Summary: Intervention & Options

Department /Agency:	Title:	
Department for Transport	**Impact Assessment of Vehicle Type Approval and implementation of Directive 2007/46/EC in UK (known as ECWVTA)**	
Stage: Final	**Version:** 3.0	**Date:** 19 February 2009
Related Publications:		

Available to view or download at:
http://www.dft.gov.uk/typeapproval

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

The Government must implement the EC Directive on Whole Vehicle Type Approval (EC WVTA). This affects manufacturers of new road vehicles (including cars, buses and trucks) by requiring them to submit new vehicles for approval before they can be sold. The EC regime is designed for high volume producers and is very onerous for low volume manufacturers. There is a long history of government setting safety and environmental standards for road vehicles, in order to provide a level playing field for industry, and to protect consumers, road users and society in general.

What are the policy objectives and the intended effects?

The main objective of the Directive is to eliminate technical barriers to trade and create a single market across Europe for buses, coaches, goods vehicles and trailers, whilst ensuring high standards of safety and environmental protection. The objectives of the UK implementation are to do this whilst maintaining the diverse range of vehicles offered to the market by manufacturers today, and ensuring that smaller low volume manufacturers are not forced out of business due to the high cost of approval testing to European standards.

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

Option 1 - This option involves implementing only the European approval regime, as set out in the Directive.

Option 2 - This option takes advantage of relaxations in the Directive to offer lower cost national (UK) approval schemes to help smaller manufacturers building vehicles for sale only in the UK, including an Individual Approval scheme for unique or bespoke vehicles allowing one vehicle to be tested at low cost. We strongly favour this option since it maintains choice, and greatly reduces the risk that small businesses will be forced to close.

When will the policy be reviewed to establish the actual costs and benefits and the achievement of the desired effects?

The implementation will be complete in 2014 and a review will take place thereafter.

Ministerial Sign-off For final proposal/implementation stage Impact Assessments:

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

Signed by the responsible Minister:

..... Date:

Summary: Analysis & Evidence

Policy Option: Option 1	Description: Implement only the Europe-wide approval schemes (ECWVTA) in the Directive

COSTS

ANNUAL COSTS	
One-off (Transition)	**Yrs**
£ 0	
Average Annual Cost (excluding one-off)	
£ 11.76m	11

Description and scale of **key monetised costs** by 'main affected groups' Vehicles manufacturers will incur approval costs associated with demonstrating the compliance of their vehicles using ECWVTA

Total Cost (PV) **£ 106.6m**

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

Choice of vehicles in marketplace would be severely restricted. High initial cost of ECWVTA would dramatically restrict companies, especially smaller companies, providing bespoke vehicles and thus affect competition, would raise costs, and could force businesses to close.

BENEFITS

ANNUAL BENEFITS	
One-off	**Yrs**
£ 0	
Average Annual Benefit (excluding one-off)	
£ 0	

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

There are no overall monetised benefits.

Total Benefit (PV) **£ 0**

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

There will be a small safety and environmental benefit from better enforcement of regulations and potentially a small improvement in vehicle quality, for consumers and road users.

Key Assumptions/Sensitivities/Risks Assumption is made that the product range will be heavily rationalised due to it becoming uneconomic to produce bespoke or customised vehicles. A range of +/- 20% has been applied to the total cost, to take account of uncertainty.

Price Base Year 2008	Time Period Years 11	**Net Benefit Range** (NPV) **£ -128m to -85.3m**	**NET BENEFIT** (NPV Best estimate) **£ -106.6m**

What is the geographic coverage of the policy/option?			UK wide	
On what date will the policy be implemented?			29 April 2009	
Which organisation(s) will enforce the policy?			DfT/DoENI Agencies	
What is the total annual cost of enforcement for these organisations?			£ 0	
Does enforcement comply with Hampton principles?			Yes	
Will implementation go beyond minimum EU requirements?			No	
What is the value of the proposed offsetting measure per year?			£ N/A	
What is the value of changes in greenhouse gas emissions?			£ Negligible	
Will the proposal have a significant impact on competition?			Yes	
Annual cost (£-£) per organisation (excluding one-off)	Micro N/A	Small N/A	Medium N/A	Large N/A
Are any of these organisations exempt?	No	No	N/A	N/A

Impact on Admin Burdens Baseline in 2010 (2005 Prices) (Increase - Decrease)

Increase of £ 1.4m Decrease of £ 2m **Net Impact** **£** -0.6m

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

Summary: Analysis & Evidence

Policy Option: Option 2	Description: To implement less onerous national schemes, including individual approval, as permitted by the DIrective .

COSTS

ANNUAL COSTS

One-off (Transition) **Yrs**

£ 0

Average Annual Cost (excluding one-off)

£ 8.94m 11

Description and scale of **key monetised costs** by 'main affected groups' Vehicles manufacturers will incur approval costs associated with demonstrating the compliance of their vehicles using ECWVTA or national approval schemes.

Total Cost (PV) **£ 75.5m**

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

BENEFITS

ANNUAL BENEFITS

One-off **Yrs**

£ 0

Average Annual Benefit (excluding one-off)

£ 0

Description and scale of **key monetised benefits** by 'main affected groups' none

Total Benefit (PV) **£ 0**

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

This option allows less onerous approval schemes. It maintains choice and competition and will particularly assist smaller manufacturers. It is the choice strongly favoured by industry. Slightly smaller safety and environmental benefits as compared to option 1 will result.

Key Assumptions/Sensitivities/Risks Assumption is that there is limited rationalisation and that demand for IVA follows industry prediction. A range of +30%/-10% has been applied to the total cost, to take account of uncertainty. A full breakdown of the costs and benefits analysis can be found in the evidence base.

Price Base Year 2008	Time Period Years 11	**Net Benefit Range** (NPV) **£ - 98.15m to -67.95m**	**NET BENEFIT** (NPV Best estimate) **£ -75.5m**

What is the geographic coverage of the policy/option?				UK wide
On what date will the policy be implemented?				29 April 2009
Which organisation(s) will enforce the policy?				DfT/DoENI Agencies
What is the total annual cost of enforcement for these organisations?				£ 0
Does enforcement comply with Hampton principles?				Yes
Will implementation go beyond minimum EU requirements?				No
What is the value of the proposed offsetting measure per year?				£ N/A
What is the value of changes in greenhouse gas emissions?				£ Negligible
Will the proposal have a significant impact on competition?				No
Annual cost (£-£) per organisation (excluding one-off)	Micro N/A	Small N/A	Medium N/A	Large N/A
Are any of these organisations exempt?	No	No	N/A	N/A

Impact on Admin Burdens Baseline in 2010 (2005 Prices) (Increase - Decrease)

Increase of £ 3.8m Decrease of £ 1.9m **Net Impact** **£** 1.9m

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

Evidence Base (for summary sheets)

Impact Assessment of Vehicle Type Approval and implementation of Directive 2007/46/EC in UK (known as ECWVTA)

1 Introduction

1.1 Brief Background

Negotiations over several years have resulted in publication of the Recast Framework Directive (RFD) (2007/46/EC) for the approval of new motor vehicles and their trailers. This Directive builds on earlier Directives which have required the compulsory type approval of new passenger cars since January 1998. Many changes are introduced but the most important is the extension of EC Whole Vehicle Type Approval (ECWVTA) to all commercial vehicles, including vans, trucks, minibuses, buses, coaches and all sizes of trailer. This will apply harmonised construction standards throughout Europe thereby removing trade barriers for manufacturers and ensuring common safety and environmental requirements for operators and consumers. The RFD lists the safety and environment Directives which set minimum standards in areas such as braking, lighting and emissions. Exemptions from ECWVTA are permitted for vehicles manufactured in low volumes or for any vehicle approved individually. For these vehicles a Member State can offer national approval schemes, permitting sales or entry into service in its domestic market only. In negotiations on the Directive, the UK argued in support of such national flexibility. The UK also successfully argued in favour of the inclusion in the Directive of the new EC small series approval scheme, which offers a Europe wide approval for low volume car manufacturers.

The UK currently operates national approval schemes for cars (low volume and individual approval, the latter known as Single Vehicle Approval SVA), and for trucks (Goods Vehicle National Type approval), whilst for buses used to carry paying passengers there exists the Certification of Initial Fitness (COIF) scheme.

1.2 The Issue

The objective of the IA is to determine how to implement the ECWVTA Directive for new goods vehicles, buses coaches and trailers in a way that minimises the burdens on UK businesses while maximising the safety and environmental benefits.

The IA examines two options for implementing the RFD. These are

Option 1 Implement the ECWTA scheme only, i.e. accept and issue only European wide approvals

Option 2 Implement the ECWTA scheme together with national schemes for small series approval and individual approvals.

1.3 Rationale for Government Intervention

Under its European obligations the Government must implement the Directive. The Department for Transport are working towards doing this in a manner which offers a high level of assurance for safety and environmental aspects while limiting the burdens on UK businesses. There is a long history of government regulating certain aspects of safety and environmental protection on road vehicles, in order to provide a level playing field for industry and to protect consumers, road users and society in general.

2 Consultation to date

The Department for Transport (DfT) and the Department of the Environment in Northern Ireland (DoENI) have undertaken regular consultations with key representative bodies through a Stakeholder Group and with the wider industry through a series of informal consultations and on-going discussions. Beneath the formal Stakeholder group, officials have maintained regular dialogue with industry representatives on an informal basis and have discussed with them many aspects of both the Directive as it was negotiated and the planned UK implementation.

The automotive industry has been involved in the drafting of the Directive from the earliest stages of discussion and has been an important contributor to developing the concept of multi-stage type approval procedures. Industry was instrumental in requesting the option of national approval schemes (Option 2) as an alternative to full European approval. In general, industry is supportive of the Directive, provided a sufficiently long lead-time is built in to allow all manufacturers, including body-builders, to comply with the requirements on type-approval.

A particular industry concern expressed has been having routes to approval at reasonable cost. The Departments have listened to the industry concerns and taken them into account as far as possible within the confines imposed by the Directive. The small series and individual approval schemes, proposed within option 2, offer two alternative routes to approval at lower cost whilst maintaining proportionate standards of safety and environmental protection.

In research carried out in support of the development of this IA and in support of the wider implementation programme, consultations were undertaken with a wide range of trade organisations and companies in the industry sectors likely to be affected. This included:

- Regular Stakeholder group meetings;
- A telephone survey of a representative sample of 275 companies spread across the various sub-sectors of the vehicle industry;
- Face-to-face interviews with 35 companies carefully selected from the sub-sectors to provide a representative and balanced assessment;
- A detailed study of the trailer industry, including manufacturers, retailers and user groups, as this is a sector with no current mandatory approval regime;
- 12 seminars, attended by a total of around 250 companies
- VOSA 'Industry Survey 2' - a comprehensive postal and internet survey of the industry to gain further information on the likely demand for approval services from DfT Agencies VOSA and VCA.

Consultation has been as wide as possible, to ensure that

(1) the industry is aware of the regulatory changes that will be taking place as a result of the Directive and understands the likely timing and scope of the changes

and

(2) the IA is based on an accurate and up to date understanding of:

- what the main costs and benefits of the changes will be to industry, and
- the views of companies on the significance of the changes for their business and the industry.

Formal public consultation

A full public consultation took place in summer 2008, and was sent to over 3000 companies and representative bodies. Over 100 responded. Overall there was strong support to the general principles embodied in our implementation of ECWVTA, including the proposals for UK-wide national approval schemes and trailer entry into service schemes. A number of issues were raised, the majority of which related to bus construction and interior dimensions, school buses and wheelchair accessible vehicles.

We have thoroughly reviewed the responses and have worked closely with industry associations and stakeholders to address the issues raised. Consequently we have made a number of changes in response to the consultation comments, primarily in the following areas:

- Bus and minibus construction and interior fittings, in order to reduce the changes compared to current UK standards. The assumption outlined in section 3 (Outline of Approach) below, that there would only be a negligible cost under the new regime in terms of having to meet new technical requirements, was highlighted by consultees as being incorrect in a number of cases. Thus the technical requirements have been reduced where justifiable to ensure that the technical effort to comply will be negligible.
- For cars designed to carry wheelchair users in their wheelchairs, changes have been made with the aim of minimising the costs of compliance whilst maintaining or improving the level of safety enjoyed by occupants of such vehicles. Due to the small proportion of these vehicles as a percentage of the vehicle parc, the impact on the headline cost figures is negligible.
- A number of other minor changes have been made to reduce the engineering effort involved in complying with the national schemes for other vehicle categories, based on a similar rationale as that for buses and minibuses outlined above.

In conclusion, the changes made following the public consultation have not changed the overall cost figures.

3 Outline of Approach in preparing the evidence base

This section outlines some general aspects of the IA and the principles followed in the analysis.

- The IA addresses the sub-sectors affected range from truck manufacturers to low volume specialist car manufacturers in the UK market. The industry has been broken down into a number of sub-sectors and a brief description of each sub-sector is set out in Annex 2.

- Mass-production cars are not considered in the analysis as they have operated under ECWVTA since 1996 and are unaffected by the changes.

- The Directive states that any national schemes should aim to ensure a level of road safety and environmental protection which is equivalent, to the greatest extent practicable, to the level provided for by the provisions of full European approval.

Appropriate technical requirements for national small series and individual approvals judged as complying with this are not examined in detail here but have been widely consulted on with industry, who have indicated that in general they are relatively content with the proposals. The costs of demonstrating compliance with these requirements are calculated using the methodology described in Annex 3 and form the main quantifiable cost associated with these proposals.

- It is assumed that vehicles already comply with the current technical standards in existing national legislation, which already covers virtually all the technical requirements which prospective ECWVTA approval schemes would include. The main change being introduced by the Directive is the requirement to demonstrate to government approval agencies that these technical requirements are indeed met. There is therefore only a negligible cost in terms of having to meet new technical requirements, but there is an extra burden of demonstrating compliance which may be appreciable, particularly in those sectors where currently no demonstration of compliance is required.

4 Sectors Affected

The regulatory changes have the potential to affect companies in the twelve key sub-sectors of the automotive industry listed in Annex 2. The companies in these sub-sectors collectively account for 20.2% of all new vehicle registrations (the remainder are mass produced cars) but more significantly they represent 98% of the total number of UK automotive vehicle manufacturers.

Vehicle Registrations by Sub-Sector

TABLE 4.1 Sub-Sectors Affected

Sub-Sectors	Number of Companies	% of Total	Vehicles Registrations	% of Total
Car Converters	10	1	2,200	0.4
Specialist Cars	28	3	4,000	0.7
Special Purpose Vehicles (except WAV)	40	4	12,000	2
Special Purpose Vehicles (WAV)	15	1	9,000	1.5
Minibus Converters	31	3	2,500	0.4
Bus/Coach Chassis	18	2	6,500	1
Bus/Coach Bodybuilders	100	9.5	6,500	1
Bus/Coach Manufacturers	3	0.5	6,500	1
Vans & Light Trucks	32	3	326,000	57.5
Heavy Trucks	23	2	56,000	10
Truck Bodybuilders	450	43	60,000	10
Light Trailers	180	17	121,000	21.5
Heavy Trailers	120	11	21,300	4
Total All Sub-Sectors	1050	100	567,000	100
% of UK Auto Producers	**98%**	-	**20.2%**	-

Source: Society of Motor Manufacturer and Traders 2006

Note: To calculate the total number of vehicle registrations, the figures for bus/coach bodybuilders and truck bodybuilders are excluded to avoid double counting. The vehicle registration figure for bus/coach bodybuilders is already included in the bus/coach chassis figure and the vehicle registration figure for truck bodybuilders is already included in the van & light truck and heavy truck figures.

As can be seen from the table to some extent, the market characteristics of individual sub-sectors are very different. For example the heavy truck chassis market is dominated by a small number of large companies operating on a European wide basis. These companies already have to meet substantial technical and regulatory requirements for sale in the UK and other Member States.

In contrast the truck bodybuilder market comprises a large number of small companies which build bodies on to the chassis mentioned above (Multi-stage build). Many of these manufacturers are producing specialist and niche vehicles. Their products currently have to meet technical requirements in national legislation but the firms are not generally required to produce evidence of approval at the point of registration or entry into use.

5 Options

The ECWVTA Directive requirements are mandatory and must be implemented if the UK is to avoid infraction proceedings in the European Court of Justice. Maintaining the status quo is therefore not a tenable option; in addition it would severely disadvantage UK-based manufacturers and other customers of the UK approval authorities, who would be forced to go overseas to obtain EC approvals to sell their vehicles in other markets. Therefore this scenario has not been considered further.

At an early stage in the development of options for implementing the RFD, a decision was taken to follow the precedent set in other areas (cars, motorcycles, agricultural tractors) by introducing UK-wide implementing legislation. This meant that if a decision was taken to introduce 'national' schemes then these would be UK-wide approval schemes rather than separate approval schemes for GB and Northern Ireland. This proposition will simplify matters for manufacturers and government, and was well received when tested with stakeholders.

A wide range of potential options has been evaluated and narrowed down during the last few years of discussions with stakeholders, to the following:

Option 1 Implement the EC Whole Vehicle Type Approval (ECWTA) scheme only

Option 2 Implement the ECWTA scheme together with UK-wide national schemes for small series and individual approvals.

The implications of these options are described in more detail below.

Option 1 Implement the ECWTA scheme only

This option involves implementing only EC Whole Vehicle Type Approval (ECWVTA) for all categories of vehicle and not implementing the UK national small series type approval (NSSTA) or individual vehicle approval (IVA) schemes permitted by the Directive. Low volume and specialist car manufacturers would be able to utilise the European Small Series (EC SSTA) scheme for cars (with a limit of 1000 vehicles of a type per year) but low volume manufacturers in other sectors would be forced to apply for ECWVTA for all their products, regardless of volumes sold.

Option 2: Implement the ECWVTA Scheme, together with New National Schemes.

Under this option, the UK would use the “small-series” and “individual approval” derogations set out in the Directive in order to introduce National Small Series Type Approval (NSSTA) and Individual Vehicle Approval (IVA). These national schemes would be available to manufacturers building vehicles for sale only in the UK. IVA would also be available to independent importers of vehicles from outside the EC. These schemes would consist of less onerous test requirements and approval procedures, which deliver the best possible safety and environmental performance in a proportionate way whilst minimising the costs to industry of demonstrating compliance.

Manufacturers would have to decide whether to comply with ECWVTA or one of the national schemes for each range of vehicles that they make, depending on a number of factors such as expected sales volume and whether export sales are planned. The national approval schemes would permit more customisation than is possible under ECWVTA, and thus enable a wider variety of products to come to market. In particular, the IVA scheme would consist of an

inspection of every vehicle, making it the most feasible route for companies making unique or bespoke products that are tailored to the customer's needs.

Industry strongly supports this option, since companies can select the scheme that is best suited to their market needs, rather than being forced by regulation into one route.

6 Costs and Benefits of the Options

6.1 Introduction

This section outlines the costs and benefits of each option. The costs and benefits are discussed mainly in terms of overall costs but a breakdown of some costs for individual sub-sectors is also discussed.

Costs and benefits are assessed in comparison to the baseline case, whereby the current approval regime is maintained. It is assumed that the total yearly sales of vehicles in UK and Europe, and the current sales mix between vehicle categories, would continue unchanged but, depending on the option, the product range available from individual manufacturers could either remain unchanged or be rationalised.

Costs have been divided into quantifiable and non-quantifiable costs. The cost of gaining approval for vehicles is the main cost that can be quantified and has several elements - the fees paid to government approval agencies, the cost of physical testing to demonstrate compliance, the cost of the back-office technical support to the process, and the cost of proving that ongoing vehicle production is in line with the approved vehicle type (known as Conformity of Production). A detailed description of how the costs of approval were calculated is contained **in Annex 3** and a summary of the total predicted costs is shown in tables in **Annex 4.**

Most of the costs other than approval costs, and all of the benefits, are very difficult to quantify although some are likely to be very significant. In particular there are likely to be substantial non-monetised benefits of implementing the Directive according to Option 2 rather than Option 1. These relate to maintaining choice in the market place and ensuring the continuing viability of small and medium sized businesses. It has not been possible to make accurate quantitative predictions of this impact with any confidence.

6.2 Option 1 - Implement the ECWVTA Scheme only

6.2.1 Quantifiable Costs and Benefits

Two possible scenarios were considered at the initial stage of analysis . On one hand a 'no rationalisation' scenario, assuming the market remains as today, and on the other a 'significant rationalisation' scenario whereby the choice of vehicle models available is significantly decreased due to the high costs of initial approval and the elimination of product lines sold in low numbers, which would be unlikely to remain profitable.

Initial cost: The approval costs associated with implementation of Option 1 have been calculated as an 'Initial cost' (see Annex 3) of £190 m (assuming no rationalisation due to the

new approval regime) or £109m (assuming significant product rationalisation due to the new regime).

Taking into account the current approval costs under the existing regulatory regime (expressed as an Initial Cost) of £16m, the resulting increase in cost would be either £174m or £93m depending on the degree of rationalisation which resulted.

All indications are that the higher cost scenario is unlikely to be realised in practice. It is likely that significant product rationalisation would take place if option 1 was implemented due to a 'double burden' on producers in sub-sectors not currently subject to an approval regime - they must demonstrate compliance for the first time, and do so using a regime (ECWVTA) which is designed to suit mass production and not low volume or customised production. Alternatively, an increasing proportion of the vehicle manufacturing industry may begin modifying vehicles after they have been registered, rather than before. Altering working practices in this way would provide a means of avoiding the requirements of the Directive because post-registration modifications are not subject to its requirements. For these reasons the lower cost, rationalised (or less compliant) scenario forms the basis of the central cost estimate.

Annual cost: The second, more likely scenario (significant rationalisation) has been further developed by calculating the increase in costs applicable for the first 11 years of the new regime, taking into account the phase-in period from 2009 to 2014. The headline cost figures are shown below.

Option 1: Cost increase by year 2009-2019 (product rationalisation) (£millions)

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Cost	2.5	3.0	25.7	18.5	24.8	14.2	5.7	8.8	8.8	8.8	8.8

Costs over 11 years

Total cost increase (undiscounted)	Annual Average	Total cost - Net Present Value (in 2008 prices)
129.34	11.76	106.63

Given the difficulty of making accurate predictions due to such fundamental changes to the approval regime, it is considered that a range of 20% either side of this figure is a possibility for outturn costs. This gives rise to a likely cost range of £85.3m to £128m.

Discussion of Quantifiable Cost by sub-sectors

Approval schemes already exist for various categories of vehicle, such as heavy truck chassis. The approval costs for these sectors would not increase greatly under the new regime and in fact in some cases may decrease because instead of applying for 27 approvals to cover sale in all Member States, only one (European) approval is needed. Conversely for sectors such as trailers, there are currently no approval costs for sale in the UK and so the increase in cost is high. The move to ECWVTA for heavy truck, van and bus manufacturers is therefore significantly less onerous than for trailer manufacturers or bodybuilders who currently have minimal or zero administrative costs associated with demonstrating compliance.

A comparison of additional costs is illustrated in Table 6.1 below, based on the 'significant rationalisation' scenario. Each sub-sector is classified as low, medium and high cost, depending on the level of compliance/assurance they currently have to meet.

TABLE 6.1 Option 1 ECWVTA only – Breakdown of Additional Costs by Subsector in NPV and Average Annual Cost (2009-2019)

Vehicle Sector		Subtotals NPV 2008	Average (annual)
GVNTA &COIF (High Current Assurance)			
Heavy Truck Chassis Manufacturers	N2 / N3	1.29	0.13
Bus/Coach Chassis Manufacturers	M2 / M3	1.52	0.16
Bus/coach Bodybuilders	M2/M3	-2.46	-0.52
Bus/Coach Manufacturers	M2 / M3	-4.33	-0.52
Van/Light Truck Manufacturers	N1	-7.34	-0.84
Special Purpose Vehicle Manufacturers (WAV)	M1	-6.06	-0.73
National Low Volume or National Individual Type Approval (Medium Current Assurance)			
Car Converters	M1	-8.11	-0.92
Specialist Cars Manufacturers	M1	2.65	0.24
Minibus Converters	M2	-1.21	-0.18
Zero or Near Zero (Current Low Assurance)			
Truck Bodybuilders	N1 / N2 / N3	59.91	6.82
Light Trailer Manufacturers	O1 / O2	37.08	4.27
Heavy Trailer Manufacturers	O3 / O4	26.62	3.04
Special Purpose Vehicle Manufacturers (except WAV)	M1	7.07	0.78
Total Cost Increase (ECWVTA only less Current Schemes)		106.33	11.76

Costs in millions

It is estimated that the NPV and average annual cost would change as follows

- Mostly decrease for sub-sectors currently subject to a high level of assurance testing, ranging from -£7.34m to £1.52m in net present value terms (2008 prices), and from -£0.84m to £0.16m annual cost.

- Mostly decrease for sub-sectors currently subject to a medium level of assurance testing, ranging from -£8.11m to £2.65m NPV and from -£0.92m to £0.24m annual cost .
- Considerable increase for sub-sectors (truck bodybuilders and trailer manufacturers) currently subject to zero or near zero assurance testing, ranging from £7.07m to £59.91m NPV and from £0.78m to £6.82m annual cost.

6.2.2 Unquantified Costs and Benefits

Unquantified Costs

There are other costs (aside from approval costs) associated with adoption of option 1 which are difficult to determine precisely. High volume manufacturers in the different sectors could relatively easily cope with the requirements of obtaining European Whole Vehicle type approval (ECWVTA) for their mass-produced vehicles, but in market sectors where specialised vehicles are demanded manufacturers have consistently indicated that implementing the Directive according to Option 1 would have severe consequences. European type approval incurs high upfront costs to firms (as outlined above) ahead of any vehicle sales, and requires a manufacturer to predict the nature of any variations on the base product which may be required in the future, in order that these are covered by the initial type approval.

Smaller manufacturers in particular are expected to incur difficulties with affordability and cash flow if they were required to obtain European type approval and would likely have to cut back on their model ranges, limiting the variations from the base product. This would reduce the choice available in the marketplace and drastically limit the customers' ability to request a tailor-made product that was well-suited to meet differing wants and needs.

Industry advise us that a mandatory requirement for ECWVTA on all vehicles would cause enormous difficulties for numerous companies working in niche and bespoke sectors, such as truck and trailer bodybuilders, those in the specialist sports car sector and those in sectors that make Wheelchair Accessible Vehicles and Ambulances where the positive benefits to society of having a tailored range of vehicles are large. Customised products are likely to become very expensive and difficult to obtain, if they could be obtained at all. It has not been possible to put a monetary value on the effect this would have on society in terms of the loss of choice and loss of utility resulting from the introduction of this Option. Nonetheless this would entail a significant cost to the UK.

An alternative for some manufacturers would to modify vehicles after registration, perhaps by adding special equipment or changing the vehicle configuration to fulfil specific needs. This would not be feasible for all firms but these incentives could lead to increased complexity in the market and distort working practices.

In the potential worst case outcome, industry advise that many businesses would be forced to cease trading, resulting in job losses. Many products enjoyed by consumers or necessary to industry today would become prohibitively expensive and thus effectively unobtainable.

Unquantified Benefits

Option 1 is expected to provide the greatest level of assurance that the European vehicle standards concerning safety and the environment are being met by all new vehicles. This may result in some safety and environmental benefits compared to today, particularly in the sectors where no approval is currently required, such as trailers and truck bodybuilding. However it is not possible to quantify these benefits since the current level of non-compliance, whilst thought to be low, is unknown. Some future non-compliance might also occur, due to 'post-registration modification'. Casualties associated with accidents involving HGV, LGV, bus/coach (LPV) and

minibuses are estimated to be around 56000 injuries per annum at a cost of approximately £3.4 billion in 2008 prices. If it exists, any safety benefit is likely to be small but even a very small effect on safety could significantly benefit society.

Although vehicles should already comply with the technical requirements today, the introduction of Conformity of Production controls in sectors not currently subject to this, and the migration from bespoke to standardised products, might result in increased level of quality from products available in the market. Again it is not possible to quantify this benefit but it is likely to be relatively small.

Another benefit of Option 1 is the increased ability for companies to export products currently sold only in domestic markets to the rest of Europe without any further barriers to trade. The marginal costs of exporting are reduced since national approval is no longer necessary, although other costs of exporting, such as setting up a dealer network, would remain. Again it has not been possible to quantify this benefit, although it may ultimately result in more competitive markets and lower costs to consumers. Alongside this, products already sold throughout Europe, such as light trucks and heavy truck chassis, will benefit from elimination of the need to gain type approval in 27 Member States. The latter benefit has already been factored into the calculations of approval costs provided above.

6.3 Option 2 - Implement the ECWVTA Scheme together with the New National Schemes

6.3.1 Quantified Costs and Benefits

Early considerations

We considered that, in contrast to Option 1, significant product rationalisation with Option 2 would be unlikely. This is because under Option 2 it would be possible to gain Individual Vehicle Approval for products which are unique or made in very small quantities, thus allowing a low cost route to market.

Therefore we estimated that in the future, vehicle sales would continue with more or less the same product mix as exists currently. Using this rationale, the approval costs were calculated as an 'Initial cost' (see Annex 3 for definition) of £62m. Taking into account the current (baseline) cost of £16m, the resulting increase in cost would be £46m.

Annual cost: This estimate was further developed by calculating for each year the costs applicable in the first 11 years of the new regime, taking into account the phase-in period from 2009 to 2014. The total cost under this calculation was £234.41m. This equates to a total of £179.3m in Net Present Value terms (in 2008 prices).

VOSA Industry Survey 2

In late 2007 VOSA conducted an industry survey, the second of its kind following an earlier similar survey. The intention was to ascertain the likely level of demand for IVA testing from 2009 onwards. Information taken from this survey has been used to update our earlier estimates, predict the likely take-up of EC and national approval schemes and calculate the total approval costs. The DfT and its Agencies embarked on a comprehensive communications exercise in early 2007 and this is likely to have contributed to an increased industry understanding of type approval. The survey reflects this increased understanding, which is likely to lead to industry adopting various techniques to reduce the costs of approval, including some rationalisation of the models on offer. Nevertheless this rationalisation is not on the scale of that predicted to occur under Option 1.

Initial cost: The approval costs associated with implementation of Option 2 based on this survey have been estimated to impose an 'Initial Cost' (see Annex 3) of £42 m. Taking into account the current (baseline) approval costs of £16m, the resulting increase in cost would thus be £26m.

Annual cost: The cost increases have also been estimated for the first 11 years after implementation, taking into account the phase-in of the new regime over 5 years and different introduction dates for different categories. The headline cost figures are shown below.

Option 2 Cost increase by year 2009-2019 (Industry survey) (£millions)

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Cost	2.5	3.1	2.0	2.5	4.6	11.7	14.2	14.5	14.5	14.5	14.5

Total cost over 11 years

Total cost increase (undiscounted)	Annual Average	Total cost - Net Present Value (in 2008 prices)
98.33	8.94	75.5

Given the difficulty of making accurate predictions due to such fundamental changes to the approval regime, it is considered that a range is a possibility for outturn costs.

We consider there may have been some under-reporting of expected demand for Individual Vehicle Approval in the survey, since the sections of industry which are most likely to use IVA are also the smallest companies least likely to have been aware of the survey or have responded to it. Since volume of IVA is proportional to the total costs of approval, under-reporting of demand for IVA will lead to under-reporting of the total approval costs. It therefore seems inappropriate to apply a range of 20% either side of the estimated figure, since the true figure for approval costs is more likely to be higher than lower than the estimated figure. Applying a range 10% lower and up to 30% higher would seem reasonable.

This would give rise to a likely cost range of £67.95m to £98.15m.

Quantified costs by sub-sector

The costs will vary widely across sub-sectors, depending on what the current baseline compliance costs are for a company in that sub-sector.

Approval schemes already exist for various categories of vehicle, such as heavy truck chassis. The approval costs for these sectors would not increase greatly under the new regime and in fact in some cases may decrease because instead of applying for 27 approvals to cover sale in all Member States, only one (European) approval is needed. Conversely for sectors such as trailers, there are currently no approval costs for sale in the UK and so the increase in cost is high. The move to ECWVTA for heavy truck, van and bus manufacturers is therefore significantly less onerous than for trailer manufacturers or bodybuilders who currently have minimal or zero requirements to demonstrate compliance.

A comparison of additional costs is illustrated in Table 6.2 below, based on the Industry survey figures. Each sub-sector is classified as low, medium and high cost, depending on the level of compliance/assurance standards they currently have to meet.

TABLE 6.2 Option 2 ECWVTA plus National Schemes – Breakdown of Additional Costs by Subsector in NPV and Average Annual Cost (2009-2019) (IS2)

Vehicle Sector		Subtotals NPV 2008	Average (annual)
GVNTA &COIF (High Current Assurance)			
Heavy Truck Chassis Manufacturers	N2 / N3	2.01	0.21
Bus/Coach Chassis Manufacturers	M2 / M3	1.52	0.16
Bus/coach Bodybuilders	M2/M3	-14.28	-1.69
Bus/Coach Manufacturers	M2 / M3	-2.31	-0.27
Van/Light Truck Manufacturers	N1	1.96	0.20
Special Purpose Vehicle Manufacturers (WAV)	M1	0.1	0.01
National Low Volume or National Individual Type Approval (Medium Current Assurance)			
Car Converters	M1	0.2	0.02
Specialist Cars Manufacturers	M1	2.68	0.28
Minibus Converters	M2	0.78	0.08
Zero or Near Zero (Current Low Assurance)			
Truck Bodybuilders	N1 / N2 / N3	37.31	4.52
Light Trailer Manufacturers	O1 / O2	16.16	1.95
Heavy Trailer Manufacturers	O3 / O4	11.91	1.43
Special Purpose Vehicle Manufacturers (except WAV)	M1	17.45	2.04
Total Cost Increase (ECWVTA + National Schemes less Current Schemes)		75.5	8.94

Costs in millions

It is estimated that the NPV and average annual cost would change as follows

- Increase slightly or decrease appreciably for sub-sectors currently subject to a high level of assurance testing, ranging from -£14.28m to £2.01m NPV and from -£1.69m to £0.2m annual cost.

- Increase slightly for sub-sectors currently subject to a medium level of assurance testing ranging from £0.2m to £2.68m NPV and from £0.02m to £0.28m annual cost.
- Increase considerably for sub-sectors (truck bodybuilders, trailer manufacturers and special purpose vehicles (except WAV)) currently subject to zero or near zero assurance testing, ranging from £11.91m to £37.31m NPV and from £1.43m to £4.52m annual cost.

6.3.2 Unquantified Costs and Benefits

Unquantified Costs

Option 2 entails some initial cost to vehicle manufacturing firms who will need to undertake more onerous procedures to obtain approval for their vehicles than is currently the case. However, these upfront costs will tend to be lower than option 1, because low volume manufacturers have the choice of only obtaining national approval, and the existence of Individual Vehicle Approval (IVA) would mean that there is a route to approval for bespoke vehicles which is much less burdensome.

Industry comments indicate that using national approval schemes to demonstrate compliance for models where only a handful of vehicles are built would be significantly less expensive than obtaining approval using the ECWVTA procedure, which would be required by option 1. Therefore option 2 is not expected to have the same drastic effect on the decision of manufacturers to supply many different types of vehicle to the market that Option 1 would.

There may be some difficulties for vehicle manufacturing companies in the sectors not subject to any formal approval process today in acclimatising to the new regime of option 2. However these are not expected to lead to any large-scale impact on competition or restructuring of the market. Consequently the proposed national approval schemes of option 2 are judged to represent the most proportionate means of implementing the RFD, delivering the maximum safety and environmental benefits with the least impact on industry.

Unquantified benefits

The most significant consumer benefit of option 2 relative to option 1 lies in offering a route to maintaining current levels of choice between different specifications and designs of vehicle in the market. Even if there was some reduction in the range of vehicle types manufactured and sold in the UK, which is likely to be the case due to attempts by manufacturers to minimise the volume of Individual Approvals they require, there would still be a markedly higher level of consumer choice than option 1. The value of this in terms of providing vehicles that are better suited to the needs of consumers and facilitating a wider range of economic activities has not been calculated due to the uncertainties involved, but is likely to be very significant.

As for Option 1, although on a slightly lower level since some European standards will not be applied in full, there will be some benefits from providing assurance that the European vehicle standards concerning safety and the environment are being met by all new vehicles, and from the improvement in quality expected to result from adoption of Conformity of Production standards. This may result in some safety and environmental benefits compared to today, particularly in the sectors where no approval is currently required, such as trailers and truck bodybuilding. These benefits have not been quantified since the current level of non-compliance is not known exactly, but are likely to be relatively minor.

Another benefit of Option 2 shared with Option 1 is the increased ability for companies to export products from the UK to the rest of Europe without any further barriers to trade by choosing

ECWVTA. The marginal costs of exporting are reduced since national approval is no longer necessary, although other costs of exporting, such as setting up a dealer network, would remain.

In addition, manufacturers choosing national approval will be able to apply for recognition of this in other countries, resulting in increased transparency and making it easier to export than today, although not as easy as if ECWVTA was held. It is for manufacturers to choose in advance the approval scheme which best meets their needs, based on expectations for a particular product. Again, this benefit has not been quantified, although it may ultimately result in more competitive markets and lower costs to consumers.

7 Competition Assessment

This section considers the impact of the new Regulations on competition within the vehicle manufacturing industry.

The industry sectors affected have a high number of diverse manufacturers both large and small; none have a dominant market share and competition is fierce. In some sectors, the market is especially diverse with at least 100 manufacturers.

Overall it is expected that there will be a continuation of the existing trend of market driven consolidation and rationalisation of the supply chain. This will result in increased outsourcing of sub-assemblies, the larger manufacturers of truck chassis adding bodywork as part of their production activities and the opening up of the UK market to more imports and to the entry of larger continental bodybuilders, the latter possibly through take over of existing companies or by creating new facilities. Vehicle safety regulation is a limited part of the story; it must be kept in perspective against existing business competition pressures which will continue to affect the industry.

The proposal to implement the RFD is not expected to directly limit the range of suppliers or reduce the incentives on suppliers to compete vigorously. There may be some indirect effect on the range of suppliers, and on the ability of suppliers to compete, depending on the option chosen: this negative impact is outlined in more detail below.

Option 1 is expected to have a significant indirect impact on competition in all the sub-sectors, with the exception of heavy trucks, light trucks and vans which are dominated by large manufacturers and importers who already operate on a European-wide market basis. The adverse competition impact in terms of reducing numbers of suppliers in the market and raising barriers to entry for other potential manufacturers is likely to be much greater than for Option 2. It could potentially threaten the viability of significant numbers of body builders who produce individual products in low numbers, since the costs of European approval will be difficult for them to absorb, unlike high volume manufacturers who will be able to absorb the additional overhead with ease. This would indirectly limit the range of suppliers and artificially restrict the ability of some suppliers to compete.

The impact of Option 2 on competition is expected to be much less significant. The National approval schemes will provide a lower cost route to market for low volume manufacturers and so should allow them to compete with larger companies on a much more level basis than Option 1. By providing the industry with the choice of approval schemes that it has requested, including the option of Individual Vehicle Approval, the effect on competition will be minimised since both the range of suppliers, and the ability of suppliers to compete, will be broadly unaffected.

8 Small Firms' Impact Test

The new Regulations are likely to have some impact on small and medium sized businesses (defined as businesses with fewer than 250 employees) within the industry sub-sectors affected by the Directive. The exceptions to this are heavy trucks (N2/N3) and vans and light trucks (N1). With this in mind, the Department undertook a "Small Firms Impact Test". The test was intended to determine the impact of the Regulations on small business and to consider how any adverse or unintentional impacts on small firms might be reduced or avoided.

250 SMEs were consulted as part of a telephone survey, and face to face interviews were carried out with 20 SMEs out of an overall group of 35 companies. In addition we sought the views of the Small Business Services (SBS) and its successor Enterprise Directorate in the Department for Business, Enterprise and Regulatory Reform, as well as the views of the Federation of Small Businesses, as part of our consultation with stakeholders.

The SMEs consulted advised us that type approval would be too onerous for some companies, and so it was important to have the option of an individual vehicle approval scheme. They were in favour of Option 2 and commented that Option 1 would cause grave difficulties for SMEs, possibly forcing a number of them out of business.

The key conclusions in respect of the impact that implementing the Directive is likely to have on small businesses are outlined below. We are working to reduce the impact on SMEs of our national schemes in two main ways - by minimising the administrative burden associated with providing proof of compliance, and by offering appropriate relaxations to the Directive requirements that nonetheless ensure that the level of safety and environmental protection is as high as is practicable. Moreover the long lead time before approval becomes mandatory for completed trucks will allow small bodybuilders to gain experience with the new regime.

<u>General Impact</u>

- The introduction of ECWVTA (Option 1) would have a significant and disproportionate effect on smaller businesses, possibly forcing some of them to close.
- The impact would be reduced by the introduction of National schemes for Small Series and Individual Type Approval (Option 2), from which small businesses would be the major beneficiaries. However, some adverse impacts on small firms would remain and we will continue to work to mitigate these.

<u>Companies Affected</u>

The two groups most affected will be:

- Bodybuilders (bus and coach, and truck). They account for 55% of the total number of SMEs affected.
- Trailer manufactures (light and heavy)

Complexity of Impact

The precise impact on small businesses of either Option 1 or 2 is anticipated to be complex because of significant differences in composition and character between the sub-sectors, the multi-stage build requirements of certain types of vehicles and the existence of niche and specialised product segments.

9 Enforcement, Sanctions and Monitoring

The implementation of the Directive in the UK will follow established practice as far as possible and will be linked to other regulatory requirements (such as the requirement to register a motor vehicle) in an integrated manner.

Enforcement, Sanctions and Monitoring

ECWVTA and National Type Approval Schemes will be administered and enforced in Great Britain by DfT's agencies, VCA, VOSA and DVLA and in Northern Ireland by DVA, an agency of DoENI. These agencies are well advanced in planning for the implementation of the regulatory changes and the changes in their role. The following describes the role of each.

- The Vehicle Certification Agency (VCA), which is the UK Approval Authority for type approval schemes.
- The Vehicle and Operator Services Agency (VOSA) which performs testing and enforcement, is responsible for IVA schemes in GB and the heavy trailer scheme across UK.
- The Driver and Vehicle Agency (DVA) - responsible for the IVA schemes in N Ireland.
- The Driver and Vehicle Licensing Agency (DVLA) whose role is centred around licensing and registration of vehicles - ensuring that only motor vehicles accompanied by evidence of compliance with the relevant standards are permitted to enter service in the UK.

Enforcement

Existing enforcement mechanisms and programmes will continue. For example, examples of new vehicles and parts are currently purchased and tested by the VCA to ensure that the vehicles or parts purporting to comply, actually do comply. No extra funding for enforcement is deemed necessary, on top of existing funding.

Monitoring

There is no formal review or monitoring process in the Directive. However monitoring the implementation of national schemes will take place on a regular basis with our existing stakeholder network.

10 Change in Administrative Cost in 2010

The administrative cost (or 'administrative burden') is (for the purposes of this IA) defined as one of three components which added together make up the overall costs to a manufacturer of demonstrating the compliance of his vehicle and thus obtaining a vehicle approval. The other two components of the cost of approval are excluded, they are 1) the test fees paid to government or independent testing agencies for conducting the tests, and 2) the cost of taking the vehicle or vehicles for testing. The latter might include hire of test track or laboratory and associated costs. The engineering development costs incurred in developing a vehicle to meet regulatory standards are not considered here since they would be incurred regardless of whether or not the vehicle had to demonstrate compliance.

The administrative burden represents the cost of the administrative activity necessary to obtain approval. It varies significantly depending on the approval scheme being used. When applying for approval for a unique vehicle using Individual Vehicle Approval (IVA), the cost will clearly be far lower than for obtaining European type approval, which involves obtaining around 45 different Directive approvals as well as the overall whole vehicle approval.

The administrative activities consist of collating information and preparing the necessary documents, communications with the approval body, completing application forms, and applying for tests. Table 10.1 below shows some examples of our estimates for the administrative burden incurred in making an application for approval under the different approval schemes. They are based on a nominal labour cost of £40 per hour.

TABLE 10.1 Admin Cost by Sub-Sectors Affected

Test and vehicle type	Admin burden (£) per approval
EC approvals	
ECWVTA / heavy truck chassis manufacturer	32,200
ECWVTA / truck bodybuilder	9,600
ECWVTA / specialist car manufacturer	39,700
ECWVTA / special purpose vehicle (WAV)	9,800
ECWVTA / bus or coach bodybuilder	17,600
EC SSTA / specialist car manufacturer	35,000
EC SSTA / car converter	10,800
New national approvals	
NSSTA / heavy truck chassis manufacturer	22,600
NSSTA / truck bodybuilder	7,000
NSSTA / specialist car manufacturer	24,900
IVA/ bus/coach bodybuilder	693
IVA/ truck bodybuilder	384
IVA/ passenger car	292
Currrent national approvals	
SVA / passenger car	274
LVTA / specialist car manufacturer	25,504
LVTA / special purpose vehicle (WAV)	9,259
GVNTA / heavy truck chassis manufacturer)	10,900
COIF / bus or coach	433

The total extra administrative burden has been calculated for option 1 and option 2 compared with the baseline of current schemes. The figures above (plus figures for other sectors not shown) have been combined with estimates for the numbers of applications under each approval scheme in 2010, to produce Table 10.2.

Table 10.2 below includes the following:

- the change in approval costs where there is an increase (EC schemes for option 1 and EC plus new national schemes for option 2),
- the change in costs for current national schemes, where there is a decrease in cost,
- the resultant (net) change.

TABLE 10.2 Total Changes in Administrative burden in 2010 (£millions, 2005 prices)

Option 1 ECWVTA only	
Change due to approvals increasing (ECWVTA, ECSSA)	1.37m
Change due to approvals decreasing (current national schemes)	-1.97m
Resultant change	-0.60m
Option 2 New Schemes (IS2)	
Change due to approvals increasing (ECWVTA, ECSSA plus new national schemes)	3.84
Change due to approvals decreasing (current national schemes)	-1.92
Resultant (net) change	1.92m

11 Annual Cost per Organisation

Information gathered during the earlier work leading up to the Draft Impact Assessment and during the consultation exercise has been reviewed, although the latter yielded little useful information on this subject. It has not been possible to generate reliable cost estimates by company size. The following are the main reasons:

- The new requirements cover a variety of different vehicle types and the compliance costs differ significantly between these various vehicles types. Therefore, two companies of equivalent size and output that operate in different vehicle sectors would not be expected to have the same compliance costs. Moreover, depending on the vehicle sectors or sub-sectors in question, these differences in compliance cost can be considerable.
- The new requirements provide companies with the option of three different schemes to demonstrate compliance and there are differences in the compliance costs associated with each of these schemes. Therefore, even for two companies of equivalent size and output that operate in the same vehicle sub-sector, if they choose different schemes to demonstrate compliance, their compliance costs will differ and this difference could be large. At present there is no evidence available to map size of company to the approval scheme used.

The net effect is that two companies of equivalent size can have very different costs, and even for two in the same sector, significant differences can exist. This spread of costs is inherent given the variety in the industry and it is impossible to estimate the actual costs with any degree of accuracy, in order to obtain the average.

Specific Impact Tests: Checklist

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

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

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

Annexes

Annex 1 - Other Impact tests not covered in Evidence Base

11. Sustainable Development Impact test. This Directive has negligible impact on Sustainable Development. There is a Directive on Recycling and Re-use of vehicles within the canon of EC automobile legislation, and this Directive may have some small effect on improving the compliance of light trucks with that Directive, but overall the effect will be negligible.

12. Carbon Assessment. The Directive has negligible impact on Carbon. The Directive sets up a structure under which a requirement to declare carbon dioxide emissions could be extended to new vehicle categories in the future, thus helping consumers to choose vehicles on the basis of low carbon emissions, but by itself has negligible direct impact.

13. Other environment. The Directive has negligible impact on the environment. The harmonisation of requirements for heavy vehicles could produce some benefits from Environmental Directives which are already applicable, due to improved enforcement of these Directives for categories of motor vehicle not currently subject to approval, but it is not possible to quantify this benefit.

16. Disabled equality. The Directive introduces harmonised European provisions for approval of wheelchair accessible vehicles. These are vehicles which allow a wheelchair user to travel in the vehicle whilst remaining in his wheelchair. It is expected that increased safety for wheelchair users will result, as well as a reduction in prices since the creation of a single European markets should allow economies of scale to be exploited. Increased availability and lower prices of such vehicles will improve the mobility of wheelchair users, particularly the severely disabled who are unable to leave their wheelchair, and improve their quality of life, although it is not possible to quantify this benefit. Without national approval schemes, some manufacturers of vehicles used by disabled people may reduce their range of specialist vehicles, so that option 1 would have an adverse impact on disabled equality.

Annex 2 Vehicle Sub Sector Definitions

Vehicle Sub Sector		Definition
Car Converters	M1	Companies that convert complete M1 category vehicle to make them suitable for specific purposes (e.g. taxis, limousines, etc.).
Specialist Car Manufacturers	M1	Companies that produce specialist M1 category vehicles, such as sports cars, in small volumes (e.g. Caterham, TVR, etc.).
Special Purpose Vehicle Manufacturers (except wheelchair accessible vehicles)	M1	Companies that manufacture or convert vehicles into one of the categories of special purpose M1 category vehicle defined in the Recast Framework Directive, other than wheelchair accessible vehicles (i.e. motor caravans, ambulances, etc).
Special Purpose Vehicle Manufacturers (wheelchair accessible vehicles)	M1	Companies that manufacture or convert M1 category vehicles into wheelchair accessible vehicles (defined as special purpose vehicles in the Directive).
Minibus Converters	M2	Companies that convert N1/N2 category van or chassis cab type vehicles into minibuses.
Bus/Coach Chassis Manufacturers	M2/M3	Companies that manufacture incomplete M2/M3 category chassis for completion by bus/coach bodybuilders.
Bus/Coach Bodybuilders	M2/M3	Companies that manufacture completed M2/M3 category vehicles, based on the chassis provided by the bus/coach chassis manufacturers.
Bus/Coach Manufacturers	M2/M3	Companies that manufacture complete M2/M3 category vehicles in a single stage (Note: this category includes LDV and Ford).
Van/Light Truck Manufacturers	N1	Companies that manufacture N1 category vehicles, including complete vehicles (i.e. vans) and incomplete vehicles (i.e. chassis cabs).
Heavy Truck Chassis Manufacturers	N2/N3	Companies that manufacture N2/N3 category vehicles, including complete vehicles (i.e. vans and tractor units) and incomplete vehicles (i.e. chassis cabs).
Truck Bodybuilders	N1/N2/N3	Companies that install bodywork and other specialist equipment (e.g. cranes, tail lifts, etc.) onto N1/N2/N3 category chassis cabs.
Light Trailer Manufacturers	O1/O2	Companies that manufacture O1/O2 category vehicles, including trailer caravans.
Heavy Trailer Manufacturers	O3/O4	Companies that manufacture O3/O4 category vehicles, including full trailers and semi-trailers for articulated vehicle combinations.

Annex 3 - Calculation of Approval Costs

General Approach

Costs have been calculated in the following manner. Costs are considered in terms of both initial expenditure and the ongoing cost of complying with the options over the 11 year appraisal period. The overall approach involved four steps to establish the additional costs that options 1 and 2 would entail.

1. Determining the costs associated with current approval tests and checks, which would be incurred if no action was taken. Doing nothing is not a feasible option but these costs provide a baseline for comparison. A high level summary of the results of this is shown in the first part of **Annex 4**.
2. Costs of options 1 and 2 were subsequently determined relative to there being no approval checks or tests in place, and assuming a stable situation following the changeover to the new regime. A high level summary of the results of this is shown in the second and third parts of **Annex 4**.
3. These data were used to calculate the initial extra costs ("Initial Cost") of moving from the current (baseline) system of vehicle approval to the requirements of options 1 and 2. (In other words – the difference between future and current costs. The extra costs imposed by the new schemes are the calculated future costs minus the current costs). The Initial Costs for each option were totalled and are shown in section 6 under Quantifiable costs.
4. The above approach is a little artificial in terms of considering the total costs of the new regime since it assumes the changeover to the new regime happens literally overnight. Therefore, the additional costs of the new regime were estimated over the entire appraisal period, covering 11 years from 2009-2019. This appraisal period was chosen to capture the recurring costs associated with a more comprehensive approval system for several years beyond the transition period set out in the Directive. Each sector of industry was profiled, taking account of the sector's maturity and expected developments, based on data provided by industry, and taking into account the transition period provided in the legislation. This "calendarised" cost profile is examined for options 1 and 2, to estimate the extra cost relative to the baseline.
5. Overall cost estimates are presented in Section 6 as a Net Present Value (NPV) in 2008 values, and in terms of the average annual cost over the 11 year appraisal period. In addition, a breakdown is provided for sectors. NPV is the sum of the discounted flow of costs and benefits over the period. The annual average is the undiscounted arithmetic mean value over the period.

The "Initial Cost" is calculated on a simplified basis, by assuming that all manufacturers would apply for type approval at the same time and that all of

the costs would be accrued in one year. It also includes one full year's worth of IVA approvals. Though such an overnight change would not occur in practice, as some sectors change in different years, this estimate gives a ready basis for comparison of the upfront costs associated with implementing the RFD via either option. The estimate is based on the costs associated with approving model types, or in some cases individual vehicles, in this initial year for the range offered by all manufacturers in that year and scenario. As part of the analysis for different options, the number of approvals is based on the breakdown developed for option 1 (ECWVTA only) and option 2 (ECWVTA with new national schemes) and the scenarios considered.

How the Costs are built up

The overall cost is built up from the costs associated with gaining the relevant approval for a vehicle type (model) or individual vehicle using the schemes appropriate to each. In turn, the overall costs for each vehicle sector are estimated; this depends on the degree to which a scheme is used. Results by sector are set out in the tables in Annex 4.

The cost profile in terms of the degree to which manufacturers would choose to use each approval route in option 2 is somewhat uncertain because this decision entails a business choice. The likely take-up of schemes in option 2 was based on data provided by industry in response to a VOSA survey. When calculating the costs over an 11 year period for the main document, the calculations take into account the varying take-up which depends on the differing years in which each sector needs to start to obtain relevant approvals.

The schemes proposed to replace the current schemes (including bus/coach COIF and trucks GVNTA) include:

- Option 1 - European whole vehicle type approval ECWVTA.
- Option 2 - either ECWVTA (any vehicle), ECSSA (cars only) or one of the national schemes (any vehicle) using NSSTA or IVA.

These schemes are aimed at very different situations and have very different associated cost levels. The proposed schemes offer a tiered proportionate approach in terms of the technical requirements and the processes involved e.g. in terms of how evidence of compliance can be provided or indicated. This is reflected in the costs associated with each scheme.

For each scheme the estimated cost for the manufacturer to gain the approval (per vehicle type) typically has three components, only one of which is the vehicle approval test fee itself. For type approval the total cost includes test costs, approval authority fees and an administrative cost for the manufacturer. For an individual approval (IVA), the three elements are the approval authority fee, the costs to take the vehicle for test and an administrative cost for the manufacturer. For both type approval and individual approval, the administrative cost covers the cost of gathering the

necessary information together, completing the relevant application forms, and so on.

(a) Type approval (cost per approval)

- ECWVTA caters well for mass produced vehicles where the very high initial cost can be spread over many production vehicles. The cost associated with a new type approval is estimated to range from £21k (light trailer) to £259k (specialist cars). A truck bodybuilder, based on a chassis which has much of the approval done, was assigned a cost of £23k.

- ECSSA (cars only) is aimed at cars produced in relatively low volume. The cost associated with an approval ranges from specialist cars (£153k) to car converter (£49k).

- NSSTA is aimed at providing a suitable national low volume scheme for all affected vehicles. The cost associated with an approval ranges from light trailers (£15k) to specialist cars (£124k).

In addition to the above costs linked to type approval, there is a separate cost to a manufacturer who must achieve an appropriate level of Conformity of Production (CoP) control aimed at ensuring consistent production. The latter is a per manufacturer cost and is included separately to the type approval costs.

(b) Individual approval

- IVA provides a route for bespoke vehicles based on each vehicle being tested. The cost ranges from bus/coach manufacturers (£1540) to light trailers (£615). In some cases averages have been calculated where one entry covers vehicles in different categories or with different fees.

In addition to the above, a cost (£14) is assigned to each trailer, for checks linked to the entry into service arrangements (trailer recording).

Annex 4 – High Level Cost matrices

List of contents

High Level Cost Matrix - Current Schemes - M1 Category

	Car Converters	Specialist Cars Manufacturers	Special Purpose Vehicle Manufacturers (except WAV)	Special Purpose Vehicle Manufacturers (WAV)
	M1	M1	M1	M1
	Completed Vehicles	Complete Vehicles	Completed Vehicles	Completed Vehicles
Number of Companies in Sector	10	28	40	15
Number of Vehicles Registered per year	2,200	4,000	12,000	9,000
Number of Companies Using UK LVTA	4	9	0	6
Number of UK LVTA Types per Company	2	1	0	2
UK LVTA Cost (per type)	£41,800	£126,700	£38,600.00	£41,800.00
Total UK LVTA Cost for Sector	£334,400.00	£1,140,300.00	£0.00	£501,600.00
No. of Companies Requiring Conformity of Production	4	9	0	6
Conformity of Production Cost (per company)	£15,000	£15,000	£15,000	£15,000
Total Conformity of Production Cost for Sector	£60,000	£135,000	£0	£90,000
Percentage of Vehicles Using UK SVA	70%	25%	2%	20%
UK SVA Cost (per vehicle)	£750	£750	£750	£750
Total UK SVA Cost for Sector	£1,155,000	£750,000	£180,000	£1,350,000
Total Type Approval Cost for Sector	£1,549,400	£2,025,300	£180,000	£1,941,600

LVNTA – Low volume type approval

SVA – Single Vehicle Approval

High Level Cost Matrix - Current Schemes - M2/M3 Category

	Minibus Converters	Bus/Coach Chassis Manufacturers	Bus/Coach Bodybuilders	Bus/Coach Manufacturers
	M2	M2/M3	M2/M3	M2/M3
	Completed Vehicles	Incomplete Vehicles	Completed Vehicles	Complete Vehicles
Number of Companies in Sector [no. producing in UK]	31	18 [2]	100	3
Number of Vehicles Registered per year	2,500	6,500	6,500	6,500
Percentage of Vehicles Using COIF	40%	0%	90%	15%
COIF Cost (per vehicle)	£1,000	£1,000	£1,000	£1,000
Total COIF Cost for Sector	£1,000,000	£0	£5,850,000	£975,000
Total Type Approval Cost for Sector	£1,000,000	£0	£5,850,000	£975,000

COIF – Certificate of Initial Fitness (required for a vehicle which is to be used to carry paying passengers). Other buses (for private use) do not have any mandatory approval testing at present.

NOTE – There is a confusing co-incidence in that the numbers of multi-stage build buses registered per year (6500), is the same as the number of single stage buses registered per year (6500). The 3rd and 4th columns cover the same 6500 multi-stage build vehicles, with the chassis covered in 3rd column and the finished vehicle including bodywork in the 4th. For simplicity all the costs have been apportioned to the bodybuilder for the purposes of this calculation, when in fact some proportion of the COIF cost will be met by the chassis builder. The 6500 vehicles in the 5th column comprises the separate set of 6500 vehicles produced in a single stage.

High Level Cost Matrix - Current Schemes - N Category

	Van/Light Truck Manufacturers	Heavy Truck Chassis Manufacturers	Truck Bodybuilders
	N1	N2/N3	N1/N2/N3
	Incomplete + Complete Vehicles	Incomplete + Complete Vehicles	Completed Vehicles
Number of Companies in Sector [no. producing in UK]	32 [4]	23 [3]	450
Number of Vehicles Registered per year	300,000	22,000	60,000
Number of Companies Using GVNTA	32	22	
Number of GVNTA Types per Company	3	3	
GVNTA Cost (per type)	£10,320	£9,468	
Total GVNTA Cost for Sector	£990,720.00	£624,888.00	
No. of Companies Requiring Conformity of Production	32	22	
Conformity of Production Cost (per company)	£15,000	£15,000	
Total Conformity of Production Cost for Sector	£480,000	£330,000	
Percentage of vehicles sold in the UK	15%	12%	
Total Conformity of Production Cost for Sector in the UK	£72,000	£39,600	
Percentage of Vehicles Using UK SVA	0.5%		
UK SVA Cost (per vehicle)	£750		
Total UK SVA Cost for Sector	£1,125,000		
Total Type Approval Cost for Sector	£2,187,720	£664,488	£0

High Level Cost Matrix - Current Schemes - O Category

	Light Trailer Manufacturers	Heavy Trailer Manufacturers
	O1/O2	O3/O4
	Complete Vehicles	Complete Vehicles
Number of Companies in Sector	180	120
Number of Vehicles Registered per year	121,000	21,300
Total Type Approval Cost for Sector	£0	£0

High Level Cost Matrix - ECWVTA Only - M1 Category

	Car Converters	Specialist Cars Manufacturers	Special Purpose Vehicle Manufacturers (except WAV)	Special Purpose Vehicle Manufacturers (WAV)
	Completed Vehicles	Complete Vehicles	Completed Vehicles	Completed Vehicles
Number of Companies in Sector	10	28	40	15
Number of Vehicles Registered per year	2,200	4,000	12,000	9,000
Number of Companies Expected to use ECWVTA	0	2	40	15
Number of ECWVTA Types per Company	0	1	2	2
ECWVTA Cost (per type)	£136,600	£258,900	£47,500	£40,800
Total ECWVTA Cost for Sector	£0	£517,800	£3,800,000	£1,224,000
Number of Companies Expected to use EC SSTA	10	26		
Number of EC SSTA Types per Company	2	1		
EC SSTA Cost (per type)	£49,300	£153,000		
Total EC SSTA Cost for Sector	£986,000.00	£3,978,000.00		
No. of Companies Requiring Conformity of Production	10	28	40	15
Conformity of Production Cost (per company)	£15,000	£15,000	£15,000	£15,000
Total Conformity of Production Cost for Sector	£150,000	£420,000	£600,000	£225,000
Total Type Approval Cost for Sector	£1,136,000	£4,915,800	£4,400,000	£1,449,000

High Level Cost Matrix - ECWVTA Only - M2/M3 Category

	Minibus Converters	Bus/Coach Chassis Manufacturers	Bus/Coach Bodybuilders	Bus/Coach Manufacturers
	M2	M2/M3	M2/M3	M2/M3
	Completed Vehicles	Incomplete Vehicles	Completed Vehicles	Complete Vehicles
Number of Companies in Sector [no.producing in UK]	31	18 [2]	100	3
Number of Vehicles Registered per year	2,500	6,500	6,500	6,500
Number of Companies Expected to use ECWVTA	31	18	100	3
Number of ECWVTA Types per Company	1	3	2	3
ECWVTA Cost (per type)	£68,700	£58,500	£78,000	£128,400
Total ECWVTA Cost for Sector	£2,129,700	£3,159,000	£15,600,000	£1,155,600
Percentage of vehicles sold in the UK		20%		
Total ECWVTA Cost for Sector in the UK		£631,800		
No.of Companies Requiring Conformity of Production	31	18	100	3
Conformity of Production Cost (per company)	£15,000	£15,000	£15,000	£15,000
Total Conformity of Production Cost for Sector	£465,000	£270,000	£1,500,000	£45,000
Percentage of vehicles sold in the UK		20%		
Total Conformity of Production Cost for Sector in the UK		£54,000		
Total Type Approval Cost for Sector	£2,594,700	£685,800	£17,100,000	£1,200,600

NOTE – There is a co-incidence in that the numbers of multi-stage build buses registered per year (6500), is the same as the number of single stage buses registered per year (6500). The 3rd and 4th columns cover the same 6500 multi-stage build vehicles, with chassis covered in 3rd column and the finished vehicles in the 4th. All the costs have been apportioned to the bodybuilder for the purposes of this calculation, when in fact some proportion of the COIF cost will be met by the chassis builder. The 6500 vehicles in the 5th column comprises the separate set of 6500 vehicles produced in a single stage.

High Level Cost Matrix - ECWVTA Only - N Category

	Van/Light Truck Manufacturers	Heavy Truck Chassis Manufacturers	Truck Bodybuilders
	N1	N2/N3	N1/N2/N3
	Incomplete + Complete Vehicles	Incomplete + Complete Vehicles	Completed Vehicles
Number of Companies in Sector [no.producing in UK]	32 [4]	23 [3]	450
Number of Vehicles Registered per year	300,000	22,000	60,000
Number of Companies Expected to use ECWVTA	32	23	450
Number of ECWVTA Types per Company	3	3	3
ECWVTA Cost (per type)	£121,900	£123,600	£23,100
Total ECWVTA Cost for Sector	£11,702,400	£8,528,400	£31,185,000
Percentage of vehicles sold in the UK	15%	12%	
Total ECWVTA Cost for Sector in the UK	£1,755,360	£1,023,408	
No.of Companies Requiring Conformity of Production	32	23	450
Conformity of Production Cost (per company)	£15,000	£15,000	£15,000
Total Conformity of Production Cost for Sector	£480,000	£345,000	£6,750,000
Percentage of vehicles sold in the UK	15%	12%	
Total Conformity of Production Cost for Sector in the UK	£72,000	£41,400	
Total Type Approval Cost for Sector	£1,827,360	£1,064,808	£37,935,000

High Level Cost Matrix – ECWVTA only - O Category

	Light Trailer Manufacturers	Heavy Trailer Manufacturers
	O1/O2	O3/O4
	Complete Vehicles	Complete Vehicles
Number of Companies in Sector	180	120
Number of Vehicles Registered per year	121,000	21,300
Number of Companies Expected to use ECWVTA	180	120
Number of ECWVTA Types per Company	4	3
ECWVTA Cost (per type)	£21,150	£37,100
Total ECWVTA Cost for Sector	£15,228,000	£13,356,000
No. of Companies Requiring Conformity of Production	180	120
Conformity of Production Cost (per company)	£15,000	£15,000
Total Conformity of Production Cost for Sector	£2,700,000	£1,800,000
Trailer Recording Cost (per vehicle)	£14	£14
Total Trailer Recording Cost for Sector	£1,633,500	£287,550
Total Type Approval Cost for Sector	£19,561,500	£15,443,550

High Level Cost Matrix - New Schemes - M1 Category

	Car Converters	Specialist Cars Manufacturers	SPV (not WAV) Manufacturers	SPV (WAV) Manufacturers
Number of Companies in Sector	10	28	40	15
Number of Vehicles Registered per year	2,200	4,000	12,000	9,000
Number of Companies Expected to use ECWVTA	0	2	10	7
Number of ECWVTA Types per Company	0	1	2	1
ECWVTA Cost (per type)	£136,600	£258,900	£47,500	£40,800
Total ECWVTA Cost for Sector	£0	£517,800	£950,000	£285,600
Number of Companies Expected to use EC SSTA	0	7		
Number of EC SSTA Types per Company	0	1		
EC SSTA Cost (per type)	£49,300	£153,000		
Total EC SSTA Cost for Sector	£0.00	£1,071,000.00		
Number of Companies Expected to use UK SSTA	4	0	5	4
Number of UK SSTA Types per Company	2	0	1	1
UK SSTA Cost (per type)	£40,700	£112,000	£35,950	£31,600
Total UK SSTA Cost for Sector	£325,600	£0	£179,750	£126,400
No. of Companies Requiring CoP	4	9	15	11
Conformity of Production Cost (per company)	£15,000	£15,000	£15,000	£15,000
Total Conformity of Production Cost for Sector	£60,000	£135,000	£225,000	£165,000
Percentage of Vehicles expected to use UK IVA	70%	25%	30%	20%
UK IVA Cost (per vehicle)	£750	£850	£750	£750
Total UK IVA Cost for Sector	£1,155,000	£850,000	£2,700,000	£1,350,000
Total Type Approval Cost for Sector	£1,540,600	£2,573,800	£4,054,750	£1,927,000

High Level Cost Matrix - New Schemes - M2/M3 Category

	Minibus Converters	Bus/Coach Chassis Manufacturers	Bus/Coach Bodybuilders	Bus/Coach Manufacturers
	M2	M2/M3	M2/M3	M2/M3
	Completed Vehicles	Incomplete Vehicles	Completed Vehicles	Complete Vehicles
Number of Companies in Sector [no. producing in UK]	31	18 [2]	100	3
Number of Vehicles Registered per year	2,500	6,500	6,500	6,500
Number of Companies Expected to use ECWVTA	0	18	0	2
Number of ECWVTA Types per Company	0	3	0	1
ECWVTA Cost (per type)	£68,700	£58,500	£78,000	£128,400
Total ECWVTA Cost for Sector	£0	£3,159,000	£0	£256,800
Percentage of vehicles sold in the UK		20%		
Total ECWVTA Cost for Sector in the UK		£631,800		
Number of Companies Expected to use UK SSTA	7	0	8	1
Number of UK SSTA Types per Company	1	0	2	2
UK SSTA Cost (per type)	£56,300	£48,800	£66,600	£108,600
Total UK SSTA Cost for Sector	£394,100	£0	£1,065,600	£217,200
No. of Companies Requiring Conformity of Production	7	18	8	3
Conformity of Production Cost (per company)	£15,000	£15,000	£15,000	£15,000
Total Conformity of Production Cost for Sector	£105,000	£270,000	£120,000	£45,000
Percentage of vehicles sold in the UK		20%		
Total Conformity of Production Cost for Sector in the UK		£54,000		
Percentage of Vehicles expected to use UK IVA	40%	0%	32%	5%

UK IVA Cost (per vehicle)	£780	£0	£1,540	£1,540
Total UK IVA Cost for Sector	£780,000	£0	£3,203,200	£500,500
Total Type Approval Cost for Sector	£1,279,100	£685,800	£4,388,800	£1,019,500

High Level Cost Matrix - New Schemes - N Category

	Van/Light Truck Manufacturers	Heavy Truck Chassis Manufacturers	Truck Bodybuilders
	N1	N2/N3	N1/N2/N3
	Incomplete + Complete Vehicles	Incomplete + Complete Vehicles	Completed Vehicles
Number of Companies in Sector [no. producing in UK]	32 [4]	23 [3]	450
Number of Vehicles Registered per year	300,000	22,000	60,000
Number of Companies Expected to use ECWVTA	32	21	10
Number of ECWVTA Types per Company	3	3	2
ECWVTA Cost (per type)	£121,900	£123,600	£23,100
Total ECWVTA Cost for Sector	£11,702,400	£7,786,800	£462,000
Percentage of vehicles sold in the UK	15%	12%	
Total ECWVTA Cost for Sector in the UK	£1,755,360	£934,416	
Number of Companies Expected to use UK SSTA	0	2	50
Number of UK SSTA Types per Company	0	2	3
UK SSTA Cost (per type)	£103,700	£99,600	£16,700
Total UK SSTA Cost for Sector	£0	£398,400	£2,505,000
No. of Companies Requiring Conformity of Production	32	23	60
Conformity of Production Cost (per company)	£15,000	£15,000	£15,000
Total Conformity of Production Cost for Sector	£480,000	£345,000	£900,000
Percentage of vehicles sold in the UK	15%	12%	
Total Conformity of Production Cost for Sector in the UK	£72,000	£41,400	
Percentage of Vehicles expected to use UK IVA	0.5%	0%	15%
UK IVA Cost (per vehicle)	£720	£900	£860
Total UK IVA Cost for Sector	£1,080,000	£0	£7,636,800
Total Type Approval Cost for Sector	£2,907,360	£1,374,216	£11,503,800

High Level Cost Matrix - New Schemes - O Category

	Light Trailer Manufacturers	Heavy Trailer Manufacturers
	O1/O2	O3/O4
	Complete Vehicles	Complete Vehicles
Number of Companies in Sector	180	120
Number of Vehicles Registered per year	121,000	21,300
Number of Companies Expected to use ECWVTA	6	6
Number of ECWVTA Types per Company	2	2
ECWVTA Cost (per type)	£21,150	£37,100
Total ECWVTA Cost for Sector	£253,800	£445,200
Number of Companies Expected to use UK SSTA	20	20
Number of UK SSTA Types per Company	2	1
UK SSTA Cost (per type)	£14,700	£28,600
Total UK SSTA Cost for Sector	£588,000	£572,000
No. of Companies Requiring Conformity of Production	26	26
Conformity of Production Cost (per company)	£15,000	£15,000
Total Conformity of Production Cost for Sector	£390,000	£390,000
Percentage of Vehicles expected to use UK IVA	2%	10%
UK IVA Cost (per vehicle)	£615	£850
Total UK IVA Cost for Sector	£1,488,300	£1,810,500
Trailer Registration Cost (per vehicle)	£14	£14
Total Trailer Registration Cost for Sector	£1,633,500	£287,550
Total Type Approval Cost for Sector	£4,353,600	£3,505,250