Department for Transport

Heavy Goods Vehicle and Passenger Carrying Vehicle motorway speed limits: A Consultation Document (DfT-2010-06)

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Section 1: Foreword

1.1 The purpose of this document is to seek views on the Department's proposals to change the maximum speed limits for:

Heavy Goods Vehicles (HGVs) having a maximum laden weight not exceeding 7.5 tonnes; and,

Passenger Carrying Vehicles (PCVs) adapted to carry more than 8 passengers.

1.2 We are proposing to make the following changes to motorway speed limits for these vehicles:

HGVs not exceeding 7.5 tonnes – to reduce the speed limit from 70mph to 60mph;

PCVs not exceeding 12 metres – to reduce the speed limit from 70mph to 65mph; and,

PCVs exceeding 12 metres – to increase the speed limit from 60mph to 65mph.

1.3 Making the changes would mean that:

All HGVs would have the same maximum speed limit of 60mph – whereas there are two limits currently (70mph for HGVs not exceeding 7.5 tonnes and 60mph for HGVs exceeding 7.5 tonnes); and,

All PCVs would have the same maximum speed limit of 65mph – whereas there are two limits currently (70mph for PCVs not exceeding 12 metres and 60mph for PCVs exceeding 12 metres).

Section 2: Executive Summary

2.1 The main reason for proposing these changes is because most modern HGVs have a technical restriction built into them to limit the maximum speed to 56mph (90Kmh) and most modern PCVs are speed limited to 62.5mph (100Kmh). Consequently, having a speed limit which is greater than the maximum speed at which a vehicle can physically travel is rather pointless, albeit it may serve to provide an incentive for some unscrupulous vehicle operators to circumvent the law on speed limitation devices whilst technically staying within the law on speed limits.

2.2 Whilst most HGVs and PCVs registered since 2001 are speed-limited by law, some older, smaller and lighter HGVs and PCVs are not required to have speed limiters fitted, and this gives them a speed advantage on motorways over comparable newer, safer and less polluting vehicles. This state of affairs seems to us both illogical and unfair – and that is a further reason for proposing the changes in this consultation document.

2.3 We believe that there would be a number of significant advantages in making the proposed changes, including:

Minimising the commercial disparity between operators of older vehicles which are not speed-limited and operators of newer ones which are speed-limited.

Removing the potential incentive for operators to keep older (less safe and more polluting) vehicles in service in order to benefit from a higher maximum speed capability.

Simplification – because there would only be one maximum speed limit for HGVs and one for PCVs (instead of two for each currently depending on weight and length, respectively).

Safety – because all drivers would know what maximum speed to expect – and they would also know that no HGV or 8+ seat PCV should be in the outside lane (whereas non-speed-limited ones currently can be).

Enforcement – because it would be much easier for the police to enforce just one speed limit per vehicle class – and it would consequently also reduce the incentive for operators and drivers to tamper with speed limiters (as some currently do in order to gain a speed advantage).

Section 3: How to Respond

3.1 The consultation period began on 02 February 2010 and will run until 27 April 2010, please ensure that your response reaches us by that date. If you would like further copies of this consultation document it can be found at www.dft.gov.uk or you can contact Mary Allum if you would like alternative formats (Braille, audio CD, etc).

3.2 Please send consultation responses to:

Rob Haggar/Mary Allum
Department for Transport
Licensing, Roadworthiness & Insurance Division
Vehicle Roadworthiness & Enforcement Branch (LRI 2)
2/09 Great Minster House
76 Marsham Street
London
SW1P 4DR
E-mail to: vehicleroadworthiness@dft.gsi.gov.uk

Tel No: 020 7944 2457 or 020 7944 2455
Fax No: 020 7944 6523

3.3 When responding, please state whether you are responding as an individual or representing the views of an organisation. If responding on behalf of a larger organisation please make it clear who the organisation represents, and where applicable, how the views of members were assembled.

3.4 A list of those consulted is detailed in section 9 of this consultation paper. If you have any suggestions of others who may wish to be involved in this process please contact us.

3.5 Information provided in response to this consultation, including personal information, may be subject to publication or disclosure in accordance with the access to information regimes (these are primarily the Freedom of Information Act 2000 (FOIA), the Data Protection Act 1998 (DPA) and the Environmental Information Regulations 2004).

3.6 If you want information that you provide to be treated as confidential, please be aware that, under the FOIA, there is a statutory Code of Practice with which public authorities must comply and which deals, amongst other things, with obligations of confidence.

3.7 In view of this it would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that confidentiality can be

maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded as binding on the Department.

3.8 The Department will process your personal data in accordance with the DPA and in the majority of circumstances this will mean that your personal data will not be disclosed to third parties.

Section 4: The proposals

4.1 The changes we are proposing would mean making some amendments to the current vehicle speed limits prescribed in Schedule 6 to the Road Traffic Regulation Act 1984.

4.2 The table below summarises the changes we would be making and it also shows the speed limiter setting which applies to most modern vehicles in the relevant vehicle Class:

Vehicle Class	**Current motorway limit (mph)**	**Proposed limit (mph)**	**Speed limiter setting (mph)**
HGVs 3.5 – 7.5 tonnes	70	60	56
HGVs more than 7.5 tonnes	60 (no change)	60 (no change)	56
PCVs less than 12 m long	70	65	62.5
PCVs more than 12 m long	60	65	62.5

4.3 To be clear, we believe that, for several reasons, it would be unrealistic to align the relevant speed limits exactly with speed limiter settings. The reasons include the following:
Speed limiters do not prevent vehicles from travelling at slightly higher speeds than speed limiter settings (eg: when coasting downhill).
Speed limiters have a small permitted technical performance tolerance.
EU law is expressed in kmh rather than mph (and having speed limits of 56mph and 62.5mph would clearly be impractical).

4.4 A small rounding upwards to 60mph for HGVs and to 65mph for PCVs would satisfactorily address these issues in our opinion.

4.5 Please also note that the proposed changes do not affect HGVs not exceeding 7.5 tonnes which are:
Articulated vehicles; or,
Drawing a trailer;
since these are already restricted to a limit of 60mph on the motorway in any event.

4.6 Additionally, please note that the proposed changes affect not only PCVs with more than 8 passengers, but also passenger vehicles, motor caravans and dual-purpose vehicles with an unladen weight exceeding 3.05 tonnes.

Section 5: Consultation Questions

5.1 It would be helpful if, when you reply, you could focus your response on the following 5 questions, though we would, of course, also be pleased to consider any other comments that you may wish to make.

Q1: Do you agree that we should reduce the speed limit from 70mph to 60mph for HGVs not exceeding 7.5 tonnes (under item 5(1), column 3(a) of Schedule 6 to the Road Traffic Regulations Act 1984) – and, if not, why not?

Q2: Do you agree that we should reduce the speed limit from 70mph to 65mph for PCVs not exceeding 12 metres, etc. (under item 1(i), column 3(a) of Schedule 6 to the Road Traffic Regulations Act 1984) – and, if not, why not?

Q3: Do you agree that we should increase the speed limit from 60mph to 65mph for PCVs exceeding 12 metres, etc. (under item 1(ii), column 3(a) of Schedule 6 to the Road Traffic Regulations Act 1984) – and, if not, why not?

Q4: Do you agree with the draft Impact Assessment (at page13) - and/or can you help us to quantify more precisely the estimated costs and benefits?

Q5: Do you consider that the proposed changes would have any other unintended implications which we have not considered in this consultation document and Impact Assessment – and, if so, please identify what these implications may be and try to place a quantified value on them.

Section 6: What will happen next

6.1 A summary of responses, including the next steps will be published on the Department for Transport's website within three months after the end of the public consultation period.

Section 7: Impact Assessment

7.1 It is difficult to be precise about the number of vehicles likely to be affected by these proposals. Our best estimate is that between 11,000 and 18,000 3.5-7.5 tonne HGVs could potentially be affected by a reduction in the HGV motorway speed limit. Similarly, up to almost 84,000 PCVs could potentially be affected – although many of these will be old stage-carriage buses which are not used on motorways and which are not capable of travelling at motorway speeds. Furthermore, since older vehicles tend to do less motorway mileage than newer ones the true impact of our proposals could be even less than this. The Impact Assessment pro-forma therefore considers ranges of numbers.

7.2 In broad terms, the IA identifies two main options: do nothing or make the changes as proposed.

7.3 If we were to do nothing older vehicles will be replaced by newer ones anyway over time and so, arguably, the need to make any change in speed limits will diminish over time. At the current rate of vehicle replacement it looks as though there may be no-non speed-limited 3.5-7.5 tonnes HGV vehicles left by around 2013. For PCVs, turnover of the fleet is much slower and it might not be until 2021 before all vehicles older than 2001 are gone. However, in doing nothing, none of the advantages identified in section 2.3 would be delivered. Furthermore, there would be a continuing problem in detecting non-compliance with EU speed limiter legislation – which also applies to visiting vehicles from other EU states.

7.4. If we make the changes as proposed the change to the HGV limit should bring net benefits of up to a maximum of £4.2 million annually – mainly as a result of lower speeds producing lower fuel consumption and reduced emissions.

7.5. The case for PCVs of less than 12m in length is ‘negative’ – by up to £18.7 million – but this is mainly because lower speeds would mean increased journey times for passengers. However, this cost equates to a value of only 14 pence per passenger trip, and an additional driver cost of 26 pence per trip – which need to be judged in the context of the non-quantifiable benefits identified in section 2.3.

7.6 By contrast, the small increase in speed limit for PCVs over 12m (from 60 to 65 mph) is strongly positive – and worth in net benefit up to £11.3 million annually.

7.7 Our preliminary assessment of the impact of the proposals on which we are consulting are contained in the attached Impact Assessment (from page 13).

Section 8: The consultation criteria

8.1 The consultation is being conducted in line with the Code or Practice on Consultation. The criteria are listed below, a full version of the Code of Practice on Consultation is available on the Better Regulation Executive web-site at:

http://www.berr.gov.uk/files/file47158.pdf

8.2 If you consider that this consultation does not comply with the criteria or have comments about the **consultation process** please contact:

Giada Covallero
Consultation Co-Ordinator
Department for Transport
Zone 2/25
Great Minster House
London SW1P 4DR

Email address consultation@dft.gsi.gov.uk

The Seven Consultation Criteria

1. **When to consult:** Formal consultation should take place at a stage when there is scope to influence the policy outcome.
2. **Duration of consultation exercises:** Consultations should normally last for at least 12 weeks with consideration given to longer timescales where feasible and sensible.
3. **Clarity of scope and impact:** Consultation documents should be clear about the consultation process, what is being proposed, the scope to influence and the expected costs and benefits of the proposals.
4. **Accessibility of consultation exercises:** Consultation exercises should be designed to be accessible to, and clearly targeted at, those people the exercise is intended to reach.
5. **The burden of consultation:** Keeping the burden of consultation to a minimum is essential if consultations are to be effective and if consultees' buy-in to the process is to be obtained.
6. **Responsiveness of consultation exercises:** Consultation responses should be analysed carefully and clear feedback should be provided to participants following the consultation.

7. **Capacity to consult:** Officials running consultations should seek guidance in how to run an effective consultation exercise and share what they have learned from the experience.

Section 9: List of Consultees

Alliance of Small Firms and Self Employed People
Association for Road Traffic Safety Management
Association Industrial Road Safety Officers
Association of British Insurers
Association of Chief Police Officers
Association of Chief Police Officers Scotland
Association of Independent Businesses
Association of Industrial Road Safety Officers
Association of Justices Chief Executive
Association of Magistrates' Officers
Association of Vehicle Recovery Operators
Automobile Association (AA)
BRAKE
British Association of Removers
British Industrial Truck Association
British Institution of Traffic Education and Research
British International Freight Association
British Vehicle Rental and Leasing Association
Confederation of British Industry
Confederation of Passenger Transport UK
Construction Plant-hire Associarion
Convention of Scottish Local Authorities
County Road Safety Officers Association
Cumbrae Local Office
Department of Environment for Northern Ireland (DOENI)
Disabled Persons Transport Advisory Committee
Environmental Transport Association
Federation of Environmental Trade Associations
Federation of Small Businesses
Freight Transport Association
Health and Safety Executive
Highways Agency
Institute of Highway Incorporated Engineers
Institute of Logistics and Transport
Institute of Road Safety Officers
Institute of Transport Administration
Magistrates' Association
Merseyside Passenger Transport Authority
Motor Insurers Bureau
Motorist Forum
National Society for Clean Air and Environment Protection
North West Regional Assembly
Parliamentary Advisory Council for Transport Safety
Police Federation for England and Wales

RAC
Road Haulage Association
Road Operators Safety Council
Road Rescue Recovery Association
Road Safety Wales
Royal Society for the Prevention of Accidents
Scottish Government
Scottish Motor Trade Association
Society of Motor Manufacturers and Traders
The Chartered Institute of Logistics and Transport (UK)
The Institute of Vehicle Recovery
The National Union of Rail, Maritime and Transport Workers (RMT)
The Traffic Commissioners
The Union of Shop, Distributive and Allied Workers
TNT Logistics
Trades Union Congress (TUC)
Transport for London (TFL)
Transport Scotland
UNITE
Welsh Assembly Government
Welsh Local Government Association

Summary: Intervention & Options

Department /Agency:	Title:	
Department for Transport	Impact Assessment of Changes to Motorway Speed Limits for Specific Vehicles	
Stage: Consultation	**Version:** 0.1	**Date:** 28 October 2009
Related Publications:		

Available to view or download at:
http://www.

Contact for enquiries: David Briggs **Telephone:** x 2453

What is the problem under consideration? Why is government intervention necessary?

The current speed limit on motorways for HGVs and large passenger carrying vehicles (PCVs) is confusing. The speed limit for HGVs with a maximum laden weight between 3.5 tonnes and 7.5 tonnes is 70mph, but the limit for vehicles over 7.5 tonnes is 60mph. Similarly, the speed limit for PCVs under 12metres in length is 70mph, but 60mph for longer vehicles. But EC law requires all HGVs over 3.5 tonnes manufactured since October 2001 to be speed-limited to 90 kmh (56mph) anyway; and, all PCVs to be speed limited to 100 kmh (62.5mph). Government intervention is necessary in the interests of simplification and to help create a more level playing-field for vehicle operators.

What are the policy objectives and the intended effects?

To reduce the disparity between legislative and effective speed limits.

To ensure that pre-2001 vehicles do not have a competitive speed advantage over newer ones.

To remove any incentive for operators to hang onto older, less safe and more polluting vehicles.

To help realise additional environmental and safety benefits through lower maximum speeds.

What policy options have been considered? Please justify any preferred option.

Option A - Do nothing
Option B - Reduce the motorway speed limit for goods vehicles - with a maximum laden weight of between 3.5 tonnes and 7.5 tonnes - from 70mph to 60mph;
Option C - Reduce the motorway speed limit for PCVs - not exceeding 12 metres overall length - from 70mph to 65mph;
Option D - Increase the motorway speed limit for PCVs - exceeding 12 metres overall length - from 60mph to 65mph.
Options B and D would be cost-beneficial, but the preferred option is to implement all options B, D and C because the non-quantifiable benefits are appealing and the impact of the consequential cost-burden per passenger would be minimal.

When will the policy be reviewed to establish the actual costs and benefits and the achievement of the desired effects? Two years after implementation.

Ministerial Sign-off For consultation stage Impact Assessments:

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible Minister:

Paul Clark.....Date: 3 December 2009

Summary: Analysis & Evidence

Policy Option: B	Description: Change of Motorway Speed Limit for 3.5-7.5 tonne HGVs

COSTS

ANNUAL COSTS	
One-off (Transition) **Yrs**	Description and scale of **key monetised costs** by 'main affected groups' Costs arise due to increased travel time impacting on, mainly driver time. That cost is calculated as the product of additional forecast travel time (700,000 hours) and a value of £11.55 per driver per hour. This equates to an average of around 24 pence per driver per day.
£ 0	
Average Annual Cost (excluding one-off)	**Total Cost** (PV) **£ 0 to £57.6m**
£ 0 to £ 8.1m	

Other **key non-monetised costs** by 'main affected groups' Businesses receiving goods deliveries may be affected by increases in journey time in terms of 'just-in-time deliveries'. However, we expect that the impact will be negligible in the context of normal time variations and uncertainties associated with goods deliveries generally.

BENEFITS

ANNUAL BENEFITS	
One-off **Yrs**	Description and scale of **key monetised benefits** by 'main affected groups' The key monetised benefits are due to lower fuel consumption as a result of lower vehicle speeds (£8.3m p.a.); lower fuel consumption due to reduced incentive of using older vehicles (£1.5m p.a.); lower carbon emissions (£2.1m); and, a reduced accident rate due to lower speeds (£1m p.a.).
£ 0	
Average Annual Benefit (excluding one-off)	**Total Benefit** (PV) **£ 0 to £91.8m**
£ 0 to £12.9m	

Other **key non-monetised benefits** by 'main affected groups' Reduced disparity between effective and legislative speeds will lead to equality of commercial competition and to simplification and better enforement of the law.

Key Assumptions/Sensitivities/Risks: We think it is possible that older vehicles may not be used as much on motorways relative to newer vehicles. If so, overall costs and benefits could be lower – which is why a range of values is given, with our NPV best estimate in the middle of the range. Also, the figures are sensitive to the value attributed to carbon savings; if higher net

Price Base Year 2008	Time Period Years 8	**Net Benefit Range** (NPV) **£ 0 to £34.1m**	**NET BENEFIT** (NPV Best estimate) **£ 17.1m**

What is the geographic coverage of the policy/option?				UK	
On what date will the policy be implemented?				Consultation stage	
Which organisation(s) will enforce the policy?				Police and VOSA	
What is the total annual cost of enforcement for these organisations?				£ not known	
Does enforcement comply with Hampton principles?				Yes	
Will implementation go beyond minimum EU requirements?				No	
What is the value of the proposed offsetting measure per year?				£ Nil	
What is the value of changes in greenhouse gas emissions?				£ up to 2.14m p.a.	
Will the proposal have a significant impact on competition?				Yes (more equality)	
Annual cost (£-£) per organisation (excluding one-off)	Micro	Small	Medium	Large	
Are any of these organisations exempt?	No	No	N/A	N/A	

Impact on Admin Burdens Baseline (2005 Prices) (Increase - Decrease)

Increase of £ 0 Decrease £ 0 **Net Impact** £ 0

Key:	**Annual costs and benefits: Constant Prices**	**(Net) Present Value**

Summary: Analysis & Evidence

Policy Option: C	Description: Change of Motoway Speed Limit for PCVs with +8 seats less than 12m in length

COSTS

ANNUAL COSTS	
One-off (Transition) **Yrs**	Description and scale of **key monetised costs** by 'main affected groups' The major costs relate to increased travel time, totalling an estimated 433506 hours. The total cost could be as high as £25m, which equates to an average of around an additional 14 pence per passenger per trip and an additional driver cost of around 26 pence per trip. That is a maximum, based on all non-speed limited vehicles being
£ 0	
Average Annual Cost (excluding one-off)	**Total Cost** (PV) **£ 0 to £181.1m**
£ 0 to £25.3m	

Other **key non-monetised costs** by 'main affected groups' None.

BENEFITS

ANNUAL BENEFITS	
One-off **Yrs**	Description and scale of **key monetised benefits** by 'main affected groups' The key monetised benefits are due to lower fuel consumption as a result of lower vehicle speeds (£3.2m p.a.) and lower carbon emissions (£0.8m)
£ 0	
Average Annual Benefit (excluding one-off)	**Total Benefit** (PV) **£ 0 to £29.0m**
£ 0 to £4.1m	

Other **key non-monetised benefits** by 'main affected groups' Reduced disparity between effective and legislative speeds will lead to equality of commercial competition and to simplification and better enforement of the law.

Key Assumptions/Sensitivities/Risks We think it is possible that older vehicles may not be used as much on motorways relative to newer vehicles. If so, the overall costs and benefits could be lower – which is why a range of values is given, with our NPV best estimate in the middle of the range. Also, the figures are sensitive to the value attributed to carbon savings; if higher net

Price Base Year 2008	Time Period Years 8	**Net Benefit Range** (NPV) **£ -150m to £0**	**NET BENEFIT** (NPV Best estimate) **£ -75m**

What is the geographic coverage of the policy/option?				UK	
On what date will the policy be implemented?				Consultation stage	
Which organisation(s) will enforce the policy?				Police and VOSA	
What is the total annual cost of enforcement for these organisations?				£ not known	
Does enforcement comply with Hampton principles?				Yes	
Will implementation go beyond minimum EU requirements?				No	
What is the value of the proposed offsetting measure per year?				£ Nil	
What is the value of changes in greenhouse gas emissions?				up to £ 0.8m p.a.	
Will the proposal have a significant impact on competition?				Yes (more equality)	
Annual cost (£-£) per organisation (excluding one-off)	Micro	Small	Medium	Large	
Are any of these organisations exempt?	No	No	N/A	N/A	

Impact on Admin Burdens Baseline (2005 Prices) (Increase - Decrease)

Increase of £ 0 Decrease £ 0 **Net Impact** £ 0

Key: **Annual costs and benefits: Constant Prices** **(Net) Present Value**

Summary: Analysis & Evidence

Policy Option: D	Description: Change of Motoway Speed Limit for PCVs with +8 seats greater than 12m in length

COSTS

ANNUAL COSTS	Description and scale of **key monetised costs** by 'main affected groups'
One-off (Transition) **Yrs**	The key monetised costs are due to higher fuel consumption as a result of higher vehicle speeds (£0.6m p.a.) and higher carbon emissions (£0.1m)
£ 0	
Average Annual Cost (excluding one-off)	**Total Cost** (PV) **£0 to £5.6m**
£ 0 to 0.8m	

Other **key non-monetised costs** by 'main affected groups' None.

BENEFITS

ANNUAL BENEFITS	Description and scale of **key monetised benefits** by 'main affected groups' The major benefits relate to decreased travel time for drivers and passengers. Decreased travel time for passengers accounts for some £13m per annum.
One-off **Yrs**	
£ 0	
Average Annual Benefit (excluding one-off)	**Total Benefit** (PV) **£ 96.3m**
£ 13.5m	

Other **key non-monetised benefits** by 'main affected groups' Reduced disparity between effective and legislative speeds will lead to equality of commercial competition and to simplification and better enforement of the law.

Key Assumptions/Sensitivities/Risks We think it is possible that older vehicles may not be used as much on motorways relative to newer vehicles. If so, the overall costs and benefits could be lower – which is a range of values is given, with our NPV best estimate in the middle of the range. Also, the figures are sensitive to the value attributed to carbon savings; if higher net

Price Base Year 2008	Time Period Years 8	**Net Benefit Range** (NPV) **£ 0 to £90.8m**	**NET BENEFIT** (NPV Best estimate) **£ 45.4m**

What is the geographic coverage of the policy/option?				UK
On what date will the policy be implemented?				Consultation stage
Which organisation(s) will enforce the policy?				Police and VOSA
What is the total annual cost of enforcement for these organisations?				£ not known
Does enforcement comply with Hampton principles?				Yes
Will implementation go beyond minimum EU requirements?				No
What is the value of the proposed offsetting measure per year?				£ Nil
What is the value of changes in greenhouse gas emissions?				fall of up to £-0.1m
Will the proposal have a significant impact on competition?				No
Annual cost (£-£) per organisation (excluding one-off)	Micro	Small	Medium	Large
Are any of these organisations exempt?	No	No	N/A	N/A

Impact on Admin Burdens Baseline (2005 Prices) (Increase - Decrease)

Increase of £ 0 Decrease £ 0 **Net Impact** £ 0

Key:	**Annual costs and benefits: Constant Prices**	**(Net) Present Value**

Evidence Base (for summary sheets)

[Use this space (with a recommended maximum of 30 pages) to set out the evidence, analysis and detailed narrative from which you have generated your policy options or proposal. Ensure that the information is organised in such a way as to explain clearly the summary information on the preceding pages of this form.]

Introduction

1.1 This evidence base relates to the preparation of a consultation stage impact assessment relating to the following proposed measures:

Reduce the motorway speed limit for goods vehicles - with a maximum laden weight of between 3.5 tonnes and 7.5 tonnes - from 70mph to 60mph;

Reduce the motorway speed limit for passenger vehicles (with driver's seat and 8+ passenger seats) - not exceeding 12 metres overall length - from 70mph to 65mph;

Increase the motorway speed limit for passenger vehicles (with driver's seat and 8+ passenger seats) - exceeding 12 metres overall length - from 60mph to 65mph.

Preparing the Impact Assessment

1.2 This initial assessment of impacts has been prepared on the basis of our current understandings - and it may therefore need to be revised if areas of uncertainty are clarified.

Options

1.3 The options to be considered are as follows:

A: Do Nothing

B: Implementation of changes to the Motorway Speed Limit for 3.5-7.5 tonne HGVs.

C: Implementation of changes to the Motorway Speed Limits for PCVs with greater than 8 passengers shorter than 12m in length.

D: Implementation of changes to the Motorway Speed Limits for PCVs with greater than 8 passengers greater than 12m in length.

1.4 A comparison of the options is given in Annex 3.

Note on time period of impact assessment

1.5 Analysis for each impact covered has been assessed over a ten year period from 2005-2015. Due to the wide range of data collected, base data has been used from 2005, 2006, 2007 and

2008. For the purpose of the summary sheets in this Impact Assessment the costs and benefits have been indicated from 2008 to 2015, an 8 year period.

1.6 Some costs and benefits are expected to decrease or increase over greater lengths of time than the period assessed, where applicable this has been stated.

OPTION A : Do nothing

2.1 The option for “doing nothing” incurs no costs but derives no benefits either.

2.2 The main advantages in lowering the speed limits would be in:

Removing the commercial disparity between operators of older vehicles who are currently able to travel faster than operators with newer, speed-limited, ones.
Removing the potential incentive for operators to hang on to older (less safe and more polluting) vehicles merely in order to benefit from a higher maximum speed capability.
Simplification – because there would only be one maximum speed limit for HGVs and one for PCVs (instead of two for each currently depending on weight and length, respectively).
Safety – because all drivers would know what maximum speed to expect – and they would also know that no HGV or 8+ seat PCV should be in the outside lane (whereas non-speed-limited ones currently can be).
Enforcement – because it would be much easier for the police to enforce just one speed limit per vehicle class – and it would consequently also reduce the incentive for operators and drivers to tamper with speed limiters (as some currently do in order to gain a speed advantage).

2.3 If we do nothing older vehicles will be replaced by newer ones anyway – and so, arguably, the need to make any change in speed limits goes away. At the current rate of vehicle replacement it looks as though there may be no-non speed-limited 3.5-7.5 tonnes HGV vehicles left by around 2013. However, for PCVs turnover of the fleet is much slower and might not until 2021 before all vehicles older than 2001 disappear from the fleet. However, in doing nothing, none of the advantages identified in paragraph 2.2 would arise – and there would be a continuing problem in clearly detecting non-compliance with speed limiter legislation.

OPTION B: Implementation of changes to the Motorway Speed Limit for 3.5-7.5 tonne HGVs

Analysis of Impacts

3.1 The proposed change in speed limit would affect the entire fleet of 3.5-7.5 tonne HGVs, although vehicles currently fitted with speed limiters would be largely unaffected. In 2007 the number of registered vehicles in this category was 209,916[1]. Over the previous three years there was little change in the size of this fleet. For the purpose of this impact assessment the number of 3.5-7.5 tonne HGVs is assumed to remain constant over the course of the study period.

3.2 In 2007 the total distance travelled by 3.5-7.5 tonne HGVs on the Motorway was 1.9902 billion km.[2] As with fleet size this distance has not varied substantially over the previous three years and is assumed to remain constant throughout the study period.

3.3 3.5-7.5 tonne HGVs registered since 2001 are required by law to be fitted with a speed limiter restricting their speed to 56mph (90kmph). In 2007 this represented 51% of all vehicles in this category. Vehicles fitted with these speed limiters will be largely unaffected by the proposed change in speed limit as they currently travel at a lower speed than the proposed limit.

3.4 Speed limiters work reliably to keep HGV speed to below 56mph, though some HGVs are known to sit in neutral on downhill stretches of motorway as the speed limiter only operates when the vehicle is in gear. By doing so they can 'coast' at speeds greater than 60mph. In general, however, use of older vehicles allows for faster travel. Therefore, reducing the speed limit would discourage operators to use older vehicles as opposed to newer vehicles.

3.5 It is suspected that older vehicles travel relatively less on the motorways compared to the average vehicle. However, there is no data available on this. The impacts below are calculated assuming that older vehicles have the same travel pattern as the average,

[1] Source: DfT estimate
[2] Source: DfT Transport Statistics and DfT Vehicle Licensing Statistics (2007)

newer vehicle, but it is possible that motorway travel makes up a small proportion of travel done by these vehicles in which case the impacts may range from zero up to those identified. This range is reflected in the summary costs presented.

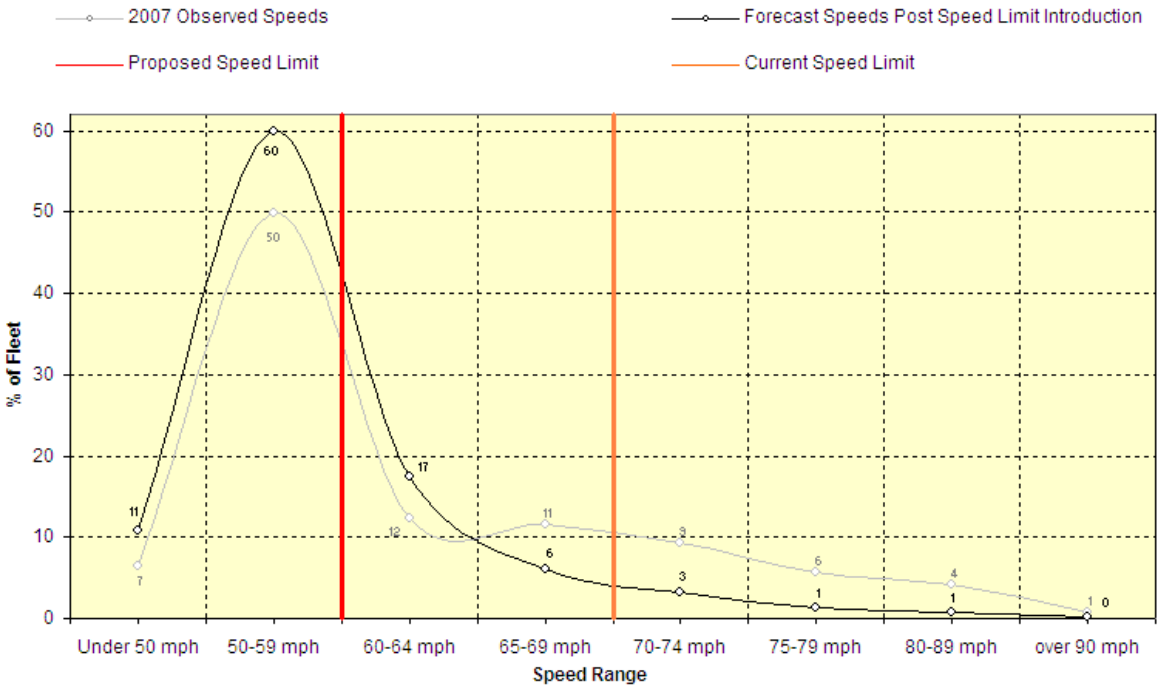
Speed Change

3.6 In 2007 80% of 3.5t-7.5t HGVs were compliant with the 70mph speed limit.[3] This is considered to include those vehicles with speed limiters fitted. 56% of vehicles were travelling within 60mph and would be largely unaffected by the speed limit change.

3.7 The introduction of a 60mph speed limit is expected to slow down the vehicles which currently travel above this speed. This will have a slight knock on effect on those travelling below the speed limit also. Forecasting is based on anticipating the changes in the vehicle speeds using the existing speed profile and applying speed reduction based on this speed profile and other appropriate speed profiles (such as towing vehicles which have a 60mph speed limit).

3.8 There is also a tendency for vehicles to only go above the posted speed limit by only a certain amount (by no more than 10%) to reduce the possibility of being prosecuted for speeding. This is why the percentage of vehicles travelling at speeds greater than 20mph over a speed limit reduces substantially. A crowding effect of vehicles just below 60mph is also expected.

[3] Source: DfT Road Statistics 2007, Traffic, Speeds and Congestion, Vehicle Speed Data Tables



Vehicle Replacement

3.9 The 3.5-7.5 tonne HGV fleet can be broken down into Euro Standard groups for emissions and fuel consumption data. By comparing the age of vehicles with the estimated data provided for each Euro Classification of vehicle it is possible to understand more about the fleet. The definitions of each Euro Classification are shown below:

Classification	Date of vehicle registration
Pre-Euro	Prior to 1992
Euro I	1992 - 30th September 1996
Euro II	1st October 1996 - 30th September 2001
Euro III	1st October 2001 - 30th September 2006
Euro IV	1st October 2006 - 30th September 2009
Euro V	1st October 2009 onwards

3.10 Each year around 15,000 new 3.5-7.5 tonne HGVs are purchased and 15,000 older HGVs are scrapped. As a result the proportion of vehicles fitted with a speed limiter is increasing. By 2015 it is estimated 86% of vehicles will be fitted with a speed limiter and 100% of vehicles will be fitted by around 2025-2030. These estimates are based on current trends in vehicle replacement[4]. Also taken into consideration is that the proposed change in speed limit would negate the benefit of using older vehicles to achieve higher speeds. This would reduce operators 'hanging on' to older vehicles and could increase the rate at which they are replaced. The table below shows estimates for changes in fleet age by classification post speed limit change.

Table – 3.5-7.5t HGV vehicle replacement with speed limit change

	% Vehicles						
Year	Pre-Euro	Euro I	Euro II	Euro III	Euro IV	Euro V	
2004	22.0%	18.2%	33.2%	26.7%	0.0%	0.0%	
2005	18.6%	16.5%	30.6%	34.3%	0.0%	0.0%	**OBSERVED DATA**
2006	15.8%	14.8%	28.6%	38.8%	2.0%	0.0%	
2007	13.5%	13.2%	26.9%	37.4%	9.0%	0.0%	
2008	8.1%	9.8%	24.2%	34.3%	23.6%	0.0%	
2009	5.6%	7.6%	22.0%	30.7%	29.3%	4.9%	
2010	4.0%	5.9%	19.5%	27.5%	30.2%	12.9%	
2011	2.6%	4.6%	16.8%	24.9%	29.0%	22.0%	**FORECAST DATA**
2012	1.6%	3.9%	14.5%	22.7%	26.7%	30.6%	
2013	0.9%	3.3%	12.9%	20.7%	24.3%	37.9%	
2014	0.4%	2.8%	12.1%	19.0%	22.3%	43.4%	
2015	0.0%	2.5%	11.5%	17.6%	21.4%	47.1%	

Accident Rate

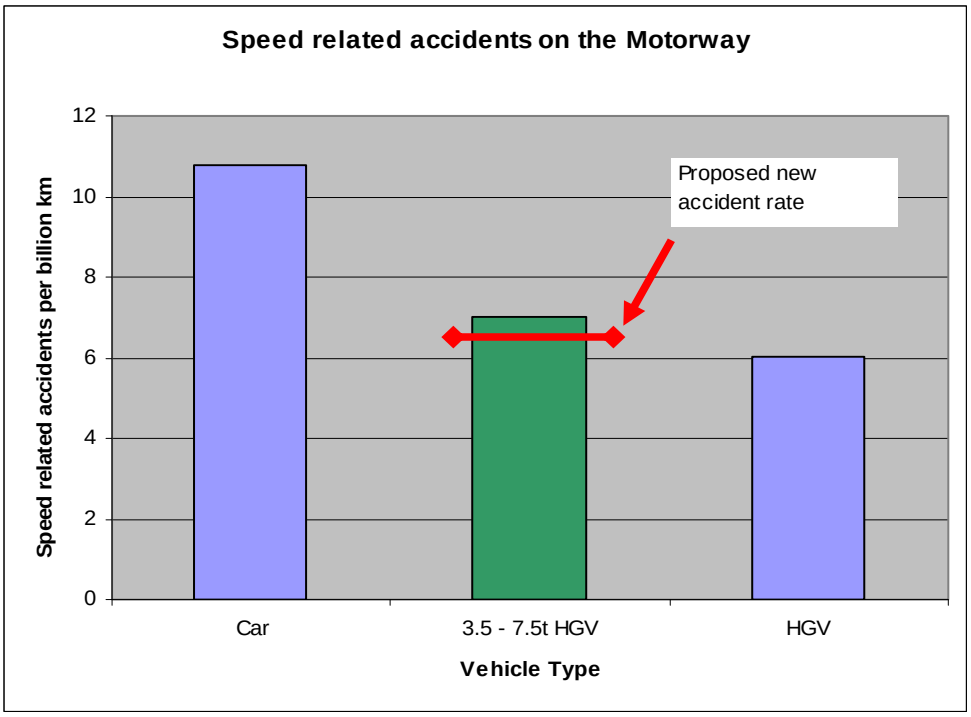
3.11 There are many contributory factors which account for accidents. The most relevant contributory factors related to speed are a) travelling too fast for conditions and b) excessive speed. Based on these two factors noted in accidents for all categories of vehicles on

[4] Source: DfT estimate

the motorway[5], the accident rate for 3.5 – 7.5 t HGVS involved with speed related accidents on the motorway would sit between the accident rate for cars and heavier HGVs.

3.12 A reduction in speed limit for 3.5 – 7.5 t HGVs is expected to cause the accident rate for these vehicles to behave more like heavier HGVs. Therefore it is proposed that to represent the change in accident rate due to a speed limit change, the accident rate be lowered to meet a level closer to that of heavier HGVs. As 3.5 – 7.5 HGVs will probably still travel faster than heavier vehicles an accident rate half way between the current 3.5 – 7.5 t HGV rate and the heavier HGV accident rate is assumed for the central case. The economic case is not dependent on this assumption.

3.13 This results in an accident rate reduction from 7.04 accidents per billion vehicle kilometres for speed related accidents to 6.24. This is equivalent to a reduction of 1.58 accidents per year on the motorway assuming 1.99 billion kilometres travelled. As discussed above, it may be that older vehicles are not driven on motorways as much as newer vehicles relatively. Therefore the change in accident rate could range from zero to 1.58 accidents per year less.



[5] DfT Road Casualties in Great Britain, Accidents on Motorways where exceeding the speed limit or travelling to fast for conditions was contributing factor.

Costs

3.14 The main costs that would arise from the introduction of a 60mph speed limit for 3.5-7.5 tonne HGVs are as a result of increased time spent on the road. Comparing the old and new speed profiles for this category of vehicles allows for estimated times on the motorway to be calculated. Assuming the predicted changes in speed profile the additional time spent on the motorway by the whole 3.5-7.5 tonne HGV fleet is between 0 to 700,000 hours per year.

3.15 This affects mainly the vehicles not fitted with speed limiters, around 100,000 vehicles.

3.16 The value of driver time is estimated to be £11.54 per hour in 2008.[6] As an arithmetic mean average, this value must be treated with caution as there may be many vehicles that do not travel on the motorway and some which travel great distances. Exceptional circumstances may exist where the extension to travel time may affect the level of service the HGV is able to provide.

3.17 The yearly total cost covering all vehicles in 2009 due to additional driver costs is between £0 to £8.1m.

3.18 Over a longer time period any cost of the change in speed limit would reduce to zero as all 3.5-7.5t HGVs are fitted with speed limiters once older vehicles are replaced. The loss in driver time would still exist but would not be as a result of the speed limit change.

Benefits

3.19 The key non monetised benefit of the introduction of the new speed limits is that by reducing the disparity between effective legislative speeds on the motorway will a) reduce confusion over adherence to speed limiter restricted speeds and national speeds and their enforcement and b) produce a level playing field for competing businesses previously unequally affected by speed limiter regulations.

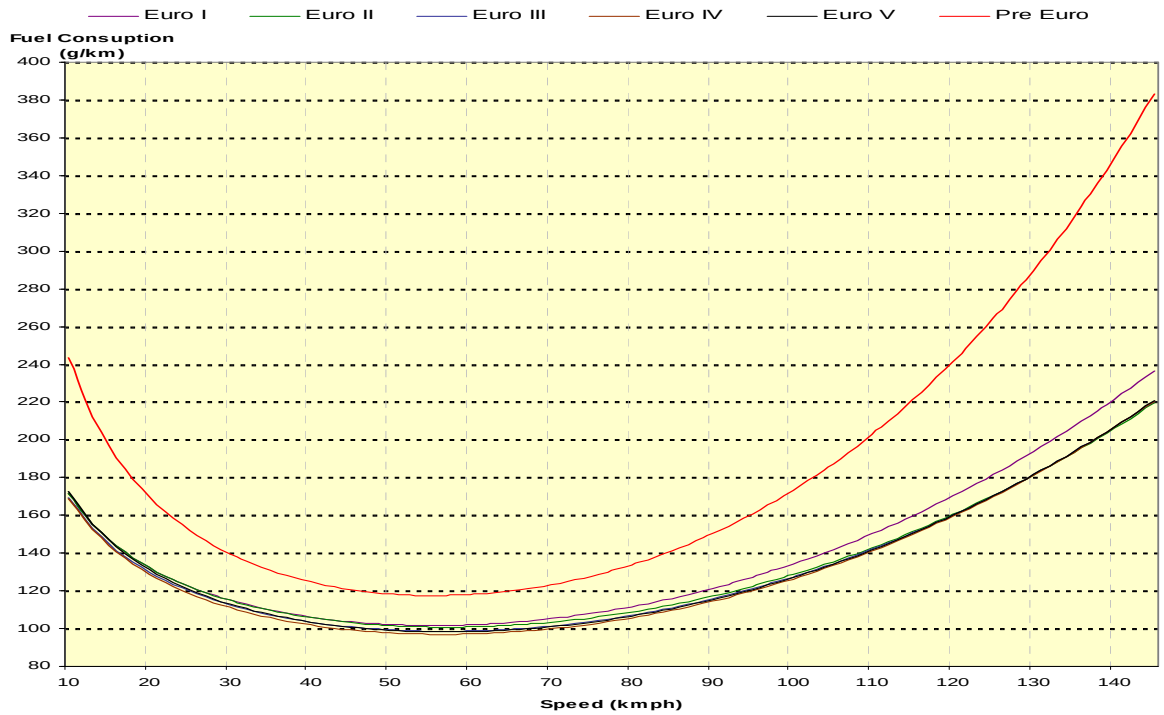
[6] Source: DfT Transport Analysis Guidance Unit 3.5.6, Values of Time and Operating Costs

Fuel

3.20 The largest monetised benefit is the reduced fuel consumption due to slower travelling vehicles and the use of newer vehicles (as stated above, operators will no longer benefit from keeping older vehicles).

3.21 The rates for fuel consumption for 3.5-7.5 tonne HGVs was obtained from COPERT 4[7]. This data showed that the fuel consumption is substantially higher for older 3.5-7.5 tonne HGVs than newer models.

3.23 The data from COPERT 4 is only accurate up to 86kmph. Beyond this the data was extrapolated to best estimate fuel consumption at higher speeds.



[7] COPERT 4 is a European Environment Agency funded program used to estimate emissions from road transport

3.24 The reduction in speed across the fleet causes a substantial reduction in fuel consumption. Using the current speed breakdown it is estimated that around 314.25 million litres of diesel is consumed for the 3.5-7.5 tonne HGV fleet to travel 1.99 billion kilometres on the motorway. Using the proposed new speed breakdown this value would reduce to 288.40 million litres. This is a saving of 25.85 million litres of diesel. Again, this is the upper limit of a range of impacts that depend on the pattern of motorway driving use of older vehicles relative to the average vehicle. The lower limit of the range is that there would be no change to the current diesel use.

3.25 The estimated cost of diesel fuel was obtained from the Department for Transports Transport Analysis Guidance (WebTAG)[8]. At the earliest possible implementation date of 2009 the value of diesel is estimated at 88.7 pence per litre. However, this includes fuel tax which is a transfer from business to government. Only the resource cost of fuel should be included which is estimated at 32.5 pence per litre in 2009. Details of these calculations can be found in Annex 2.

3.26 The yearly reduction in fuel costs for 2009 due to speed reduction would therefore be between £0 to around £8.3m. The average benefit per vehicle per day of the upper limit is only around 36p. This again is an arithmetic mean average across a very large fleet size so does not represent the variations in motorway use across the fleet.

3.27 There will also be a reduction in fuel consumption due to the changes in vehicle replacement trends discussed above. With the proposed new speed limits in 2009 the fuel consumption was estimated at 288.40 million litres of diesel for the whole fleet. As operators no longer benefit from using older vehicles the fleet breakdown is assumed to change to the breakdown suggested in the Vehicle Replacement section of this assessment. Using this fleet breakdown only 284.47 million litres diesel is used. This is a reduction of 3.93 million litres. Between the years 2009-2015 reductions of up to 5.5 million litres can be seen with an average benefit of 4.68 million litres of diesel saved per year. Using fuel prices for each year obtained from WebTAG the average fuel saving is between £0 to £1.5m worth of diesel per year.

[8] Method from http://www.webtag.org.uk/webdocuments/3_Expert/5_Economy_Objective/3.5.6.htm paragraphs 1.3.8 to 1.3.14

3.28 These savings in fuel cost must be treated in context: In order for these savings to be realised both the speed limit and the behaviour of the operators must change. By changing vehicles now, the operators could obtain benefits from fuel savings which would outweigh the time saving loses. However the purchase of newer vehicles is required for this to be the case.

Accidents

3.29 The classification of the costs of accidents was obtained from the DfT's Road Casualties Great Britain 2007 Annual Report.[9] The term used to estimate the cost of road accidents is the value of prevention. This is defined as the sum of the costs of the casualties and the damage caused by the accident:

3.30 Casualty Costs:

Loss of output due to injury. This is calculated as the present value of the expected loss of earnings plus non-wage payments made by employers.

Ambulance costs and the costs of hospital treatment.

The human costs of casualties. These are based on willingness to pay to avoid pain, grief and suffering to the casualty, relatives and friends, as well as intrinsic loss of enjoyment of life in the case of fatalities.

3.31 Damage Costs:

Costs of damage to vehicles and property.

Police costs and administrative costs of accident insurance.

2007 Costs of Accidents on Motorways	
Accident type	**Cost (£)**
Fatal	2,145,280
Serious	235,690
Slight	29,490
Damage Only	2,620

[9] DfT, Road Casualties Great Britain 2007 Annual Report, Section 2; A valuation of road accidents and casualties in Great Britain in 2007

3.32 The total number of fatal and serious accidents involving 3.5-7.5 tonne HGVs on the motorway in 2007 was 47. This was made up of 10 fatal accidents and 37 serious accidents.[10] The total cost using the cost of accidents on motorways 2007 was around £30m.

3.33 As stated in the Accident Rates section of this assessment the change in speed limit could result in a reduction of up to 1.58 speed related accidents each year on the motorway (although it should be noted that . speed related accidents are only recorded for accidents where a police officer attended the scene). It has been assumed that the severity of each speed related accident recorded was either fatal or serious. This means that the number of fatal and serious accidents could reduce from 47 to 45.42. This is a reduction of 3.4%.

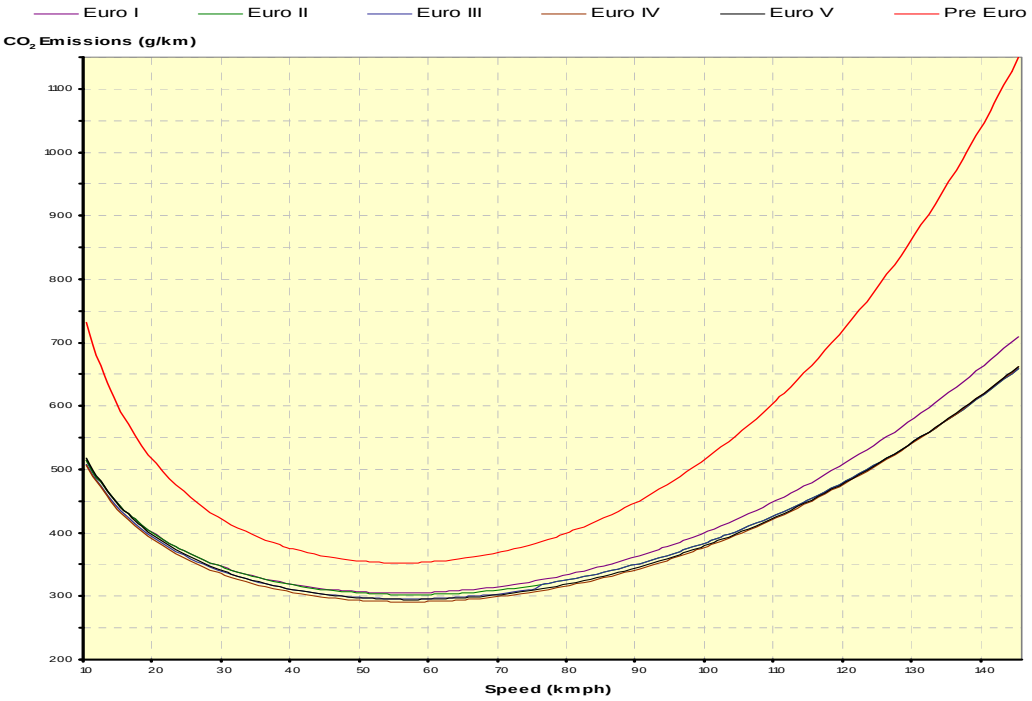
3.34 This represents a benefit of up to £1m in reduced accidents costs per year due to the speed limit change, however the benefit may be lower if all accidents avoided were not fatal or serious.

3.35 Over a longer period of time this benefit will reduce to zero as the reduced accident rate would result from the speed limiters fitted across the whole fleet regardless of the speed limit change or not.

[10] DfT, Road Casualties in Great Britain

Carbon Assessment

3.36 The levels of CO_2 emissions from 3.5-7.5 tonne HGVs on the Motorway is affected by both the speed the vehicles are travelling and the age of the vehicles. COPERT 4[11] shows that older vehicles produce far higher levels of emissions than newer vehicles particularly at higher speeds.



3.37 Using the current fleet breakdown and current speed profile it was estimated that around 801,000 tonnes of CO_2 will be produced by the 3.5-7.5 tonne HGV fleet on the motorway in 2009. Using the speed profile proposed after the speed limit change this value would reduce to 735,000 tonnes. This is a reduction of 66,000 tonnes of CO_2. Again, this assumes older vehicles travel on motorways as much as average vehicles. If this is not the case then there will be less change, with the lower limit being no change.

3.38 The value of a tonne of carbon dioxide was obtained using the DfTs Transport Analysis Guidance[12] using the 2008 base for carbon price

[11] COPERT 4 is a European Environment Agency funded program used to estimate emissions from road transport

[12] Method from http://www.webtag.org.uk/webdocuments/3_Expert/3_Environment_Objective/3.3.5 paragraph 1.4.1 to 1.4.3

and additional costs due to the increasing marginal cost of emissions over time. Details of these calculations can be found in Annex 1.

3.39 Using these values the reduction of 66,000 tonnes of CO_2 would represent a saving of £1.8m in 2009. Between the years 2009-2015 savings between £1.5m and £2.1m per year can be observed. The average saving per year is £1.78m worth of CO_2. This is an upper limit, with £0 as the lower end of the range.

3.40 The expected accelerated changes in vehicle replacement rates due to the change in speed limit will also reduce the CO_2 emissions. In 2009 the reduced speed limit was estimated to reduce emissions to 735,000 tonnes CO_2. If increased rates of vehicles replacement are included then only 725,000 tonnes are expected to be produced. This reduction of 10,000 tonnes has an estimated value of £212,000. Up to 2015 reductions of up to 13,800 tonnes CO_2 can be seen with an average saving of £325,000 worth of emissions.

3.41 Overall the average saving per year in CO_2 emissions is between £0 to £2.1m including reductions due to lower speeds and increased rates of vehicle replacement.

OPTION C: Implementation of changes to the Motorway Speed Limit for PCVs with greater then 8 passengers less than 12m in length

Affected vehicles and levels of impact

4.1 The proposed change in speed limits would affect the entire fleet of PCVs with more than 8 passengers. PCVs in this category (less than 12m in length) would be subject to a reduction in speed limit from 70mph to 65mph.

4.2 In 2007 the number of registered PCVs less than 12m in length was 104,041[13]. Over the previous three years there was little change in the size of this fleet. For the purpose of this impact assessment the number of PCVs less than 12m in length is assumed to remain constant over the course of the study period. In 2007 the total distance travelled by PCVs less than 12m in length was 1.2 billion km[14].

4.3 There is no direct correlation between definitions for PCVs in speed limiter regulations, which broadly speaking apply on the basis of vehicle gross design weight and registration date, and definitions for PCVs in national speed limits legislation, which apply on the basis of vehicle length. For many PCVs below a certain gross design weight, speed limiters are required to be fitted on models first registered after October 1st 2001. The speed limiters on these vehicles do not allow speeds greater than 100kmph (62mph). In 2007 36% of these PCVs were estimated to have a speed limiter fitted. It is possible that for some PCVs with a high gross design weight but nevertheless below 12 m in length require a speed limiter to be fitted earlier if first registered between 1 January 1988 and 30 September 2001.

4.4 It is suspected that older vehicles travel relatively less on the motorways compared to the average vehicle. However, there is no data available on this. The impacts below are calculated assuming that older vehicles have the same travel pattern as the average, newer vehicle, but it is possible that motorway travel makes up a small proportion of travel done by these vehicles in which case the

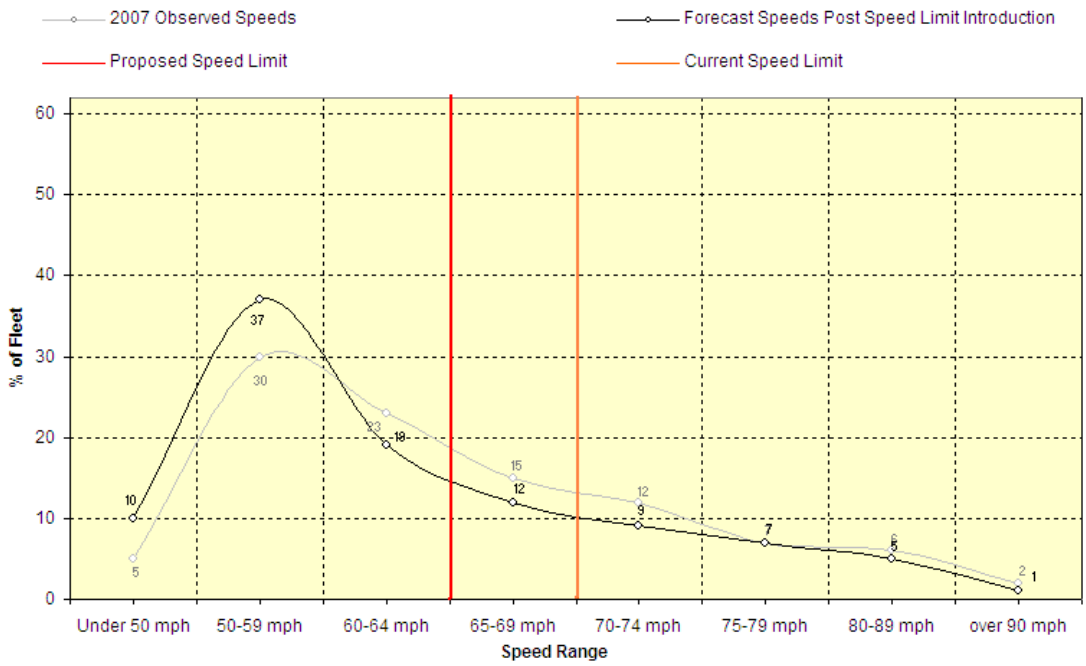
[13] Source: DfT estimate
[14] Source: DfT Transport Statistics and DfT Vehicle Licensing Statistics (2007)

impacts may range from zero up to those identified. This range is reflected in the summary costs presented.

Speed Change

4.5 In 2007 73% of PCVs less than 12m long were compliant with the 70mph speed limit.[15] This is considered to include those vehicles with speed limiters fitted. 58% of vehicles were travelling within 65mph and would be largely unaffected by the speed limit change.

4.6 The introduction of a 65mph speed limit is expected to slow down the vehicles which currently travel above this speed. This will have a slight knock on effect on those travelling below the speed limit also. Forecasting is based on anticipating the changes in the vehicle speeds using the existing speed profile and applying speed reduction based on this speed profile and other appropriate speed profiles. A larger number of vehicles sitting at just below 65mph is expected.



Vehicle Replacement

[15] Source: DfT Road Statistics 2007, Traffic, Speeds and Congestion, Vehicle Speed Data Tables

4.7 The PCV fleet can be broken up into the same Euro Classifications as the HGV fleet.

4.8 Minor changes in the PCV fleet less than 12m in length may occur due to the speed limit change. The rate of turnover for these vehicles is relatively slow, with only around 5,000 new vehicles purchased each year. As a result any encouragement to replace older vehicles with newer vehicles is likely to take a long time to have an effect and has been treated as negligible for the purpose of this Impact Assessment.

Accident Rate

4.9 No quantifiable change in accident rate is expected with the introduction of the new speed limits for PCVs.

4.10 No speed related accidents on the motorway involving PCVs less than 12m in length have been recorded on the motorway[16]. This suggests an extremely low if not zero accident rate per billion kilometres. Therefore while reducing the speed of these vehicles would normally be expected to reduce the accident rate, in practice with such a low rate it is unlikely to be feasible. This does not mean that the likelihood of an accident involving a PCV less than 12m long has not been reduced, however since there have been no accidents involving these vehicles in the last five years so it is not possible to estimate this reduction.

Costs

4.11 The costs that arise from the change in speed limits for PCVs are largely as a result of increased travel time for the under 12m category of vehicle. Using the current speed breakdown for these vehicles the time taken to travel the 1.2 billion kilometres on the motorway is 11.85 million hours. Using the projected speed profile after the speed limit change the time taken to travel the same distance would be 12.29 million hours. This shows an increase in travel time of 0.44 million hours.

[16] DfT, Road Casualties in Great Britain, Accidents on Motorways where exceeding the speed limit or travelling to fast for conditions was contributing factor.

4.12 This is the equivalent of only around 1 minute per vehicle per day (assuming operation 7 days a week). This is an arithmetic mean average across a very large fleet size so does not represent the likely wide variation in use between different vehicles in the fleet. The change in speed limit will cause an increase of around 3.5% to journey time on the motorway. This would only add 4.5minutes to a 2 hour journey and is unlikely to cause great cost. Exceptional circumstances may exist however where the level of service provided is lowered.

4.13 The values of driver time and passenger time in 2008 are estimated to be £11.54 per hour and £5.83 per hour respectively[17]. Using these figures the extra driver cost for the whole fleet per year would be £5m.

4.14 Assuming an average of 8 passengers[18] in a PCV shorter than 12m, the estimated additional cost per year in passenger costs would be £20.2m. This equates to only around 14p per person per trip - dependant on trip length and number of trips undertaken each year.

Benefits

4.15 Decreased fuel consumption due to a change in the speed of PCVs shorter than 12m in length is the main monetised benefit. The rates of fuel consumption for PCVs shorter than 12m were extracted from COPERT 4[19]. The data in these tables was only reliable to 75kmph for shorter than 12m PCVs. Data beyond these points was estimated through extrapolation and may be inaccurate. The graphs for these PCVs show that there is little change in fuel consumption between older and newer PCVs and that at high speeds, changes in speed also have little effect on fuel consumption. This results from no optimal speed being identified within the range for which data is available and is unlikely to be the true relationship.

4.16 Therefore an alternative has been investigated. Data from the DfT UK road vehicle emission factors (October 2008 consultation

[17] Source: DfT Transport Analysis Guidance Unit 3.5.6, Values of Time and Operating Costs
[18] This is a rough arithmetic average estimated from a variety of web-based sources.
[19] COPERT 4 is a European Environment Agency funded program used to estimate emissions from road transport

version)[20] has been used as a test to see what the impact may be if the fuel efficiency curve above 75km/h follow similar patterns to other types of vehicle. To do this data for a smaller PCV (buses lighter than 15 tonnes) has been used up to 75km/h and then extrapolated beyond this point using the percentage increases seen in the data for coaches lighter than 18 tonnes. This produces a realistic fuel efficiency curve up to 150 km/h.

4.17 Currently around 230 million litres of diesel are consumed by PCVs under 12m on the motorway. Using the current speed breakdown combined with the two approaches to fuel efficiency above and comparing this with the proposed new speed breakdown results in a saving of between 0-9.84m tonnes of diesel for PCVs under 12m.

4.18 The estimated cost of diesel fuel was obtained from the Department for Transports Transport Analysis Guidance (WebTAG)[21]. At the earliest possible implementation date of 2009 the value of diesel is estimated at 88.7 pence per litre. However, this includes taxation which is a transfer from business to government so should not be include. The resource cost of diesel in 2009 is estimated at 32.5 pence Details of these calculations can be found in Annex 2. This provides an estimated saving of between £0-£3.2m in fuel expenditure.

4.19 Reducing the disparity between effective and legislative speeds on the Motorway and hence adherence and enforcement is the key non-monetised benefit of the introduction of the new speed limit.

Carbon Assessment

4.20 The levels of CO_2 emissions from PCVs were originally obtained from COPERT 4[22]. The data shows that the difference in older vehicle and newer vehicle emissions for all sizes of PCV is minimal. The speed of vehicles has a greater impact on CO_2 emissions but is still minor. However, this is as a result of the limited range covered by the COPERT 4 data. As described in the fuel efficiency section above another possible scenario has been looked at using the DfT emission factors.

[20] http://www.dft.gov.uk/consultations/closed/consultvehicleemission/
[21] Method from http://www.webtag.org.uk/webdocuments/3_Expert/5_Economy_Objective/3.5.6.htm paragraphs 1.3.8 to 1.3.14
[22] COPERT 4 is a European Environment Agency funded program used to estimate emissions from road transport

4.21 Around 720,000 tones of CO_2 are expected to be produced by the entire PCV fleet in 2009. Comparing the emissions for the pre speed limit introduction and post speed limit introduction a saving across the entire fleet of between 0-28,000 tonnes of carbon dioxide is estimated.

4.22 The value of a tonne of carbon dioxide was obtained using the DfTs Transport Analysis Guidance[23]. Details of these calculations can be found in Annex 1. These values suggest a benefit of up to £760,000 due to reduced CO_2 emissions in 2009. By 2015 the amount of carbon saved is expected to be similar to 2009 but the value per tonne of carbon is greater so the monetised savings are estimated to be £902,000 per year at maximum.

[23] Method from http://www.webtag.org.uk/webdocuments/3_Expert/3_Environment_Objective/3.3.5 paragraph 1.4.1 to 1.4.3

OPTION D: Implementation of changes to the Motorway Speed Limit for PCVs with greater then 8 passengers longer than 12m in length

Affected vehicles and levels of impact

5.1 The proposed change in speed limits would affect the entire fleet of PCVs with more than 8 passengers. PCVs greater than 12m in length would have their limit increased from 60mph to 65mph.

5.2 In 2007 the number of registered PCVs greater than 12m in length was 76,764[24]. The size of this fleet is gradually increasing. Over the period 2008-2015 the size of the fleet of PCV greater than 12m in length is expected to grow. This is estimated to be by around 5% based on current growth trends. In 2007 the total distance travelled by PCVs greater than 12m in length was 0.6 billion km[25]. To tie in with growth trends it has been assumed that this value will also increase by 5% by 2015 to 0.63 billion km.

5.3 Almost all PCVs greater than 12m in length are required to have a 100kmph (62mph) speed limiter fitted. Some exceptions may exist for older vehicles[26].

5.4 It is suspected that older vehicles travel relatively less on the motorways compared to the average vehicle. However, there is no data available on this. The impacts below are calculated assuming that older vehicles have the same travel pattern as the average vehicle, but it is possible that motorway travel makes up a small proportion of travel done by these vehicles in which case the impacts may range from zero up to those identified. This range is reflected in the summary costs presented.

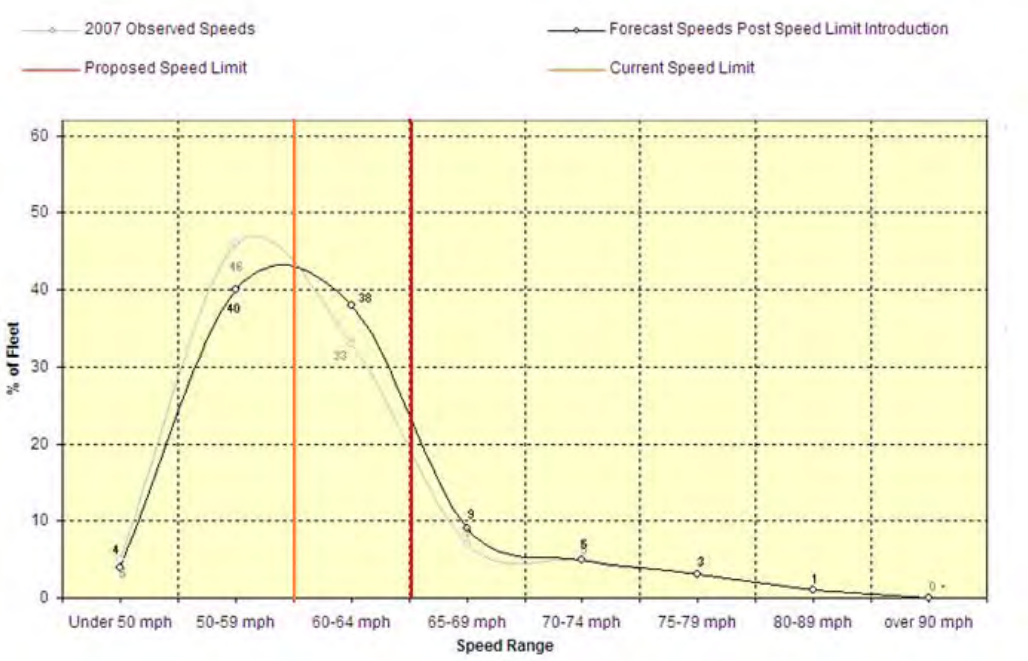
Speed Change

5.5 In 2007 51% of PCVs greater than 12m long were compliant with the 60mph speed limit.[27] This is considered to include those vehicles with speed limiters fitted. 16% of vehicles were travelling above 65mph and would be largely unaffected by the speed limit change.

[24] Source: DfT estimate
[25] Source: DfT Transport Statistics and DfT Vehicle Licensing Statistics (2007)
[26] Source: http://www.bvrla.co.uk/binary/documents/855_Speed_Limiters
[27] Source: DfT Road Statistics 2007, Traffic, Speeds and Congestion, Vehicle Speed Data Tables

These vehicles are likely to be fitted with a speed limiter but disable it or ‘coast’ on downhill stretches.

5.6 The introduction of a speed limit raised to 65mph is expected to slightly increase the speed of the vehicles which currently travel below this speed. Forecasting is based on anticipating the changes in the vehicle speeds using the existing speed profile and applying speed reduction based on this speed profile and other appropriate speed profiles. Little change is expected as the current speed profile suggests that most vehicles in this category are driven to the limits of their speed capability. An increased number of vehicles travelling just below 65mph is also expected.



Vehicle Replacement

5.7 Vehicle replacement for PCVs greater than 12m long is unlikely to change at all as a result of the speed limit change. There is currently no benefit in using older vehicles.

Accident Rate

5.8 The change in speed limit for PCVs greater than 12m in length is expected to have a negligible effect on the accident rate as these vehicles are currently driving close to their capability. It is therefore proposed that there will be no increase in the accident rate for this category of PCV.

Costs

5.9 The rates of fuel consumption for PCVs longer than 12m was extracted from the DfT consultation values for fuel consumption. The data was only considered reliable to 103kmph for PCVs longer than 12m in length. Data beyond these points was estimated through extrapolation and may be inaccurate. The graphs these PCV show that there is little change in fuel consumption between older and newer PCVs and that at high speeds, changes in speed also have little effect on fuel consumption.

5.10 Currently around 198 million litres of diesel is consumed by PCVs over 12m on the motorway. The difference between applying the speed curves for with and without speed limit change to the values for PCVs greater than 12m in length suggest an increase of 1.94 million litres of diesel for the year after implementation.

5.11 The estimated cost of diesel fuel was obtained from the Department for Transports Transport Analysis Guidance (WebTAG)[28]. At the earliest possible implementation date of 2009 the value of diesel is estimated at 32.5 pence per litre (resource cost excluding tax). Details of these calculations can be found in Annex 2. This provides an estimated extra cost of £629,000 in 2009.

[28] Method from http://www.webtag.org.uk/webdocuments/3_Expert/5_Economy_Objective/3.5.6.htm paragraphs 1.3.8 to 1.3.14

Using 2015 fleet age breakdown and fuel prices the cost is £663,000.

Benefits

5.12 Reducing the disparity between effective and legislative speeds on the Motorway and hence adherence and enforcement is the key non monetised benefit of the introduction of the new speed limit.

Time Benefits

5.13 The main monetised benefits due to the change in speed limits for PCVs are as a result of gained time due to faster travelling PCVs greater than 12m in length. Using the current speed breakdown it takes the whole fleet of PCVs greater than 12m long 6.33 million hours to travel 0.6 billion kilometres on the motorway. Using the proposed new speed breakdown this time would be reduced to 6.25 million hours, a reduction of 72,980 hours.

5.14 This decrease is only the equivalent of a 1% reduction in journey time, or 1 minute per 2 hour journey. Although this is a small value the estimated monetised costs are large due to the large fleet size and large number of passengers per vehicle.

5.15 Using the previously stated (in Option C) values for driver and passenger time as above benefits of £0.84m in driver time and £12.7m in passenger time (assuming average 30 passengers per vehicle[29]) can be seen.

Carbon Assessment

5.16 The levels of CO_2 emissions from PCVs were obtained from COPERT 4[30]. The data shows that the difference in older vehicle and newer vehicle emissions for all sizes of PCV is minimal. The speed of vehicles has a greater impact on CO_2 emissions but is still minor. However, this is as a result of the limited range covered by the COPERT 4 data in this area, as for the fuel efficiency for smaller

[29] This is a rough arithmetic average estimated from a variety of web-based sources.
[30] COPERT 4 is a European Environment Agency funded program used to estimate emissions from road transport

PCVs. Another possible scenario using the DfT emission factors has been considered to provide a range of the plausible impact.

5.17 The value of a tonne of carbon dioxide was obtained using the DfTs Transport Analysis Guidance[31]. Details of these calculations can be found in Annex 1. These values suggest a cost of up to £118,000 due to reduced CO_2 emissions in 2009. By 2015 this cost is expected to be £158,000 at maximum.

[31] Method from http://www.webtag.org.uk/webdocuments/3_Expert/3_Environment_Objective/3.3.5 paragraph 1.4.1 to 1.4.3

Specific Impact Tests: Checklist

Use the table below to demonstrate how broadly you have considered the potential impacts of your policy options.

Ensure that the results of any tests that impact on the cost-benefit analysis are contained within the main evidence base; other results may be annexed.

Type of testing undertaken	*Results in Evidence Base?*	*Results annexed?*
Competition Assessment	No	No
Small Firms Impact Test	No	No
Legal Aid	No	No
Sustainable Development	No	No
Carbon Assessment	Yes	Yes
Other Environment	No	No
Health Impact Assessment	No	No
Race Equality	No	No
Disability Equality	No	No
Gender Equality	No	No
Human Rights	No	No
Rural Proofing	No	No

Annexes

Annex 1: CO_2 Costs

CO2 Costs Background Data

Method from http://www.webtag.org.uk/webdocuments/3_Expert/3_Environment_Objective/3.3.5.htm paragraph 1.4.1 to 1.4.3

Prices	Values	Cost per tonne of carbon	Cost per tonne of CO2
2000	2000	£70.00	£19.09
2008	2000	£85.39	£23.29
2008	2008	£95.14	£25.95
2008	2009	£96.36	£26.28

Values: increase per year in real terms (due to increasing marginal cost of emissions over time)		
2000 prices	£1	per tonne
2002 prices	£1.04	per tonne
2008 prices	£1.22	per tonne

Cost of CO2 2008-2015
Prices and values current for each year

Year	Cost	Additional cost due to increasing emissions cost	Total cost per tonne of carbon	Total cost per tonne CO2
2008	£85.39	£9.76	£95.14	£25.95
2009	£85.39	£10.98	£96.36	£26.28
2010	£85.39	£12.20	£97.58	£26.61
2011	£85.39	£13.42	£98.80	£26.95
2012	£85.39	£14.64	£100.02	£27.28
2013	£85.39	£15.86	£101.24	£27.61
2014	£85.39	£17.08	£102.46	£27.94
2015	£85.39	£18.30	£103.68	£28.28
			Average 2008-2015:	£27.11

Annex 2: Fuel Costs

Fuel Costs Background Data

Method from http://www.webtag.org.uk/webdocuments/3_Expert/5_Economy_Objective/3.5.6.htm paragraphs 1.3.8 to 1.3.14

Year	Resource Cost	Duty	VAT	Total Fuel Price (pence per litre)
2002	20.9	45.8	17.5	**78.4**
2003	22.3	44.8	17.5	**78.9**
2004	24.4	44.5	17.5	**80.9**
2005	31.9	43.6	17.5	**88.7**
2006	34.6	42.8	17.5	**91.0**
2007	33.6	42.8	17.5	**89.8**
2008	35.1	43.3	17.5	**92.1**
2009	32.5	44.7	15.0	**88.7**
2010	31.6	45.1	17.5	**90.1**
2011	31.8	45.6	17.5	**90.9**
2012	32.0	46.0	17.5	**91.6**
2013	32.2	46.2	17.5	**92.1**
2014	32.4	46.2	17.5	**92.3**
2015	32.5	46.2	17.5	**92.5**
			Average 2008-2015:	**91.3**

Note: Resource Cost increased to 2008 values using GDP delator

Annex 3
Changes to motorway speed limits for specific vehicles
Summary of Options B, C and D

	Option B	**Option C**	**Option D**
	HGVs 3.5 – 7.5 tonnes	**PCVs 8 plus seats less than 12 m in length**	**PCVs 8 plus seats more than 12 m in length**
Current national speed limit (mph)	70	70	60
Proposed change (mph)	60	65	65
Speed limiter restriction (mph)	56	62.5	62.5
Annual cost (max of range)	£8.1 million (mainly attributable to increase in driver costs)	£25.3 million (mainly attributable to increase in travel time)	£0.8 million (mainly attributable to increase in fuel consumption)
Annual benefit (max of range)	£12.9 million (lower fuel consumption)	£4.1 million (lower fuel consumption)	£13.5 million (decreased travel time)
Annual net benefit (middle of range)	£2.4 million	minus £10.5 million	£6.3 million
Net benefit (NPV over 8 years)	£17.1 million	minus £75 million	£45.4 million
Impact on KSIs	Around 2 fatal or serious injuries per year	Negligible	Negligible

Notes
a) No information available on propensity of older vehicles to travel less on motorways.
b) No information available on impact on small firms and their competitiveness from increase in journey times.
c) Option A – "do nothing" not shown