Title: Examining the speed limit for HGVs over 7.5 tonnes on single carriageway roads **IA No: DfT00151** **Lead department or agency:** Department for Transport **Other departments or agencies:** N/A	**Impact Assessment (IA)** **Date:** 12/10/2012 **Stage:** Consultation **Source of intervention:** Domestic **Type of measure:** Secondary legislation **Contact for enquiries**: Katherine Lancaster, 020 7944 4512, katherine.lancaster@dft.gsi.gov.uk

Summary: Intervention and Options

RPC: AMBER

Cost of Preferred (or more likely) Option				
Total Net Present Value	**Business Net Present Value**	**Net cost to business per year** (EANCB on 2009 prices)	**In scope of One-In, One-Out?**	**Measure qualifies as**
£454m	£410m	-£30.6m	Yes	OUT

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

The maximum speed limit for Heavy Goods Vehicles (HGVs) over 7.5t on single carriageway roads, as prescribed in Schedule 6 of the Road Traffic Act 1984. It has been suggested by a number of interested parties - including the Scottish Government, the trade associations and comments received via the Red Tape Challenge - that the 40 mph speed limit is too low. It is said that the 40 mph speed limit causes unnecessary cost to vehicle operators, congestion and avoidable overtaking accidents. Speed limits are set by Government to balance the private benefits of speed of travel with the social cost of high speeds, particularly potentially increased accident risk/severity.

What are the policy objectives and the intended effects?

The policy objective is to maximise the benefits of travel to society, taking into account the sum of economic, environmental and safety outcomes by considering a change to the current 40 mph maximum speed limit for HGVs over 7.5 tonnes on single carriageway roads. The intention is to ease unnecessary congestion which forces time delays for motorists. The intention is also to level the playing field for businesses, as HGVs which are travelling above the maximum speed limit currently have a competitive advantage over those that are adhering to the maximum 40 mph speed limit.

What policy options have been considered, including any alternatives to regulation? Please justify preferred option (further details in Evidence Base)

The options considered in this Impact Assessment are:
Making no change to the current 40 mph (do nothing) - which would have no net costs and no net benefits (the baseline comparison).
Option 1 - to increase the national speed limit for HGVs over 7.5t on single carriageways from **40 to 50 mph.** This is on the basis that the net benefits to hauliers and motorists generally would exceed net costs - which arise through increased fuel consumption and environmental emissions. The Department will closely monitor any impact on road safety (see Annex A).
Option 2 - to increase the national speed limit for HGVs over 7.5t on single carriageways from **40 to 45 mph.**

Will the policy be reviewed? It will be reviewed. **If applicable, set review date:** March/2018

Does implementation go beyond minimum EU requirements?			N/A		
Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base.	**Micro** Yes	**< 20** Yes	**Small** Yes	**Medium** Yes	**Large** Yes
What is the CO_2 equivalent change in greenhouse gas emissions? (Million tonnes CO_2 equivalent)			**Traded:**	**Non-traded:** 0.6	

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:  Date: 22/10/2012

Summary: Analysis & Evidence

Policy Option 1

Description: Raise the national speed limit for HGVs over 7.5 tonnes from 40 to 50 mph on single carriageway roads

FULL ECONOMIC ASSESSMENT

Price Base Year 2012	PV Base Year 2013	Time Period Years 18[1]	Net Benefit (Present Value (PV)) (£m)		
			Low: 424m	**High:** 484m	**Best Estimate:** 454m

COSTS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	Optional		5.0	**68.7m**
High	Optional		6.2	**85.2m**
Best Estimate			3.1	**77.0m**

Description and scale of key monetised costs by 'main affected groups'

Road users will experience higher fuel costs as they travel faster
HGVs will experience a reduction in operating 'costs' - faster travel will lead to vehicle capital savings as journeys take less time and vehicles become more productive
Costs to society, including Greenhouse Gas (GHG) costs, Air Quality impacts and Noise impacts

Other key non-monetised costs by 'main affected groups'

Possible road safety costs (please see Annex A)
Implementation costs to government, local authorities and information providers
Monitoring costs for sunset review
Potential additional enforcement costs
Potential additional maintenance costs

BENEFITS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	Optional		36.6	**492.6m**
High	Optional		42.2	**569.1m**
Best Estimate			39.4	**530.9m**

Description and scale of key monetised benefits by 'main affected groups'

Businesses will experience time savings from faster journeys, although there are some small negative effects on non-business users, who may see journey times increase as they experience slightly more traffic
Government benefits from fuel duty revenues from increased fuel use

Other key non-monetised benefits by 'main affected groups'

Reduction in 'platooning', (build up of traffic behind HGVs travelling at 40 mph), leading to reduced journey times for vehicles travelling behind HGVs and unable to overtake
Possible road safety benefits (please see Annex A)
More level playing field for businesses and increased respect for HGV speed limits

Key assumptions/sensitivities/risks **Discount rate (%)** 3.5

HGVs over 7.5t travel at 43 mph on average when unconstrained by other factors (i.e. free-flow.) This is the 'base case' assumption. We assume an increase in the average free-flow speed to 47 mph (Low) and 49 mph (High) to account for uncertainty about behaviour change. 50 mph is not modelled as this would imply that HGVs are travelling faster than cars.
The National Transport Model has been used to estimate changes in time savings and fuel and environmental costs. This relies on government forecasts and these assumptions are detailed in the text.

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			In scope of OIOO?	Measure qualifies as
Costs: 14.5	**Benefits:** 45.1	**Net:** 30.6	Yes	OUT

[1] The NTM has been used to forecast each scenario until 2030. Using an assumed implementation year of 2013, this gives an appraisal period of 18 years rather than the default 10 years recommended by the IA Toolkit when the expected life of the policy is uncertain. This has been chosen because it is important to consider the longer term impacts of any change. The impacts of additional traffic or fuel efficiency improvements, for example, may have a slow and gradual impact on traffic.

Summary: Analysis & Evidence

Policy Option 2

Description: Raise the national speed limit for HGVs over 7.5 tonnes from 40 to 45 mph on single carriageway roads

FULL ECONOMIC ASSESSMENT

Price Base Year 2012	PV Base Year 2013	Time Period Years 18[2]	Net Benefit (Present Value (PV)) (£m)		
			Low: Optional	**High:** Optional	**Best Estimate:** 242m

COSTS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	Optional		Optional	**Optional**
High	Optional		Optional	**Optional**
Best Estimate			1.4m	**19.6m**

Description and scale of key monetised costs by 'main affected groups'

Road users will experience higher fuel costs as they travel faster

HGVs will experience a reduction in operating 'costs' - faster travel will lead to vehicle capital savings as journeys take less time and vehicles become more productive

Costs to society, including GHG costs, Air Quality impacts and Noise impacts

Other key non-monetised costs by 'main affected groups'

Possible road safety costs (please see Annex A)
Implementation costs to government, local authorities and information providers
Monitoring costs for sunset review
Potential additional enforcement costs
Potential additional maintenance costs

BENEFITS (£m)	Total Transition (Constant Price)	Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	Optional		Optional	**Optional**
High	Optional		Optional	**Optional**
Best Estimate			19.4m	**261.6m**

Description and scale of key monetised benefits by 'main affected groups'

Businesses will experience time savings from faster journeys, although there are some small negative effects on non-business users, who may see journey times increase as they experience slightly more traffic

Government benefits from fuel duty revenues from increased fuel use

Other key non-monetised benefits by 'main affected groups'

Reduction in 'platooning', (build up of traffic travelling behind HGVs travelling at 40 mph), leading to reduced journey times for vehicles travelling behind HGVs and unable to overtake

Possible road safety benefits (please see Annex A)

More level playing field for businesses and increased respect for HGV speed limits

Key assumptions/sensitivities/risks **Discount rate (%)** 3.5

HGVs over 7.5t travel at 43 mph on average when unconstrained by other factors (i.e. free-flow.) This is the 'base case' assumption. We assume an increase in the average free-flow speed to 45 mph (this is an average, so some people will still be speeding but others will travel under the speed limit)
The National Transport Model has been used to estimate changes in time savings and fuel and environmental costs. This relies on government forecasts and these assumptions are detailed in the text.

BUSINESS ASSESSMENT (Option 2)

Direct impact on business (Equivalent Annual) £m:			In scope of OIOO?	Measure qualifies as
Costs: 6.0	**Benefits:** 22.6	**Net:** 16.6	Yes	OUT

[2] The NTM has been used to forecast each scenario until 2030. Using an assumed implementation year of 2013, this gives an appraisal period of 18 years rather than the default 10 years recommended by the IA Toolkit when the expected life of the policy is uncertain. This has been chosen because it is important to consider the longer term impacts of any change. The impacts of additional traffic or fuel efficiency improvements, for example, may have a slow and gradual impact on traffic.

Evidence Base (for summary sheets)

Problem under consideration

1. The maximum speed limit for Heavy Goods Vehicles over 7.5 tonnes (HGVs >7.5t) on single carriageway roads, as prescribed in Schedule 6 of the Road Traffic Regulation Act 1984.

2. Representations have been made by the Scottish Government and Industry stakeholders[3], including the main trade associations, that the 40 mph speed limit for HGVs >7.5t on single carriageway roads is too low. While very few HGVs adhere to the 40 mph speed limit, it is said that the impact of the number that do can be significant, as lengthy platoons of traffic can develop behind them. It is suggested that this causes avoidable accidents, whereby following drivers become frustrated and prompts some to make unsafe overtaking manoeuvres. Stakeholders also cite the unnecessary cost to vehicle operators.

3. Currently, around 70% of HGVs travel in excess of the 40 mph speed limit[4] – with the average free-flow speed[5] which has remained relatively stable in recent years, as 45.5 mph on non-built up single carriageway roads. Given that the free-flow speed of HGVs >7.5t on single carriageways has remained relatively stable in recent years it seems unlikely that the enforcement authorities regard enforcement of the limit as being a major priority. HGVs are one of the least enforced of all vehicle speeds, in part because the majority of fixed and average cameras are set to road speed limits and not vehicle types, and also because ACPO speed enforcement guidelines allow 10%+2 before enforcement. This means that 40 mph HGV speeds are not enforced until 46 mph.[6] Furthermore, there is no clear evidence that a failure to adhere to the 40 mph limit is causing any major road safety issue. We intend to consult on the precise level of enforcement effort by government and police.

4. Given that the data collected on free-flow speeds suggests that HGV drivers routinely travel over the 40 mph limit, it could equally be argued that there is no real need for any change to the speed limit prescribed by statute. However, there are two main reasons for considering such a change:

- The majority of vehicle operators and drivers would clearly prefer to be operating within the law, rather than breaking a speed limit which appears not to be widely enforced.
- Anecdotal evidence suggests that if there are some HGV operators and drivers who strictly adhere to the 40 mph limit, this causes unnecessary congestion which prompts unsafe overtaking manoeuvres.

5. The consultation will help the Department to formalise anecdotal and informal evidence to show whether the 40 mph speed limit is currently socially acceptable i.e. taking into account the economic, environmental and safety outcomes.

6. A number of comments have been made through the Red Tape Challenge that the speed limit should be increased to 50 mph. The Department for Transport published its Logistics Growth Review - Connecting People with Goods document in November 2011.[7] One of the actions contained within the document is to confirm that the Government intends to consult on the speed limit for HGVs >7.5t on single carriageway roads during 2012. The Department is carrying out separate work to assess the potential economic, safety and environmental impacts of introducing 80 mph speed limits on motorways where variable limits are currently in place.

Rationale for intervention

7. Speed limits are set by Government to balance the private benefits of speed of travel with the social cost of high speeds, most clearly identified with accident risk. Government regulates speed limits because private users do not take the full social costs of speed into account when choosing how fast they travel. The main reason for the lower vehicle speed limits is that goods vehicles are designed to carry heavier loads and when laden take longer to slow down than a car travelling at the same

[3] For example http://www.scottish.parliament.uk/S4_ScotlandBillCommittee/Inquiries/Road_Haulage_Association.pdf

[4] See: http://www.dft.gov.uk/statistics/tables/spe0101

[5] This term used to describe the average speed that a motorist would travel if there were no congestion or other adverse conditions.

[6] It does not necessarily follow that should this speed limit be increased to 50 mph, these vehicles can travel at 57 mph before enforcement. Goods vehicles are limited to 56 mph by speed limiters, and as cars and light goods vehicles travel on average at or around 48 mph in free-flow, we do not anticipate that HGVs will travel (on average) at speeds in excess of those experienced by cars and vans.

[7] http://assets.dft.gov.uk/publications/logistics-growth-review/logistics-growth-review.pdf

speed, though there have been significant technical improvements to vehicles, and roads infrastructure, since the current vehicle speed limits were set. This Impact Assessment is concerned with whether the speed limit for HGVs >7.5t is set at the most socially beneficial level.

Policy objective

8. The policy objective is to maximise the benefits of travel to society, taking into account the sum of economic, environmental and safety outcomes, and to consider representations from stakeholders that the vehicle speed limit is too low. We intend to consult on the proposals in order to seek further evidence and views from additional parties.

Description of options considered

9. The options considered in this Impact Assessment are:
    a. Making no change to the current 40 mph (do nothing).
    b. Option 1 - to increase the national speed limit for HGVs over 7.5t on single carriageways from **40 to 50 mph.**
    c. Option 2 - to increase the national speed limit for HGVs over 7.5t on single carriageways from **40 to 45 mph.**
10. The Impact Assessment has no preferred option. The policy objective is to consider the social impacts of speed limits specifically, so other options such as greater enforcement of the present limit, have not been considered in this IA.

Do nothing – the reference case against which other options are considered

11. The 'do nothing' case is the counterfactual against which the benefits and costs of the other options are compared and appraised. In this case the 'do nothing' case is retaining the current HGV speed limit on single carriageway roads. The following section describes the characteristics of the 'do nothing' case.

12. The current speed limit for HGVs >7.5t on single carriageway roads is 40 mph, (when the posted speed limit is 50 mph or national speed limit (60 mph) on single carriageway roads, HGVs >7.5t may only travel at 40 mph). However, data from automatic traffic counters which are located at free-flowing sites on the road network[8] shows that the average free-flow for HGVs is higher than 40 mph. In 2010, data collected shows that the average free-flow speed for all HGVs was 44.3 mph, while in 2009 it was 45.5 mph.[9] Chart 1 below shows the breakdown of speeds. However, the proposals in this IA only apply to HGVs >7.5t, whereas the speed data is collected for all HGVs (vehicles over 3.5t) and is not categorised beyond that. These lighter vehicles, HGVs over 3.5t but under 7.5t (HGVs <7.5t), represent 18% of the HGV fleet.

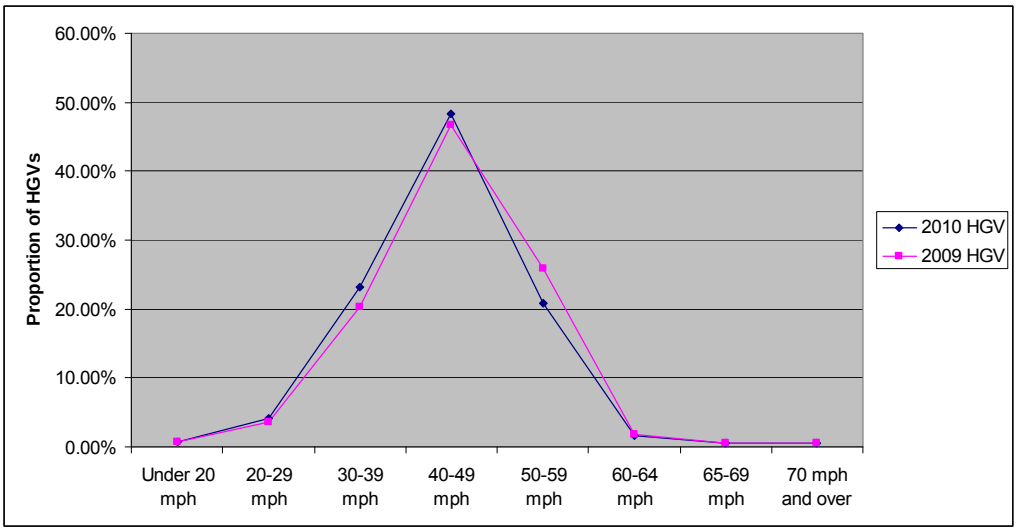
13. Currently, 13.9% of all HGV traffic uses single carriageway rural 'A' and 'B' roads (compared to 15.9% of all traffic).[10]

[8] Areas of the network where external factors which might restrict driver choice, (including junctions, hills, sharp bends and speed enforcement cameras as well as congestion) are not present.

[9] 2011 data has not yet been finalised or published. See: http://www.dft.gov.uk/statistics/tables/spe0101

[10] DfT Road Traffic Statistics 2010 http://www.dft.gov.uk/statistics/series/traffic/

Chart 1: HGV traffic speed at free-flow sites on non-built up single carriageway roads, % by speed band, 2009 and 2010



14. Chart 1 shows that free-flow speeds in excess of 40 mph are the norm, even after taking into account the possibility that smaller HGVs are travelling faster than large ones.

15. The speed limit for HGVs <7.5t on single carriageway roads is 50 mph, a difference of 10 mph. If, to allow for the difference in speed limit, we assume that HGVs <7.5t (18% of HGVs) are going on average 10 mph faster than HGVs >7.5t (the remaining 82% of HGVs) in free-flow areas and given that the observed average free-flow speed for all HGVs is 45.5 mph, then the average free-flow speed of HGVs >7.5t would be 43.7 mph.

16. In fact, the reality is that HGVs travel at similar speeds on single carriageway roads regardless of size: the average free-flow speed in 2010 for articulated HGVs with 5 or more axles (i.e. trucks with ten wheels) which are almost certain to be over 7.5t, is 44 mph, and for 2009 the figure is 46 mph[11]. This is similar to the average free-flow speed for small 2-axle (i.e. four wheels) HGVs on single carriageways – 46 mph in both 2009 and 2010.

17. As Chart 1 shows, a significant number of vehicles are exceeding the current speed limit and only a small proportion of vehicles are within the 40 mph speed limit (<30% of all HGVs). This distortion creates an unequal playing field between those users and businesses who observe the law and those who do not.

18. Given that police and government priorities do not currently make enforcement of the HGV 40 mph speed limit a priority, the current status quo benefits those users and businesses who contravene the limit as there is little chance of being caught. The Home Office has published data on Fixed Penalty Notices for speeding offences as a whole, but they do not have a breakdown by type of vehicle. We welcome information about the precise current level of enforcement effort by various police forces.

Monetised and non-monetised costs and benefits of each option (including administrative burden);

19. The effects of changing the speed limit fall into three main categories:

    a. **economic:** This includes its effects on journey times, their reliability, fuel and other vehicle operating costs, changes in tax transfers (including fuel duty), implementation and maintenance costs for roads authorities;

    b. **environmental:** This includes its effects on carbon emissions, pollutants and noise;

    c. **safety:** The effects that the change of the speed limit will have on the number of road traffic and pedestrian collisions, casualties and severity of casualties.

[11] DfT statistics on free-flow vehicle speeds: 2009 and 2010 - http://www.dft.gov.uk/statistics/tables/spe0101

20. The following table summarises the major effects of higher speeds for heavy goods vehicles on the network as a result of increasing the speed limit, and who will be affected by them.

Table 1 – List of impacts

Impacts of increasing the national speed limit for HGVs on single carriageway roads	
Impact	**Incidence**
Time savings and reliability impacts	HGV drivers, and the businesses they work for; individuals
Changes in fuel costs and non-fuel vehicle operating costs	HGV drivers, and the businesses they work for; individuals
Changes in external costs of vehicle use: • Air pollutants (e.g. NOx[12]) • Carbon emissions • Accident risk (including associated increase in congestion caused by incidents) • Noise	Other road users, individuals near single carriageway roads, and wider society
Costs of implementation	Government (central and local) and other information providers such as training providers and printers of the highway code
Increased fuel duty and tax revenue	Transfer from individuals/business to government

21. The Department for Transport's National Transport Model (NTM)[13] has been used to model changes in HGV speed limits. It takes into account:
    - Demographic factors over time
    - Increasing incomes, hence increasing vehicle ownership and use (including greater demand for goods and increasing freight miles as a result)
    - The generalised cost (financial and non-financial costs) of different modes of travel over time
    - Road traffic flow and capacity, including future likely road infrastructure
    - Changes in the cost of motoring over time (including forecast fuel price changes)
    - Changes in vehicle operating costs including labour costs for business use
    - Fuel efficiency of vehicles and associated emissions including changes over time such as increasing use of biofuels

22. The modelling relies on a 'do nothing' case in respect of speed limit changes. This becomes a reference case to compare the options for speed limit changes against. Therefore, the benefits of a higher speed limit in 2020, for example, are calculated by comparing the forecast case in 2020 of a higher speed limit, against what is forecast to happen in 2020 without changing the speed limit.

23. The NTM, which produces forecasts at five year intervals, has been used to forecast each scenario until 2030. Using an assumed implementation year of 2013, this gives an appraisal period of 18 years rather than the default 10 years recommended by the IA Toolkit[14] when the expected life of the policy is uncertain. This has been chosen because it is important to consider the longer term impacts of any change. The impacts of additional traffic or fuel efficiency improvements, for example, may have a slow and gradual impact on traffic.

24. The forecasts were then used to provide monetary valuations of the costs and benefits in terms of time savings, fuel costs, non-fuel operating costs and environmental impacts, compared to the 'do nothing'. To do this, the forecast data was combined with values of time, fuel and non-fuel costs and environmental valuations from WebTAG[15], the Department for Transport's appraisal guidance. Table 2 below shows the information used and the sources.

[12] Nitrogen Oxides.
[13] For more information on the NTM please visit http://www.dft.gov.uk/pgr/economics/ntm/
[14] The IA Toolkit can be found at http://bis.gov.uk/ia
[15] The DfT appraisal guidance can be found at http://www.dft.gov.uk/webtag/

Table 2 – List of sources and guidance for monetary valuation

Valuation data sources	
	Source
Fuel prices and forecasts	DECC/HMT – Inter-departmental Analyst's Group guidance for policy appraisal[16], tables 4-21
Value of carbon emissions (non-traded sector)	DECC/HMT – Inter-departmental Analyst's Group guidance for policy appraisal[17], table 3
Value of preventing casualties	WebTAG Unit 3.4.1
Values of local air pollution	WebTAG Unit 3.3.3
Value of noise	WebTAG Unit 3.3.2
Value of time savings	WebTAG Unit 3.5.6
Value of non-fuel operating costs	WebTAG Unit 3.5.6

WebTAG is the Department for Transport's Appraisal Guidance (http://www.dft.gov.uk/webtag)

25. To make sure that all our values are comparable, they have been expressed in 2012 prices. If necessary, values that were not in 2012 prices have been uplifted using HM Treasury's GDP deflators[18] to convert them to 2012 prices to reflect changes in prices and inflation between years. Not all values are the same from year to year - some values increase into the future (due to factors such as increasing GDP and income), and these changes have been calculated according to the individual guidance instructions.

Costs and benefits of Options 1 and 2

Monetised benefits

26. The monetised benefits that have been estimated from the modelling results are in the form of overall time savings across all categories of drivers – that is not to say that on certain roads there will not be additional traffic and potentially increased congestion, however the modelling shows that there will be a net time saving benefit across the network over the 18 year appraisal period.

27. Other monetised benefits include additional fuel duty revenues from the increased fuel consumption that higher speeds will cause. Fuel duty is also reflected in the fuel costs as a cost to drivers/businesses, and may therefore be considered a transfer from drivers to government, and not as a true cost. However, it is presented as both a cost to drivers and a benefit to the exchequer as additional fuel duty revenue can either be used to increase government spending or decrease taxation elsewhere in the economy.

28. Given the data for the true speed of HGVs >7.5t described above, we have set the NTM in its 'do nothing' scenario to allow the free-flow speed of HGVs to reach 43 mph[19]. We believe that this is a good approximation of the current reality.

29. In the 50 mph option, we have used two scenarios, a High (49 mph average free-flow speed) and a Low (47 mph) case, to assess the possible impacts of a speed limit change. We do not believe that the average free-flow speed will be in excess of 50 mph as there are already HGVs that choose to travel below 40 mph (see Chart 1).

30. This is supported by the roads statistics, which indicate that cars and light goods vehicles travel on average at or around 48 mph in free-flow.[20] **This means that light vehicles travel at an average of 48 mph on single carriageway roads even when the speed limit is signed as 50 mph or at the national speed limit of 60 mph, and when they are not inhibited by factors such as dense traffic. We do not anticipate that HGVs will travel (on average) at free flow speeds in excess of those displayed by cars and vans.** This is both because we assume these professional HGV

[16] http://www.decc.gov.uk/en/content/cms/about/ec_social_res/iag_guidance/iag_guidance.aspx
[17] http://www.decc.gov.uk/en/content/cms/about/ec_social_res/iag_guidance/iag_guidance.aspx
[18] http://www.hm-treasury.gov.uk/d/gdp_deflators.csv
[19] This is based on observed data and is contained in the COBA DMRB manual published at http://webarchive.nationalarchives.gov.uk/+/http://www.dft.gov.uk/pgr/economics/software/coba11usermanual/part5speedsonlinks.pdf
[20] See previous statistics at http://www.dft.gov.uk/statistics/tables/spe0101

drivers have the same behavioural response to speed limits and driving conditions, and use the same common sense approach that is shown by car and light good vehicle drivers; and also because HGV drivers will have greater concern about the additional fuel costs of increasing their speed than light vehicle drivers.

31. In addition, an analysis of different international studies on the effect of changing speed limits showed that on average, across all vehicle types and on different types of roads, a 10 mph change in speed limit led to a 2.4 mph average change in free-flow speed[21]. Therefore, average flee flow speeds in excess of 49 mph (which is already a 6 mph increase in modelled free-flow speed) are not anticipated.

32. We have included a range to help readers understand how impacts are affected by variability in drivers' behaviour change in response to the speed limit change. As Chart 1 shows, some vehicles would travel, even at free-flow, below the speed limit. Some of those travelling at or above the current 40 mph speed limit might not wish to travel at the 50 mph limit. Equally however, there will be a proportion of vehicles that travel in excess of an increased 50 mph limit.

33. For Option 2, the 45 mph scenario, we have considered only one scenario: a change in average free-flow speed to 45 mph. Although the true behaviour change may result in average free-flow speeds above (or below) 45 mph, having only a single 45 mph scenario for Option 2 allows readers to more clearly see the differences in impacts between speeds.

34. To produce estimates for time savings, we used the NTM to model average free-flow speeds in response to a 50 mph HGV speed limit at both 47 and 49 mph on single carriageway A roads. This is an increase in the average free-flow speed for HGVs from 43 mph. However on B roads the base speed is 40 mph and we have increased the maximum average free-flow speed on these roads to 43 mph. Due to the nature of these roads, an increase of 3 mph over the previous free-flow limit is considered reasonable. Light vehicles, such as cars and vans, are currently modelled with an average 43 mph free-flow speed on rural single carriageway B roads, based on studies of real-life road conditions.[22] It was not considered appropriate to allow HGVs to be modelled travelling faster than light vehicles on a given type of road.

Monetised costs

35. Modelling results indicate that there will be a cost to drivers in the form of higher fuel prices, as well as a cost to society as a whole in the form of environmental impacts. These include increased carbon emissions, local air quality impacts through increases in NOx and PM10,[23] and local noise impacts.

36. We have appraised the environmental costs in line with our appraisal guidance (see Table 2 above). For Air Quality, this means using a 'damage cost' approach to value the environmental and health impacts (the damages) resulting from changes to HGV speed limits.

37. There is also an alternative method for appraising air quality impacts, which considers EU limit values for certain pollutants. This was published in March 2010, and is referred to as the 'abatement cost' (the cost of improving air quality to the required level) approach to valuing air quality.

38. The abatement cost approach to valuing air quality was developed for use where policies affect progress toward meeting legally binding limits. Where a policy or scheme leads to an increase in emissions above legally binding levels, appraisal should include the cost of action to offset these emissions. Since the affected roads are generally away from built-up areas, DEFRA has advised that the scale of proposal is unlikely to affect compliance. Furthermore, work is still ongoing to consider

[21] Finch, D., Kompfner, P., Lockwood, C., Maycock, G. (1994) *Speed, Speed limits and accidents*, TRL Project Report 58, Transport Research laboratory. Although some evidence from other countries exists on the potential increase in free-flow speeds following a general speed limit change, there is little or no evidence on how the free-flow speeds of HGVs could change when faced with an increase in the vehicle speed limit (as opposed to the road speed limit).

[22] See COBA Part 5, Speeds on Links
http://webarchive.nationalarchives.gov.uk/+/http://www.dft.gov.uk/pgr/economics/software/coba11usermanual/part5speedsonlinks.pdf

[23] PM10 is particles measuring 10Âµm or less. This standard was designed to identify those particles likely to be inhaled by humans, and PM10 has become the generally accepted measure of particulate material in the atmosphere in the UK and in Europe.

whether this approach can be applied in a robust way and incorporated into the Department's appraisal guidance (WebTAG). Therefore the approach has not been applied to this proposal.

39. The Department invites views from local authorities on where they think the proposals will have an impact on air quality, specifically whether there are any single carriageway roads which are subject to the national speed limit, or are signed at 50 mph in areas where there are air quality problems. We would also ask how local authorities would intend to abate any breaches of EU limits caused by the speed limit change, given the power available to them to change the speed limit on non-trunk primary routes in line with the guidance set out in the DfT Circular 1/06.[24]

40. An increase in speed may also result in an increase in noise. We have worked with DEFRA to assess the noise impacts of the change in speed limit. As no database of speed limits was available, this noise modelling has been carried out by DEFRA using a simple assumption, in the absence of better data, that 5-10% of A roads will be affected. Mapping analysis indicates that this means that 0.87 – 1.73 million dwellings within 300 metres of affected roads would be affected by noise impacts. The noise impacts have then been assessed using WebTAG guidance (see Table 2 above) using the modelled noise increase and DEFRA's assumptions about the existing noise level to which these dwellings are subjected.

41. The NTM results also permit the monetisation of additional vehicle operating costs. The elements making up non-fuel vehicle operating costs include oil, tyres, maintenance, depreciation and vehicle capital saving (only for vehicles in working time)[25]. With HGVs travelling faster than previously, this allows a significant capital saving for firms who own HGVs as they become more productive and can do more in a given period of time. Therefore the 'operating costs' in the case of increasing speed limits actually become cost savings to operators. Thus, we have reflected these cost savings in the summary Table 3 below as a benefit alongside time savings for presentational simplicity (rather than as a 'negative cost'). For technical reasons, however, this is still counted as a cost in the summary sheets on pages 2 and 3.

42. Modelling to forecast the effects of increased speed on road safety (i.e. the numbers of casualties and collisions) has not been carried out. As most studies of speed-casualty relationships are based on changes in speed across all vehicles types, very little evidence is available on the effects of a speed limit change only for HGVs. In addition, the 'knock on' effects for other vehicles' speeds are not modelled by the NTM, making assessment impossible (this is further discussed in non-monetised benefits below). The Department commissioned a report into casualty estimates by the Transport Research Laboratory (TRL) examining the potential effects on casualties, however it was inconclusive. A summary of the key findings, the assessment of road safety implications and the Department's proposals for future monitoring and evaluation of road safety impacts if any of the options are implemented, are discussed in Annex A.

Summary of monetised costs and benefits by Option and Scenario

43. The results from the National Transport Model have been combined with the values described in Table 2 above to value the impacts of the two options. Given the complexity of the modelling, it has not been possible to present results in a manner that allows the reader to calculate values from the raw model outputs. As a result, the average annual (undiscounted, 2012 prices) impacts of each scenario have been presented, broken down into their constituent categories. As described above, the monetised benefits are time savings and fuel duty revenues plus the reduction in operating costs whilst the monetised costs are the fuel and environmental costs.

Table 3

Average annual values of modelled impacts (2013 - 2030)

[24] http://www.dft.gov.uk/publications/-speed-limits-guidance/

[25] WebTAG 3.5.6 (see Table 2).

Option	Scenario	Time savings, plus operating cost reductions	Fuel duty revenues	Fuel costs	Carbon costs	Local environmental costs[26]	Net impact[27]
1 (low)	47 mph	£41.7m	£6.5m	£13.2m	£1.6m	£1.8m	£31.6m
1 (high)	49 mph	£47.9m	£7.9m	£15.9m	£2.0m	£1.9m	£36.0m
2	45 mph	£22.6m	£2.9m	£5.9m	£0.7m	£0.8m	£18.0m

44. These benefits equate to the following annual time savings for drivers, summed across all vehicle classes:
    - Option 1 (low), 47 mph – 2.1 million hours saved per year, on average
    - Option 1 (high), 49 mph – 2.4 million hours saved per year, on average
    - Option 2, 45 mph – 1.1 million hours saved per year, on average

45. Although these time savings may appear large, around 10 billion hours per year will be spent driving on average between 2013 and 2030. This means time savings from this policy represent around 0.01 - 0.02% of overall driving hours. These figures mostly represent the HGV time savings, as the NTM is not able to model the congestion benefits to faster vehicles (such as cars), stuck behind HGVs, and who will also be able to speed up, (this is a *non-monetised* benefit, as listed below). We would therefore expect time savings to be greater than this in reality.

46. We would welcome views during consultation from HGV operators and trade associations about whether they feel the balance of savings and costs of extra speed reflects their own experience or expectations.

Non-monetised costs

47. Although we expect significant (currently non-monetised) net benefits to society from allowing cars stuck behind HGVs to speed up , this also brings with it some costs – carbon emissions, fuel, noise and air quality could all be affected by increased car speeds following a reduction in 'platooning'.

48. These costs are all currently non-monetised, as the NTM does not model the effect of 'platooning' so we cannot predict the speed change of vehicles whose speed is currently constrained because they are following HGVs. The extent of this will depend on the frequency and number of vehicles in platoons before and after the HGV speed limit change.

49. Enforcement costs have not been factored into the analysis. The precise level of enforcement effort by government and police has not yet been assessed; these costs may be clarified in a later Impact Assessment closer to implementation. The current 'do nothing' scenario places a relatively low level of specific enforcement activity for the 40 mph HGV speed limit.

50. There would also be other implementation costs, as yet unmonetised, accruing to both government and the private sector as a result of the speed limit change. For example, government (central and local) would incur some publicity costs, and costs will also arise where literature and publications will need to be updated to cover the new vehicle speed limit. There would be no additional cost to reprint The Highway Code, as this is reprinted regularly at 6-monthly intervals and since we estimate that there would be a year's lead-in time, there would be no additional cost to reprint because, with knowledge of such a long lead-in period, the DSA could run the stocks down naturally. The only time there would be an additional cost is if the change was to come in suddenly and with immediate effect, necessitating scrapping 6 months' worth of printed copies of The Code.

51. The effect on road maintenance requirements of HGVs travelling at a higher speed on single carriageway roads is not known. If this were to change the requirements for maintenance then this could impose some additional costs on the Highways Agency, local authorities and devolved administrations. However, as the proposal only increases the speed of current HGVs >7.5t of which

[26] Air quality impacts and noise impacts.

[27] Time savings plus fuel duty revenues minus fuel costs minus carbon costs minus local environmental costs.

about 70% already travel above what is permitted, and as it is not expected to increase the number of HGVs on the road, this effect is anticipated to be negligible. We welcome views in response to the consultation regarding wear and tear and road maintenance requirements. We are also asking consultees whether they believe the change will cause more HGVs >7.5t to use single carriageway roads, which do not currently.

52. It is worth noting that local authorities have powers to lower the road speed on non-trunk primary routes (local road network), in line with the guidance set out in the DfT Circular 106.[28] We therefore also ask local authorities in the consultation whether they would take advantage of this power.

53. There could be an increase in the severity of accidents or a change in the number of accidents involving HGVs. Further analysis of the true implications of the HGV speed limit change on accidents would need to be carried out to estimate the impacts (see Annex A). Statistics for this purpose are already collected, so no additional cost would arise.

Non-monetised benefits

54. There will be some benefits from the reduction in 'platooning', where long queues of vehicles unable to overtake build up behind slower HGVs. While there could be an increase in the severity of accidents, a reduction in platooning could result in a reduction in frequency of accidents from less frequent dangerous over-taking manoeuvres (see Annex A). We welcome any sources of information on the effects of HGV speed on accident rates and casualties that would enable a better assessment of road safety.

55. Time savings to the faster vehicles stuck behind HGVs have not been quantified because the NTM does not model their delays. However these could be quite significant, if anecdotal evidence from Industry is true, and so we believe that the current time savings underestimate the overall effects from the policy. However, with no accurate data about the true scale of the problem nationally and no assessment of how this situation or behaviour may change given a change to the HGV speed limit, this impact has not been quantified or monetised.

56. There is also a potential competition benefit associated with the options as they level the playing field for businesses. Those HGVs which are travelling above the maximum speed limit currently have a competitive advantage over those that are adhering to the maximum 40 mph speed limit. It should be noted however that our values of time do not include any impression about the value of the load.

Key Risks

57. The analysis in this Impact Assessment has been based on modelling of the predicted changes in journey times for trips before and after a speed limit change. The speeds achieved are highly dependent on the number of other vehicles on the road. The National Transport Model is the source of the Department for Transport's official forecasts of transport demand;[29] therefore the results are based on official predictions of demand. However, we have not assessed the potential for the proposals to lead to a change in demand – if this were to lead to an increase in trips, for example, the benefits might be greater.

58. Although the model's performance is good given the right inputs,[30] should there be a large change in the basic assumptions underlying the NTM, (such as changes in the economic growth rate, oil prices, fuel efficiency and population estimates), then it is possible that the forecast benefits could change.

59. There may be a risk that some freight may switch from rail to HGV. We have not allowed for this in the model and we are not able to quantify this risk. We would welcome views on this during the consultation.

[28] http://www.dft.gov.uk/publications/local-speed-limits-guidance/

[29] http://www.dft.gov.uk/publications/road-transport-forecasts-2011/

[30] See Figure 4.1 at http://assets.dft.gov.uk/publications/road-transport-forecasts-2011/road-transport-forecasts-2011-results.pdf - the NTM forecast is within 0.2% of the observed data in 2010.

60. The impact of the proposed increase to this HGV speed limit may not materialise as envisaged. This includes road safety impacts where there may be more serious accidents due to increased speeds, though there could also be less frequent accidents due to less overtaking; road safety impacts have not been quantified or monetised in this consultation-stage IA as the evidence is not robust enough to allow it, (see Annex A). To mitigate this risk, an early sunset clause will be included in any future legislative change and a comprehensive post-implementation monitoring exercise will be undertaken. In the meantime, we will welcome in the consultation, any sources of information on the effects of HGV speed on accident rates and casualties that would enable a better assessment of road safety.

Key Assumptions

61. The key assumptions are:
    - An implementation year of the policy of 2013.
    - The National Transport Model has been used to model the time savings, fuel consumed, carbon emissions and local air quality effect of the options.
    - The NTM results have been valued according to WebTAG, the Department for Transport's Appraisal Guidance, and the Impact Assessment has followed Green Book principles.
    - HGV emissions have been appraised using the 2010 NAEI emission factors valid at the time of appraisal. New 2012 emission factors have since been issued by NAEI[31] and any further appraisal should any of the options be implemented will use the new emissions factors. This is not anticipated to have any material impact on the balance of costs and benefits of any of the options but would increase the monetised costs to some extent.
    - For the 50 mph option, we have accounted for uncertainty about behaviour change by modelling two different increases in the average free-flow speed: to 47 mph (Low) and 49 mph (High). Higher speeds have not been modelled as this would imply that HGVs are travelling faster than cars (who travel on average at or around 48 mph in free-flow).
    - For the 45 mph option we assume an increase in the average free-flow speed to 45 mph (this is an average, so some people may still be speeding but others will travel under the speed limit).
    - The average HGV free-flow speed used in the 'do nothing' is 43 mph. We believe this is a good representation of current HGV (over 7.5t) behaviour, and therefore accurately depicts the benefits of changing speed limits. We believe that modelling HGVs at 40 mph would overstate the true benefits.
    - Time savings to vehicles following HGVs are not modelled by the NTM.
    - The road safety impacts of the policy have not been modelled (or monetised in the NPV). Please see Annex A for an explanation for the reasons why, and the proposed solution to this.

Specific Impact Tests

Small Firms Impact Test

62. This proposal will affect small firms, but as it is deregulatory in nature it has not been considered necessary to exempt small firms.

63. Assessment of BIS statistics[32] has shown that the proposal should benefit small firms and their employees, not just large firms. For example, looking at sectors that might use HGVs to carry out their business, 32% of employees in the Waste Collection sector are employed by small firms (those with fewer than 50 employees). Similarly, in Land Transport 51% of employees are employed by small firms, although in Warehousing this falls to 20%.

[31] http://naei.defra.gov.uk

[32] BIS Business Population Estimates 2011 (http://www.bis.gov.uk/analysis/statistics/business-population-estimates), Waste Collection is Division 38, Land Transport is Division 49, Warehousing is Division 52.

Competition Impact Test

64. The Office of Fair Trading (OFT) indicate that four questions should be considered to examine whether there would be significant impacts on competition. Would the proposal:
    - Directly limit the number or range of suppliers?
    - Indirectly limit the number or range of suppliers?
    - Limit the ability of suppliers to compete?
    - Reduce suppliers' incentives to compete vigorously?

65. We have considered all four questions in turn. The proposal would in no way, directly or indirectly, limit the number or range of suppliers for road transport of goods on HGVs. Neither would it limit the ability of suppliers to compete – in fact we consider that it would create a more level playing field between those who currently obey the law and the majority who travel faster than legally permitted. We also consider that there would be no reduction in suppliers' incentives to compete vigorously.

66. As the answer to each of the four questions is 'no', there is no need to complete a full competition assessment.

Greenhouse Gas Assessment and Wider Environmental Impacts

67. The GHG and wider environmental impacts of the proposals have been carefully considered throughout this Impact Assessment. These have been fully valued in the sections above.

68. GHG emissions from increased fuel use of the policies have been modelled using the National Transport Model. The average annual values of the emissions have been valued above, but the following table adds the associated average annual emissions in terms of kilotons (kT) of CO_2.

Table 4

Average annual GHG emissions and values			
Option	Scenario	CO2 emissions (kT)	Value (£m)
1 (low)	47 mph	25.7 kT	£1.6m
1 (high)	49 mph	30.9 kT	£2.0m
2	45 mph	11.6 kT	£0.7m

69. There are also local environmental issues in the form of air quality and noise impacts. These have been modelled by DEFRA using modelling results on air quality emissions and speed changes.

Table 5

Average annual local environmental costs		
Option	Scenario	Value (£m)
1 (low)	47 mph	£1.8m
1 (high)	49 mph	£1.9m
2	45 mph	£0.8m

Equalities Impact Test

70. Any negative impacts on equalities have been considered. These include negative impacts on race, sexual orientation, religious belief, transgender/transsexual persons, disability, gender, age, etc. We have concluded that this measure would not have a disproportionate impact on any particular group.

Direct costs and benefits to business calculations (following OIOO methodology)

71. The proposals in this IA should be considered as OUTs, as the direct incremental economic benefit to business exceeds the direct incremental costs to business.

72. The direct impacts on businesses have been identified below:

Table 6

Average annual net cost to business				
Option	Scenario	Time savings plus operating cost reductions	Business fuel costs	Net impact on business
1 (low)	47 mph	£42.1m	£13.1m	£28.9m
1 (high)	49 mph	£48.2m	£15.9m	£32.4m
2	45 mph	£22.6m	£6.0m	£16.6m

73. It should be noted that the time and cost saving benefits to business outweigh the overall time and cost saving benefits (compare Table 3 to Table 6). This is a modelling result that could have occurred because increasing the speed limit could lead to slightly higher levels of congestion on certain single carriageway roads. Non-business vehicles (i.e. some cars and vans) that were already using these roads could therefore see some very slight congestion delays as a result.

74. It is also worth noting a change to the speed limit is a de-regulatory measure. It will also not be mandatory for users to increase their HGV speed. They may wish to drive at a lower speed than the prescribed maximum. Road users will be able to make decisions at an individual level on whether the time savings from travelling faster outweigh any additional fuel costs from doing so.

Issues identified by the clearance process

The Regulatory Policy Committee responded that the IA should make the underlying assumptions more explicit to help respondents to the consultation comment on the appropriateness and reliability of the estimates, and the IA was amended to reflect this.

Clearance from the Reducing Regulations Committee was subject to two conditions, and narrative and questions were added or changed in the draft consultation document, to include these points:

- Any potential health and social costs are taken into account, and the policy reflects this; and
- You consider whether to retain a 40mph speed limit where the speed limit is below 60mph for passenger vehicles

We are continuing our conversations with other Government departments regarding this consultation and any final-stage IA will reflect our ongoing work with them.

Annex A – Road safety implications

75. The Government sets speed limits to balance the benefits of travelling at higher speeds with the private and social costs of speed – of which a primary concern is road safety. The average value of prevention of a fatality, for example, is estimated to be approximately £1.5 million[33]. Given the high value placed on preventing fatalities, where possible the road safety impacts are quantified and monetised so that the impacts are reflected in the Net Present Value of options.

76. However, despite commissioning research on the subject, it has not been possible at this stage to assess what road safety impacts may result if vehicle speed limits for HGVs >7.5t are increased, on single carriageway roads.

77. In 2009, the Department commissioned the Transport Research Laboratory (TRL) to provide an evidence base, analysis and reasoned opinion on whether or not there is likely to be any road safety risk involved in increasing the speed limit of HGVs over 7.5t on single carriageway roads from 40 mph to 50 mph.[34] The analysis used three accident databases: the Stats 19 accident database[35], the Heavy Vehicle Crash Injury Study (HVCIS) database[36], and the On-The-Spot (OTS) accident database[37] to assess the possible impacts. TRL also performed additional analysis of the time and distance required for overtaking.

78. TRL compared accident rates on links, (i.e. stretches of road that are not at or near junctions), for HGVs >7.5t against HGVs < 7.5t (which already have a 50 mph limit). They found that the difference in proportion of accidents rated as 'travelling too fast for conditions' was statistically insignificant (5.5% HGVs >7.5t versus 6.4% HGVs <7.5t). However, no opinion was given about whether the proportion of vehicles 'travelling too fast for conditions' might increase given an increase in the speed limit, although TRL did conclude from analysis of DfT speeds data that the most likely maximum increase in average free-flow speeds for HGVs >7.5t would be about 3 mph, as they already travel at speeds close to HGVs <7.5t and would not be expected to travel faster than those vehicles, on average.

79. Analysis of fatal accidents from Stats 19 showed 1,434 fatal accidents out of 19,811 total accidents with reported injuries involving HGVs >7.5t between 1999 and 2008, and 281 (of 5,918) involving HGVs <7.5t. This demonstrates a higher percentage of fatal accidents for large HGVs (7.2% against 4.7%) and a greater proportion of serious injuries (21.4% against 18.2%). We can conclude therefore, that in the event of an accident, one involving HGVs >7.5t are more likely to lead to fatalities and serious injuries than accidents involving HGVs < 7.5t. However, again no opinion could be offered on whether the severity or frequency of those accidents would increase if the speed limit were to be increased.

80. TRL found that currently, around 36 fatal accidents per year directly involving HGVs occur in the speed range 36 – 44 mph. On the assumption that vehicles travelling below 36 mph and over 44 mph would find their behaviour unaffected by a change in the 40 mph speed limit,[38] they forecast that this is the maximum number of fatal accidents that could be affected. This was an estimation of current injuries, however, not a forecast of future injuries.

81. However, TRL reported that if accidents involving large HGVs being overtaken could have been prevented by HGVs travelling faster, this would result in five fewer fatalities a year. HVCIS does not contain all accidents caused by overtaking HGVs however, as those that did not directly involve the

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[33] http://www.dft.gov.uk/webtag/documents/expert/unit3.4.1.php

[34] Insert link here [published alongside consultation].

[35] Stats 19 is the national system for collating personal injury road accident data reported to the Police, they list road type, speed limit, vehicle type and casualty severity. From 2005 contributory factors, (key actions and failures that led directly to the actual impact, split 'very likely' and 'possibly'), were also recorded.

[36] HVCIS Fatal Accident Database contains accidents involving HGVs, light commercial vehicles, large passenger vehicles and agricultural vehicles where there was a direct impact with another vehicle.

[37] The OTS accident database contains information from expert investigators who attend scenes at the same time as the emergency services, with the aim of improving the understanding of the causes and consequences of road traffic accidents.

[38] The underlying assumption being that a vehicle choosing to travel below 36 mph is not constrained by the existing speed limit, and that vehicles travelling above 44 mph are behaving like HGVs <7.5t which already have a 50 mph speed limit.

HGV (e.g. a motorcycle overtaking an HGV hits a car) are not always recorded in HVCIS, so this may be an underestimate.[39]

82. It is impossible to conclude definitively from the report what the overall impact on road safety would be. Currently, there are around 36 fatal accidents involving HGVs >7.5t in the speed range 36-44 mph each year that could be made more severe by HGVs increasing their speed. If there were to be an increase in the proportion of vehicles travelling too fast for the conditions, then there may be an increase in the number of accidents and casualties.

83. However, there are also fatalities that could be prevented if dangerous overtaking manoeuvres are reduced: at least 5 per year, based on an incomplete database of accidents. There is no robust evidence of the likelihood of either of these outcomes occurring, nor do TRL conclude whether one is more likely than the other.

84. As the analysis from the report commissioned specifically for this policy proved to be inconclusive, a search was also made for other sources of information on the relationship between HGV speed and casualties. Several academic studies on the relationship between casualties and changes in speed were found, although these applied for all traffic more generally rather than increasing the speed of specific vehicle classes. However, as discussed in the costs and benefits, the impact of the speed limit change for non-HGV vehicles following HGVs is not modelled by the NTM, therefore it has not been possible to estimate the overall average speed change on single carriageway roads as a result of this policy. For that reason, we have not been able to use these models to forecast the road safety impacts.

85. One such study is the Elvik mathematical model[40] based on analysis of 460 observations from 92 studies to predict the impact on casualties from a change in the average speed. In this model, for a given increase in speed, fatal casualties are forecast to increase more than serious injuries, which in turn have a greater increase than for slight injuries. This is because as speed increases, the possibility that a given accident may be fatal increases.

86. Another review also found other data assessing the impact of speed limit changes on average free-flow speed in different countries. Finch et al. (1994)[41] estimated a 2.4 mph change in average speed for every 10 mph in speed limits based on a meta-analysis of 'before and after' studies. However, this was again for changes in general speed limits rather than for category-specific speed limit changes.

87. We welcome in the consultation any sources of information on the effects of HGV speed on accident rates and casualties that would enable a more robust appraisal of road safety, for a future version of the impact assessment.

88. Due to the absence of any significant evidence regarding road safety impacts, it is envisaged that any future change to the regulations that govern HGV speeds on single carriageway roads will include an early sunset date, meaning that the impact of any change would need to be quantified and Ministerial decisions made on whether the change of maximum speed would continue. This will allow for a detailed examination of accidents/causation associated with the change of maximum speed.

89. A review will support early action where regulation is proving ineffective, i.e. where there is an unacceptable increase in accidents on single carriageways directly involving HGVs >7.5t, where the maximum permissible speed limit has increased. We will establish a baseline to measure the change against. Only if the impact on road safety has been acceptable will the regulations be reaffirmed.

90. Stats 19 data collected by the Police to gather accident statistics will be monitored in the years following implementation of any change and prior to the revocation date. The Stats 19 database gives statistics on all injury accidents reported to the police. The information will be filtered to provide the following:
    - grid reference;

[39] HVCIS only includes on average 23% of all fatal accidents, so to get a truer sense of the number of fatalities involved would require scaling up.

[40] Elvik, R., Christensen, P., & Amundsen, A., '*Speed and Road Accidents – An evaluation of the Power Model*', TOI Report 740/2004.

[41] Finch, D., Kompfner, P., Lockwood, C., Maycock, G. (1994) *Speed, Speed limits and accidents*, TRL Project Report 58, Transport Research laboratory.

- road type i.e. those accidents on a single carriageway road;
- permanent road speed limit i.e. roads with a maximum road speed limit of 50 or 60 mph;
- the severity of injuries, i.e. fatal, serious or slight;
- vehicles involved i.e. HGVs 7.5 tonnes and over;
- information about the manoeuvres involved and the contributory factors. This information might tell us, for example, if the vehicle was travelling too fast.

91. It may not capture a portion of accidents involving HGVs >7.5t, for example if a car overtakes a HGV >7.5t and hits another car. Furthermore the contributory factors reflect the reporting officer's opinion at the time of reporting and are not necessarily the result of extensive investigation; subsequent enquires could lead to the reporting officer changing his opinion. Some factors may have contributed to the cause of an accident, but it may be difficult for a police officer attending the scene after the accident has occurred, to identify these factors.

92. That said, we have assessed the data, and consider it would enable us to analyse and make further decisions. Comparisons will also be made with statistics for accidents involving HGVs on other types of roads over the same period and HGV traffic volumes on single carriageway roads will also be considered, by monitoring all rural 'A' and 'B' class roads that are single carriageways. Accident numbers will be considered alongside HGV traffic volumes on single carriageway roads to permit a full assessment of road safety impacts using accident rates.[42]

93. Together this data will help to inform whether a change in road safety has had a net benefit to society.

94. Resource to monitor the impacts and analyse the data will be met by existing resource at the DfT. The estimated resource required will be approximately three weeks per annum.

95. We want to liaise with safety groups, in particular, to gain insight and ideas in to what extent the policy has achieved its objectives, whether there have been inadvertent outcomes and what scope there is for improvement or deregulation.

96. Road Haulage groups, DEFRA, DECC, and Devolved Administrations have already been involved with the development of this policy and this engagement will continue.

[42] The reason for excluding urban roads is to give us a proxy for roads with a 50 or 60 mph speed limit. The database does not distinguish between single/dual carriageways on minor roads so we have assumed that all 'B' roads are single carriageway.