said:

Over the past six years scientific opinion has moved decisively to an almost universal consensus that climate change is happening and is the result of human activity. That means we can move the debate from whether there is a problem to how to deal with it. Yes, climate change represents a potentially catastrophic threat, but it is within our control to address it – and address it we must. Climate change will not only affect the UK but all parts of the world, and it stands to most damage those areas least able to adapt to it particularly sub-Saharan Africa. However, we must also respond to this challenge at home. Our 2003 Energy White Paper set us on a clear path to a low carbon economy. Our task now is to deliver at home and find ways to get international agreement through the G8 and other forums to strengthen the global effort to tackle climate change.

Source:

<http://www.sustainable-development.gov.uk/publications/pdf/strategy/Prelims.pdf>

and in the executive summary:

#### Chapter 4:

##### Confronting the greatest threat: climate change and energy

The UK government is committed to reducing the country's greenhouse gas emissions. In its 2003 Energy White Paper, the Government put the goal of moving to a low carbon economy at the heart of its energy strategy, and set out a long term goal of reducing carbon dioxide emissions by some 60 per cent by about 2050, with real progress to be shown by 2020.

2.2.2 If we are committed to reducing the country's GHG emissions then it follows that we would not deliberately add to them without the fullest possible analysis and evaluation of all options that would permit us to achieve our policy objectives and ambitions at a lower carbon total. This is not the case for the HM6L and the link can in no way be described as consistent with "moving to a low carbon economy".

## 2.3 The Stern Review

### 2.3.1 The Stern Report on the economics of climate change and written at the behest of the UK Treasury was unequivocal in its conclusions:

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#### STERN REVIEW: The Economics of Climate Change

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##### Executive Summary

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The scientific evidence is now overwhelming: climate change presents very serious global risks, and it demands an urgent global response.

This independent Review was commissioned by the Chancellor of the Exchequer, reporting to both the Chancellor and to the Prime Minister, as a contribution to assessing the evidence and building understanding of the economics of climate change.

The Review first examines the evidence on the economic impacts of climate change itself, and explores the economics of stabilising greenhouse gases in the atmosphere. The second half of the Review considers the complex policy challenges involved in managing the transition to a low-carbon economy and in ensuring that societies can adapt to the consequences of climate change that can no longer be avoided.

The evidence shows that ignoring climate change will eventually damage economic growth. Our actions over the coming few decades could create risks of major disruption to economic and social activity, later in this century and in the next, on a scale similar to those associated with the great wars and the economic depression of the first half of the 20<sup>th</sup> century. And it will be difficult or impossible to reverse these changes. Tackling climate change is the pro-growth strategy for the longer term, and it can be done in a way that does not cap the aspirations for growth of rich or poor countries. The earlier effective action is taken, the less costly it will be.

Policies on climate change can also help to achieve other objectives. These co-benefits can significantly reduce the overall cost to the economy of reducing greenhouse-gas emissions. If climate policy is designed well, it can, for example, contribute to reducing ill-health and mortality from air pollution, and to preserving forests that contain a significant proportion of the world's biodiversity.

***There is still time to avoid the worst impacts of climate change if strong collective action starts now.***

Above all, reducing the risks of climate change requires collective action. It requires co-operation between countries, through international frameworks that support the achievement of shared goals. It requires a partnership between the public and private sector, working with civil society and with individuals. It is still possible to avoid the worst impacts of climate change; but it requires strong and urgent collective action. Delay would be costly and dangerous.

Source: all quotes taken from the 27 page executive summary of the Stern review

[http://www.hm-treasury.gov.uk/media/8AC/F7/Executive\\_Summary.pdf](http://www.hm-treasury.gov.uk/media/8AC/F7/Executive_Summary.pdf)

2.3.2 Given the strength of Sir Nicholas Stern's conclusions and given the acceptance of his findings and conclusions by the government it would be perverse if we were now to proceed with a scheme rooted in 1960s thinking and oblivious of the injunction in the Stern report to forge a new path towards a low carbon economy and to take urgent action now.

## **2.4 Planning and climate change (Supplement to PPS1, December 2006)**

2.4.1 The government's draft guidance on planning and climate change clearly emphasises this new policy agenda:

Planning Policy Statements (PPS) set out the Government's national policies on different aspects of spatial planning in England. PPS1 sets out the overarching planning policies on the delivery of sustainable development through the planning system.

This PPS on climate change supplements PPS1 by setting out how planning should contribute to reducing emissions and stabilising climate change (mitigation) and take into account the unavoidable consequences (adaptation). It does not seek to assemble all national planning policy relevant or applicable to climate change and should be read alongside the national PPS/G series. Where there is any difference in emphasis on climate change between the policies in this PPS and others in the national series this is intentional and this PPS takes precedence.

These policies on planning and climate change should be taken into account by regional planning bodies in the preparation of regional spatial strategies, by the Mayor of London in relation to the spatial development strategy in London and by local planning authorities in the preparation of local development documents. They may also be material to decisions on individual planning applications.

Source:

## **Consultation**

### Planning Policy Statement:

### Planning and Climate Change

### Supplement to Planning Policy Statement 1

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[http://www.communities.gov.uk/pub/142/ConsultationPlanningPolicyStatementPlanningandClimateChangeSupplementtoPlanning1\\_id1505142.pdf](http://www.communities.gov.uk/pub/142/ConsultationPlanningPolicyStatementPlanningandClimateChangeSupplementtoPlanning1_id1505142.pdf)

- 2.4.2 The intention here is clear. The planning system “should contribute to reducing emissions” and this may be material to decisions on individual planning applications.
- 2.4.3 It is my view that this emerging policy should be reflected in the balancing of issues around the HM6L especially as it reflects the most recent expression of UK government thinking and its basis on up-to-date scientific evidence

## 2.5 The Climate Change Bill (March 2007)

2.5.1 The Climate Change Bill gives the planning system and all stakeholders and citizens a clear message that climate change must be at the heart of all public policy making and decisions. The UK is the first country in the world to embed climate change in statute and to give it the force of statute and it would defy logic if this were interpreted in any way other than a firm commitment to solve climate change problems by all possible means including reducing greenhouse gases.

2.5.2 The commitment could not be clearer:

### CLIMATE CHANGE BILL SUMMARY

The debate on climate change has shifted from whether we need to act to how much we need to do by when, and the economic implications of doing so. The time is therefore right for the introduction of a strong legal framework in the UK for tackling climate change. The draft Climate Change Bill is the first of its kind in any country.

The Government has shown consistent leadership in the field of climate change by setting bold targets and pursuing ambitious policies. We are committed to securing a strong multilateral agreement beyond 2012, and within the EU, we are pushing hard for ambitious greenhouse gas reduction targets, and to move to a low-carbon economy over time. At home, we have already shown progress in reducing greenhouse gas emissions and are set to double our Kyoto target.

This Bill provides a legal framework to manage future emissions. It provides a clear, credible and long term framework that will provide greater clarity and confidence for businesses and individuals to plan and invest in delivering the changes needed to move to a low carbon economy. It will demonstrate leadership through example – a vital factor in helping to secure future international agreements.

In summary the Bill:

- makes challenging carbon dioxide reductions targets for 2020 and 2050 legally binding;
- introduces a system of 'carbon budgeting' capping emissions over five-year periods – with three budgets set ahead to help businesses plan and invest with increased confidence;
- creates a new independent body to advise on the setting of carbon budgets and to report on progress;
- contains enabling powers to make future policies to control emissions quicker and easier to introduce; and
- introduces a new system of Government reporting to Parliament including on climate change adaptation policies.

Taken together these measures create a coherent framework that will ensure we achieve reductions in emissions whilst maintaining a strong and growing economy and high levels of social welfare.

**Additional Information on Key Provisions of the Draft Climate Change Bill**

**Targets**

- This Bill puts into statute the UK's targets to reduce carbon dioxide emissions through domestic and international action by 60% by 2050 and 26-32% by 2020, against a 1990 baseline.

Source:

DEFRA

<http://www.defra.gov.uk/environment/climatechange/uk/legislation/pdf/CCBill-summary.pdf>

2.5.3 Government has also made it clear that “business as usual” is not an option:

5. If we carry on with business as usual, as countries grow in wealth and population, the stock of greenhouse gases in the atmosphere will increase dramatically, and climate change could become dangerous or catastrophic. This will have a devastating impact on people, as well as nature.

Source: DEFRA, Climate Change Strategic Framework

<http://www.defra.gov.uk/environment/climatechange/uk/legislation/pdf/CCBill-Strategy.pdf>

2.5.4 The HM6L is as clear an example of business as usual as it is possible to imagine. For several decades it has been UK practice to identify congestion and pollution and then move rapidly to the narrow solution of a bypass or some similar expansion of road capacity. This is no longer tenable in a policy environment informed by climate change. We now have a very clear signal that business as usual is not acceptable

- 2.5.5 Government has made it clear that we have to show leadership in this area especially as we move to a low carbon economy and a reduction in greenhouse gases:

#### **Carbon Budgets**

33. The Climate Change Bill is the beginning of a fundamentally new approach for the UK to tackling climate change. The goal of the Bill is to demonstrate the leadership required to encourage others to engage in an international framework, to minimise the cost of making the transition to a low-carbon economy, and create a framework to enable the UK to meet its domestic and international obligations.
34. Our approach is to provide the long term credibility required to stimulate investment in a low-carbon economy, by being clear about the level and timescale for reducing carbon dioxide emissions, while creating the flexibility to allow emissions to be reduced in the most cost-effective sectors and geographical locations.

Source:

<http://www.defra.gov.uk/environment/climatechange/uk/legislation/pdf/CCBill-Strategy.pdf>

- 2.5.6 The HM6L is not consistent with moving towards a low carbon economy or a reduction in greenhouse gases.

### **3 The carbon burden of the HM6L**

- 3.1 The HM6L will add to the national inventory of greenhouse gases. This is the case in both the 2010 and 2025 DS scenarios.
- 3.2 The addition to the national CO<sub>2</sub> inventory is greater than the combined total of every road scheme in every English LTP. The figures are reproduced in Appendix 1 to this evidence.
- 3.3 The national CO<sub>2</sub> total from all LTP road schemes is 21425 tonnes pa and the 2010 DS figure referred to below is 23,000 tonnes
- 3.4 Table 6.2.2 in the ES statement, Volume 1, part A, Report 6, Air quality reports a 23,000 tonne increase in CO<sub>2</sub> when the DS is compared with the DM in 2010 and a 26,000 tonne increase for the same comparison in 2025. The Appraisal Summary Table notes a slightly higher increase of 23,514 tonnes. This is the equivalent in

increased CO2 emissions of an additional 192,737 people taking return flights from London to Paris every year (based on figures taken from the October 2006 Bulletin of the European Federation for Transport & Environment, p 3: return flight from London to Paris = 122kg of CO2 per person). Even if this were the maximum increase in emissions the road would generate, it is clearly not acceptable in the current policy context.

- 3.5 We do not accept that the increase between 2001 and 2010 DM is accurate. This increase from 371,000 tonnes to 448,000 tonnes is a product of a set of policy assumptions and growth forecasts and would change if these assumptions were varied. The impact of selecting the figure of 448,000 is to render the increase in the DS scenarios less than it might otherwise be and so produce an artificially low estimate of the impact of the road on CO2.
- 3.6 If the time period between now and 2010 were to see the vigorous application and implementation of demand management policies in all workplaces, ambitious school travel plans in all schools, park and ride and investment in new buses and increased frequencies as in York then we would see a result that was lower than 448,000 tonnes in 2010 and consequentially the DS estimate would produce a higher percentage increase than the reported 5%. The 11-13% reduction in car trips announced by the Minister in three towns that are directly comparable with Lancaster clearly indicates the scale of CO2 reduction that can be achieved through sustainable transport initiatives not related to road building (the Minister's letter is reproduced in Appendix 4 to my air quality evidence)
- 3.7 Measures such as these are being considered by Faber-Maunsell as part of their study on behalf on Lancaster City Council into an integrated transport strategy for the Lancaster District.
- 3.8 We note in passing that there is also uncertainty on traffic predictions on links in the highways system especially through the impact of the new road on liberating suppressed demand and generating new traffic. Professor Goodwin will present evidence on this topic and this in its turn (should the quantification of induced traffic be higher than in the case for the road) will produce a higher estimate for CO2 in both the 2010 and 2025 DS scenarios.
- 3.9 Currently the evidence presented by the proposer seeks to make the DM figures higher than they would be and the forecasts of CO2 emissions in 2010 and 2025 with the road lower than they would be.

## **4 Regional issues**

- 4.1 The development plan for the region also contains clear guidance on the need to reduce carbon emissions and tackle climate change. The clearest expression of this is in the North West RSS EiP Panel Report, which explicitly states that proposals, schemes, and investment decisions should contribute to the regional target of

reducing carbon emissions (Recommendation 3.10). The recommendations in this Report represent the most recent expression of policy intent in the Region, based on the most up-to-date scientific evidence and most recent consultation and testing, and should therefore be given particular weight with regard to topics such as climate change, where the evidence base and policy is developing so rapidly. We will not duplicate our evidence on this matter here, but refer to the section “Reducing CO2 emissions and climate change” in ESTA’s evidence regarding consistency with the development plan.

- 4.2 The North West has also adopted a Climate Change Action Plan, “Rising to the Challenge”, led by the North West Development Agency. The headline target for this Plan is to reduce the quantity of GHGs emitted in the Region. The exact amount of the reduction is due to be quantified during Summer 2007, however, this scheme will directly undermine that target by increasing the quantity of emissions in the region. It will also not contribute to improving the performance of other, specifically transport-related indicators in the plan, such as the total number of journeys by bus and rail or the number of integrated transport or sustainable travel schemes deployed. It undermines the intention of this key regional document and will cancel out some of the positive impact that other measures within the Plan will have.

## 5 Conclusion

- 5.1 The HM6L proposal is a business as usual project that takes no account of the new policy imperative to reduce greenhouse gas emissions. It will frustrate the intentions of government policy in the area of climate change
- 5.2 The proposal to build the HM6L is contrary to established and emerging policy in the areas of sustainable development and climate change
- 5.3 The HM6L has been progressed and promoted as if the climate change debate had not existed, the Stern review not written, the draft addition to PPS1 not thought of and the Climate Change Bill not designed and promoted by the UK government as an international benchmark of the seriousness of our national commitment to reducing greenhouse gases
- 5.4 The HM6L is contrary to regional planning and climate change policies. The clearest expression of this is in the North West RSS EiP Panel Report, which explicitly states that proposals, schemes, and investment decisions should contribute to the regional target of reducing carbon emissions (Recommendation 3.10). The recommendations in this Report represent the most recent expression of policy intent in the Region, based on the most up-to-

date scientific evidence and most recent consultation and testing, and should therefore be given particular weight with regard to topics such as climate change, where the evidence base and policy is developing so rapidly.

- 5.5 It would be perverse and illogical if the planning system were to move in the direction of having clear policies to deal with climate change (including reducing emissions) whilst at the same time granting planning permission to developments that add a significant extra burden of GHG to the national inventory
- 5.6 The HM6L is a test of the seriousness of UK climate change policy and of the capacity of the planning system to deliver that policy
- 5.7 This is especially the case given the finding that the HM6L CO2 total is greater than the combined total of every other road scheme in the English LTPs
- 5.8 There is uncertainty around the quantification of CO2 impacts as a result of an exaggerated DM forecast and an under-estimate of CO2 levels in the 2010 and 2025 DS scenarios. CO2 levels will be higher in both DS scenarios than quoted and the percentage increase on the DM scenario will be higher than the 5% that is quoted in Table 6.2.2

## Appendix 1

### CO2 totals from all English LTP schemes

Scheme	Provisionally or Fully Approved?	CO2 assessment
1 Selly Oak Relief Road		1674
2 A6096 Ilkeston-Awsorth Link		
3 A612 Gedling Integrated Transport Scheme, Nottinghamshire		
4 A165 Reighton Bypass		270
5 A228 Leybourne & West Malling Corridor Improvement		-0.75
6 East Kent Access Phase 1		154
7 A1198 Papworth Everard Bypass		279
8 Cradley Heath Bypass		<b>187.8</b>
9 A38 Northfield Regeneration Bypass		<b>366</b>
10 Barford Bypass		<b>-1043</b>
11 Rugeley Eastern Bypass		<b>18</b>
12 Sheffield Inner Relief Road		<b>-88</b>
13 A4146 Stoke Hammond/Linlade Western Bypass		<b>1159</b>
14 Barnstaple Western Bypass		<b>578</b>
15 Sunderland Southern Radial Route		<b>-1500</b>
16 A158/C541 Lincolnshire Coastal Access Improvement - A158 Burgh le Marsh Bypass		<b>424</b>
17 A127/A1159 Priory Crescent, Southend on Sea		<b>0.9</b>
18 East Leeds Link Road		<b>111</b>
19 Leeds Inner Ring Road Stage 7		<b>-62</b>
20 Tunstall Northern Bypass		<b>-2541</b>
21 Markham Employment Growth Zone, Derbyshire		<b>0.06</b>
22 Ridgmont Bypass/ Woburn Link		<b>-590</b>
23 A63 West Bawtry Road Improvements		
24 Darlington Eastern Transport Corridor		<b>1528</b>
25 Glasshoughton Coalfields Link Road		
26 Brierley Hill Access Network		
27 M4 J11 (Green Park Improvements)		
28 Earl Shilton Bypass, Leicestershire		<b>1251</b>
29 Hemsworth to A1 Link Road		<b>-1456</b>
30 A688 Wheatley Hill - Bowburn Link, Durham		<b>112</b>
31 Poole Bridge Regeneration Initiative		<b>43</b>
32 Owen Street Relief Road		
33 Rugby Western Bypass		
34 <b>not a road</b>		
35 Waverley Link Road	PA	680
36 A4123/A461 Burnt Tree	PA	-0.87
37 Taunton Third Way	PA	583
38 Beverley	PA	
39 Sadlers Farm Junction	PA	-743
40 East Kent Access Phase 2	PA	8520
41 Edge Lane West, Liverpool	PA	177
42 Bexhill to Hastings link road	PA	5426

43	Sittingbourne Northern Relief Road	PA	559
44	Darlaston Strategic Development Area	PA	-39
45	Weymouth Relief Road		-506
46	A509 Isham Bypass, Northamptonshire	PA	724
47	A1073 Spalding to Eye Improvement, Lincolnshire	PA	-1907
48	A1056 Northern Gateway, North Tyneside	PA	612
49	North Middlesbrough Accessibility Improvements		-441
50	Ashton Northern Bypass Stage 2, Tameside		-22
51	A43 Corby Link Road	PA	1575
52	Alderley Edge and Nether Alderley		357
53	A628 Cudworth & West Green Bypass	PA	-913.3
54	A57(T) M1 Junction 31 to Todwick Crossroads	PA	
55	Wolley Lane		
56	Hall Lane Area Improvements, Liverpool		
57	Bedford Western Bypass		2000
58	Stowmarket Relief Road		30
59	Carlise Northern Development Route		4057
	<b>Total CO2</b>		21602.84
	<b>Total carbon (CO2 x12/44)</b>		5891.68

**Source of data:** Most recent Appraisal Summary Table (AST) of local authority Major Road Schemes approved by the Department for Transport into the Local Transport programme.  
 ASTs placed in House Library. Parliamentary Written Answer by Gillian Merron MP, 17 May 2007, Hansard, Column 841W  
<http://www.publications.parliament.uk/pa/cm200607/cmhansrd/cm070517/text/70517w0004.htm#07051798000467>  
 Most recent ASTs also supplied by Department for Transport to Transport 2000 on 16 May 2007, and CO2 figures contained in the ASTs placed in this table by Transport 2000.