Department for Transport

Consultation on the possibility of allowing an increase in the length of articulated lorries

Summary and analysis of responses

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1. Introduction

From 30 March 2011 until 21 June 2011, the Department for Transport (DfT) ran a consultation on the possibility of allowing an increase in the length of articulated lorries.

The consultation document is available at:

http://www.dft.gov.uk/consultations/dft-2011-06

1.1 Consultation Options

The consultation sought views on whether or not DfT should amend the Road Vehicles (Construction and Use) Regulations 1986 and Road Vehicles (Approval) Regulations 2009 in order to permit an increase of 2.05 metres in the permitted length of semi-trailers for articulated lorries. This would increase the maximum loading length of a semi-trailer from 13.6 metres to 15.65 metres giving up to 13% increase in capacity.

The Department also sought views on increasing the overall permitted length of an articulated vehicle to 18.75 metres – in order to allow the development and use of tractor units with safer, more aerodynamic frontal designs in addition to longer semi-trailers - the same as for a rigid truck / drawbar trailer combination currently allowed on UK roads.

The Government's preference was to relax the existing Road Vehicles (Construction and Use) Regulations 1986 and the Road Vehicles (Approval) Regulations 2009 to permit the operation of semi-trailers up to a maximum length of 15.65 metres, and to increase the overall permitted length of an articulated lorry to 18.75 metres, the same length as is already permitted for rigid truck / drawbar trailer combination goods vehicles.

1.2 Consultation exercise

The Department laid a Written Ministerial Statement in Parliament on 30 March 2011 to inform all MPs of the consultation and issued national and trade press notices to inform industry and members of the public.

In support of the consultation, the Department offered to meet key transport, safety and environmental bodies potentially affected by the proposals. Invitations to meet were sent to the Freight Transport Association (FTA), the Road Haulage Association (RHA), the Rail Freight Group, DB Schenker, Direct Rail Services, Freightliner, GB Railfreight, Association of Directors of Environment, Economy, Planning and Transport (ADEPT), Chartered Institute of Highways and Transportation (CIHT), Parliamentary Advisory Council for Transport Safety (PACTS), Road Safety GB, the Royal Society for the Prevention of Accidents (RoSPA), the AA, Campaign for Better Transport, Freight on Rail, SUSTRANS, CTC, Campaign for the Protection of Rural England, Friends of the Earth, the London Cycling Campaign (LCC), British Motorcyclists Federation (BMF), and Motorcycle Action Group UK (MAG).

The following organisations accepted our offer to meet to discuss the proposals: FTA, RHA, the Rail Freight Group, DB Schenker, Direct Rail Services, Freightliner, GB Railfreight, CIHT, Campaign for Better Transport, Freight on Rail, CTC, LCC, BMF, MAG and Cambridge Cycling Campaign.

Additionally, we considered it necessary to specifically consult Small and Medium Sized Enterprises (SMEs). The Department therefore undertook a survey of SMEs as part of the consultation process. 49 SMEs were invited to take part in the survey. Six agreed to participate. The feedback received from the survey has been considered and where relevant incorporated into the responses received under Section 7, Impact on Small Firms.

1.3 Responses Received

318 responses to the consultation were received. The responses fell into the following categories:

Trade Associations	11
Training Providers	2
Trade Unions	8
Hauliers	9
Local Authorities and Local Authority Groups	23
Regional Government	1
HGV drivers	7
Consultancy	5
Safety Groups	5
Vehicle/trailer/axle manufacturers or designers	8
Environmental organisations	7
Road user (cyclist, motorcyclist, etc)	29
Rail Freight Operator	2
Cycling/motorcycling Bodies	3

Manufacturers (not transport)	9
Retailers	4
Logistics company	2
Parcel/mail delivery	3
Not elsewhere specified (individuals, other groups, etc)	180

41 responses were clearly in favour of allowing high volume semi-trailers (the majority of which were hauliers, manufacturers, retailers or parcel/mail delivery companies), 253 responses (of which 43 were trade bodies, representative groups, businesses or local authorities) were clearly opposed to allowing high volume semi-trailers. 24 responses did not state a clear preference or provided an impartial response.

2. Consultation Questions

The consultation consisted of 25 questions. These questions were organised into the following headings, and summaries of the responses to them are found at the pages listed.

Questions	Headings	Pages
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2.1 General

Q1. Do you agree that the research has identified the correct sectors that would be engaged in the introduction of high-volume semi-trailers? (See Report Section 4.4, page 20). If not, how and why would other sectors be engaged?

44 responses were received to this question. The majority of respondents that replied to this question agreed that the research had identified the correct sectors. Several respondents suggested that the following sectors should also be engaged:

- Forest products and waste transport
- Certain indivisible loads, the length of which exceed current semi-trailer lengths and are required to be transported under indivisible load requirements
- Global food manufacturing
- Beverage production and distribution; Confectionery manufacturing and distribution
- Packaging manufacturers and suppliers
- Appliance manufacturers and distributors
- Specialist 3rd party logistics providers
- Dairy goods production and distribution
- Large scale bakery production and distribution

- Cereals and snacks manufacturers
- Agricultural materials such as straw bales etc.
- Low density building materials such as foam insulation panels
- Tissues and toilet paper
- General cargo and roll-cage deliveries
- Kiln dried sawn timber and sawmill co-products and chipped wood biomass
- Car transport
- Bulk refuse movement to e.g. landfill/incinerator sites
- Livestock carriers
- Equine bedding and poultry litter
- Steel products especially plates/girders/beams haulage
- Commodities of various types/densities that are carried in non-tipping /moving floor 'maxi-volume' type trailers
- Various construction /building materials e.g. brick/block transport
- Refrigerated transport, including seafood, meat, frozen foods

One respondent considered that sectors where loads tend to gross out on weight before they bulk out on volume should probably have been included in the study. Another respondent felt that the combined transport sectors (road/rail and road/sea) had not been fully investigated.

Department for Transport comment:
We are grateful for respondents' suggestions of additional sectors that should be engaged in the introduction of high-volume semi-trailers and will take steps to ensure they are notified of this response to the consultation. However, some of the suggested sectors appear to relate to heavier commodities which may not be able to benefit from using high-volume semi-trailers, as the gross vehicle weight (GVW) of 44 tonnes will remain unchanged.

Q2. In light of the impact assessment and the lead time on the active steering technology, the Government is minded to opt for existing standards instead of tighter standards, at least initially. Under such circumstances what types of trailers would manufacturers and operators expect to develop / purchase as a result of the full 2.05m deregulation and why?

38 responses were received to this question. Ten stated a preference that existing standards should be used while five stated a preference that tighter standards should be used.

One haulier welcomed the proposal to use existing standards, but believed development and purchase of potential new design trailers is not realistic until such time as active-steering technology is ready for market.

Two respondents thought that the consultation was unclear in what was meant by "active steering technology" as no definition was given in the consultation document.

The RHA thought that the term “existing standards” is potentially misleading, as it can be read in two ways. Existing regulatory standards could mean those which are less demanding in terms of turning circles than current typical operating standards – referred to in the consultation as “tougher standards”. There was concern that the difference between the two is significant, in terms of road safety and also, potentially access, to some sites.

Department for Transport comment:
"Active steering technology" is explained in paragraph 2.4.4 of the Department's research which supported the proposals - http://www.wspgroup.com/upload/28823/D3_Vehicle%20Specification%20Performance%20Safety.pdf
Because a weblink to the research was published alongside the consultation document, it was considered unnecessary to duplicate this information within the consultation document.

The consultation document made clear that many vehicles currently achieve better performance than is required by existing regulatory standards. If high volume semi-trailers were introduced, the effect of the additional length means that requiring consistency with existing performance would in effect mean introducing stricter regulatory standards.

We recognise the technical challenges associated with tightening standards in order to ensure that high-volume semi-trailers match the performance already achieved by the existing semi-trailer fleet, and will continue to monitor developments with active steer technology with a view to encourage its development and inclusion in the trials.

One local authority respondent was concerned at the cost to business of complying with existing standards, if then at a later date the trailers were forced to comply with tighter standards.

The majority of those who specified what type of trailer they would develop/purchase said they would prefer 15.65m trailers utilising the full 2.05 extension to the length. Three respondents said they would prefer any lengths up 15.65m, and one said that 25.25m would be a better option.

Department for Transport comment:
Ministers have ruled out introduction of 25.25m trailers for the foreseeable future. This length is therefore outside the scope of this consultation.

In respect of the type of trailers likely to be used, the majority of respondents advised they would use curtainsiders and box trailers (insulated or refrigerated).

A joint response from Freight on Rail, Campaign for Better Transport, Friends of the Earth, Sustrans, Living Streets, Road Peace, CTC and PACTS referred to a safety analysis undertaken by the Metropolitan Transport Research Unit (MTRU), which disputed the safety assumptions in the Impact Assessment and considered that any extension to the length of a semi-trailer would increase the risk of accidents regardless of the standards adopted.

Department for Transport comment:
In response to the approach of the research on the safety aspects the Department does not agree with many of the criticisms:

- The effect of length in accidents was studied carefully by the research as reported in the technical report "Specification, Performance and Safety" (Author - TRL & Cambridge University). This report also carefully considered the impact on tail swing[1] and on blind spots.
- The report concludes there is likely to be a small increase in the number of casualties per km driven for 15.65m vehicles equipped with existing steer axle technologies (of around.+0.02 fatalities per billion vehicle kms). However, the Department believes that this increase in safety risk per vehicle could be outweighed by a decrease in accidents from running fewer lorries if firms can achieve their forecast reductions. For the more advanced active steer technologies, a small decrease in the number of casualties per vehicle km would be expected (e.g. -0.08 fatalities per billion vehicle kms)
- It is reasonable to assume given current legislation that command or active steer would remain a niche fitment to existing length vehicles, hence the report assessed the new trailers against the existing trailers they are likely to replace.

Q3. Table 5 of the Impact Assessment and the accompanying text (pages 39 – 41) explains the approach to estimating the likely take-up of high-volume semi-trailers in the sectors engaged. Do you have any evidence on the likely take-up that would increase the Government's understanding of the impacts? Please supply business analysis or other evidence to support your position, showing the tonne-km anticipated to move to high-volume semi-trailers.

[1] See for example figures 10 to 25 and associated text, sections 5.2.1, 5.3.1, and 5.5.3.4, Tables 11, 23, 24, and 26 and overall conclusion numbers 4 and 5 at http://www.wspgroup.com/upload/28823/D3_Vehicle%20Specification%20Performance%20Safety.pdf

36 responses were received to this question. In their responses, 13 provided no evidence or stated that they were unable to do so. Some of the evidence provided by respondents on take-up was unquantifiable, such as stating a percentage of the fleet which would change to high volume semi-trailers, but without providing actual numbers of trailers in the current fleet.

Five trade associations provided quantifiable information on the likely take-up of high volume semi-trailers. Freight Transport Association (FTA) consulted their members on this issue. Six FTA members advised that should high volume semi-trailers be permanently permitted they would change approximately 40% of their fleets by 2020, equating to 2334 trailers.

Some businesses undertook an analysis of the effect of using high volume semi-trailers in their fleets and believed that the proposed change will lead to an overall reduction in vehicle miles of between 11% and 13%. The largest operator predicted savings of up to c4.3 million miles per annum and up to 5,700 tonnes of CO2 emissions saved per annum. One respondent also predicted a fuel consumption reduction of 48,000 gallons of diesel per annum.

The Road Haulage Association (RHA) expressed concern that the evidence base seems to draw strongly from large retailers. RHA members' views are divided on the issue. Medium-sized and large transport members questioned the extent to which trailers currently use existing capacity and feared that hauliers would be required to acquire trailers whose additional capacity would in many cases not be well-used. In a survey in February 2011 to which 104 RHA members responded, two-thirds said they believed that the longer trailer would become the norm.

In their response to question 25[2] in the consultation document, a number of businesses said that they would replace their entire fleet with the longer trailers if they were introduced.

The Institute of Transport Administration stated that there is currently evidence of operators delaying purchase of new trailers until the legislation changes. After the first wave of new trailers being purchased, they would expect a similar take-up as when the change was made from 12m to 13.6m i.e. a gradual change, over 2 to 3 years (especially if the rest of Europe adopts the same standard) until the former 13.6m trailers become the exception.

The joint response from Freight on Rail, Campaign for Better Transport, Friends of the Earth, Sustrans, Living Streets, Road Peace, CTC and PACTS referred to

[2] "If high-volume semi-trailers were permitted permanently, what proportion of its fleet would your company or organisation expect to switch to these vehicles by 2015 and by 2020? Please supply evidence on your current fleet and your operations to explain the change you anticipate."

the MTRU[3] report which considered that historically take-up of larger or heavier vehicles has resulted in the maxima becoming the most common. One trade union (RMT) also believed that the proposal would make longer lorries universal. One member, whose response was typical of several public transport groups, supported this, stating that evidence from past UK dimension /weight increases, from continental countries that have increased length/weights in recent years, e.g. Sweden, Finland and Switzerland, and very importantly from the experiences in Canada, USA, Australia and New Zealand, suggests the take up will be very high and over a relatively short period of time, for example, 2-5 years. The 15.65m semi-trailer will become the norm.

Department for Transport comment:
The information provided in the consultation response suggests that the behaviour of the industry in the event of an increase in length of trailers, and therefore the likely take-up of high volume semi-trailers, is uncertain. From the information received it appears that take-up could exceed the Department's projections if the Road Vehicles (Construction and Use) Regulations 1986 and Road Vehicles (Approval) Regulations 2009 were amended to allow high-volume semi-trailers.

The Department considers that further investigation is needed to develop an understanding of industry behaviour and potential take-up.

Q4. The research concludes that the greatest benefit derives from allowing increases of up to 2.05 metres in semi-trailer length (Section 6.3, pp 35-39). Do you agree with this assessment? If not, please give your reasons including supporting evidence. If there is particular data in the Impact Assessment that you disagree with please supply us with evidence to update our assessment.

44 responses were received to this question.

22 respondents considered that the greatest benefit derives from allowing a 2.05 metre increase in semi-trailer length. One respondent thought that a 1 metre increase would deliver greater benefits. One respondent thought that both 1 and 2.05 metre increases should be permitted. Two respondents considered that far longer heavier vehicles should be allowed and two others thought that a complementary weight increase should be considered.

18 respondents thought that any extension to the length of a semi-trailer would produce either no benefits or disbenefits. The European Transport Board considered that with the change in length in the past from 12.20, 12.60, 13.20 and 13.60 metres, there has not been any long-term sustainable financial

[3] A safety analysis undertaken by the Metropolitan Transport Research Unit (MTRU)

benefit for the transport industry. The initial higher revenue and margins were eroded within a short period or jeopardised by a lower profitability on the shorter trailers. Several local government authorities responded stating that the research does not present the disbenefits from allowing longer lorries – in particular the costs of adapting highway infrastructure to accommodate their use. They were also concerned that the environmental and safety benefits had been overstated in the research.

The joint response from Freight on Rail, Campaign for Better Transport, Friends of the Earth, Sustrans, Living Streets, Road Peace, CTC and PACTS referred to the MTRU report, stating that detailed economic analysis using industry standard elasticities and proper consideration of the congestion impacts of longer trailers (where congestion is estimated to be two thirds the length of the trailer rather than the one third the Department used in the impact assessment) shows overall monetised external costs in introducing either 1 or 2 metre longer trailers.

Department for Transport comment:
The Department recognised in the consultation the possibility that the research had underestimated the costs for infrastructure and therefore included questions specifically intended to improve this aspect of the Impact Assessment (see section 2.5 below).

The financial benefit found in the research is unlikely to accrue to the road transport industry as it is a competitive industry with over 90,000 firms in the UK. The benefit is instead expected to accrue to the customers who buy the goods transported more efficiently.

The Department accepts that a wider range of elasticity evidence exists for the response of the freight sector to a decrease in costs, and thanks the consultees for raising this issue. We have investigated the impact of this on our conclusions and included this in the updated Impact Assessment published alongside this consultation response. If extra traffic was generated as a result of reduced freight transport costs this would reduce the financial benefits to industry, though these would still be positive. Our assessment also suggests that for the majority of options the generated traffic would approximately equal the reduced lorry miles from greater efficiency; hence resulting in little change in external costs (environmental, congestion and accidents) in either direction. This highlights the importance of how the vehicles will be used in real operations.

The Department does not accept that a realistic congestion valuation is two-thirds of the length of the extensions. For the reasons discussed in paragraph 135 of the consultation stage Impact Assessment there are many circumstances where extra length would not cause increased congestion. Whilst we do accept that there is no comprehensive evidence in this area, the

Department believes the value used in the impact assessment (one-third of the length increase) is a fair reflection of the situation and has conducted sensitivity tests to show the impact of other values. However, further evidence on the operation of these vehicles would improve this assessment.

In response to the calls for an increase in the gross vehicle weight, the Department has already stated that no increase to vehicle weight will be considered.

Q5. The magnitude of benefits is largely dependent on the switch to high-volume semi-trailers. Our assumptions for different types of loads are shown in table 5 of the Impact Assessment. Do you agree with these categories and associated assumptions? Can you provide evidence that either supports these assumptions or suggests different figures?

33 responses were received to this question.

19 agreed with the assumptions for different types of loads shown in table 5 of the Impact Assessment. Three others also agreed, but suggested additional categories of beneficiaries such as indivisible loads of greater than 7.8m length, other general haulage activity developed to satisfy inter-plant moves and moves to/from warehouses for a wide range of commodities. One trailer manufacturer thought that there would be safety benefits from a reduction in over-hanging loads, although the extra cost of steering axles may discourage this. The Institute of Transport Administration thought that the table offered a good estimate in the current climate but cautioned that this could be the best guess.

Nine respondents did not agree with the assumptions. Local government authorities considered that there were more disbenefits such as infrastructure impacts and additional costs (maintenance and repairs to roads, new signage, services and parking facilities). Two local government authorities thought that adopting an improved front end design for the tractor units would provide greater benefits than an increase in overall length.

The joint response from Freight on Rail, Campaign for Better Transport, Friends of the Earth, Sustrans, Living Streets, Road Peace, CTC and PACTS considered that table 5 shows that almost half of loads (46.6%) are neither weight or volume constrained, i.e. partially loaded, and felt this meant there was not a strong case for increasing lorry lengths.

The RHA questioned the assertion in Paragraph 113 of the Impact Assessment that 90% of freight in category 3 – neither volume nor weight constrained – would switch to longer semi trailers, as significant benefits can be achieved. If the trailer is not fully loaded by volume, it is unlikely that a longer semi-trailer will do other than add to the cost of providing the freight movement; it is likely that

13.6 metre trailers will be more appropriate, if they are available in the time and place required.

Department for Transport comment:
It is to be expected that not all lorry journeys in the UK would be constrained by weight or volume due to the spread of industrial and consumption activity around the country. However, there is a strong profit incentive for haulage businesses to use their assets efficiently and hence improve vehicle fill where it is profitable. The Impact Assessment and research was concerned with a move from the current situation and took into account the current vehicle fill levels. For this reason category 3 in table 5 was assumed to be a prime candidate for switch to high volume semi-trailers, as these journeys will be, for example, return legs of journeys where the vehicle was constrained.

The Department considers that further investigation is needed to develop evidence of the benefits and potential impacts, particularly those on infrastructure and partial loads.

2.2 Financial impacts

Q6. We require financial analysis of the impact on capital and operational costs for different types of business resulting from this change (including whether there is likely to be early write-down of assets which are not fully depreciated) If you represent a company can you supply us in confidence with financial analysis regarding how your business would implement a change of up to 2.05m? (costs of the high-volume trailers are shown in table 4a of the Impact Assessment) If you represent a trade association can you assist us in gathering data to show how industry sectors are likely to react to the change?

28 responses were received to this question.

Little financial data was supplied as some stated that it was currently difficult to assess the impact on capital and operational costs. A number of respondents stated that they would move to higher volume semi-trailers within their normal replacement programme (7 to 10 years) and that it was unlikely to lead to significant write-down of existing assets. RHA informed that in response to a survey of their members currently operating 13.6 metre trailers, 28% in said they would be unable to fund investment in new trailers and 38% said they could do so “with difficulty”.

The European Transport Board stated that it is business practice that equipment is depreciating to a residual amount. The depreciation period depends on the equipment type and is set differently by each ETB member. The Average CAP Red Book price list (http://www.cap.co.uk) gives a good indication

of the market value of equipment. The second-hand market value for used equipment will drop for equipment that needs to be sold inside the UK. Due to the expected increase in availability of used equipment they expect a lower value for export equipment too. At the previous change to a 13.6m trailer length the market value of used semi-trailers dropped by 25% overnight.

The joint response from Freight on Rail, Campaign for Better Transport, Friends of the Earth, Sustrans, Living Streets, Road Peace, CTC and PACTS considered that no allowance had been made for the cost of early retirement of existing semi-trailers by all operators, especially public hauliers, to ensure fleet interoperability and ability to maintain competitiveness. They believed that this could be as much as £1.8billion over 5 years, based on the research conducted by MTRU[4].

Department for Transport comment:
The Department accepts that the potential depreciation costs of 13.6m trailers were not fully reflected in the Impact Assessment. No monetised evidence was received from firms to allow an industry-wide assessment of this cost. However, the approach suggested in the research conducted by MTRU has been considered, and reflected in the updated Impact Assessment published alongside this consultation response. However, we have taken into account up to date information on the cost of trailers and the fact that many companies expect to retire trailers over their normal replacement cycle. The combined effect gives a central estimate of £318m cost for the early depreciation of current trailer equipment, with a range of £94m-£541m. This reduces the financial benefits to industry from this change, but the Impact Assessment finds there are still significant financial benefits following this change alongside the change to reflect generated traffic.

Q7. Large, medium and small businesses in varied sectors of the freight industry are likely to react differently to the introduction of high-volume semi-trailers. Can you help us segment the impact on different sizes of companies in the sectors concerned? In particular can you provide financial analysis for individual businesses to show how they are likely to respond?

23 responses were received to this question.

Little financial analysis was provided. Those respondents in favour of high volume semi-trailers said that they would have a positive impact on their businesses. However, some also felt that smaller operators would have concerns about the introduction of high volume semi-trailers.

[4] A safety analysis undertaken by the Metropolitan Transport Research Unit (MTRU)

Two respondents considered that the size of a business would not drive the reaction to the introduction of high-volume semitrailers. They believed that the type of goods and traffic are more important. Implementing the high-volume semi-trailers will be at a cost, so the more financially healthy businesses may also react more quickly compared with those that suffer from the current financial climate. It will be hard to obtain financing for these assets and the setting of the residual values will be difficult.

FTA found in a survey of their members that larger third party operators servicing dedicated contracts and in-house (own-account) fleets serving specialist flows were likely to provide the greatest opportunity for take-up and trials of high volume semi-trailers. Uptake amongst medium and small hauliers will be patchier. Unless the additional cubic capacity or deck space of high volume semi-trailers can be regularly used, the lower tare-weight of existing 13.6m semi-trailers is likely to continue to offer greater operational versatility.

RHA believed the segmentation of sectors into large, medium and small is not particularly helpful. Companies will respond according to cost, risk/reward and ability to fund. In particular, the most positive response to high volume semi-trailers can be expected among: those transport providers who are working with cost-plus-management-fee contracts and similar in which the equipment is mostly dedicated to one traffic flow and where risk to the contractor is minimised; own-account firms, where again the trailer is likely to be working entirely or largely on a single traffic flow and where transport is a relatively small element of the total business; and those hauliers who can be confident that they will be able to gain profitable revenue from high volume semi-trailers.

Department for Transport comment:
As little financial assessment was supplied, it has not been possible to update our assessment of the impacts on different sizes of companies.

Q8. Are there any other costs or benefits that we have not identified of introducing high-volume semi-trailers? Can you provide evidence on their magnitude to individual companies or to the industry as a whole?

43 responses were received to this question. The following were suggested as possible benefits of the proposal not previously identified:

- Trailers with active steering will reduce chassis strain, thus reducing maintenance and increasing the life of the trailer.
- Steering axle technology would reduce tyre wear.
- Increased business for trailer manufacturers.
- If the height restrictions were to be moved to 4.9m in lieu of 4.57m overall then this would enable double deck operators to benefit if possible from the increase in length (if payload permits).

- Improved drivers hours (from reduction in number of journeys)
- Reduction in the average age of the UK trailer fleet with subsequent reduction in time spent by VOSA on vehicle enforcement
- Local quality of life improvements in areas close to roads (from reduced number of vehicles operating)
- Opportunity for safer loading practices for certain indivisible loads e.g. the elimination of the need for marker boards and additional lighting equipment when transporting steel beams.

The following were suggested as possible costs and/or disbenefits of the proposal not previously identified:

- Infrastructure impacts/costs (maintenance and repairs to roads, new signage, services and parking facilities)
- Many workshops may not be able to handle the 2.05 extra length trailers, so premises may need to be extended.
- Additional costs for access to loading and delivery points with limited space and refuelling
- Concerns expressed about the high volume semi-trailer being unable to access or manoeuvre adequately at specific sites, including haulage depots, distribution and freight terminals. This would generate a problem for operators who have a long lease.
- The potential to take fuller advantage of gross vehicle weight as a result of greater available loading platform could increase social costs in terms of road maintenance and increased stopping distances.
- Customers potentially unwilling to pay increased rates for larger loads
- Negative impact on the second-hand market.
- Axle costs (purchase and maintenance) are higher than anticipated.
- The overall efficiency of the fleet will drop because the high-volume semi-trailer is likely to also be used for transport which can be carried out using a cheaper and more fuel-efficient standard trailer.
- There is a potential on-cost through the operation of a mixed fleet (containing standard length semi-trailers and the proposed high-volume semi-trailers) that would result from having the wrong trailer in the wrong place resulting in empty or part-load running.
- Drivers may not adapt to the changing trailer length when driving with the two different lengths, causing an unsafe driving situation and additional damage.
- The introduction of high volume semi-trailers may spark increased pressure for route restrictions on articulated lorries in urban and rural areas. While this would have little or no impact on traffic flows between sites adjacent to motorways and major trunk roads, there would be a significant negative impact on cost and environmental impact were efficient movement of articulated lorries to be further restricted.
- Cost of implementing additional Traffic Regulation Orders at local authority level to implement required restrictions.

- Increased cost to operators for installation of safety equipment and the use of on-board weighing devices, although this may be off-set by reduced maintenance costs and savings from improved legal compliance.
- Potential increase to enforcement costs (VOSA staff and weighbridge facilities)
- Those firms operating internationally would be disadvantaged, as high volume semi-trailers can only be used in GB.

Additionally, the joint response from Freight on Rail, Campaign for Better Transport, Friends of the Earth, Sustrans, Living Streets, Road Peace, CTC and PACTS believed that the full costs to society in safety, environmental and road congestion terms has not been properly evaluated. They felt that an analysis of the extra driver stress negotiating the road network and trying to find vehicle parking was needed; as well as inclusion of non-monetised environmental factors related to length such as severance and visual intrusion which impact on pedestrians, cyclists and non-road users. Similarly, nuisance and intimidation caused to drivers and passengers in other road vehicles, which they felt were likely to be very significant, are not included.

Department for Transport comment:
The Impact Assessment has been updated to reflect these areas of additional suggested benefits and costs. However, the Department considers that further investigation is needed to develop evidence of the potential benefits and costs, particularly with regard to potential infrastructure costs on the network and at depots.

The Department accepts that longer vehicles may have non-monetised environmental and amenity costs which have been reflected in the updated Impact Assessment published alongside this consultation response. However, the Department believes that there could also be a corresponding benefit due to fewer HGV miles. A trial of the vehicles in operation will provide a fuller understanding of these issues.

2.3 Safety Considerations

Q9. Assuming that, at least initially, the requirement is for high-volume semi-trailers to comply with existing standards, how could commercial development of the active steering technology be maintained? For example, would you be supportive of attaching conditions to Vehicle Special Orders (VSOs) to encourage the use of active steering technology or do you see another, more effective mechanism?

42 responses were received to this question.

Two respondents thought that the Department should encourage use of active steering technology by altering the conditions of the VSOs, while seven respondents thought that their use on high volume semi-trailers should be mandatory (subject to the technology being available).

Eleven respondents thought that no conditions relating to active steering technology should be attached to the VSOs, while a further seven respondents supported this by stating that active steering technology was untested, with no field trials of the technology being yet undertaken.

One respondent expanded on this point, believing that a high volume semi-trailer trial could be used to determine the actual experience in trailer use without active steering, in order to allow an educated impact assessment of Active Steer implementation. The removal of the administration and potential shortened book life associated with a limited term VSO, would stimulate the demand for Active Steering, hopefully stimulating its accelerated development. However, in this respondent's opinion, if Active Steering is known to provide such a step change in vehicle safety, its development ought to be promoted via the DfT acceptance of tare weight compatibility with current design, resulting in a gross weight of say 45 tonnes. This would greatly accelerate the demand for its development and not just limit the product to high volume semi-trailers.

One respondent suggested that it might be possible for a VSO to impose steering that enables the vehicle to conform to EU standards or better, but commits the licensee to convert to active steering when it becomes available or within a reasonable time thereafter. This could mean beginning with command steer then changing to active steer later.

One respondent stated that assuming existing standards are applied initially, the only commercial incentive to develop active steering technology systems is to set a (provisional) date for a change to Existing Performance. This would encourage other system manufacturers to become involved and would help with system costs. Any changeover date needs to be sufficiently distant to allow for thorough development, testing and type approval, i.e. not less than five years from the introduction of the scheme.

Other respondents thought that the cost of this technology is currently prohibitive. Suggestions for the development of active steering technology included assistance by grants or making any public funded research available to all, in particular, to prevent any monopoly of supply.

The Cambridge Vehicle Dynamics Consortium members believed that the best legislative approach would be to allow both 'Level 1' and 'Level 2' vehicles[5] to run on UK roads for a limited period (say 3-5 years), while the active steering technology becomes widely available. After that period only 'Level 1' vehicles should be allowed to operate on UK roads. They believe that using this phased approach would enable the fuel consumption and productivity benefits of high-volume semitrailers to be achieved immediately, and the improved safety performance to be achieved as soon as possible. Failure to mandate Level 1 vehicles would encourage vehicles with lower safety performance and would increase the risk of safety incidents, particularly with vulnerable road users. They believe that should the requirement for active steering be mandated in this way, the heavy vehicle industry would be able to produce steering systems that could meet the legislative requirements in sufficient volumes and that because of its low weight and significant performance benefits, active steering will gradually overtake existing steering technologies as the equipment of choice.

Department for Transport comment:
The Department has noted these comments and will monitor technical progress with active steer systems and consider how these systems might be encouraged. However, the Department notes that any changes to the performance criteria must comply with EU obligations to allow approved vehicles to be sold and used in GB.

Q10. If the Government were to opt for tighter standards in the future, when would trailer manufacturers be in a position to supply sufficient actively steered trailers to meet the likely demand?

20 responses were received to this question. Six trailer or axle manufacturers responded with varying timescales. One respondent indicated that they were developing a trailer that was equipped with active steering and they expected this to be ready for production towards the end of 2012. Across other responses, the range for the earliest date by which actively steered trailers could be introduced was from "within 18 months" to "by 2016". Other respondents similarly quoted varying timescales with the possibility that the lead time required to develop active steering technology would be up to 18 months. However, the time needed to assess its technical feasibility for a new trailer design and to obtain the associated type approval, means that its availability on volume produced trailers is probably 3 to 4 years away.

A number of other consultees indicated that it would be 3 to 4 years before active steering technology would be available.

[5] In the Consultation Document, the draft technical specification for semi-trailers matching existing performance through the incorporation of active steering technology was called "Level 1" while the draft specification for semi-trailers matching existing standards was called "Level 2"

Q11. What should the performance criteria be if cross-wind stability were to be controlled by a metric other than a height limit of 4.57 metres?

32 responses were received to this question, but many did not address the question.

Eleven respondents suggested ways in which the performance criteria for cross wind stability could be controlled rather than imposing a height limit of 4.57m.

Five respondents considered that a better metric than introducing a height limit would be to introduce a specific roll stability requirement, with two suggesting that this could be achieved by specifying a performance requirement that could be verified by a calculation similar to that currently applied to road tankers.

One respondent suggested that wind tunnel and CFD analysis could be used to assess the cross wind stability of trailers. Trailers that had a height greater than 4.57m could be permitted if it was demonstrated that their stability equalled those that were less than 4.57m.

One respondent suggested that the centre of gravity should be controlled, but acknowledged that this could be difficult given the different loading conditions the trailers could be subject to.

Four respondents indicated that the mandatory fitment of electronic stability control systems to high volume semi-trailers would help control cross wind stability.

A number of respondents questioned the need to impose a height restriction, but did not indicate a performance criterion that could be applied in place of a height restriction.

TRL responded that it has recently undertaken further research on height limits of articulated vehicles. This new work has highlighted that cross wind sensitivity is particularly sensitive to the assumed mass distribution of the unladen trailer, which in reality will vary considerably between different vehicles. What TRL did not make clear in the LST report published alongside the consultation document on the Department's website[6], because they did not fully realise its importance, is that the "equal risk" height calculated was on the basis of isolating the change in length as a variable – i.e. a 15.65m semi-trailer equipped with command or active steer was compared to a 13.6m semi-trailer equipped with command or

[6] Longer Semi-trailer Feasibility Study and Impact Assessment http://www.wspgroup.com/en/Welcome-to-WSP-UK/WSP-UK/Press-centre-UK/News-Archive-UK/2011/DfT-Study/

active steer. TRL noted that many would argue this is the correct comparison because it compares like with like. However, others might argue that it is more realistic to say that command or active steer will remain a niche fitment to existing length vehicles and thus the comparison should be between a 13.6m fixed steer vehicle and a 15.65m command or active steer vehicle. In the latter comparison, the cross wind sensitivity of the longer vehicle is actually less than the existing vehicle meaning that the "equal risk" height would be more than 4.9m.

The reason for this difference is that compared with a fixed steer trailer, the command and active steer systems add substantial weight, which acts to keep the vehicle on its wheels in a cross wind (which was simulated in the likely worst case – unladen). TRL is in the process of finalising a report that explains all of this in full as well as contributing other new material that may be of interest.

Two local government authorities felt that it would be impractical to create separate criteria for wind loadings should the trailer unit be extended by 2.05m.

Department for Transport comment:
The Department is grateful to TRL for the additional research that indicates a height restriction would not be necessary for the Level 2 option in the draft Technical Requirements.

TRL's additional research concluded that for three axle trailers the cross wind sensitivity of the longer vehicles is comparable with existing vehicles. 3 axle trailers would also offer advantages in transient manoeuvres (particularly for an extended length trailer which retains the same wheel base) and the Department will consider whether any trial of high volume semi-trailers should be required to have 3 axles.

Q12. Both standards assume that, like many existing systems, the steering axles are locked at speed. Should this be introduced as a regulatory requirement (as suggested in the draft Technical Requirements for the trial), and at what speed? Do you see difficulties in making the locking of steering axles a regulatory requirement? If so, please explain. If not, would locking at a speed of 50km/h be appropriate? And what should the performance criteria be if high speed stability were to be controlled by a means other than a locking requirement?

40 responses were received to this question.

Several respondents did not address the question or stated that they would comply with the requirements.

Seven respondents thought that locking of steering axles at 50km/h was appropriate, three expressed a view that more than 50 km/h would be preferable and two that 40km/h would be preferable.

Five respondents, of which four were trailer manufacturers, felt that steering axles should not be locked and expressed concerns over safety if certain types of steering system were required to lock at a given speed. Two of these believed that whilst there should be no requirement for steering systems to lock at speed, all systems must be failsafe. One further respondent thought there would be technical difficulties in locking mechanical command systems.

One respondent explained that if certain current steering systems are permitted to steer at high speeds, the stability of the combination could be substantially reduced and noted that locking the steering system was merely one means of eliminating this problem. One alternative to locking the system would be to make the steering insensitive to the kind of small articulation angles that would be achieved at high speeds.

Department for Transport comment:
We agree that there may be trailer / steering designs where steered axles should not be locked at speed, but the manufacturer would be expected to have considered this aspect and have evidence to demonstrate why locking is unnecessary.

Q13. Both standards also assume that semi-trailers with steering systems should also comply with certain relevant type approval requirements (as suggested in the draft Technical Requirements for the trial). Do you see difficulties in specifying these requirements for the trial?

24 responses were received to this question. A number of respondents did not address the question.

Twelve respondents could see no difficulties in complying with the relevant type approval requirements that were suggested in the draft technical requirements for trials. The SMMT stated that compliance with UNECE Regulation 79.01[7] should be required.

Two of the respondents stated that type approval should not be mandatory for any vehicle that might participate in any trials but recognised that any vehicles used after a trial would require type approval given that this would be a mandatory requirement.

[7] This refers to an international vehicle construction standard applied to the steering equipment of cars, commercial vehicles and their trailers. Details are available at http://live.unece.org/trans/main/wp29/wp29regs.html

Department for Transport comment:
High Volume Semi-Trailers are not exempted from type approval when used on GB roads under a trial. Type approval for trailers is already possible and some trailer manufacturers have obtained it, but from 29 October 2012, most new trailers will be subject to approval and the manufacturer will be required to present evidence of approval to VOSA before a new trailer can be placed on the road.

For information manufacturers have three options to gain approval:
Full EU type approval; (available from VCA)
National small series approval (NSSA); (available from VCA) or,
Individual Approval (IVA) (available from VOSA)

2.4 Improved Frontal Design

Q14. An overall increase in the permitted length of an articulated lorry to 18.75 metres would accommodate a safer more aerodynamic frontal design of between 0.2 – 0.4 metres in parallel with an increase of 2.05 metres in the length of a semi-trailer, depending on whether or not the semi-trailer were fitted with a close coupling arrangement. What advantages or disadvantages do you see in allowing an increase in overall length to 18.75 metres? If there are both advantages and disadvantages, which do you see as the most important?

47 responses were received to this question.

Several respondents did not address this question.

26 respondents believed that a safer more aerodynamic frontal design of between 0.2 – 0.4 metres would deliver benefits. These were stated as allowing for additional space in the cab, allowing for better vehicle design in terms of collision absorption and potential to result in more efficient design reducing drag, fuel and emissions.

A number of responses were received from road safety groups and local government authorities that were in favour of allowing such devices to improve road safety.

Many operators do not use close coupling as a company policy and therefore felt that this will need to be considered.

14 respondents considered that there were disadvantages with this proposal. These were stated as being:

- because there is no requirement that lorries utilising the longer trailers must also have the safer front it seems unlikely that this will be adopted unless enforced;
- it is likely that a cab increase of around 0.8 to 1 metre would be needed for serious fuel efficiency improvements and this would not be allowed under EU type approval;
- the longer cab could result in reduced visibility leading to more damage;
- truck manufacturers are unlikely to make major changes to the design of their cabs for a UK specific market, and so it is questionable whether this change in legislation would be beneficial without being an EU wide change;
- with the move to Euro VI emission requirements which are likely to require additional engine cooling, the frontal cab design will be a vital factor and the impact of the nose cone design could have an adverse effect on engine cooling developments;
- if truck manufacturers develop cabs with slightly longer frontal designs, then as the same cabs are fitted to both articulated and rigid trucks, the permitted length of drawbar combinations may need to be considered;
- any market specific changes would be uneconomic for such a unit and reduce the opportunity for payback on the research, development and approval costs that would be needed to comply with existing legislation on, for example, lighting and front underrun protection;
- the extension to 18.75m to allow for a 200mm frontal aerodynamic portal offers very little advantage. Tests suggest that 200mm is a marginal increase given the overall dimensions of modern tractor units and is unlikely to have any aerodynamic advantage and may actually reduce fuel efficiency as a result of increased surface attachment and poor flow separation at the rear of the trailer;
- the assumption that the nose cones would make vehicles safer from a collision / impact perspective was questioned, with analysis of business accident statistics suggesting the nose cones would have no impact on reducing casualties;
- the aerodynamics of an articulated HGV can be better improved by better matching of tractor/trailer, optimising the cab/trailer gap, correct fitting/alignment of cab air deflectors, fitting side skirts on trailers, having rounded corners/ air deflectors on the front of trailers, using teardrop roof trailers and using lower roof trailers.

Department for Transport comment:
The Department confirms that the proposals for the improved frontal design were to be used on lorries operating with any semi-trailers and not just the longer high-volume semi-trailers.

With regard to the comment that “under type approval and circulation directives no increase in cab length could be permitted”, the UK understanding is that this is permitted in accordance with Article 4(4) of Directive 96/53/EC.

From the responses received, it appears that vehicle manufacturers are unlikely to progress the development of tractor units with a safer more aerodynamic frontal design at this time. However, the Department will work with industry to monitor this and will keep the position under review, in particular for any developments that may be introduced at the EU level.

Q15. The implications of an improved frontal design for operators and other road users are discussed in section 7 of the TRL report, "Safer aerodynamic frontal structures for trucks: final report". Do manufacturers agree with the results of the modelling work and in particular do they have any of their own evidence from investigation of this subject? If you represent an operator would you expect to take up these vehicles given the costs and benefits discussed in section 7? In particular, do these results suggest the payback would be sufficient to justify investment?

22 responses were received to this question.

Many respondents did not address the question. Some respondents referred to their response to question 14.

Whilst several respondents said that they would want to adopt safer aerodynamic frontal designs, several others said that there would be a low take up due to the limited or unproven benefits in relation to cost and because the proposal was UK specific and not EU wide.

One haulier stated that they have adopted the use of new aerodynamic trailers and tractor units and are encouraged by initial results. Although internal analysis continues, they have found the new design fleet has delivered some saving on fuel consumption (however, this needs to be taken in conjunction with their SAFED training initiatives for safer and improved driving techniques). Measurement and comparison is required over a longer period for them to be confident of the impact made by design versus other pertinent actions to deliver efficiencies.

Department for Transport comment:
The Department is grateful for this information. From the responses received, it seems there is unlikely to be significant commercial demand for safer aerodynamic frontal designs at present. The Department will keep the position under review, in particular for any developments that may be introduced at the EU level.

2.5 Impact on Infrastructure

Q16. The Impact Assessment assumes (see Summary tables) that there will not be a need for significant changes to road infrastructure from the introduction of high-volume semi-trailers, as the overall length would not exceed that of a rigid truck / drawbar trailer combination already allowed on the UK's roads. Do you agree that this is a valid assumption? If not, please give your reasons: eg are there potential constraints with loading bays? or at lorry parking facilities?

155 replies were received to this question.

23 respondents agreed with the assumptions in the Impact Assessment that there will not be a need for significant changes to road infrastructure from the introduction of high-volume semi-trailers and/or merely some minor impacts on loading bays, yards, etc.

132 respondents stated that there would be considerable impact on road infrastructure, with some respondents stating that further information or research was required on the impact to road infrastructure.

17 responses were received from local government authorities concerned that the proposal will have a significant impact on the costs of building and maintaining the road infrastructure in both urban and rural areas. Reasons stated were:

- the research findings[8] published alongside the Department's consultation document indicated a greater tail swing. This would impact greatly on the geometry and other infrastructure at all junctions, especially in an urban area.

- 18.55m long lorries would take up more road space, would need longer front and rear headway (owing to potentially greater braking distances) and would need to negotiate junctions more slowly than 16.5m long HGVs. There are risks that these longer lorries could get stuck halfway through a manoeuvre, have trouble negotiating ramps and be too big for many loading bays. Where it is possible to alter junctions to accommodate the altered swept path of larger HGVs there would be significant costs incurred in relocating street furniture such as signs and signals and the alterations would be detrimental to pedestrians and cyclists as it increases their exposure to danger through having to cross wider carriageways. The research gives no analysis of the additional infrastructure costs to local authorities of re-designing junctions and replacing damaged street furniture.

[8] Longer Semi-trailer Feasibility Study and Impact Assessment http://www.wspgroup.com/en/Welcome-to-WSP-UK/WSP-UK/Press-centre-UK/News-Archive-UK/2011/DfT-Study/

- Taking into account that most loading bays or service facilities (and highways infrastructure such as junction corner radii, pedestrian islands or narrowed carriageways for road crossings) will not have been designed for longer vehicles a number of Traffic Regulation Orders may need amending, at an average cost of over £3000 each. The alternative is to undertake one consolidation order per Controlled Parking Zone (CPZ) within the Local Authority, with the costs of this including the time officers will spend adjusting other parking bays through site visits, assessments of the practicalities, drawings and measurements for the required amendments etc. It would also be expected that similar to the cycle superhighways in London, Trixi mirrors should also be supplied at junctions which have had accidents or where sightlines are below DMRB standards, due to historical geometries and layouts. Local authorities indicated that they would be unwilling to bear these costs and would want them to be met by industry or the Department.

- Experience of trying to accommodate longer vehicles for public transport indicates that retrofitting the existing urban environment is not physically possible at many locations. This would result in increased direct risk to all road users as the longer HGV attempts to manoeuvre and could encourage risky behaviour from other drivers.

- Wear and tear on surfaces from wheel scrub could increase, due to the longer lever arm of the trailer, unless the rear axle of the trailer is made steerable. In the vertical plane more roads may have issues especially at bridges and level crossings.

One Local Authority made the point that the majority of Great Britain's transport corridors pass through historic towns and villages, traverse river valleys and climb and descend hill and mountain passes. Consequently much of the roads infrastructure does not meet modern standards of width, gradient, curvature and advance sighting, or where it does, it is characterised by sudden changes in the nature of the infrastructure from modern to sub-optimal standards. They expressed concern over the risks of using these vehicles on narrow and sharply curved stretches of road and at road bridges. They were also concerned about the impacts on railway over and under-bridges, which are often narrow and frequently have near 'right-angle' bends approaching or leaving them.

Transport Scotland were concerned that, should larger vehicles become the industry norm, the competitiveness of haulage operations to Scotland's rural areas may be adversely affected, due to the constraints of the rural road network. They requested that the Impact Assessment be expanded to include an analysis of the geographical impact of the proposal.

One logistics company considered that high volume semi-trailers will have different driving characteristics compared with a rigid truck / drawbar trailer.

Whilst both may stay within the turning circle, they may have different entry and exit corner behaviour. Any kind of standardisation in the infrastructure, such as loading bays, ferry crossing and terminals needs to be updated to handle multiple semi-trailer lengths safely.

RHA stated that concerns had been expressed by members about the high volume semi-trailers being unable to access or manoeuvre adequately at specific sites, including haulage depots, distribution and freight terminals. Partly, this is because of the physical length; partly there are concerns over swing-out of the offside rear corner of the trailer. The impact on a single-depot operator could be substantial. They have had representations from medium-sized members who say they would be unable to use the longer trailers in depots on which they have a long lease. The loss of commonality of access is likely to impose some cost on the overall efficiency of the industry. The same concern is expressed in relation to some workshops.

The RHA also highlighted the need for Authorised Testing Facilities to be able to accommodate high volume semi-trailers as well as current artics and they urge that this be adopted by VOSA.

There is also concern about motorway service areas' ability to accommodate a significant number of longer vehicles if, as many believe will happen, 15.65 metres becomes the new industry standard or at least very numerous. The current number of full-length truck/trailer drawbar combinations on the road, and therefore using truck stops, is modest.

Department for Transport comment:
The Department is grateful to respondents for identifying impacts that had not been considered in the original research and therefore not incorporated in the Impact Assessment. The updated Impact Assessment published alongside the consultation has been revised accordingly.

We are aware there could be increased tail swing of up to 0.74 metres, but trailers will still need to comply with manoeuvrability requirements set out in national "construction and use" legislation. There are several vehicle types already in circulation that potentially exhibit similar characteristics.

The Department considers that further investigation is needed to develop evidence of the potential impacts on infrastructure.

Q17. The Impact Assessment also indicates (Option 1 summary; paragraph 41 p 22) that an increase in semi-trailer length of 1 metre with un-steered axles would effectively reduce the gross vehicle weight from 44 to 40 tonnes, thereby reducing loading capacity and introducing a risk of axle or axle group overload. Do you see a need for on board weighing

devices to ensure that axles on this type of semi-trailer are not overloaded? Do you feel that the potential additional costs would affect the take-up of these semi-trailers?

42 responses were received to this question.

13 respondents stated that on board weighing devices should be mandatory. 19 respondents stated that they should not be required. This was because many businesses already had built in load compliance, such as weighbridges, in their warehouse systems. Others said that electronic braking systems (EBS) have the axle weight as a standard parameter already. Since July 2011, this information is provided by electronic braking systems fitted to type approved trailers.

Eight respondents considered that the potential additional costs of on-board weighing devices would not affect the take-up of high volume longer semi-trailers.

Seven respondents said that it would affect take-up. One respondent felt that though the comparatively high on-cost of an on-board weighing device is likely to be lower than that for a steering axle, the loss of potential payload was likely to totally discourage the take-up of 40 tonne fixed-axle combinations.

RHA had concerns about the loading on the drive axle on a 4x2 tractor unit, regardless of whether there are fixed or steering axles on the trailer. They said that drive axle overloads are already an issue with 4x2 tractor units coupled to 13.6 metre trailers and this is known to both operators and to VOSA. High volume semi-trailers are likely to impose a greater load on the drive axle, exacerbating the current problem. (Most of the longer trailers are unlikely to have a demountable fork-lift on the back of the trailer to counter-balance weight on the drive axle.)

Road Safety groups highlighted the fact that the overloading of vehicles has implications for road safety. Local authorities had concerns over vehicle overloading and the consequential risk to road and rail infrastructure.

2.6 Impact on Rail

Q18. Has the research correctly identified the rail market that will be affected by the introduction of high-volume semi-trailers? (Report Section 5.4, p 28). If not, can you provide evidence to show why other markets could be affected?

71 responses were received to this question. Nine respondents agreed that the research correctly identified that intermodal rail freight growth would be

affected. Ten respondents said neither rail nor any other markets would be affected. 42 respondents said that rail freight would be affected.

FTA's rail freight operators were concerned that this proposal would make road even more competitive in comparison to rail. FTA's Rail Freight Council agreed that a constructive package of complementary measures to help rail freight, including fiscal measures, should be considered by Government, including:

- Restoration of Freight Facilities Grants on a longer term basis
- Rebate of duty on diesel fuel used by diesel locomotives
- Increasing the gross weight of inter-modal road transport units
- Grant funding for wagons for equivalent payloads to high volume semi-trailers
- Enhanced capital allowances for early write down of railway rolling stock
- Compensatory freight marginal Track Access Charge reductions
- Investment in the development of a Strategic Freight Network 2 for Control Period 5

Rail Freight Group (RFG) was particularly concerned that, despite the fact that the impact assessment indicates a negative impact on rail freight growth, DfT wishes to support the proposal. They believed this contradicts previous policy support for multi modal solutions in freight and logistics. They were particularly concerned that the reduction in rail growth is shown as a benefit to the freight sector in the assessment.

ASLEF also felt that any move to increase the length of HGVs would be contradictory to the Government's stated aim to get more freight on to rail, something that polling shows is supported by the public. Consumer rail freight, which has grown for the 8th consecutive year and now outstrips coal traffic, would using the DfT figures be severely undermined and forecast growth would be cut by two thirds.

TfL considered that the research identifies the correct impacts on the rail sector. Rail is typically associated with the carriage of heavy and bulky materials, to which it is well-suited. However, TfL recognised that the industry is diversifying into a greater range of goods, with subsequent social and environmental benefits. If the changes to permitted lengths go ahead, they believe that the impacts on the sector should be monitored closely. Rail freight faces a number of potential barriers to the successful uptake of longer intermodal units and if the industry is not able to capitalise upon changes to the regulations then TfL believe a package of mitigations should be considered in order to help rail freight.

TfL also supported the concern expressed in the Longer Semi-trailers Feasibility Study and Impact Assessment by the Rail Freight Group that an increase in vehicle length should not be accompanied by an increase in weight, hence the 44 tonne restriction should be enshrined in appropriate regulations. The analysis suggests a 4m height limit could help reduce disbenefits to the sector

and TfL believe this may also be welcomed by some manufacturers and operators as some delivery destinations are unable to receive double decked vehicles (which exceed 4m).

Concerning other markets that might be affected by the proposals, it was suggested that there may be an impact on the postal and courier sector, the coastal/shortsea container market, inland waterways freight, port-centric distribution, and light metals (such as aluminium) transport. There may also be an impact on the growth in warehousing facilities in close proximity to UK ports. In these locations, traffic that currently moves in deep-sea containers to inland distribution centres will be re-sorted and will move inland as domestic intermodal traffic. This would be particularly applicable for lightweight deep-sea intermodal commodities such as electrical goods and clothing. This would reduce the requirement for deep-sea container transfer by rail, and because longer lorries will make road more competitive versus road, would directly abstract from rail's 28% market share of the overall deep-sea intermodal business (currently equating to 850,000 boxes moved in the UK per year). Respondents did not believe that this potential impact on rail volumes has been accounted for in the impact assessment.

Department for Transport comment:
The Impact Assessment is consistent with a cross-modal approach which seeks to maximise the efficiency of the whole freight transport system, whilst minimising social impacts, rather than treating each mode separately. Whilst it is accepted that rail freight growth is likely to be lower with the introduction of high-volume semi trailers, the overall costs of moving freight around the country would fall, thereby reducing the costs the consumer bears.

The Department notes that a height limit would erode the productivity benefits that the freight sector could gain, and hence reduce the efficiency benefits from the proposal. Whilst it would reduce the impact on rail freight, it would not maximise social benefits.

While the Department recognises that there are new warehousing developments in close proximity to UK ports, it is unclear that this proposal would accelerate the development of these facilities.

Q19. Is it likely that longer intermodal loading units would be developed as a response to allowing high-volume semi-trailers, and would they be used giving an increased loading capacity for domestic intermodal trains? (See Annex 6 of Impact Assessment). Are there any operational issues or costs that have not been accounted for that arise as a result?

32 responses were received to this question. 10 respondents considered that longer intermodal loading units would be developed. The majority of these respondents were retailers or consumer goods manufacturers.

One respondent stated that longer intermodal loading units would fit on existing Multifret and Megafret rail wagons allowing better use of the load deck. However, every increase in length of an intermodal loading unit requires an increase in the depth of its floor beams, effectively reducing the cubic capacity available for payload. One haulier said they have had a 15.65m intermodal container designed that is ready for build, being compatible with Megafret railcars. However, they had been led to believe that some railhead cranes cannot straddle this length, and some investment here would be required in order to facilitate its general use.

15 respondents considered it unlikely that longer intermodal loading units would be developed and if they were developed, this would only be in very small numbers. This was mainly because a longer intermodal unit is not compatible within Europe. Due to frame design limitation these units will have a higher base frame and/or increased weight, which will limit the 'to' and 'from' transport to the final destination by road. Additionally, the domestic unit wagon costs would be higher (as leasers would consider them much more risky) and also could potentially lead to issues about compliance with interoperability directives. Longer demountable units can be conveyed on megafret wagons, on routes cleared to at least W9 gauge (for a 9'6" high unit). Whilst they could also be conveyed on a standard deep sea flat wagon, it would be uneconomic to do so. They cannot be conveyed on the new Superlow45 wagon now in production, or on existing well wagons. Megafrets are at least 10 years old and are largely owned by one wagon leasing company. These factors therefore limit the flexibility of operation and increase costs. They also mean that longer demountable units are not a universal solution for the domestic sector as they cannot be exploited everywhere.

With the longer life span of rail assets compared with lorries (typically 30-35 years compared with 5-10 years for a lorry) and much higher costs for design and approval, the payback period is much greater, making it more challenging for rail freight operators to make new investments in the same timescales as road. Respondents also noted that the timescales for introducing and getting approval for new wagon designs are much longer for rail than for road, where space is less constrained and legislation easier to comply with. The existing equipment used in domestic rail services is relatively new, and much of it is grant aided. It is unclear if rail operators or customers will prioritise re-investment in rail equipment. Grant aided equipment cannot be written off until the end of the commitment period.

Department for Transport comment:
The Department accepts that the development and uptake of longer

intermodal units is uncertain due to the operational considerations. The Impact Assessment therefore continues to assess the case for high-volume semi-trailers without including the development of these units in the central case.

2.7 Impact on Small Firms

Q20. The Small Firms Impact Test in Annex 8 to the Impact Assessment explains our knowledge to date of the effect of this proposal on small firms. However, we are keen to gain direct assessments from micro, small and medium size firms9 of the impact that allowing high-volume semi-trailers would have on their businesses. The Impact Assessment provides detailed figures at paragraphs 79-80 of the characteristics and costs of high-volume semi-trailers which could help smaller firms assess the impacts on their business. In particular, what costs would firms expect to incur, and what benefits would they expect to gain, from the use of the vehicles?

27 responses were received to this question. Only one of these responses (from the RHA) formally represented the views of small businesses.

Some respondents believed there would be benefits to smaller operators:

The fuel savings make a compelling case for industry. It also seems likely that the demand for new, longer trailers and the effect on residual values of conventional ones will drive a demand for trailer modification by the larger companies, lessening the impact for smaller operators.

Smaller firms tend to be family businesses with pride in the quality and appearance of their fleet. They also tend to be pragmatic with regards to investments, often the first to embrace new technology. Most smaller operators purchasing from dealers use top of the range tractor units/ trailers etc with all extra add ons that are available and affordable. Larger operators tend to buy standard vehicles. There is a belief that the vast majority of smaller operators would not hesitate to buy a longer semi-trailer if the nature of their work required it and with operators charging per pallet carried per km they would gain exactly the same benefits as larger operators.

Others felt there would be disbenefits:

[9] Micro firms: 9 employees or fewer
Small firms: 10 – 49 employees
Medium firms: 50 – 249 employees

Transport Scotland cautioned that the benefits need to be balanced carefully with any disadvantages that may arise for specific sectors or geographical areas of Great Britain, particularly the impact of the regulations could fall disproportionately on small businesses.

Small and medium operators would be at a disadvantage at the start due to the fact that they would not be in as good a position to purchase these trailers as the larger operators. However, given time the smaller and medium operator would eventually obtain these trailers. Take-up also depends on whether operators buy or lease. Those leasing would simply change when their contract is renewed.

RHA felt that the cost model would benefit from addressing leasing costs, as this is likely to be an important area for the market. There are concerns that for the 15.65 metre trailer residual values (RV) may be low and therefore leasing – which may be the only practical option for many firms – may prove an expensive option, as the RV is a key element to any leasing deal. A proportion of the privately-owned haulage sector views leasing as an undesirable option in most circumstances, expensive in the long term and weakening the company's balance sheet.

RHA members would need further clarification from their vehicle suppliers – both trailer and truck - to understand the impact, if any, on their current and future equipment. The benefits – and disbenefits – will depend on factors such as the nature of the operator, its customers/goods receivers, its depot infrastructure, its mix of business and the age and value of its trailer fleet.. Best advantaged are likely to be those groupage operators for whom the incremental increase proposed will allow more revenue-earning freight within their existing pattern of operation; and those firms who believe they will be in a position to demonstrate carbon savings to customers for whom that is important. Conversely, most disadvantaged will include: those whose current premises are unable to take longer semi trailers; those with only a relatively small proportion of traffic genuinely able to make use of extra volume; and those firms with a relatively new, high-value trailer fleet that they would need to replace quickly, greatly reducing the value of their current trailers.

There was an additional comment from one respondent that no allowance has been made in the impact assessment for the cost of early retirement of existing semi-trailers by all operators, especially public hauliers, to ensure fleet interoperability and ability to maintain competitiveness; this could be as much as £1.8billion over 5 years.

The Department also undertook a survey of small businesses as part of the consultation process. 49 SMEs were invited to take part in the survey. Six participated and the findings are summarised below:

The businesses contacted employed between 45 employees and 540 employees (although the largest firm was not an SME, it had a good understanding of the issues faced by smaller firms). The smallest business had 28 vehicles, the largest 275 vehicles, with the number of single deck trailers owned ranging between 6 and 50. Some bought all trailers new, others mostly second-hand, and others a mixture of owned (new and second hand) and leased. One leased all their trailers. Ages of the trailers owned varied from 12 months to 21 years.

Two businesses saw the proposal as a threat. They felt that most businesses do not understand the consultation - will it result in trailers of 14.55m or 15.65m length?. Added to that was the complexity of the trailer and active steer axles depriving it of an increased amount of payload; a concern that trailer manufacturer prototypes already built could not meet the current turning circle requirements; a perception that buying high volume semi-trailers would create a cost penalty which would be passed on to their businesses by their customers; a belief that trailers were already long enough for the capacity required and with just in time deliveries driving industry behaviour, additional capacity was not required; and a concern that only the retail sector would see real benefit – other hauliers were likely to be forced into upsizing because of customer demand with no opportunity to pass on costs. There was a belief that these longer trailers would become the industry norm.

Others saw it as an opportunity, because the additional 2 metres would allow more products to be carried per vehicle, particularly in the refrigeration / blue chip operations, with one business estimating it would reduce their lorry movements by one in ten.

Two saw it as both an opportunity and threat: an opportunity if they are able to acquire vehicles and bid competitively for work; a threat if others have already acquired the vehicles ahead of them and can undercut. They also highlighted a potential risk that major players buy up manufacturing availability and block the market for smaller operators. There could also be a challenge to backhaul operations where the nature of load differs on the two legs – increasing the length without small increment in GVW will reduce payloads.

One said neither, because their loads weigh out.

In terms of whether they would expect to gain or lose financially from the introduction of high volume semi-trailers, those who saw their introduction as a threat believed they would lose, for the reasons stated above, and stated that high volume semi-trailers would become the industry standard.

One business said that overall, they would expect to gain, again for the reasons stated above on the potential opportunities for these longer trailers. They would also expect there to be a net benefit to society because of reduced lorry

movements, but recognised that these vehicles would not be suited to all routes – they would expect to use them only on trunking between Distribution Centres.

Other businesses felt it would depend on what their competitors did and on getting access to vehicles and making deals with customers, including the ability to manage potential additional costs from manufacturers or a premium charge from leasing companies. Early benefits are likely to go to the retail sector and it could be up to five years from implementation before sufficient vehicles are available to ensure relatively level playing field (with a lifespan of trailers around 15 years).

When asked if their operating centres could accommodate high volume semi-trailers businesses it was felt that site access to most operating centres should not be a problem, but workshop bases are not geared to additional length. Working within depots also needs consideration with finger docks being designed specifically for 13.6m trailers. Adjusting loading and unloading procedures should be sufficient rather than investment on new docks. There may be issues around loss of parking space.

When asked if they had any other comments or observations about the potential impacts of high volume semi-trailers, the following comments were received:

Older 13.6m trucks are currently exported to developing countries in Africa and Asia. These countries may not want to purchase high volume semi-trailers as they would not be standard and may cost more. These old trailers could also not be sold in the EU.

One SME was worried that some customers are requiring that trucks are not loaded to full capacity, because they are concerned at the "health and safety" implications of unloading the goods at their stores/warehouses. They state that double-decks cannot be used either for the same reasons. These customers will demand high volume semi-trailers, but will still not fill the trailer to the full capacity.

Department for Transport comment:
From its survey of SMEs, the Department notes that the majority of small firms are likely to be concerned that customer demand may force them to purchase high volume semi-trailers with little or no potential to recover costs.

The Department considers that further evidence of the potential impacts on small firms is required.

Q21. We would like to further understand the payment methods for small firms when delivering to large retailers: for example, we would like to get

evidence from firms of whether they are paid per load or per pallet, and how rates are decided or negotiated.

18 replies were received to this question. It appears that there is a mixture of payment methods with rates being based on load rates and pallet rates being commonplace. Some companies used a combination of both.

Department for Transport comment:
The Department thanks all those who responded to this question. Any commercial information supplied will be treated in confidence.

Q22. We would like a better understanding of the reported pressures on small firms to invest in the largest available vehicles even where this means operating on part loads at reduced fuel efficiency.

22 responses were received to this question. Some responses did not address the question.

Many said that in the current financial environment, it will be more difficult for smaller companies to acquire additional funds to finance equipment and compete with other businesses. Small firms may suffer in the short term as their existing equipment will inevitably be being depreciated over a set term, meaning they cannot invest in new equipment until the old equipment has been fully depreciated or has depreciated down to a market value allowing them to change equipment. Longer semi trailers could have a negative impact upon standard semi trailer residual values over time, as they become established in the market place. Larger transport companies will try to take a competitive advantage over smaller operators, by starting a race for the new equipment in which smaller operators will not be able to compete. Customers will demand the newer length very quickly.

When a load is offered or published the sender will want to convey the largest amount of goods for the smallest cost. Hauliers will be asked the size of their trailers and any smaller than the new longer length will not be considered unless no other vehicle available.

Many hauliers survive and provide a carbon-optimised service by being able to carry any load. But the haulier – small, medium-sized or large - must have the deck length demanded by the customer. Failure to invest in high volume semi-trailers could result in a firm being shut out of a sector of the market that is currently available to it.

Responses from several retailers and consumer goods manufacturers supported this, stating that high volume semi-trailers would produce benefits for

smaller businesses, and that this will be the sort of trailer they will want their contracted hauliers to use.

Department for Transport comment:
The Department considers that further evidence of the potential impacts on small firms should be investigated.

2.8 Way Forward

Q23. If the proposed modifications to articulated lorry and semi-trailer length are permitted (either in a trial or through amendment of existing legislation), what is a reasonable estimation of the time that would be needed to enable industry to make the appropriate investment and acquire new vehicles?

39 responses were received to this question. Six trade associations responded. FTA advised that 11 of their members indicated that they would begin operations within six months if it were permitted under existing standards, but additional conditions such as active steer technology would prolong the time significantly.

RHA stated that the investment can be made more or less immediately in designs that are currently available. In a survey of their members, 26% of respondents said they would acquire high volume semi-trailers within 12 months (that sample was weighted towards medium-sized and larger firms). However ability to finance, uncertainty over the road-trials and future regulation, and uncertainty over trailer lengths and axle technologies, make this question difficult to answer more broadly.

The Institute of Transport Administration considered that larger operators would want to take up these trailers within 3 months and the smaller / medium operators would possibly take up to 12 months. However the constraining factor may be how quickly manufacturers would be able to meet demand.

SMMT considered that the period over which semi-trailers are operated, in order to cover their write-down (first life), is at least 8 years. Although the focus of the DfT's report is on the supply of new vehicles, it does not take into consideration the possibility of conversions from the existing length of 13.6m to up to 14.6m being undertaken; this will have employment and financial implications. This proposal may be introduced at the same time as Euro VI engines come on to the market and this may have an impact on the take-up of high volume semi-trailers.

The European Transport Board felt that it depends on whether there are financial subsidies to scrap the existing fleet but, when looking to trials in other

countries, they foresee a period of 1 year to start the trial and up to 10 years to evaluate the industry impact. Some companies may go out of business as a result of the need to invest in high volume semi-trailers, as well as having to deal with long lead-times and high Original Equipment prices. The business model for transport and warehousing needs to be reinvented to achieve productivity with a mixed trailer fleet.

Food and Drink Federation and several businesses thought that the speed of change will be determined by the cost/benefit equation and the complexity of change.

A number of hauliers and logistics businesses (including mail/parcel delivery companies, retailers, consumer products manufacturers) responded with varying timescales ranging from 6 months to 3 to 5 years. Two logistics companies considered take-up to be either 1 to 10 years or 5 to 10 years to fully establish. One business, for example, estimated that they would replace up to 30% of its trailer fleet within 12 months to service the routes that gave the largest benefit, with the remainder of the trailer fleet being replaced over the course of the next 4 years; another expected to have their first new semi-trailers operational within the first year, and would programme in vehicle upgrade within their existing trailer replacement programme which operates on an 8-10 year cycle.

Four trailer manufacturers provided responses. One said that they are able to manufacture trailers to the new requirements as soon as they are allowed to be delivered and believe that uptake would be immediate. One said they already produce their own high volume semi-trailers and have plans already in place to increase production to meet demands. One stated a minimum 5 months, maximum 7 years, depending on individual circumstances. One felt that for there to be production quantities available after robust development and trials there would need to be a period of between 3 and 5 years from the confirmation that they would be permitted.

Four local government authorities responded, focussing on the time and cost to implement any required infrastructure and traffic amendments to accommodate longer trailers. The Local Government Technical Advisers Group (TAG) considered that if the proposal proceeds, it would be reasonable to assume that local authorities would need to undertake relevant impact surveys on their networks which would be approximately 18 months. They predicted that consequent changes to traffic orders and amending signing and lining would take approximately 2 years, with a period of between 3.5 – 5 years the minimum time period for undertaking any necessary amendments. They believed this should be funded up front by either industry or the DfT.

TAG also believed that should there be additional requirements to amend the physical environment such as the geometry of junctions, crossing points,

islands, refuges, strengthening of footways, erecting Trixi Mirrors etc to accommodate the new longer trailer, a five year assessment period would be necessary with a further 10 year implementation timeline – giving a 15 year period in total to enable relevant assessments and implementation of the necessary infrastructure. Again they believed this should be fully funded via the industry or the Department.

Q24. Assuming the proposed modifications are introduced in the first place through a trial involving Vehicle Special Orders (VSOs), how rapidly would interested operators expect to apply for a VSO, how many vehicles would they expect to apply for, how many applications would this imply and by when? (Information about Vehicle Special Orders can be found at www.vca.gov.uk.)

28 responses were received to this question. Five trade associations responded. FTA said that feedback from their members suggests that operators would begin trials within an average of six months if permitted under VSOs. The number of trailers that those businesses who responded to their surveys would expect to be operated under VSOs is up to 2000 . RHA answered this as their reply to Question 23. European Transport Board expected that only around 10 financially strong companies, would apply - for 5 VSOs each totalling 50 in the first 6 months. The other responses were unquantifiable.

Four hauliers responded. One stated that they would apply for 300 trailers with immediate effect, another said they would apply for 500, one stated that they would not look to apply for VSO's until comprehensive site assessments had been completed and the business implications incorporated into a revised transport strategy. The other stated they would not apply for any as high volume semi-trailers would not be allowed for use elsewhere in Europe.

A number of logistics companies responded, including mail and parcel delivery companies and consumer products manufacturers. Of those that provided quantifiable information, the number of trailers that would be applied for ranged from 1 to 10 per business.

The London Cycling Campaign thought that if high volume semi-trailers are allowed through VSOs, the number should be tightly limited. In their opinion, a few dozen vehicles would be enough to highlight their manoeuvrability and infrastructure problems.

Q25. If high-volume semi-trailers were permitted permanently, what proportion of its fleet would your company or organisation expect to

switch to these vehicles by 2015 and by 2020? Please supply evidence on your current fleet and your operations to explain the change you anticipate.

29 responses were received to this question. Several respondents found it difficult to predict at this time, and other information was unquantifiable. Those that provided a percentage of trailers to be switched to high volume semi trailers stated 100% (= 220 trailers), 50% (=115) 80/90% (= 540), 90% (= 288), 55% (250), 40% (= 2400). FTA thought that 40% might be the average.

Department for Transport comment:
The Department thanks all those who responded to this question. The information received will be used to update the Impact Assessment.

2.9 Other Responses Received

124 responses were received concerning additional safety impacts of high volume semi-trailers not covered by any of the questions. Respondents' main concerns were with the manoeuvrability, bulk head swing, tail swing, swept path, drivers' blind spots, all round visibility, driver capability of handling longer vehicles, problems overtaking longer vehicles, impacts on vulnerable road users such as cyclists. There was criticism that the Impact Assessment had not properly looked at these safety impacts.

To try to address some of the safety concerns, respondents suggested measures including: requiring axle-weight indicators and CCTV on the side and at the back of lorries; adding a sign on the back of the vehicle indicating that it is a 'longer' vehicle; mandatory additional training for drivers of the longer lorries; and implementing signage on busy roads/motorways to restrict longer lorries from overtaking.

178 responses were received concerning other aspects of high volume semi-trailers. The majority of these responses considered that the proposal would be bad for the environment and would increase congestion. Many raised their objections to the proposal without stating why.

Many considered that longer lorries will be directed down unsuitable roads by satellite navigation systems. Some thought that longer vehicles should be limited to certain sized roads or motorways or certain routes. Some were concerned that the haulage sector would call for heavier vehicles to be allowed. Many thought that the extra length of the vehicle would be better utilised on extra room in the drivers' cab. Two respondents considered that long lorries block the view of the signage for other road users, and that the ability of other drivers to find a space in the nearside lane in good time to exit is also often impaired. Some were concerned over who would enforce the weight limit of

these vehicles. A few stated that many longer trailers would have less volume capacity than existing double decker HGVs. As an alternative to high volume semi-trailers, one respondent pointed out that Germany, which initially started with a vignette lorry road user charging system and then moved to a distance based one in 2005, has reduced empty running by 20% to below 20%.

A few respondents (including the joint response from Freight on Rail) thought that the proposal was not allowed under European legislation or that any increase in semi-trailer length would risk opening up the current Directive 96/53/EC on grounds of unfair competition, by treating semi trailers and road trains (i.e. draw-bar operations) differently. Legally, they believe this means that the DfT can only allow 2 metre longer HGVs on a trial basis. They also expressed concern that any amendments for increasing the length could lead to mega trucks of 25.5 metres and up to 60 tonnes in weight coming to the UK.

Department for Transport comment:
In respect of legality of the proposals under European law, the Department believes that the proposals to allow longer articulated lorries are permitted in accordance with Article 4(4) of Directive 96/53/EC. Additionally, the European Commission have commented that they are in favour of allowing high volume semi-trailers for a trial period in accordance with Article 4(5) of Directive 96/53/EC.

Some considered that the Impact Assessment had not looked at the effect of the proposal on the employment and working hours of HGV drivers if it results in fewer vehicles on the road. Some thought that the need for such vehicles had not been addressed. Some thought the benefits in the Impact Assessment had been overstated.

Some complained that the consultation was not publicised adequately, and was only addressed to those in favour of the proposal. One thought that the timing of consultation was ill considered, as there are many EU technical requirements coming out now.

Department for Transport comment:
In response to the comment that the consultation was not publicised adequately and was addressed to those in favour of the proposal, the Department would like to point out that the consultation was open to anybody to respond. A Written Ministerial Statement was laid in Parliament to inform all MPs; a national press notice was issued when the consultation was launched on 30 March and this resulted in a number of articles in the general press. Additionally, a wide range of representative bodies were formally consulted and invited to meet with the Department to discuss the proposals further, including those covering safety, road users (cycling, motorcycling and cars), pedestrians, environmentalists and rail as well as the road haulage sector.

Several respondents supported the proposal stating that high volume semi-trailers would produce benefits, and several others stated that the longer heavier 25.25m vehicles would produce greater benefits. Some asked for the Government to bring in high volume semi trailers without a trial.

3. STATEMENT OF INTENT

The Department has considered all the responses received as part of this consultation exercise.

The research underlying the consultation proposal suggests that high volume semi-trailers have potential environmental, safety and congestion benefits: they would allow up to 13% more loading space than current articulated lorries, resulting in fewer journeys needed to transport the same amount of goods. The research predicts that by 2015, this will reduce lorry miles in the UK by 100 – 180 million a year, meaning reduced congestion, reduced air pollution and reduced carbon emissions (around 100 000 tonnes a year reduction). The research also found that there would be a net decrease in casualties of around 1.6% from this reduction in lorry miles.

However, the Department concludes that the evidence provided as part of the consultation has identified a number of areas which would benefit from additional investigation and that the above conclusions are sensitive to how the trailers are used in haulage operations. These include:

- The level of take-up of high volume semi-trailers across the industry: if the level of take-up is greater than predicted by the research and in the impact assessment then there will be knock-on effects on the level of benefit derived from introduction of these trailers

- The change in lorry miles in real-world operations due to the use of high volume semi-trailers

- The impacts of high volume semi-trailers on road infrastructure and design and on depot and distribution centre infrastructure and design

- The impacts of allowing high volume semi-trailers on SMEs

- The effectiveness of additional vision/sensor/safety systems fitted to improve detection of vulnerable road users

The research underlying the consultation proposals was comprehensive. To gather further evidence on such impacts will therefore require a trial of high volume semi-trailers in operation.

The Department therefore intends to proceed with an operational trial of high volume semi-trailers in order to on gather evidence in these areas. Trailers taking part in the trial will operate under Vehicle Special Orders issued under Section 44 of the Road Traffic Act 1988.

The Department considers that the number of vehicles permitted in the trial will need to be limited to a number that will still allow meaningful evidence to be gathered on the likely take-up of high volume semi-trailers across the vehicle fleet as well as impact on infrastructure. This would require a trial of vehicle numbers that allows operators to swap a sufficient percentage of their fleet over to the longer semi-trailer to enable them to remove standard trailers from their fleet and make an effective comparison of performance. The responses to the consultation also indicate that different businesses would wish to choose between trailer lengths of up to 1m and trailer lengths of up to 2.05m depending on type of operation. The trial provides an opportunity to validate the impacts of each length. The current trailer parc for articulated vehicle above 40 tonnes in the UK is estimated at around 100,000 trailers. The Department therefore intends to proceed with a trial of up to 900 trailers of an increased length of up to 2.05m; and 900 trailers of an increased length of up to 1m. 1800 trailers represent just under 2% of trailers on British roads.

Our baseline research shows that the ability to operate longer semi trailers would provide clear benefits to business and a clear link to growth, with the trial generating a net present value of £33m – a financial gain of £3m a year across those operators participating in the trial (around £1,800 per vehicle per year). We would expect many of these benefits to flow through the consumer. The trial will allow us to see whether more benefits can be secured in practice. It will also allow us to assess the likely level of take-up of these trailers, how operators use them and their impacts – including on rail freight, infrastructure and SMEs.

Participation in the trial will be on a voluntary basis and at the participants' own risk; the Government can provide no guarantee that the use of the high volume semi-trailers will continue to be permitted beyond the end of the trial period. The trial will therefore run for up to 10 years, to allow those businesses wishing to participate the opportunity to cover the costs of investment in the high volume semi-trailers.

However, the Department wishes the trial to be closely monitored, to ensure that any significant issues, particularly on safety, that arise are addressed quickly and to ensure that it is able to meet the Department's objectives. The Department will therefore appoint an independent contractor to monitor and review trial progress. The contractor will report to the Department on a four-monthly basis; at the end of each trial year, the Department will review progress towards objectives, including considering any changes to the length of the trial and the numbers of trailers involved in the trial.

Full details of the trial criteria, and information on how operators can apply to take part in the trial, have been published on the Department's website alongside this consultation response.

With regards to question 12 of the consultation, the Department concludes that the Vehicle Special Order (VSO) should not require axles to be locked at a given speed. However, the Department will require applicants wishing to participate in the trial to provide information on whether their trailer had either steering that locked or was designed in such a way that locking was unnecessary.

The Department has also considered the responses received to question 17 and advises that High volume semi-trailers having axles that do not steer should either have axle weighing devices fitted or have an additional driver display to be linked to an EBS load sensor. Alternatively, the maximum gross weight of such combinations shall be limited to 38 tonnes GVW.

Although many of the responses from vehicle operators supported the development of tractor units with a safer more aerodynamic frontal design, it was evident from the majority of responses received from vehicle manufacturers that they are unlikely to progress with the development improved frontal designs at this time. Therefore, the Department has decided not to include tractor units with an extension of up to 0.4 metres for improved frontal designs in the trial. However, we are keeping the situation under review, especially if EU proposals were to be forthcoming.

A.1

Organisations invited to respond to the consultation

AIM Commercial Services Ltd
Alliance of Independent Retailers Ltd
Andover Trailers
Argos Ltd
Arla Foods
Asda Stores Ltd
ASLEF
Association for Road Traffic Safety Management
Association of British Insurers
Association of Chief Police Officers (ACPO)
Association of Chief Police Officers Scotland
Association of Independent Businesses
Association of Industrial Road Safety Officers
Association of International Couriers and Express Services
Association of Vehicle Recovery Operators
Automobile Association (AA)
B & Q Plc
BIS
Boots
BP Connect
BRAKE
British Aggregates Association
British Association of Removers
British Chambers of Commerce
British European Transport
British Independent Motor Trade Association
British Industrial Truck Association
British International Freight Association (BIFA)
British Parking Association
British Safety Council
British Sugar PLC
British Vehicle Rental and Leasing Association (BVRLA)
Cairn Lodge
Campaign for Better Transport
Campaign to Protect Rural England
Canute Group
Carbon Trust
Cartwright Group
Chartered Institute of Logistics and Transport
Confederation of British Industry (CBI)
Consumers Association

Convention of Scottish Local Authorities
Co-Op
CTC
Davie Malcolm Transport Ltd
DB Schenker (Rail)
Defra
Denby Transport
Dennison Trailers
Department of Environment for Northern Ireland (DOENI)
Department of Regional Development for Northern Ireland
DHL
Direct Rail Services Ltd
Don-Bur
D-Tec Containertrailers BV
Environmental Transport Association
Euro Garages
Eurotunnel
Extra MSA
Federation of Environmental Trade Associations
Federation of Petroleum Suppliers
Federation of Small Businesses
FedEx
First Motorway Services
Ford Motor Co Ltd
Ford Motor Co Ltd
Freight on Rail
Freight Transport Association (FTA)
Freightliner
Friends of the Earth
GB Railfreight
Gray & Adams
Highways Agency
HM Treasury
Honda Logistics Centre (UK) Ltd
HSE
IKEA
Information Commissioner
Institute of Advanced Motorists
Institute of Grocery Distribution
Institute of Highway Incorporated Engineers
Institute of Road Safety Officers
Institute of Road Transport Engineers
Institute of Transport Administration
International Road Freight Office (IRFO)
Intermodal Logistics
Jaguar

John G Russell (Transport) Ltd
John Lewis Partnership
Kaessbohrer & Talson Trailers
Kel-Berg Trailers
Kellogg
Kimberley Clark
King Trailers
Krone UK
Kuehne & Nagel
Lawrence David
LCC
Local Government Association
M&G Trailers
Malcolm Logistics
Marks & Spencer
Mineral Products Association
Montracon
Morrison's
Moto
Motor Insurers Bureau
Muldoon Transport Systems
National Association of Agricultural Contractors
National Express Group
National Society for Clean Air and Environment Protection
Nestle
Network Rail
Norbert Dentressangle
P&O Ferries
Parcel Force Worldwide
Parliamentary Advisory Council for Transport Safety
Pedestrian Association
Police Federation for England and Wales
Port of Dover
RAC
Rail Freight Group
RMT
Road Chef
Road Haulage Association (RHA)
Road Operators Safety Council
Road Rescue Recovery Association (RRRA)
Road Safety Council of Wales
Road Safety GB
Royal Mail
Royal Society for the Prevention of Accidents
Ryder
Sainsbury

Schmitz Cargobull UK
Scottish Accident Prevention Council
Scottish Chamber of Commerce
Scottish Consumer Council
Scottish Council for Development of Industry
Scottish Environment Protection Agency
Scottish Executive
SDC Trailers
Skills for Logistics
Small Business Service
Society of Motor Manufacturers and Traders
Society of Operations Engineers
Stobart Group
Stop 24
Sustrans
Tandem Transport
Tarmac
TDG
Tesco
The Forum of Private Business
The Traffic Commissioners
The Union of Shop, Distributive and Allied Workers
The United Road Transport Union
TNT Logistics
Trades Union Congress (TUC)
Transport and General Workers Union
Transport for London (TFL)
Transport Tribunal
Truckstop News
UK Major Ports Group Ltd
Unilever UK
Unipart Logistics
United Biscuits
Van Eck
Van Hool Trailer Marque
VCA
VOSA
W Trailer
Wales TUC
Welcome Break
Welsh Assembly Government
Welsh Consumer Council
Welsh Local Government Association
Westmorland
Wincanton

B.1

Main organisations that responded to the consultation

Alert Professional LGV Training
Andover Trailers
Argos Ltd
Asda Stores Ltd
ASLEF
Association of Chief Police Officers (ACPO)
Association of International Couriers and Express Services
Bibby Distribution
Borough of Poole
BPW Ltd
BRAKE
Brake Bros Ltd
British Soft Drinks Association
British Vehicle Rental and Leasing Association (BVRLA)
Cambridge Vehicle Dynamics Consortium
Campaign for Better Transport
Campaign to Protect Rural England
Coastlink
Coca Cola Enterprises Ltd
CTC
Culina Logistics
Dairy Crest Foods
DB Schenker (Rail)
Denby Transport
DHL
Dorset County Council
East Sussex County Council
European Transport Board
Food and Drink Federation
Freightforce Distribution Ltd
Freight on Rail
Freightliner
Freight Transport Association (FTA)
Friends of the Earth
Gray & Adams
Hampshire County Council
Institute of Transport Administration
Intermodal Logistics
Jacobs Engineering
John Lewis Partnership
Jost GB Ltd

King's Lynn and District Trade Council
King Stag Transport Ltd
Leeds City Council
Lincolnshire County Council
Liverpool City Council
Living Streets
Local Government Technical Advisors Group
London Borough of Ealing
London Borough of Hounslow
London Borough of Hackney
London Boroughs Cycling Officers Group
London Cycling Campaign
London Road Safety Council
Motorcycle Action Group UK
Muldoon Transport Systems
National Organisation of Residents Associations
Norfolk County Council
Nottingham City Council
Oxford Pedestrians Association
P&O Ferrymasters Ltd
Parliamentary Advisory Council for Transport Safety
PepsiCo (Walkers Crisps Distribution Ltd)
Powys County Council
Procter & Gamble
Rail Freight Group
Railfuture
RMT
Road Haulage Association (RHA)
Road Peace
Royal Mail Group
Royal Society for the Prevention of Accidents
Sainsburys
Schmitz Cargobull UK
SDC Trailers
SERA
Silvertip Designs
Skills for Logistics
Society of Motor Manufacturers and Traders
South Lanarkshire Council
South Yorkshire LTP Partnership
Sundown Products Ltd
Surrey Hills Board
Sustrans
Telford & Wrekin Council
Timber Transport Forum
Trades Union Congress (TUC)

Transport for London (TFL)
Transport Scotland
TRL
Unilever UK&I Ltd
UNITE
United Biscuits UK Ltd
UPS Ltd
Wincanton
Yodel Transport Ltd