

Summary: Intervention & Options

Department /Agency: Department for Transport	Title: Impact Assessment of The Road Vehicle Lighting Regulations amendment covering reflective markings on emergency vehicles	
Stage: Consultation	Version: 1	Date: 7 March 2008
Related Publications:		

Available to view or download at:

<http://www>.

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

The emergency services, Highways Agency and Vehicle Operator Services Agency (VOSA) use distinctive retro-reflective liveries (known as battenburg) on their vehicles. This livery is based on research by the Police Scientific development branch to develop a livery that improves conspicuity and creates a common easily recognisable identity. This livery is prohibited by the Road Vehicle Lighting Regulations (RVLR) and each organisation has been issued with a temporary special order under section 44 of the Road Traffic Act 1988 to permit its use.

What are the policy objectives and the intended effects?

To provide a firm legal basis for the use of distinctive retro-reflective liveries by the emergency services, Highways Agency and VOSA and to ensure their use can continue in the long term.

The existing special orders for ambulances are restricted to those operated by the NHS. These amendments offer the opportunity to extend the use of this livery to ambulances operated by the private sector provided they are used for emergency purposes.

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

1. Continue to rely on special orders for the foreseeable future (status quo).
2. Amend RVLR to permit the use of these liveries by the organisations currently issued with special orders.
3. Amend RVLR to permit the use of these liveries and extend the use to non-NHS emergency ambulances (preferred option).

Option 3 meets the needs of the existing services and allows all ambulances that operate an emergency service to benefit from these markings..

When will the policy be reviewed to establish the actual costs and benefits and the achievement of the desired effects? A review is not required. The use of these liveries has been established over the past 7 years, this policy simply provides a long term solution for their use.

Ministerial Sign-off For consultation stage Impact Assessments:

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

Signed by the responsible Minister:

.....Date:

Summary: Analysis & Evidence

Policy Option: 1

Description: Continue to issue special orders under section 44 of the Road Traffic Act 1988

COSTS	ANNUAL COSTS		Description and scale of key monetised costs by 'main affected groups' Current situation, no additional costs are incurred.
	One-off (Transition)	Yrs	
	£ 0		
	Average Annual Cost (excluding one-off)		
	£ 0		Total Cost (PV) £ 0
Other key non-monetised costs by 'main affected groups' private ambulance operators not permitted to use the ambulance livery on their emergency vehicles			

BENEFITS	ANNUAL BENEFITS		Description and scale of key monetised benefits by 'main affected groups' Current situation, no additional benefits will be achieved.
	One-off	Yrs	
	£		
	Average Annual Benefit (excluding one-off)		
	£ 0		Total Benefit (PV) £ 0
Other key non-monetised benefits by 'main affected groups' Improved conspicuity and public awareness of livered vehicles over non-livered vehicles			

Key Assumptions/Sensitivities/Risks

Price Base Year 2007	Time Period Years 10	Net Benefit Range (NPV) £ 0	NET BENEFIT (NPV Best estimate) £ 0
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What is the geographic coverage of the policy/option?			UK	
On what date will the policy be implemented?			June 2008	
Which organisation(s) will enforce the policy?			VOSA, Police	
What is the total annual cost of enforcement for these organisations?			£ 7,000	
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?			£ 0	
What is the value of changes in greenhouse gas emissions?			£ 0	
Will the proposal have a significant impact on competition?			No	
Annual cost (£-£) per organisation (excluding one-off)	Micro	Small	Medium	Large
Are any of these organisations exempt?	No	No	N/A	N/A

Impact on Admin Burdens Baseline (2005 Prices)			(Increase - Decrease)	
Increase of	£ 0	Decrease of	£ 0	Net Impact £ 0

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

Summary: Analysis & Evidence

Policy Option: 2

Description: Amend RVLR to permit the use of retro-reflective liveries

COSTS	ANNUAL COSTS		Description and scale of key monetised costs by 'main affected groups' No additional costs over existing situation.
	One-off (Transition)	Yrs	
	£ 0		
	Average Annual Cost (excluding one-off)		
	£ 0		Total Cost (PV) £ 0
Other key non-monetised costs by 'main affected groups'			

BENEFITS	ANNUAL BENEFITS		Description and scale of key monetised benefits by 'main affected groups' Admin costs for the department to maintain existing special orders plus admin costs of emergency services and agencies to implement special orders will no longer be imposed.
	One-off	Yrs	
	£ 0		
	Average Annual Benefit (excluding one-off)		
	£ 1,148		Total Benefit (PV) £ 9,830
Other key non-monetised benefits by 'main affected groups' Guarantees the long term use of these liveries.			

Key Assumptions/Sensitivities/Risks

Price Base Year 2007	Time Period Years 10	Net Benefit Range (NPV) £ 7,612 - 12,047	NET BENEFIT (NPV Best estimate) £ 9,830
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What is the geographic coverage of the policy/option?	UK			
On what date will the policy be implemented?	June 2008			
Which organisation(s) will enforce the policy?	Polcie, VOSA			
What is the total annual cost of enforcement for these organisations?	£ 7,000			
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?	£ 0			
What is the value of changes in greenhouse gas emissions?	£ 0			
Will the proposal have a significant impact on competition?	No			
Annual cost (£-£) per organisation (excluding one-off)	Micro	Small	Medium	Large
Are any of these organisations exempt?	No	No	N/A	N/A

Impact on Admin Burdens Baseline (2005 Prices)		(Increase - Decrease)	
Increase of	£ 0	Decrease of	£ 9,830
		Net Impact	£ 9,830

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

Summary: Analysis & Evidence

Policy Option: 3

Description: Amend RVLR to permit the use of retro-reflective liveries and extend to non-nhs ambulances

COSTS	ANNUAL COSTS		Description and scale of key monetised costs by 'main affected groups' No additional costs over existing situation
	One-off (Transition)	Yrs	
	£		
	Average Annual Cost (excluding one-off)		
	£ 0		Total Cost (PV) £ 0
Other key non-monetised costs by 'main affected groups'			

BENEFITS	ANNUAL BENEFITS		Description and scale of key monetised benefits by 'main affected groups' Admin costs for the department to maintain existing special orders plus admin costs of emergency services and agencies to implement special orders will no longer be imposed.
	One-off	Yrs	
	£		
	Average Annual Benefit (excluding one-off)		
	£ 1,148		Total Benefit (PV) £ 9,830
Other key non-monetised benefits by 'main affected groups' Guarantees the long term use of these liveries.			

Key Assumptions/Sensitivities/Risks

Price Base Year 2007	Time Period Years 10	Net Benefit Range (NPV) £ 7,612 - 12,047	NET BENEFIT (NPV Best estimate) £ 9,830
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What is the geographic coverage of the policy/option?	UK			
On what date will the policy be implemented?	June 2008			
Which organisation(s) will enforce the policy?	Police, VOSA			
What is the total annual cost of enforcement for these organisations?	£ 7,000			
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?	£ 0			
What is the value of changes in greenhouse gas emissions?	£ 0			
Will the proposal have a significant impact on competition?	No			
Annual cost (£-£) per organisation (excluding one-off)	Micro	Small	Medium	Large
Are any of these organisations exempt?	No	No	N/A	N/A

Impact on Admin Burdens Baseline (2005 Prices)		(Increase - Decrease)	
Increase of	£ 0	Decrease of	£ 9,830
		Net Impact	£ 9,830

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

Evidence Base (for summary sheets)

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

1. Title and effect of measure

Amendment of the Road Vehicles Lighting Regulations 1989 (S.I. 1989/1796) (RVLR) - Covering Retro-reflective markings for emergency vehicles.

2. Objective

To update the RVLR to permit the use of distinctive retro-reflective markings on vehicles used by the emergency services, Vehicle Operator Services Agency (VOSA) and Highways Agency Traffic Officers (HATO) to ensure they are highly visible and easily distinguishable.

3. Background

Many emergency services use distinctive retro-reflective markings on the sides and rear of their vehicles. This usually consists of large blocks of colour, known as the battenburg pattern (see figure 1), on the side and chevrons on the rear. This marking arrangement was developed by the Police Scientific Development Branch to enhance visibility and to enable police vehicles to be clearly recognisable. Subsequently it was adopted by other emergency services using their own colours.

More recently the battenburg markings have been adopted by VOSA for use on their enforcement vehicles and by the Highways Agency on their Traffic Officer (HATO) vehicles.

The use of retro reflective markings on vehicles is controlled by the RVLR which specify, in so far as is relevant, that reflective markings used to make the vehicle more visible must be red for the rear, any colour except red for the front of a vehicle, and amber for the side. If side retro-reflective markings are within 1m from the rear, red may be used rather than amber. The retro-reflective markings used by the emergency services and agencies do not comply with these colour requirements and so the Secretary of State has issued each service with a special order, under section 44 of the Road Traffic Act 1988, which gives exemptions from the relevant parts of RVLR for vehicles operated by them.

Table 1 below summarises the colours of reflective material which each service may use under their special order.

	Side	Rear
NHS Ambulance	Yellow Green White	Yellow orange
Police	Yellow Blue White	Yellow orange

Fire & Rescue Service	Yellow Red	Yellow orange
VOSA	Yellow Silver/white	Yellow Orange
HATO	Yellow White	Yellow

Table 1 Colours currently allowed by special order

The special order covering ambulances was issued to the Ambulance Services Association and is restricted to ambulances used for emergency purposes that are operated on behalf of the NHS. However, there is a large private ambulance industry and many of these operators have also adopted green and yellow reflective markings on the side, either in the battenburg format or using alternative patterns, despite the restrictions in RVLR. The private ambulance industry believe that they operate the same services as NHS ambulances and therefore should be granted the same benefits as NHS vehicles.

Special orders are a temporary solution and must be regularly renewed. The Secretary of State must now consider whether to continue issuing special orders or to amend RVLR to permit the distinctive markings and to extend the requirements to emergency vehicles operated by the private ambulance industry.

4. Rational for Government Intervention

The Secretary of State has issued special orders to the emergency and enforcement agencies permitting the use of colours in their distinctive reflective liveries which would otherwise be prohibited by RVLR. Special orders are a temporary measure and in these cases are renewed on a regular basis. Amending the RVLR will eliminate the need for special orders for retro-reflective colour schemes and clarify which vehicles may use them.

Secondly the opportunity exists to extend these amendments to include ambulances operated by the private sector provided the vehicles are used for emergency purposes. This would harmonise the requirements across the ambulance sector. However caution will be required to ensure that use is strictly limited to those vehicles which are used primarily for emergency purposes. Vehicles used for patient transport for example are not considered by the Department to be emergency vehicles and would not be permitted to use the markings. If there is a need to improve the conspicuity of non-emergency vehicles, RVLR currently permits additional retro-reflective amber coloured side markings to be used.

Consideration will also need to be given as to whether extending markings to the private industry would have a negative impact for the NHS ambulance service. This would happen if the use by the private industry changed the public's response to vehicles fitted with these markings. This can be mitigated by limiting the use of the markings to privately operated ambulances used primarily for emergency purposes and not those intended as patient transport. The NHS also has the option to use specific brand logos on their ambulances to help differentiate them from other ambulance operators.

5. Consultation

We consulted informally with emergency services, VOSA, Highways Agency and representatives of the private ambulance industry who indicated they would like to use

distinctive retro-reflective markings. Each organisation has indicated they want exclusive use of their particular choice of colour.

The ambulance services association has raised concerns about extending battenburg to private ambulances suggesting this could have a negative impact on the public image of NHS ambulances.

The following stake holders were informally consulted for technical advice

- VOSA
- Highways Agency
- NHS
- Private Ambulance industry
- ACPO
- Fire Brigade

6. Options for achieving the Policy Objectives

OPTION 1

Maintain current situation, continue issuing special orders

OPTION 2

Amend RVLR to permit vehicles used for Police, Fire and Rescue and Ambulance purposes, VOSA enforcement vehicles and HA traffic officers vehicles to use distinctive retro-reflective markings

This option considers assigning the colour of retro-reflective markings to the vehicles listed above. The colours permitted for each vehicle purpose would be those listed in table 1. Use of these markings will be optional but if fitted they would need to meet the colour specification above.

OPTION 3

As Option 2 but extend the use of these markings to all ambulances used for emergency purposes not just those operated by the NHS.



Figure 1.

7. Risks

Option 1 presents no major risks other than the inconvenience to both the Department and emergency services of maintaining existing special orders.

Option 2 presents no additional risks. While there is no control on the pattern used, all those currently issued with special orders use the battenburg pattern which has been shown to have significant benefits for conspicuity and recognition and there is no reason to believe they will switch to alternative patterns.

If option 3 is chosen there is a risk that private ambulance operators will chose not to use the battenburg pattern. Alternative patterns may not be so conspicuous and the benefits of a common identity may be lost. However non-NHS ambulances could also use alternative patterns to differentiate themselves and avoid any suggestion that they may be impersonating NHS ambulances.

There is a risk that private ambulance operators who use the battenburg pattern are mistaken for NHS ambulances. This may lead to security issues when ambulances are being directed to an emergency in a restricted area. However options exist for the NHS ambulances to differentiate themselves from other ambulance operators such as the use of the NHS logo on the side of their vehicles.

8. Compliance and Enforcement

Enforcement of RVLR is a matter for the Police and VOSA.

9. Unintended consequences

Restricting the use of these markings to the existing emergency services should have no unintended consequences. Emergency vehicles have been using these markings for over 7 years and there have been no reports of any problems.

Extending the requirements to the private and voluntary ambulance sector may lead to a proliferation of the markings and, if misused, their effectiveness could be reduced, this could have a negative impact on the public image of the NHS ambulance service. The Department of Health has received correspondence from members of the public relating to vehicles that they assumed were operated by the NHS but were in fact privately operated.

10. Cost and Benefits

Sectors and Groups affected: These proposals will affect the Police, Fire and Rescue, NHS Ambulance Services, VOSA and Highways Agency.

Ambulance services operated by commercial and charitable organisations will also be affected. Extending the use of these markings will make those private ambulance operators who already mark their vehicles with green and yellow reflective liveries compliant with the RVLR. Others who have not fitted the markings because of existing regulations would be permitted to do so.

Safety Benefits

Statistics are not available to show how beneficial these markings have been since their use began. However, research by the Police Scientific Development Branch compared the conspicuity of vehicles using the battenburg livery, using the blue and yellow colour scheme, with civilian vehicles and other police liveries. The study found that under daylight conditions the proposed livery was picked as the most conspicuous when viewed from the side by 53% of subjects compared to 42% for the most conspicuous civilian vehicle. Under night time conditions the battenburg livery performed almost twice as well as the best performing police livery. Subjective feedback suggested that the battenburg livery was distinctive and readily associated with the police.

Option 1 maintains the current status. There are no additional costs or benefits to those organisation already issued with special orders. The administrative costs associated with maintaining special orders, both for the Department and the emergency services, will remain however these costs are small.

Option 1 also maintains the current situation for non-NHS ambulances. They would continue to be prohibited to use Green reflective markings. For conspicuity purposes they would continue to be permitted to use amber reflective markings on the side but the advantage of being associated with the emergency services provided by the green markings would not be present.

Option 2 provides a regulatory basis for the use of these liveries and removes any uncertainty over their future use. The administrative costs associated with maintaining the existing special orders will be removed however, as stated previously, these costs are small.

Option 3 extends the use of the green and yellow livery to privately operated ambulances. This may provide benefits when these ambulances are genuinely used for emergency purposes to assist the vehicle to make progress through traffic and when at the scene of an emergency.

Extending the markings to the private industry may have an additional cost for the NHS ambulance service if the proliferation of the markings reduces their impact on the public. This can be avoided if the use of markings by private industry is restricted to vehicles used primarily for emergency purposes.

There is potential that this option could increase the demand for reflective material, however our understanding is those operators who would like to use the markings already do so despite the existing regulations so we do not expect demand for reflective material to increase significantly.

Administration costs

The current situation of issuing special orders carries a small administrative burden on both the Department and the emergency services and agencies using them. It is estimated that the Department spends ½ days per special order at a cost of around £53. Each special order lasts for approximately 3 years so with 5 special orders to maintain the average yearly cost is about £88. The Emergency services and agencies will need to spend a greater proportion of their time implementing the special orders however it is unlikely to require more than 2 days per year. With 5 special orders in place this imposes an administrative cost of approximately £1060. The total administrative costs will therefore be around £1148 per year.

Material Costs

The use of such liveries would be optional so there would be no mandatory costs on the private industry to comply. If markings are fitted we estimate the cost per vehicle to be between £900 to £1,400 based on materials and labour when fitted to vehicle the size of an ambulance, e.g. Ford Transit, Renault Master, etc. We are aware that many private ambulances are marked with green reflective liveries, despite the current regulations, and we do not expect a large increase in privately operated ambulances being marked as a result of these changes.

Enforcement costs

Costs regarding enforcement are anticipated to be small as checks on compliance can be conducted as part of the current vehicle enforcement checks made by the police and VOSA. If 5,000 vehicles were checked for compliance during roadside inspections each year the enforcement costs would be around £7,000 assuming that a vehicle inspector would take approximately 2 minutes to make a decision as to whether the correct retro-reflective livery was being used.

Material Suppliers

There is unlikely to be a large increase in demand for retro-reflective tape under options 1, 2 or 3. None of these options will require the fitment of tape and those that have special orders already use marked vehicles. The options proposed do not favour any particular supplier.

There are not expected to be any significant impacts on consumers. A social benefit of the battenburg pattern is the creation of a common identity for the emergency services. However the widespread use of the battenburg markings means that any such benefits are likely to have been achieved already and these proposals are unlikely to give further benefits in this area.

We do not expect environmental impacts.

11. Small firm impact test

As the proposed measure is permissive there should be no new or increased burden on vehicle operators.

All vehicles covered by existing special orders will comply with Options 2 and 3. There will be no cost implications for these vehicles. Many private ambulances also meet Option 3. We are not aware of any privately operated ambulances operating using alternative colour schemes to the green and yellow markings or the amber schemes already permitted by RVLRL.

12. Competition assessment

The proposed regulation will not result in any mandatory increase cost on the part of operators of emergency vehicles however those private ambulance operators currently using retro-reflective markings incorrectly would be required to remove them under options 1 and 2 if the regulations are fully enforced.

Option 1 and 2 may also put private ambulance operators at a disadvantage when responding to an emergency compared to NHS ambulances, particularly if the public do not regard the vehicles with the same caution given to NHS ambulances.

The proposed measures still allow for a level playing field among the private ambulance industry and do not put potential or existing, large or small businesses in a situation where one has an advantage over the other.

13. Enforcement, Sanctions and Monitoring

Enforcement will be handled by either VOSA or the police. This will not be a burden as the proposed measures are permissive and enforcement of the use of retro-reflective markings is already permitted by RVLRL.

14. Implementation and Delivery plan

As the intended measures are deregulatory, they can be introduced without delay once the amendment has been drafted and consulted on. A detailed implementation plan is not necessary. However it is imperative that those affected or concerned about the proposed changes are informed of the changes to the regulation. In this case, businesses involved in lighting and retro-reflective markings for vehicles will be informed of the proposed changes. At the same time we plan to send out questionnaires to concerned organisations and the general public to seek their opinions and to alert them of possible means of creating a more effective system for marking emergency vehicles.

15. Summary and recommendations

The Department recommends Option 3. This gives a regulatory basis to the continued use of retro-reflective colour schemes by the emergency services and other government agencies who are involved in enforcement work on the road network. The pattern used by these organisations will not be regulated however the existing pattern is based on research which has shown it to offer conspicuity benefits. Its use has provided these services with an identity that is recognisable to the public and so it is unlikely there will be proliferation of alternative patterns.

Extending the colour scheme to private ambulance operators will provide them with the same benefits as NHS ambulances when operating in emergency situations.

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	<i>Results in Evidence Base?</i>	<i>Results annexed?</i>
Competition Assessment	Yes	No
Small Firms Impact Test	Yes	No
Legal Aid	No	No
Sustainable Development	No	No
Carbon Assessment	No	No
Other Environment	No	No
Health Impact Assessment	No	No
Race Equality	No	No
Disability Equality	No	No
Gender Equality	No	No
Human Rights	No	No
Rural Proofing	No	No

Annexes

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