Title:

Implementing the certification requirements of the European Directive on the maintenance of railway vehicles ("Miscellaneous Amendments Regulations")

IA No:

ORR1201

Lead department or agency:

Office of Rail Regulation

Other departments or agencies:

Department for Transport

Impact Assessment (IA)

Date: 18/04/2013

Stage: Final

Source of intervention: EU

Type of measure: Secondary legislation

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RPC: Green

Summary: Intervention and Options

Cost of Preferred (or more likely) Option (Option 3)							
Total Net Present Value	Business Net Present Value	Net cost to business per year (EANCB on 2009 prices)	in scope of One-in,	Measure qualifies as			
£1.1m	£0.9m	£-0.1m (£-0.3m including EU)	Yes, partially	OUT			

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

Different national procedures in the EU for the approval of freight wagons hinder the free movement of trains and impose costs on businesses. Railway undertakings assert that these procedures are bureaucratic and expensive when freight wagons are placed in service. "Keepers" of freight wagons have identified that meeting multiple maintenance regimes of different railway undertakings is onerous and expensive. EU-wide action is needed to address this, as no Member State can unilaterally determine that the operating authorisation it has issued will be valid elsewhere.

What are the policy objectives and the intended effects?

The European Commission's objective is to harmonise railway vehicle maintenance regimes across the EU and establish a certification scheme for entities in charge of maintenance ("ECMs") to ensure that freight wagons are maintained in a safe manner. The UK objectives are to: (a) establish a maintenance regime applicable to the UK, which complies with the Directive and is consistent with the Railways and Other Guided Transport Systems (Safety) Regulations 2006 ("ROGS"); and (b) additionally make some clarifications in ROGS and two other existing Regulations all in the interests of better regulation. The intended effects are to: (a) provide assurance that the ECM of a freight wagon is able to safely maintain it; (b) reduce the administrative burden on some operators; and (c) provide ORR with jurisdiction to supervise ECMs' compliance with health and safety legislation in certain premises.

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

Option 1: Do nothing - Existing regime stays in place

Option 2: Implement the Directive's requirement for an ECM for freight wagons to obtain an ECM certificate from a certification body.

Option 3: As Option 2, but in addition make changes to ROGS, EARR and TDLCR in the interest of better regulation. **Option 3 is preferred** because it meets EU requirements and benefits businesses by improving clarity and reducing administrative burdens on some duty holders.

Will the policy be reviewed? It will be reviewed. If applicable, set review date: 06/2017

	Does implementation go beyond minimum EU requirements?	No			
Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base. Micro < 20 Yes			Small Yes	Medium Yes	Large Yes
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)			Traded:	Non-	traded:

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: Simon Burns	Date:	20/04/2013

Summary: Analysis & Evidence

Policy Option 2

Description: Implement the Directive on vehicle maintenance to require an ECM for freight wagons to obtain an ECM certificate from a certification body. This is a minimal or 'copy out approach'.

FULL ECONOMIC ASSESSMENT

Price Base		Time Period	Net	Benefit (Present Val	ue (PV)) (£m)
Year 2010	Year 2010	Years 10	Low:	High:	Best Estimate: 0.2

COSTS (£m)	Total Tra (Constant Price)	ansition Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0.3			1.6
High	0.6	1		2.0
Best Estimate	0.5		0.2	1.9

Description and scale of key monetised costs by 'main affected groups' (Constant prices)

The costs for this option arise only from the certification of ECMs as summarised in **Table 8** in **Section 5** below. Total transition and annual costs are summarised in **Table 1** in **Section 4**. For 10 freight wagon ECMs in Great Britain these are estimated to be £0.4m for familiarisation with the ECM certification requirements and preparing for certification. Total transition cost for ORR is estimated to be £0.1m for policy development and its role as an ECM certification body. Total annual cost for 10 freight wagon ECMs is estimated to be around £0.1m for 'Professional Head' engineering services and annual surveillance checks. Total annual cost for ORR is estimated to be £0.02m for conducting annual surveillance checks.

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

None.

BENEFITS (£m)	Total Tra (Constant Price)	ansition Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low				
High		1		
Best Estimate	0		0.3	2.1

Description and scale of key monetised benefits by 'main affected groups' (Constant prices)

Total benefits (in present value terms) for Option 2 are summarised in **Table 8** in **Section 5** below. Details of transition and annual benefits (in constant price terms) are shown in **Table 2** in **Section 4** below. Total annual benefit for 8 railway undertakings is around £0.01m. Total annual benefit for 10 ECMs not having to undergo multiple checks from different railway undertakings is £0.05m. Total annual benefit for Network Rail PWRA team is £0.2m.

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

The benefits of the Regulations are that (a) they will help to achieve consistency of approach to rail vehicle maintenance across the EU; and (b) they help to reduce the burden on railway undertakings in terms of time and cost involved in ensuring that freight wagons have been properly and safely maintained.

Key assumptions/sensitivities/risks

Discount rate (%)

3.5

This IA assumes that the certification body is ORR and that 10 ECMs apply to ORR for an ECM certificate. An ECM can choose to apply to any certification body in the European Union, (whether accredited, recognised or a national safety authority such as ORR), but at present it is unlikely that a UK based ECM will apply outside the UK. As ORR's assessment of applications will involve high-level scrutiny of the ECM's maintenance processes, costs are likely to increase for an ECM if it chooses to apply for a more thorough assessment from an accredited or recognised body. Any follow-up and closure of preventative or corrective actions by the ECM are assumed to be included.

BUSINESS ASSESSMENT (Option 2)

Direct impact on bus	siness (Equivalent Annu	In scope of OITO?	Measure qualifies as	
Costs: 0.0	Benefits: 0.2	Net: 0.2	No	NA

Summary: Analysis & Evidence Policy Option 3 (Preferred Option)

Description: As Option 2, but in addition, make changes to ROGS; the Health and Safety (Enforcing Authority for Railways and Other Guided Transport Systems) Regulations 2006 ("EARR"); and the Train Driving Licences and Certificates Regulations 2010 ("TDLCR").

FULL ECONOMIC ASSESSMENT

Price Base	PV Base	Time Period	Net	Benefit (Present Val	ue (PV)) (£m)
Year 2010	Year 2010	Years 10	Low:	High:	Best Estimate: 1.1

COSTS (£m)	Total Tra (Constant Price)	ansition Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	0.3			1.7
High	0.6	1		2.1
Best Estimate	0.5		0.2	2.0

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

The costs of Option 3 are shown in **Table 8** in **Section 5** below, which identifies the main elements under this Option, and compares them with Option 2. (Further details of transition and annual costs are set out in **Table 6** in **Section 5**). The costs of Option 3 are the same as those summarised in Option 2 above, but in addition to these costs, Option 3 involves some minor one-off familiarisation costs in relation to the changes made to ROGS, EARR and TDLCR. These are estimated to be £0.03m on the assumptions set out in **Section 4** below (paragraph 4.53). There will also be additional annual average costs of £0.01m for statutory reviews of EARR and TDLCR.

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

None.

BENEFITS (£m)	Total Tra (Constant Price)	ansition Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low				
High		1		
Best Estimate	0.0		0.4	3.1

Description and scale of key monetised benefits by 'main affected groups' (Constant prices)

Option 3 offers annual benefits of about £0.3m per year (average in 2010 prices), with the largest items being savings to the PWRA team from a shift in responsibility for freight wagon maintenance by the onset of ECM certification (£0.2m per year) and drivers for non-mainline train operators (£0.1m per year). There are also small transitional benefits of £0.04m in relation to train drivers for non-mainline operators.

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

The benefits are (a) greater consistency of approach to rail vehicle maintenance across the EU; (b) smaller burden on railway undertakings in terms of time and cost in ensuring that freight wagons have been properly and safety maintained; (c) Forty one safety certificate and safety authorisation applicants could benefit from shorter processing times of their applications; and (d) savings to some operators from not having one safety certificate instead of two.

Key assumptions/sensitivities/risks

Discount rate (%)

3.5

This IA assumes that the certification body is ORR and that all 10 ECMs apply to ORR for an ECM certificate. An ECM can choose to apply to any certification body in the European Union, (whether accredited, recognised or a national safety authority such as ORR), but at present it is unlikely that a UK based ECM will apply outside the UK. As ORR's assessment of applications will involve high-level scrutiny of the ECM's maintenance processes, costs are likely to increase for an ECM if it chooses to apply for a more thorough assessment from an accredited or recognised body. Any follow-up and closure of preventative or corrective actions by the ECM are assumed to be included.

BUSINESS ASSESSMENT (Option 3)

Direct impact on bus	siness (Equivalent Annua	In scope of OITO?	Measure qualifies as	
Costs: 0.0	Benefits: 0.1 (0.1 including EU)	Net: 0.1 (0.3 including EU)	Yes, partially	OUT

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Evidence Base (for summary sheets)

1. Issue

1. 1 Implementing the certification requirements of the European Directive on the maintenance of railway vehicles ("Miscellaneous Amendments Regulations").

Problem

1. 2 There are different national procedures in the EU for the approval of freight wagons, which hinder the free movement of trains. Railway undertakings assert that these procedures are bureaucratic and expensive when freight wagons are placed in service. "Keepers" of freight wagons have identified that meeting multiple maintenance regimes of different railway undertakings is onerous and expensive. This is a barrier to the creation of new railway undertakings in the freight sector and a stumbling block affecting the interoperability of the European rail system. As no Member State has the power to determine unilaterally that the operating authorisation it has issued will be valid in another Member State, an EU-wide initiative is being taken to harmonise and simplify the existing national procedures. The proposed Miscellaneous Amendments Regulations implement European provisions that are part of the solution to this problem.

2. Purpose and intended effect

- It is hoped that the effect of the introduction of ECM certification regime for freight wagons will improve the competitiveness of the freight sector in the UK and across the EU by reducing the administrative costs associated with establishing freight wagon safety. (See **paragraphs 3.5 to 3.7**). The impact of a consistent approach to establishing vehicle maintenance standards and safety will particularly benefit international traffic, although it is envisaged that substantial benefits will also be realised at a UK level. (See **paragraph 4.7**). (**Note:** A full glossary of acronyms and technical terms is at **Annex 7**).
- 2.2 The Railways and Other Guided Transport Systems (Miscellaneous Amendments)
 Regulations 2012 ("the Miscellaneous Amendments Regulations") are being proposed to
 make miscellaneous amendments to three statutory instruments:
 - The Railways and Other Guided Transport Systems (Safety) Regulations 2006 ("ROGS"):
 - The Health and Safety (Enforcing Authority for Railways and Other Guided Transport Systems) Regulations 2006 ("EARR"); and
 - The Train Driving Licences and Certificates Regulations 2010 ("TDLCR").
- 2.3 The Miscellaneous Amendments Regulations propose to implement the outstanding elements of Directive 2008/110/EC ("the Directive on vehicle maintenance) which requires an entity in charge of maintenance ("ECM") of freight wagons to obtain an ECM certificate from a certification body. European Commission Regulation 445/2011 ("the ECM Regulation") was adopted on 10 May 2011 and sets out the system of certification of ECMs for freight wagon, which must be followed in all Member States.
- 2.4 The intended effect of an ECM certificate is to provide assurance to the railway undertaking and the national safety authority¹ that an ECM is able to safely maintain the freight wagon for which it has responsibility. The ECM certificate is intended to reduce the burden on railway undertakings in terms of time and cost involved in ensuring that freight wagons have been properly and safely maintained. By having an ECM certificate the need for further checks and audits of freight wagons by the railway undertaking will be reduced.

¹ For Great Britain, the national safety authority is the Office of Rail Regulation ("ORR"). "Safety authority" is defined in the Railway Safety Directive as meaning the national body entrusted with the tasks regarding railway safety in accordance with that Directive or any bi-national body entrusted by Member States with these tasks to ensure a unified safety regime for specialised cross-border infrastructures.

- 2.5 As well as implementing the above mentioned elements of the Directive on vehicle maintenance, ORR wishes to include some additional amendments to ROGS, EARR and TDLCR. Whilst the additional amendments to increase the transparency are not part of the European transposition process they have been included in light of experience of operating under the current regime and are designed with better regulation principles in mind to ensure regulatory clarity and give businesses the benefits of reduced administrative burdens. More information about these measures can be found in **Section 4**.
- 2.6 The amendments proposed do not expand or gold plate any of the Directives' requirements. As they represent a purely domestic change, these amendments are within scope of "One In, Two Out", but they do not create any "Ins". The draft Regulations propose some domestic "Outs" by removing the requirement for non-mainline² operators to submit annual safety reports to ORR and by clarifying that non-mainline operators are excluded from the requirements of the TDLCR. The introduction of these measures is estimated to save businesses around £107,000 per year on the current arrangements.

3. Background

The position in the United Kingdom

- 3.1 In the UK, the Private Wagon Registration Agreement ("PWRA") was created before railway privatisation. It places responsibility for safety assurance of private wagons running on the infrastructure with the infrastructure manager. Currently this is Network Rail Infrastructure Ltd.
- 3.2 PWRA members are rail freight industry members of the Private Wagon Federation ("PWF") and other private wagon owners. The PWF is a trade association comprising members with interests in freight wagons.
- 3.3 The UK rail freight sector, mainly through the PWF, has expressed a desire to move away from the current regime. In particular, they have requested the establishment of a scheme that recognises them (private wagon owners) as a player under the Railway Safety Directive and allows them the choice of breaking away from the PWRA. The ECM certification scheme will allow them to have this choice by enabling them to appoint any certificated ECM from across the EU.
- 3.4 In the UK, there are³:
 - 19,319 UK-registered domestic freight wagons (i.e. registered in the UK for travel in the UK), of which 5,130 are privately owned;
 - 1,732 UK-registered international freight wagons (i.e. registered in the UK to travel through the Channel Tunnel); and
 - 6,477 foreign registered international freight wagons (i.e. registered outside the UK for travel through the Channel Tunnel).

According to figures from the National Rail Trends⁴, 19.23 billion net tonne kilometres of freight was carried by rail in Great Britain in 2010-11. This is a 0.9 per cent increase from 2009-10.

3.5 There are 26 private wagon owners (of which 17 are part of the PWRA) and eight railway undertakings. However, we estimate that there will be around 10 ECMs for privately owned freight wagons. This is because private wagon owners will have commercial arrangements between themselves and maintainers for the ECM for their wagons. DB Schenker ("DBS"), is an example of a typical railway undertaking which operates privately owned freight wagons in its trains. It currently undertakes audits of privately owned freight wagons not registered in the PWRA and ensures that they are managed correctly. It also undertakes a pre-departure

 $^{^{2}\ \}mbox{Non-mainline}$ means those operators and systems that are not part of the mainline railway.

³ Source: Rolling Stock Library.

⁴ National Rail Trends Yearbook 2010-11, p. 67 (See **Annex 8** for link).

- examination in accordance with RIS-2702-RST. (RIS-2702-RST is a voluntary industry standard on in-service examination and reference limits for freight wagons).
- 3.6 An audit could take up to two person-days to conduct and a documentation review could take about half a day. The introduction of an ECM certification regime would mean that DBS could benefit by a reduction in the audit and documentation review it carries out. If the keeper leasing or hiring out a non-PWRA wagon to DBS presented them with an ECM Certificate, DBS would only need to carry out a pre-departure examination prior to operating the freight wagon, monitor the performance of their wagons and liaise with them as necessary. This could mean some cost savings for DBS. (Source: DB Schenker).
- 3.7 For a private wagon owner, which is non-PWRA, it would benefit if railway undertakings only carry out a pre-departure examination for all of the wagons it owns.

The position in Europe

- 3.8 COTIF stated in 2006 that keepers of freight wagons were no longer obliged to register them with a railway undertaking. This led to representatives of the freight wagon community lobbying the EU institutions to amend the Railway Safety Directive. They wanted a system that would help provide assurance of the safety of freight wagons across EU Member States. In October 2006 a working group⁵ was set up by the European Commission ("the Commission") to look at ways to clarify the role of the keeper of wagons and the maintenance of wagons. It consisted of representatives from the freight community, national safety authorities, Member States and the European Railway Agency ("ERA")⁶.
- 3.9 Across the EU, there are⁷:
 - a. a total of 536 contracting parties, which include 83 railway undertakings, 354 private wagon keepers and 99 railway undertakings who are also wagon keepers; and
 - b. a total of 705,168 declared wagons of which 201,698 are owned by private wagon keepers.

Directive on vehicle maintenance (2008/110/EC)

- 3.10 The nature of the problem identified above, and the objectives set suggested that an EU-wide approach was more appropriate.
- 3.11 The outcome of the lobbying mentioned earlier was a consultation by the Commission in early 2006. Responses to the consultation favoured a Commission initiative. Non-legislative options considered included:
 - close monitoring of the use of the mutual recognition principle and, where appropriate, launch of infringement procedures; and
 - assigning ERA the role of coordinating parallel acceptance procedures.
- 3.12 In December 2006, the Commission⁸ tabled a package of revisions to the Common Transport Policy. The driving force behind these revisions was to improve cross-acceptance for freight wagons. This is to allow free movement of rail services in an integrated common railway area. The legislative package included amendments to the Railway Safety Directive, in the form of the Directive on vehicle maintenance.
- 3.13 The Directive on vehicle maintenance establishes a common system for maintenance arrangements across EU Member States. Under its requirements, all vehicles need to be assigned an ECM before they are placed in service or used on the network. The ECM must be registered on the National Vehicle Register⁹ of the Member State in which it is first placed in service. The ECM must also establish a system of maintenance, which ensures that the

⁵ Working Group Final Report – See 'References' section in **Annex 8** for web link.

⁶ ERA has been established to provide EU Member States and the Commission with technical assistance in the fields of railway safety and interoperability.

⁷ 2007 figures from Working Group Final Report – See 'References' section in **Annex 8** for web link.

⁸ European Commission explanatory memorandum and impact assessment – See 'References' section in **Annex 8** for web link

⁹ A database of rail vehicles operated in each Member State whose establishment is required under Directive 2008/57/EC

- vehicles for which it is responsible are safe to run on the network. These requirements have already been transposed by The Railways and Other Guided Transport Systems (Safety) (Amendment) Regulations 2011(S.I. 2011/1860).
- 3.14 In respect of the maintenance of freight wagons only, the ECM will need to hold an ECM certificate. The ECM certificate will provide assurance that the maintenance requirements of the Directive on vehicle maintenance are being met for any freight wagon for which the ECM has responsibility. The ECM Regulation sets out a system of certification of ECMs for freight wagons.

4. Options

Option 1: Do nothing.

4. 1 A "do nothing" option would leave all regulations unchanged. This would mean we fail to implement the outstanding elements of the Directive and the existing regime stays in place. There would be the risk of infraction fines with this option. It is the baseline for quantifying the costs and benefits of action under the other two Options.

Option 2: Implement the Directive on vehicle maintenance in relation to the requirement for an ECM for freight wagons to obtain an ECM certificate from a certification body.

4. 2 The Miscellaneous Amendments Regulations are being proposed to introduce to ROGS the requirement for an ECM for freight wagons to obtain an ECM certificate from a certification body as set out in the ECM Regulation. As a result of these new requirements the following impacts are envisaged:

Proposal 1: Certification of ECMs for freight wagons

Costs

- 4. 3 Some of the ECM certification requirements for freight wagons are broadly being carried out under the existing arrangements in the Private Wagon Registration Agreement (PWRA). The PWRA is a series of contracts between Network Rail and around 17 Private Wagon Owners ("PWO"), which allows the PWOs' 3400 freight wagons to be operated on Network Railmanaged infrastructure. The PWRA team at Network Rail reviews the maintenance documentation for the 3400 wagons and registers and undertakes audits of their maintenance locations at no cost to the PWO. The PWRA team issues engineering instructions to the Private Wagon Owners and reviews any modifications that the owners wish to carry out to their wagons. The PWRA team also monitors the safety performance of the wagons and assists with investigations into serious incidents and accidents. Under the existing arrangements, the PWRA team carries out some aspects of the ECM function under the ECM certification regime.
- 4. 4 The onset of the ECM certification regime for freight wagons means a shift in responsibility for freight wagon maintenance from the PWRA team to the PWO, who in most cases will become the ECM. As a result of this, the PWRA will be replaced by the ECM Service Provision Agreement (ESPA). The ESPA team at Network Rail will provide an engineering support service to the ECM, but the ECM itself will become responsible for managing the maintenance activities relating to any freight wagons for which it is responsible. The new ECM responsibilities mean that extra costs are likely to be incurred in set up, administration, assessment, audit and decision-making.
- 4. 5 The new regime means that the ECM will be required to:
 - familiarise itself with the new requirements;
 - prepare and adopt the necessary formalised internal procedures and processes;
 and

- prepare the application for ECM certification.
- 4. 6 The costs for the certification of ECMs for freight wagons are summarised in **Table 1**. Over a ten year period, the total present value costs are estimated to be around £1.4m¹⁰. The underlying cost calculations can be found in **Annexes 1 and 2**.

Table 1: Summary of certification costs for freight wagon ECMs (Proposal 1)

	Transition (or one-off) costs (2010 constant prices)				nual costs (excluding nsition) (2010 constant ces)		
	Low	High	Best estimate	Low	High	Best estimate	
Initial familiarisation costs for the ECM	200,000	500,000	350,000				
'Professional Head' services cost for the ECM				100,000	100,000	100,000	
Annual surveillance check costs for the ECM				40,000	50,000	45,000	
Policy development costs for ORR	80,000	80,000	80,000				
ECM certification costs for ORR	20,000	20,000	20,000				
Annual surveillance check costs for ORR				20,000	20,000	20,000	
Total costs	300,000	600,000	450,000	160,000	170,000	165,000	
Total in present value terms over 10 years	value terms 300,000 600,000 450,000					1,400,000	
Grand total in present value tern transition costs)	1,600,000	2,000,000	1,900,000				

Benefits

4. 7 The total benefits of ECM certification are summarised in **Table 2**. Over a ten year period the total present value of benefits is £2.1m on best estimate. The underlying benefits calculations can be found in **Annexes 1 and 2**.

Table 2: Summary of benefits of certification of ECMs for freight wagons (Proposal 1)

	Transition benefits (2010 constant prices)			Annual avera transition) (2		
	Low	High	Best estimate	Low	High	Best estimate
Benefits of Railway Undertakings	0	0	0	12,000	12,000	12,000
Benefits of the ECM	0	0	0	45,000	45,000	45,000
Benefits of PWRA/ESPA	0	0	0	200,000	200,000	200,000
Total benefits	0	0	0	257,000	257,000	257,000
Total in present value	e terms ove	er 10 years		2,100,000	2,100,000	2,100,000

 $^{^{\}rm 10}$ Cells H4 and H5 of CBA – Option 2 in Annex 2

Option 3: In addition to the proposal in Option 2 (Implement the Directive on vehicle maintenance) include amendments to ROGS, EARR and TDLCR.

- 4. 8 In reviewing ROGS to implement the outstanding elements of the Directive on vehicle maintenance, ORR has also taken the opportunity to consider the current railway safety framework in the light of lessons learned from operating under the current regime. The Miscellaneous Amendments Regulations also propose changes to: ROGS; the Health and Safety (Enforcing Authority for Railways and Other Guided Transport Systems) Regulations 2006 ("EARR"); and the Train Driver Licences and Certificates Regulations 2010 ("TDLCR"). The Miscellaneous Amendments Regulations therefore propose to:
 - amend ROGS to require an ECM for freight wagons to obtain an ECM certificate from a certification body (*Proposal 1*);
 - amend EARR to give ORR inspectors jurisdiction to enter and have enforcement powers in certain premises that have been excluded, thereby allowing ORR inspectors to carry out enforcement in premises where an ECM may have maintenance facilities (*Proposal 2*);
 - remove from ROGS the requirement for mainline operators to carry out safety
 verification in the light of introduction of the common safety method ("CSM") on risk
 evaluation and assessment (European Regulation 352/2009). This will reduce the
 administrative burden of mainline operators who currently have a legal duty to carry out
 the existing safety verification requirements in ROGS and apply the CSM on risk
 evaluation and assessment (*Proposal 3*);
 - amend the definition of 'mainline railway' in ROGS to ensure that operators of heritage and light rail systems are excluded from the mainline requirements (*Proposal 4*);
 - amend TDLCR to clarify the meaning of "in Code form" in relation to medical restrictions in train driving licences (*Proposal 5*);
 - remove the requirement for non-mainline operators to send annual safety reports to ORR, thereby reducing their administrative burden (*Proposal 6*);
 - amend ROGS to make it clear controllers of 'safety critical work' must have suitable and sufficient monitoring arrangements in place (*Proposal 7*);
 - amend ROGS so that the 28 day 'affected parties' consultation period runs concurrently with ORR's four month processing time for applications for safety certificates and authorisations, thereby reducing the time taken for applicants to receive a safety certificate or safety authorisation (*Proposal 8*); and
 - amend the definition of 'national safety rules' to clarify its meaning (Proposal 9).
- 4. 9 In the interests of better regulation, these changes and the implementation of the Directive on vehicle maintenance are being taken forward in a single instrument, since they all either make amendments to ROGS or have a direct relationship with ROGS or the Railway Safety Directive.

Proposal 1: Certification of ECMs for freight wagons

4. 10 The costs and benefits of the certification of ECMs for freight wagons are the same as those set out in Proposal 1 in Option 2 (above).

Proposal 2: Enforcement of ECMs

- 4. 11 The Railways Act 2005, which made provision for the transfer of responsibilities for railway safety from the Health & Safety Executive ("HSE") to ORR, did not include provisions for ORR to mutually agree enforcement demarcation with HSE (as HSE is able to with local authorities, for example).
- 4. 12 The Health and Safety (Enforcing Authority for Railways and Other Guided Transport Systems) Regulations 2006 ("EARR") were made under the Health and Safety at Work etc. Act 1974. They provide the enforcement demarcation between HSE and ORR for railway safety purposes. Under EARR, ORR is the enforcing authority for activities associated with operation of a railway.

- 4. 13 The current demarcation means that in certain premises such as factories, mines quarries, etc., ORR inspectors can enter to undertake railway related inspections of railway vehicles only by invitation from the occupier or by authorisation from HSE to accompany one of their inspectors. This potentially limits ORR's effectiveness as safety regulator because some ECMs will have maintenance facilities in premises where ORR has no enforcement responsibility, e.g. railway heavy maintenance workshops. ORR, as a safety authority, could therefore have difficulty monitoring that ECMs' maintenance systems.
- 4. 14 ORR proposes to amend EARR to allow ORR inspectors to enter and have enforcement powers in those premises that have been excluded from regulation 4(3) of EARR. This is solely to allow ORR inspectors to monitor compliance by ECMs with the requirements in regulations 18A of ROGS. Currently, only HSE inspectors are allowed to carry out enforcement on these premises (e.g. quarries, harbours, factories, warehouse premises).

Costs and benefits

4. 15 ORR does not envisage that this change will create any additional cost burden to ORR or to businesses. The non-monetised benefit is that ORR will be able to monitor compliance by an ECM certificate holder operating in all premises.

Proposal 3: Safety verification

- 4. 16 ROGS requires that whenever there is a significant change that impacts on safety, a duty holder has to decide if safety verification is needed by applying a two stage test:
 - **Difference Test:** the risk arising from the design is new, or novel to the transport system; and
 - Risk Test: there will be a new significant safety risk or a significant increase in risk
- 4. 17 The CSM for risk evaluation and assessment on the mainline railway has applied in full since 1 July 2012 to all significant change.
- 4. 18 The CSM has direct effect in the all EU Member States. When a proposed change has an impact on safety on the mainline railway, the CSM places a duty on a proposer of change to decide, by expert judgment, the significance of a change based on six criteria:
 - failure consequence;
 - novelty;
 - complexity;
 - The inability to monitor the change;
 - reversibility; and
 - additionality.
- 4. 19 If a change is regarded as significant, the risk management process described in the CSM should be followed.
- 4. 20 The CSM covers the same requirements as safety verification (and more). Both are designed to provide an independent assessment that a project has gone through all the steps needed to reduce risks.
- 4. 21 Retaining requirements for safety verification in Great Britain in relation to the mainline railway when the CSM is in force potentially means that additional burdens are being placed on mainline operators if they are required to carry out both. ORR therefore proposes that it should no longer be a requirement under ROGS for mainline operators to carry out safety verification. The requirement for non-mainline operators to carry out safety verification will be retained.

4. 22 Guidance on the CSM can be found on ORR's website¹¹.

Costs and benefits

4. 23 A baseline of 'do nothing' in relation to safety verification in ROGS would result in additional cost burdens being placed on the operator. This is because costs will be incurred in carrying out safety verification under ROGS as well as carrying out the CSM. The impact of this proposal is to avoid these costs. Removing the requirement for safety verification has savings for businesses.

Proposal 4: Definition of 'mainline railway'

- 4. 24 ORR has reviewed its policy in relation to safety certificates for:
 - non-mainline operators whose vehicles operate on part of the mainline infrastructure;
 and
 - mainline operators whose trains operate on a part of non-mainline infrastructure.
- 4. 25 ORR has also reviewed, in conjunction with the Department for Transport, how this policy impacts on the requirement for drivers of trains for a railway undertaking required to have a safety certificate.
- 4. 26 ORR considers that it is not the policy intention of the Railway Safety Directive that a non-mainline operator, such as a heritage railway or a metro system, whose vehicles operate on part of the mainline railway, should be required to have a mainline safety certificate to operate on that part of the mainline railway. This is because those systems are excluded from the requirements of the Directive. ORR also considers that it is not the policy intention of the Train Driver Licensing Directive (2007/57/EC) that the drivers of trains operated by such operators must have a train driving licence and certificate to do so.
- 4. 27 ORR believes that a non-mainline safety certificate should cover all that operator's activities even if its trains operate on part of the mainline infrastructure. Its SMS should show that its systems are adequate for mainline operation. For example, a heritage railway whose trains operate on part of the mainline railway should be able to demonstrate in its SMS that it complies with relevant regulations and national safety rules.
- 4. 28 ORR believes that a mainline operator that operates vehicles on part of non-mainline infrastructure should not be required to have a separate non-mainline safety certificate. As long as the operator has stated the extent of its operations on its application for mainline safety certificate, its safety certificate should cover the whole of its operations.
- 4. 29 The Railway Safety Directive applies to mainline operators; i.e. those that operate on the mainline railway and those that manage the mainline infrastructure. In order to clarify that those operators that may be excluded from the Railway Safety Directive requirements properly excluded from the mainline railway in Great Britain, ORR proposes to amend the definition of "mainline railway" in ROGS.
- 4. 30 The revised Railway Safety Directive gives an opportunity for Member States to exclude heritage operations that operate on the mainline, provided they comply with national safety rules. ORR therefore propose that a new definition excludes from the mainline railway requirements in ROGS systems such as heritage railways like North Yorkshire Moors Railways, and metro systems such as London Underground and Tyne and Wear Metro, which may operate trains on part of mainline infrastructure. It is not clear from the current definition whether these systems are excluded.

¹¹ Guidance on the CSM for risk evaluation and assessment – See 'References' section in **Annex 8** for web link

4. 31 The proposed definition is intended to also exclude from the mainline railway requirements in ROGS systems, such as heritage railways and metro systems, which may operate trains on part of the mainline infrastructure.

Cost and benefits

- 4. 32 This clarification will eliminate any potential costs that a non-mainline operator would incur in obtaining train driver licences and certificates for its drivers driving on the mainline. By making these changes to the definition of "mainline railway" three non-mainline operators with a total of around 710 drivers would benefit from the changes.
- 4. 33 TDLCR came into effect on 29 October in respect of new cross-border drivers. It will come into effect in two further phases:
 - new domestic drivers from 29 October 2013; and
 - existing train drivers from 29 October 2018.
- 4. 34 Using the evidence from RSSB (2009)¹² scenarios 3 and 4, which applied to 21 train operation companies and figures from the non-mainline operators, the benefit would be as follows (2010 constant prices):
 - Medical assessment testing for new drivers: Assuming that there are 20 new drivers in 2013 each requiring a medical assessment in line with TDLCR at an additional cost of £300 per driver, the total medical assessment cost saving is estimated to be £6,000 in 2013. There would also be cost savings from a medical assessment every three years.
 - Psychometric testing for new drivers: Assuming that there are 20 new drivers in 2013 each requiring a one-off psychometric test in line with TDLCR at an additional cost of £200 per driver, the total psychometric testing cost saving is estimated to be £4,000 in 2013 (2010 constant prices).
 - Medical assessment for existing drivers 55 and over: Assuming that there are 210
 existing drivers across three non-mainline operators aged 55 and over in 2018, each
 requiring an annual medical assessment in line with TDLCR at an additional cost of £300
 per driver, the total medical assessment cost saving is estimated to be £63,000 per year
 from 2018.
 - Medical assessment for existing drivers under 55: Assuming that there are 500
 existing drivers across three non-mainline operators under the age of 55, each requiring a
 medical assessment in line with TDLCR at an additional cost of £300 per driver, the total
 medical assessment cost saving is estimated to be £150,000 in 2018 and 2021. There
 would be cost savings from a medical assessment every three years.
 - Certificate database: The cost of creating or modifying driver competence databases to comply with the requirements of TDLCR would be a one-off saving, estimated to be £36,000.
 - Certificate database administration: Starting from 2013, there would be estimated savings of £56,000 per year for the extra cost of administering the driver competence management system.
- 4. 35 The total benefits from amending the definition of "mainline railway" are summarised in **Table**3. The present value figure for the one-off benefits has been discounted as they occur in year2.

¹² MVA Consultancy (March 2009) for RSSB, *Assessment of EU Driver Licensing Directive*, Cost Benefit Analysis, Project no T77 – See 'References' section in **Annex 8** for web link and **Annex 2**.

Table 3: Summary of benefits of amending the definition of "mainline railway"

	One-off benefits	Annual average benefits from 2012 over 10 years
Additional medical assessment for 710 drivers		57,000
Psychometric testing for 20 drivers	4,000	
Certificate database	36,000	
Certificate database administration		56,000
Total	40,000	113,000
Total in present value terms over 10 years	37,000	940,000

Proposal 5: Train Driving Licences and Certificates Regulations 2010

- 4. 36 Schedule 2 of TDLCR refers to a model train driving licence and harmonised complementary train driving certificate across the EU. It sets out a model of what information licences and certificates must contain, how it must look and what restrictions there are.
- 4. 37 In order to clarify the meaning of "in code form" in paragraph 2(g) of Schedule 2 of TDLCR, a definition is being inserted into TDLCR and the final paragraph of paragraph 2(g) is being deleted. This makes it clear that "in code form" implements future obligations in relation to additional information or medical restrictions that may be required by amendments to Commission Regulation 36/2010.

Cost and benefits

4. 38 This minor change to TDLCR does not create any impact on businesses.

Proposal 6: Annual safety reports for non-mainline operators

- 4. 39 Regulation 20 of ROGS currently requires that a transport operator sends an annual safety report to ORR if it requires a mainline or non-mainline safety certificate or safety authorisation.
- 4. 40 ORR has reviewed the requirement for non-mainline operators and has concluded that this requirement is not necessary, as information from these operators is available in other ways. ORR therefore proposes that the requirement for non-mainline operators to send annual safety reports to ORR is removed from ROGS.

Costs and benefits

4. 41 Removing the requirement for non-mainline operators to submit annual safety reports to ORR will mean a cost saving for these operators. ORR estimates that it takes 12 hours for a report to be written by a middle manager earning £15 per hour 13 (plus overheads at a rate of 30 per

¹³ Annual Survey of Hours and Earnings - Manufacturing

cent, which is not included in the £15¹⁴). There are five non-mainline duty holders that submit annual safety reports to ORR. The total benefit to these non-mainline operators is £1,200 per year.

Proposal 7: Competency and fitness for safety critical work

- 4. 42 ROGS regulation 24(1)(d) of ROGS requires that every controller of safety-critical work, so far as is reasonably practicable, ensure that anyone under his management, supervision or control only carries out safety-critical work where there are arrangements in place for monitoring the competence and fitness of that person.
- 4. 43 Operational experience suggests that the provisions of regulation 24(1)(d) are not clear to duty holders. It is also difficult to enforce against these arrangements if they were considered by the inspector to be unsuitable and insufficient. However, if regulation 24(1)(d) required that there were in place suitable and sufficient arrangements for monitoring, this would help to improve safety by clarifying the requirement for controllers of safety-critical work. The inspector would then be able to require improvements if monitoring arrangements were considered to be unsuitable and insufficient.
- 4. 44 ORR therefore proposes to amend regulation 24(1)(d) of ROGS to clarify that the monitoring arrangements of the controller of safety-critical work have to be suitable and sufficient.

Costs and benefits

4. 45 ORR does not envisage that this clarification will create additional cost burdens on businesses. There will be non-monetary benefits in increased transparency of the monitoring arrangements of controllers of safety-critical work.

Proposal 8: Consulting an 'affected party'

- 4. 46 Regulation 17 of ROGS requires that whenever an application is made for a safety certificate or authorisation, the applicant must consult an 'affected party' on its application or any further information requested by ORR. The 'affected party' has 28 days from the date of issue of the application to make representations to ORR. The 'affected party' includes:
 - for all applications, any recognised trades unions in the applicant's organisation;
 - for all applications, the appropriate rail user groups;
 - for a safety certificate application, transport operators who manage the infrastructure of the transport system the applicant runs; and
 - for a safety authorisation application, transport operators who run on the applicant's infrastructure or who manage infrastructure that 'interfaces' with the applicant's.
- 4. 47 ROGS also requires that the four month period that ORR has to make its decision on an application for a safety certificate or authorisation will not begin to run until the 28-day period stated above has elapsed. ORR has reviewed this requirement and found that in many cases, it did not take as long as four months for ORR to process applications. Taking the four-month period as 122 days, adding 28 days gives 150 days. In a sample size of 64 safety certificate applications, the average time taken to process an application is 99 days. In a sample size of 29 safety authorisations, the average duration is 110 days. These are within four months, which means that in these cases applicants will have to wait up to an additional 28 days to receive their certificate or authorisation.
- 4. 48 In the interest better regulation, ORR therefore proposes that ROGS is amended so that the 28-day consultation with an 'affected party' runs concurrently with the four-month application assessment period. This will in some cases shorten the time taken for an applicant to receive a decision from ORR.

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¹⁴ Standard Cost Model

4. 49 Amending ROGS to allow the consultation of 'affected parties' to run concurrently with ORR's four-month assessment period could mean that an operator receives its safety certificate or authorisation earlier. For new train operators or infrastructure managers, this could mean that they can begin their operations earlier and benefit from generating revenue earlier. However, this is difficult to quantify because franchises run for several years and it is difficult to predict whether or not existing franchise holders will continue with the same operation. This proposal applies to 41 safety certificate and safety authorisation applicants from October 2012 until 2015 (see **Table 4**) that currently hold certificates or authorisations.

Table 4: Applications affect by change in 'affected party' consultation

Year	No of safety certificates	No of safety authorisations
2012 (from October)	7	4
2013	14	7
2014	3	3
2015	2	1
Total	26	15

4. 50 Making this change to ROGS does not create any additional cost burden for businesses.

Proposal 9: Definition of national safety rules

4. 51 ROGS uses the term 'transport undertaking' rather than 'railway undertaking', which is in the Railway Safety Directive as 'transport undertaking' includes operators not on the mainline. The definition of 'national safety rules' was copied from the Railway Safety Directive and is therefore out of line with UK implementation as it includes the term 'railway undertaking'. ORR therefore proposes to change the definition of 'national safety rules' so that it refers to 'transport undertaking' rather than 'railway undertaking'.

Costs and benefits

4. 52 The clarification of the definition of 'national safety rules' does not create any material impact on costs. It will benefit duty holders as they will be able to better understand what is meant by 'national safety rules'.

Familiarisation costs in relation to proposals 2 to 9

4. 53 A total of 67 duty holders will need to familiarise themselves with the changes being made to ROGS, TDLCR and EARR. Assuming that it takes a middle manager earning £15 per hour (plus overheads at a rate of 30 per cent, which is not included in the £15¹⁵) taking three days (24 hours) to familiarise themselves with the legislation, the total familiarisation cost is around £30, 000 (rounded to one significant figure).

One-in, Two-out business assessment

- 4. 54 As the measures implement European requirements which the UK is obliged to implement as part of its treaty obligations as a Member State of the European Union, the ECM measures included in the Miscellaneous Amendments Regulations do not fall within the scope of the Government's "One In, Two Out" ("OITO") requirement. In relation to those measures that do fall within the scope of OITO, the "Ins" identified are those relating to the familiarisation costs above, but in 2009 prices (£36,000). These proposals create 'Outs' in relation to:
 - **proposal 3:** the removal of safety verification for mainline operators in ROGS;

¹⁵ Stan<u>dard Cost Model</u>

- proposal 4: amending the definition of 'mainline railway' in ROGS;
- **proposal 6:** the removal of the requirement in ROGS for non-mainline operators to send annual safety reports to ORR, and
- **proposal 8:** amending ROGS to allow the 28-day 'affected parties' consultation period to run concurrently with ORR's four-month processing time;
- 4. 55 The total benefits for the 'Outs' and costs of 'Ins' are set out in **Table 5**.
- 4. 56 The present value of the net cost to business ("PVNCB") (based on the familiarisation costs set out in **paragraph 4.54** for 69 duty holders) is £-0.9m. Over a 10 year period, using an annuity rate of 8.608, the equivalent annual net cost to business (EANCB) is £-0.1m. Box 1 shows how the EANCB is calculated. This includes new entrants.
- 4. 57 The transitional costs occur in year 0 and so are not discounted. The transitional benefits occur in year 2 and so are discounted.
- 4. 58 The PVNCB for all businesses including the ones arising out of the European requirements is £-2.7m. Over a 10 year period the EANCB is £-0.3m. This includes new entrants.

Table 5: Benefits of 'Outs' and costs of 'Ins'

	Table 3. Benefits of Outs and Costs of Ins						
	· ·				erage (excluding (2009 constant prices)		
Benefits	Low	High	Best estimate	Low	High	Best estimate	
Benefits of no annual safety reports (Proposal 6)	0	0	0	0	0	1,000	
Benefits of non-mainline operator (train driver) (Proposal 4)	0	0	39,000	0	0	110,000	
Total benefits	0	0	39,000	0	0	111,000	
Total in present value terms over 10 years			36,000			923,000	
Grand total in present value terms	over 10 ye	ars (includi	ng transitio	n benefits)		960,000	
		Transition costs (2009 constant prices)			Annual average (excluding transition) (2009 constant prices)		
Costs	Low	High	Best estimate	Low	High	Best estimate	
Familiarisation costs of 'Outs' involving five duty holders	0	0	30,000	0	0	0	
Total in present value terms over 10 years			30,000				

Box 1: Calculation of EANCB and EANBB for 'Outs'

EANCB = \underline{PVNCB} where $a_{t,r}$ is the annuity rate given by: $a_{t,r}$

$$a_{t,r} = \frac{1+r}{r} \left[1 - \frac{1}{(1+r)^t} \right] = \frac{1.035}{0.035} \left[1 - \frac{1}{1.411} \right] = 8.608$$

Where:

Present value of net costs to business = PVNCN
Time period in the calculation of the net present value = t (10 years)
Discount rate = r (3.5%)
Equivalent annual net cost to business = EANCB

PVNCB (OITO) = $£_£0.03m - £0.96m = £-0.93m$

PVNCB (OITO+EU) = £_£0.37m - £3.04m = £-2.7m

EANCB (OITO) = $\frac{\text{PVNCB (OITO)}}{a_{t,r}} = \frac{\text{\pounds}-0.93\text{m}}{8.608} = \text{\pounds}-0.1\text{m}$

EANCB (OITO+EU) = PVNCB (OITO+EU) = £-2.7m = £-0.3m $a_{t,r}$ 8.608

5. Summary of preferred option (Option 3)

5.1 The preferred option is Option 3 because it provides an opportunity to make further changes to ROGS, EARR and TDLCR. The total costs of Option 3 are summarised in **Table 6**. In addition there will be the cost of carrying out a statutory review (See **Section 6**). The total benefits of Option 3 are summarised **in Table 7**. **Table 8** sets out a summary of the present value of costs and benefits for both Options 2 and 3.

Table 6: Summary of costs for Option 3

	Transition (or one-off) costs (constant prices)			Annual cost (constant pr	s (excluding rices)	transition)
	Low	High	Best estimate	Low	High	Best estimate
Initial familiarisation costs for the ECM (Proposal 1)	200,000	500,000	350,000			
'Professional Head' services cost for the ECM (Proposal 1)				100,000	100,000	100,000
Annual surveillance check costs for the ECM (Proposal 1)				40,000	50,000	45,000
Policy development costs for ORR (Proposal 1)	80,000	80,000	80,000			
ECM certification costs for ORR (Proposal 1)	20,000	20,000	20,000			
Annual surveillance check costs for ORR (Proposal 1)				20,000	20,000	20,000
Familiarisation cost for changes to ROGS, EARR and TDLCR (Proposals 2 to 9)	30,000	30,000	30,000			
(Cost for statutory review of EARR and TDLCR)				8,000	8,000	8,000
Total costs	330,000	630,000	480,000	168,000	178,000	173,000
Total in present value terms over 10 years	300,000	600,000	500,000	1,400,000	1,500,000	1,400,000
Grand total in present value	Grand total in present value terms (including transition costs) 1,700,000 2,100,000 2,000,000					2,000,000

Table 7: Total benefits of Option 3

	Transition benefits (constant prices)			Annual average (excluding transition) (constant prices)		
	Low	High	Best estimate	Low	High	Best estimate
Benefits of railway undertakings (Proposal 1)	0	0	0	12,000	12,000	12,000
Benefits of the ECM (Proposal 1)	0	0	0	45,000	45,000	45,000
Benefits of PWRA (Proposal 1)	0	0	0	200,000	200,000	200,000
Benefits of no Annual Safety Reports (Proposal 6)	0	0	0	1,200	1,200	1,200
Benefits of non-mainline operator (train driver) (Proposal 4)	40,000	40,000	40,000	110,000	110,000	110,000
Total benefits	40,000	40,000	40,000	368,200	368,200	368,200
Total in present value terms over 10 years	37,000	37,000	37,000	3,100,000	3,100,000	3,100,000
Grand total in present value terms over 10 years (including transition costs)				3,100,000	3,100,000	3,100,000

Table 8: Summary of present value of costs and benefits (Over 10 years, relative to "do nothing" notional option) (Best estimates in 2010 prices)

	Option 2 – co	opy out the	Option 3 – the Directi amend do requireme	ve and mestic
Proposal	Costs	Benefits	Costs	Benefits
Proposal 1: Certification of ECMs for freight wagons	1,900,000	2,100,000	1,900,000	2,100,000
Proposal 2: Enforcement of ECMs	0	0		0
Proposal 3: Safety verification	0	0		0
Proposal 4: Definition of 'mainline railway'	0	0		990,000
Proposal 5: TDLCR	0	0		0
Proposal 6: Annual safety reports for non-mainline operators	0	0	30,000*	10,000
Proposal 7: Competency and fitness for safety critical work	0	0		0
Proposal 8: Consulting an 'affected party'	0	0		0
Proposal 9: Definition of national safety rules	0	0		0
Statutory reviews			70,000	0
Total in present value terms	1,900,000	2,100,000	2,000,000	3,100,000
Net benefit in present value terms		200,000		1,100,000

^{*}Divided equally between proposals 2 to 9

6. Statutory review of ROGS, TDLCR and EARR

- 6.1 It is the UK Government's policy that for regulations implementing EU obligations, a statutory obligation on the Secretary of State to review them every five years will apply. The Railways and Other Guided Transport Systems (Safety) (Amendment) Regulations 2011 has already inserted regulation 34A into ROGS. This requires that within a maximum of five years of those Regulations coming into force, the Secretary of State must review the whole of ROGS and publish the review's conclusions. As a result of this, the Miscellaneous Amendments Regulations do not insert a review clause into ROGS. However, a Post Implementation Plan can be found at **Annex 4**.
- 6.2 The Train Driving Licences and Certificates Regulations 2010 ("TDLCR") and the Health and Safety (Enforcing Authority for Railways and Other Guided Transport Systems) Regulations

2006 ("EARR") implement EU obligations so a statutory obligation on the Secretary of State to review them applies. The Miscellaneous Amendments Regulations inserts regulation 40 into TDLCR and regulation 8 into EARR. This requires that:

- within 5 years the Secretary of State must review the whole of TDLCR and publish the review's conclusion; and
- within 5 years the Secretary of State must review the whole of EARR and publish the review's conclusion.
- 4. 59 TDLCR came into effect on 29 October in respect of new cross-border drivers. It will come into effect in two further phases:
 - new domestic drivers from 29 October 2013; and
 - existing train drivers from 29 October 2018.
- 6.3 The Department for Transport at the end of 5 years will undertake a desktop review of TDLCR to ensure that its policy for application of the Directive is working and not disproportionately affecting industry. It will also review the costs and benefits of implementation of the licensing requirements of the Train Driver Licensing Directive to domestic drivers. The review will involve collating and updating existing evidence (including industry Cost-benefit Analysis reports on the costs associated of implementing the requirements of the Directive) as well as taking evidence from stakeholders via workshops and questionnaires. Stakeholders are all those affected by TDLCR, such as Train and Freight Operating Companies.
- The Post Implementation Review Plan for TDLCR is at **Annex 5** and the Post Implementation Review Plan for EARR is at **Annex 6**.
- ORR expects that it will take 0.33 person-years to carry out each review. The estimated completion cost, including publication as a Command Paper, will be around £40,000¹. This occurs in year 5 and year 10. So the annual average cost is £8,000 over 10 years (constant prices).
- 6.6 The benefits of a Ministerial duty to review TDLCR and EARR are that it helps to:
 - prevent over-regulation;
 - ensure that the Regulations are working as intended; and
 - assess whether any burdens on business and others can be reduced.

7. Specific impact tests

7.1 ORR has considered the potential impact of this policy on the following areas, in line with relevant guidance. No specific impacts have been identified given the nature of the proposed measure.

Equality

7.2 The proposals in the Miscellaneous Amendments Regulations are aimed at railway undertaking (mainline train operators), infrastructure managers, ECMs, and non-mainline train operators (e.g. metros and heritage railways) regardless of whether individuals have any of the protected characteristics under the Equality Act 2010. ORR envisages no impact on an individual with any particular protected characteristic because the proposals will have neither a positive or negative impact on these characteristics.

Competition

¹ This assumes: salary is £42,491 (plus overheads at a rate of 30 per cent, which is not included in the £42,491); full time equivalent required is 0.33; an additional £2,000 for publication of the Command Paper for each review.

7.3 The certification regime for ECMs for freight wagons is likely to have a positive impact on competition in the UK and European rail freight markets. It is likely to reduce barriers to entry for firms wishing to operate across national borders by increasing confidence in an ECM's ability to control the process of freight wagon maintenance.

Impact on Small Firms

7.4 The Miscellaneous Amendments Regulations should not adversely impact on small firms. ORR does not believe that regulatory burden will increase for any size of firm. They apply to any size, whether micro or large to ensure protection of the public from risks of danger and injury. However, the clarification of the exclusions from the definition of 'mainline railway' will minimise or the burden on smaller lines (such as those that are functionally separate from the mainline railway and used for local passenger services and heritage or touristic railways).

Greenhouse Gas

7.5 With the exception of the certification of ECMs for freight wagons, the measures being proposed are administrative and are not expected to have a material impact on greenhouse gas emissions. In relation to ECM certification, a consistent approach to rail freight wagon maintenance across Europe should allow for easier cross-border rail traffic, which may encourage the movement of traffic from the roads onto the rail network resulting in environmental benefits from lower carbon emissions.

Wider Environmental Impact

7.6 The Miscellaneous Amendments Regulations do not have a material impact on the wider environment other than what's been stated under 'Greenhouse Gas' above.

Health & Well Being

7.7 Major incidents on the railway and other guided transport systems are rare, but when they occur, they have the potential to cause a large impact on the confidence of users. They can also lead to injuries and fatalities as well as physical disruption of the railway. Indirectly, these incidents can undermine public confidence in the operation of the railways. Implementing the measures in the Miscellaneous Amendments Regulations is likely to provide further assurance that safety risks are being managed appropriately.

Human Rights

- 7.8 The Miscellaneous Amendments Regulations propose to amend EARR to give ORR inspectors jurisdiction to enter and have enforcement powers in certain premises that have previously been excluded. ORR inspectors would, therefore, be able to carry out enforcement in premises where an ECM may have maintenance facilities.
- 7.9 The powers of inspectors are governed by section 20 of the Health and Safety at Work etc. Act 1974. These powers allow for entry, inspection, analysis and seizure of property. Allowing inspectors to exercise these powers in more areas engages Article 1 of the First Protocol of the European Convention on Human Rights and Fundamental Freedoms. This relates to the entitlement to peaceful enjoyment of possessions. The powers of inspectors restrict that right as they allow interference with property.
- 7.10 However, this is not an absolute right. The Article is qualified by stating that no one shall be deprived of his possessions except in the public interest and subject to the conditions provided for by law and by general principles of international law. The basis of the restriction is found in health and safety legislation. Allowing inspectors these powers is legitimate as they ensure that health and safety rules are enforced. Health and safety rules are necessary to ensure protection of the public from risks of danger and injury. The rules in force are proportionate to the purpose to be achieved. The interference is limited and the aim, namely public safety, extremely important.

7.11 As a result, it is likely that these proposals will be human rights compliant. In coming to this conclusion, reference has been made to the Ministry of Justice guidance and the <u>Human Rights Flowchart</u> (Page 50 of the guidance).

Justice Impact

7.12 No new impacts are created on the justice system. Please see Justice Impact Test in **Annex** 3. This has been agreed by the Ministry of Justice.

Rural Proofing

7.13 The railways affect both urban and rural areas and the Miscellaneous Amendments Regulations apply to the whole of Great Britain without being specific to any particular geographic location. ORR therefore considers that the proposals do not disproportionately impact on rural communities, either negatively or positively.

Sustainable Development Impact

7.14 The Miscellaneous Amendments Regulations do not have a material impact on sustainable development. However, the certification regime for ECMs for freight wagons is likely to have a positive impact on competition in the UK and European rail freight markets. A more competitive rail transport sector will also help the EU to fulfil its basic commitments with regard to sustainable development and the struggle against climate change². A consistent approach to rail freight wagon maintenance across Europe should allow for easier cross-border rail traffic, which may encourage the movement of traffic from the roads onto the rail network resulting in environmental benefits from lower carbon emissions. See also 'Competition' above.

² European Commission explanatory memorandum – see 'References' section in **Annex 8** web link

Annex 1: Cost and benefit calculations for Proposal 1 (which occurs in both Options 2 and 3)

Costs of certification of ECMs for freight wagons

Costs for the ECM (source: Private Wagon Federation)

- 1. The estimated total initial cost per ECM is between £24,750 and £49,500. A range is expressed because ECMs will be starting from different points. For example, one organisation might have a baseline of a defined management and responsibility structure, formalised document control, internal audit and competence systems. Others may need to start at a baseline where these areas would need to be developed. Similarly, whereas some ECMs are rail specialists with access to in-house professional expertise, others are not and would need to buy-in this expertise to the level likely to be required.
- 2. The estimated total initial cost per ECM makes the following assumptions:
 - it takes typically at least 55 to 110 person days of effort for each ECM to familiarise itself with the new requirements and prepare for ECM certification; and
 - the cost for each ECM will be £450 per person day (source: Private Wagon Federation).
- 3. So, assuming the current position in GB where there are 10 ECMs (PWRA members and non-members) (excluding railway undertakings and infrastructure managers), the estimated total initial cost for all freight wagon ECMs will be between £200,000 and £500,000 (rounded to one significant figure).
- 4. Each ECM is likely to require additional 'Professional Head' engineering services of at least an estimated half a day a week compared to the baseline of 'no ECM'. At £450 per day, this is an additional cost of £12,000 per ECM per year. So, for all freight wagon ECMs, the total cost for 'Professional Head' engineering services is estimated to be around £100,000 per year (rounded to one significant figure).
- 5. Each ECM will also incur on-going additional costs to service annual surveillance checks compared with the 'no ECM' baseline. The total cost per ECM per year is between £4,000 and £5,000. This assumes the following:
 - the surveillance check involves high level scrutiny by the certification body;
 - the surveillance check involves two sites: the headquarters site, plus perhaps one workshop site;
 - the cost is £450 per person day, per site (source: Private Wagon Federation); and
 - it takes 4 to 6 days for the ECM to prepare for and undergo surveillance.
- 6. So, for all freight wagon ECMs, the total surveillance costs will be between £40,000 and £50,000 per year (rounded to one significant).

Costs for ORR

- 7. In its role as a safety regulator ORR will incur costs in developing policy and implementing the Directive on vehicle maintenance.
- 8. The cost to ORR for policy development is **£80,000** (rounded to one significant figure) assuming the following:
 - 70% of a Grade D's time with annual salary of £42,491;
 - 5% of a Grade C's time with annual salary of £55,045;

- 25% of a Grade B's time with annual salary of £60,839
- a 30 per cent overhead rate is applied to all salaries; and
- there will be one-off development costs of between £15,000 and £20,000 for the accreditation of certification bodies by the United Kingdom Accreditation Service.
- 9. As a certification body ORR will also incur costs in processing applications for ECM certificates. The cost for ORR certifying 10 ECMs over 12 months is estimated to be £20,000 (rounded to one significant figures), assuming the following:
 - it takes 6.5 hours for a Grade G to process one application;
 - it takes 1 hour for a Grade E to process one application;
 - it takes 47 hours for two Grade Cs to process one application;
 - it takes 2.5 hours for one Grade B to process one application;
 - a Grade G's hourly rate is £12.34;
 - a Grade E's hourly rate is £19.20;
 - a Grade C's hourly rate is £31.28;
 - a Grade B's hourly rate is £34.57; and
 - an overhead rate of 30 per cent is applied to the hourly rate.
- 10. The certification body will be required to carry out surveillance activities at least once a year at selected sites, representative of all the activities of those ECMs they have certified. The cost for ORR will be £20,000 per year (rounded to one significant figures) assuming the following:
 - the number of sites visited is 20 (two per ECM);
 - each visit takes 20 hours and includes preparation, inspection and report writing;
 and
 - the total staff cost per hour is £31.28 (plus 30 per cent for overheads, which is not included in the £31.28).

Benefits of certification of ECMs for freight wagons

- 11. Assuming that the example from DBS in Section 3 (3.6) can be applied to other railway undertakings, the estimated benefits of an ECM certificate for eight railway undertakings is around £12,000 per year. The following assumptions are made based on the example from DBS in Section 3:
 - three workers are involved in the check, each earning £19.32 per hour (plus 30 per cent for overheads, which is not included in the £19.32) are assumed for the average railway undertaking;
 - each day has 8 hours;
 - the supplier audit takes 48 hours;
 - the document review takes 12 hours; and
 - each railway undertaking relies on an ECM certificate and does not carry out the supplier assurance audit and the documentation review but carries out a predeparture examination.
- 12. Assuming that the ECM will no longer undergo the supplier assurance audit and documentation review when it presents an ECM certificate to a railway undertaking, the estimated benefits for ECMs will be around £45,000 per year (based on the assumptions in the paragraph 11, but for 10 ECMs).
- 13. Assuming that there are benefits for the PWRA Team in not having to carry out the 'Professional Head' engineering role for all ECMs, the total benefit to Network Rail is estimated to be £200,000 per year. This assumes that:
 - there are 17 private wagon owners in the PWRA and the future ESPA;
 - the role is carried out for half a day per week over 52 weeks in a year; and
 - the cost per day is £450 (source: Private Wagon Federation).

Annex 2: Costs and benefits spreadsheet





Source data for ROGS Amendmend 20

data for BIS IA calculator.xls

Annex 3: Justice Impact Test



Annex 4: Post Implementation Review (PIR) Plan for ROGS

A PIR should be undertaken, usually three to five years after implementation of the policy, but exceptionally a longer period may be more appropriate. If the policy is subject to a sunset clause, the review should be carried out sufficiently early that any renewal or amendment to legislation can be enacted before the expiry date. A PIR should examine the extent to which the implemented regulations have achieved their objectives, assess their costs and benefits and identify whether they are having any unintended consequences. Please set out the PIR Plan as detailed below. If there is no plan to do a PIR, please provide reasons below.

Basis of the review:

The basis of the review is a statutory review of the whole of ROGS five year from when the ROGS (Amendment) Regulations enter into force. See 'Statutory review of ROGS' in section 6 of the evidence base.

Review objective:

A proportionate check that ROGS are operating as intended.

Review approach and rationale:

ROGS came into force on 6 October 2006. A report on the monitoring and evaluation of ROGS was published by GL Nobel Denton in June 2010. In view of the scale of resources involved in carrying out such a review, ORR does not envisage a second review of ROGS on the same scale with a five-year timeframe. The 2010 report concluded that the majority of objectives of ROGS had either been met or were on their way to being met. On that basis, and the fact that the impact of new regulation 18A is likely to be small, ORR feels that a desktop review of ROGS will be appropriate. This will involve collating and updating existing evidence from the 2010 report and seeking new evidence from inspectors and evidence from stakeholders via workshops and questionnaires. Stakeholders are all those affected by ROGS, such as Network Rail, Train Operating Companies, Freight Operating Companies, heritage organisations, metros and tramways.

Baseline:

The baseline position is:

- (a) replacing (in 2006) a system of 'permissioning' safety cases with system of: minimum requirements for a safety management system, safety certification, safety authorisation, and co-operation to ensure system safety:
- (b) replacing (in 2006 and 2008) a system of formal approval by ORR before new or altered works, plant or equipment are introduced with a system of safety verification from an independent competent person;
- (c) changing (in 2006) the approach of controlling the number of hours for preventing fatigue to one requiring arrangements to be implemented that controls risks such as patter of working hours and roster design;
- (d) changing (in 2006) the focus on the management of hours of work of safety critical workers to include other factors, rather than just hours of work;
- (e) introducing (in 2006) the requirement for controllers of safety critical workers to ensure that safety critical workers are competent, fit and risks arising from fatigue are adequately managed;
- (f) introducing (in 2011) the requirement to assign an entity in charge of maintenance ("ECM") to a railway vehicle and ensure that the ECM is registered on the National Vehicle Register; and for the ECM to ensure that the rail vehicles for which it is responsible are safely maintained through a system of maintenance; and (g) introducing (in 2012) the requirement for an ECM responsible for freight wagens to obtain an ECM.
- (g) introducing (in 2012) the requirement for an ECM responsible for freight wagons to obtain an ECM certificate from and certification body.

Success criteria:

- (a) ROGS and any changes made to it have a positive or neutral impact on business
- (b) Standards of safety do not reduce
- (c) The administrative burden of ROGs and changes made to it reduce over time

Monitoring information arrangements:

ORR's approach to maintaining health and safety on Britain's railways is to ensure that the industry manages risks satisfactorily, and continuously improves its health and safety performance as far as is reasonably practicable. ORR monitors the safety performance of duty holders and investigates incidents and complaints to find out why failures have occurred and if the law has been broken.

Reasons f		

Not applicable.

Annex 5: Post Implementation Review (PIR) Plan for TDLCR

A PIR should be undertaken, usually three to five years after implementation of the policy, but exceptionally a longer period may be more appropriate. A PIR should examine the extent to which the implemented regulations have achieved their objectives, assess their costs and benefits and identify whether they are having any unintended consequences. Please set out the PIR Plan as detailed below. If there is no plan to do a PIR, please provide reasons below.

Basis of the review:

The basis of the review is a statutory review of TDLCR 5 years from the Regulations coming into force for domestic drivers.

Review objective:

The basis of the review is a statutory review of TDLCR 5 years from the Regulations coming into force for domestic drivers.

Review approach and rationale:

On 6 April 2010 the EU directive on Train Driver Licensing was transposed for GB. TDLCR will come into effect in three phases:

- New cross border drivers from 29 October 2011;
- new domestic drivers from 29 October 2013; and
- existing train drivers from 29 October 2018

The directive had the aim of creating a standardised licensing system for train drivers across Europe, in order to allow train drivers to move more easily between railway undertakings in different Member States. The directive imposes substantial costs on the rail industry (mainly administering licenses and changes to medical assessment requirements) without providing significant benefits

The review will comprise a desktop review to ensure that the Regulations are operating as intended and not disproportionately affecting industry. It will also review the costs and benefits of implementation of the licensing requirements of the Directive to domestic drivers. The review will involve collating and updating existing evidence (including research conducted by Rail Standards and Safety Board in 2009) as well as taking evidence from stakeholders via workshops and questionnaires.

Baseline:

The baseline position is:

Impact Assessment from transposition of Train Driver Licensing Directive:

MVA Consultancy (March 2009) for RSSB, Assessment of EU Driver Licensing Directive, Cost Benefit Analysis, Project no T77 (See 'References' section in **Annex 8** for web link).

Success criteria:

- (a) TDLCR and any changes to it have a positive or neutral impact on stakeholders
- (b) The costs and administrative burden on the rail industry reduce over time

Monitoring information arrangements:

ORR is the regulator for the licensing requirements of the Directive. Their approach is to ensure that the industry manages risks, and continually improves its health and safety performance as far as reasonably practicable. ORR monitors the safety performance of duty holders and investigates incidents and complaints to find out why failures have occurred and if the law has been broken. In terms of TDLCR the Department will liaise closely with ORR as to whether there are problems by the industry with compliance with the Regulations. The Regulations will be reviewed and monitored and the Department will make amendments if proved necessary.

Reasons for not planning a PIR:	
Not applicable.	

Annex 6: Post Implementation Review (PIR) Plan for EARR

A PIR should be undertaken, usually three to five years after implementation of the policy, but exceptionally a longer period may be more appropriate. If the policy is subject to a sunset clause, the review should be carried out sufficiently early that any renewal or amendment to legislation can be enacted before the expiry date. A PIR should examine the extent to which the implemented regulations have achieved their objectives, assess their costs and benefits and identify whether they are having any unintended consequences. Please set out the PIR Plan as detailed below. If there is no plan to do a PIR, please provide reasons below.

Basis of the review:

The basis of the review of EARR will be a statutory review looking at the allocation of health and safety enforcement responsibility between HSE and ORR, and any changed needed which have been identified since the last review.

Review objective:

This review will be a proportionate check that EARR are operating as expected and adequately describing the allocation of HSE and ORR's enforcement responsibilities.

Review approach and rationale:

EARR came into force in 2006 when responsibility for railways health and safety regulation was transferred from HSE to ORR. This review will establish how well the current arrangements are working and whether further areas of uncertainty for enforcement responsibility have been identified. The approach will involve a combination of policy/legal discussions with HSE and external stakeholder consultation with the industry and other interested parties. We will arrange an open meeting with stakeholders if there are significant issues to discuss. We intend to keep the scale of the review proportionate to the scope of any proposed changes.

A project board will probably not be required to carry out this review.

Baseline:

The baseline position is:

- a) EARR came into force following the transfer of responsibility for rail safety from HSE to ORR in April 2006.
- b) EARR was amended in 2008 to resolve some ambiguities around enforcement responsibilities between ORR and HSE in relation to demarcation issues, such as in the case of harbours, pier railways, the operation of miniature railways and construction activities relating to both the extension of the railways and construction work at operational premises.
- c) A further minor amendment will be made in 2012 to take account of some new responsibilities for ORR arising out of European regulations.
- d) A review will be required to examine and give clarity to further areas of uncertainty in relation to enforcement responsibility.
- e) Other issues are likely to be identified during the review and consultation.

Success criteria:

a) The review will clarify areas of uncertainty and rectify any anomalies regarding the borders of ORR and HSE enforcement responsibilities. This will give clarity to duty holders and facilitate effective and efficient health and safety regulation.

Monitoring information arrangements:

ORR and HSE have designated policy staff with "ownership" of EARR. The policy functions monitor the effectiveness of the regulations and meet every 6 months to discuss any issues. Notes are taken of these meetings.

The ORR legal support team gives advice on the interpretation of EARR to inspectors and notes any problematical areas to the policy team.

An issues log has been raised to capture areas of concern and support the next review.

Reasons for not planning a review:

Not applicable.

Annex 7: Glossary of Terms

Accredited certification body	A body accredited as defined by Article 2(10) of European Regulation 765/2008 to perform ECM certification in accordance with the ECM Regulation
Certification body	A body responsible for the certification of entities in charge of maintenance in accordance with the ECM Regulation
Commission	European Commission
Common safety method	The method to be developed to decide how safety levels and achievement of safety targets and compliance with other safety requirements are assessed
Controller of safety-critical work	Any person controlling the carrying out of safety- critical work on a transport system or in relation to a vehicle used on a transport system
COTIF	Convention on International Carriage by Rail
CSM	Common Safety Method for risk evaluation and assessment (European Regulation 359/2009)
Directive on Vehicle Maintenance	Directive 2008/110/EC
Documentation review	A review of all the documentation associated with the maintenance of a freight wagon
DRS	Direct Rail Services
EANCB	Equivalent annual net cost to business
EARR	Health and Safety (Enforcing Authority for Railways and Other Guided Transport Systems) Regulations 2006 (S.I. 2006/557 as amended by S.I. 2008/2323)
ECM	Entity in Charge of Maintenance
ECM Regulation	Commission Regulation 455/2011 on a system of certification of entities in charge of maintenance
Entity in charge of maintenance	Any person or organisation that is responsible for the safe maintenance of a vehicle and is registered as an ECM in the National Vehicle Register. This can include people or organisations such as railway undertakings, infrastructure managers, a keeper or a maintenance organisation
ERA	European Railway Agency
ESPA	Entities in Charge of Maintenance Service Provision

	Agreement
EU	European Union
HSE	Health and Safety Executive
Keeper	A person who owns a rail vehicle, or has a right to use it, and operates it as a means of transport
Miscellaneous Amendment Regulations	Railways and Other Guided Transport (Miscellaneous Amendments) Regulations 2012 (proposed)
National Vehicle Register	A database of rail vehicles operated in each Member State whose establishment is required under Directive 2008/57/EC
ORR	Office of Rail Regulation
Professional Head	A chartered engineer, or equivalent, with at least 10 years of appropriate experience in the rail industry
PVNBB	Present value of net benefits to business
PVNCB	Present value of net costs to business
PWF	Private Wagon Federation
PWRA	Private Wagon Registration Agreement
Railway Group Standards	(a) technical standards with which railway assets or equipment used on or as part of railway assets by or on behalf of Railway Group members must conform; and (b) operating procedures with which all operators of railway assets must comply; compliance with which will contribute significantly to the safe operation of the rail network and the safe operation and safe interworking of railway assets used or to be used on or in connection with the Rail Network
Railway Safety Directive	Directive 2004/49/EC
Railway undertaking	A Freight Operating Company
Recognised certification body	A body, the competence of which has been assured by the Member State when not applying accreditation as defined by Article 2(10) of European Regulation 765/2008, and performs ECM certification in accordance with the ECM Regulation
Regulation 445/2011	Certification system for freight wagon ECMs
ROGS	Railways and Other Guided Transport Systems (Safety) Regulations 2006 (S.I. 2006/599)
ROGS (Amendment) Regulations	Railways and Other Guided Transport Systems (Safety) (Amendment) Regulations (S.I. 2011/1860)
RSSB	Rail Safety and Standards Board

Supplier assurance	Confidence in a supplier's ability to deliver a good or service that will satisfy the customer's needs
Surveillance activity	A surveillance check carried out by a certification body
Surveillance check	An audit (but not necessarily full system audit) of representative areas and functions within the scope of the ECM's maintenance arrangements
SMS	Safety Management System
TDLCR	Train Driving Licences and Certificates Regulations 2010 (S.I. 2010/724)
Train Driver Licensing Directive	Directive 2007/57/EC
TSI	Technical Specification for Interoperability (A technical standard)

Annex 8: References

- 1. ROGS (http://www.legislation.gov.uk/uksi/2006/599/contents/made)
- 2. **European Commission explanatory memorandum** (http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexplus!prod!DocNumber&lg=EN&type_doc=COMf inal&an_doc=2006&nu_doc=0784)
- 3. European Commission Impact Assessment (http://www.europarl.europa.eu/registre/docs-autres-institutions/commission-europeenne/sec/200-6/1641/COM-SEC(2006)1641_EN.pdf)
- 4. **Working Group Final Report** (http://www.otif.ch/otif/ epdf/dir tech adm 2007/2007-10 WG Keeper final report.pdf)
- 5. European Railway Agency Impact Assessment



- 6. **European Regulation 445/2011** (http://eur-lex.europa.eu/LexUriServ.do?uri=OJ:L:2011:122:0022:0046:EN:PDF)
- 7. **ROGS (Amendment) Regulations** (http://www.legislation.gov.uk/uksi/2011/1860/made)
- 8. MVA Consultancy (March 2009) for RSSB, Assessment of EU Driver Licensing Directive, Cost Benefit Analysis, Project no T77 (http://www.ialibrary.berr.gov.uk/ImpactAssessment/?IAID=b4682ed944d340c89f1286648ff9a6a5)
- 9. **Guidance on the CSM on risk evaluation and assessment** (http://www.rail-reg.gov.uk/server/show/ConWebDoc.8453)
- 10. **National Rail Trends Yearbook 2010-11** (http://www.rail-reg.gov.uk/upload/pdf/nrt-yearbook-2010-11 (http://www.rail-reg.gov.uk/upload/pdf/nrt-yearbook-2010-11 (http://www.rail-reg.gov.uk/upload/pdf/nrt-yearbook-2010-11 (http://www.rail-reg.gov.uk/upload/pdf/nrt-yearbook-2010-11.pdf)
- 11. **Standard Cost Model (**http://www.berr.gov.uk/files/file44503.pdf**)**