



OFFICE OF RAIL REGULATION

Revising Railway Safety Regulations

Railway Safety (Miscellaneous Provisions) Regulations 1997, Railway Safety Regulations 1999 and Railway Safety (Miscellaneous Amendments) Regulations 2001

8 July 2014

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Foreword

1. ORR is responding to the Government's Red Tape Challenge, launched by the Prime Minister in 2011.

2. We are proposing:

- to remove Regulations which:
 - are out of date;
 - have been superseded; or
 - are duplicated by other legislation; and
- new Regulations that will modernise and simplify the law on:
 - train protection systems;
 - the use of Mark 1 (slam door) rolling stock on the mainline; and
 - the installation of passenger communication systems.

3. I hope that all interested parties will contribute their views on our proposals over the coming weeks. We look forward to hearing from you.

Ian Prosser, Director of Railway Safety

8 July 2014

1. Executive Summary

Modernising railway safety regulations

1.1 We have reviewed three railway safety-related instruments (the Railway Safety (Miscellaneous Provisions) Regulations 1997, the Railway Safety Regulations 1999 and the Railway Safety (Miscellaneous Amendments) Regulations 2001) using the principles of the Red Tape Challenge as our starting point. The Red Tape Challenge asks the fundamental question ‘are these Regulations examples of ‘good regulation’ which strike the right balance between individual responsibility and protection of consumers, employees/employers, society and the environment?’¹ We have examined all three instruments from this perspective and considered their on-going applicability to the modern railway since the provisions they contain have all been in force for over a decade.

1.2 We have concluded that all three instruments can be revoked and replaced by a single, consolidated, set of Regulations (a draft of which can be found at **Annex A**) which contain fewer provisions whilst ensuring that risk on the railway is still properly controlled.

1.3 We would welcome your views on our proposals.

Proposed new regulations

1.4 The new Regulations retain and update three provisions that are vital to the control of risk on the railway:

- (a) use of a train protection system;
- (b) use of Mark 1 rolling stock; and
- (c) means of communication.

¹ More information on the Red Tape Challenge is available at www.redtapechallenge.cabinetoffice.gov.uk/home/index.

1.5 A further provision allows for exemptions to be granted from any of the above provisions.

1.6 The table in **Chapter 7** summarises the regulatory requirements we propose to remove and our justification for doing so.

One In - Three Out

1.7 When the new Regulations are brought into force, they will also revoke all three of the current instruments. This means that our proposals will revoke three instruments and replace them with one set of regulations.

2. Introduction

Background

Railways (Miscellaneous Provisions) Regulations 1997

2.1 The Railways (Miscellaneous Provisions) Regulations 1997 ('MPR 97') were created as part of a programme in the late 1990s to modernise railway legislation. They consolidated provisions in 14 other statutory instruments dating from 1836 to 1992 which were seen as too prescriptive and did not reflect the operation of a modern railway. The MPR 97 put in place five 'goal-setting' duties covering:

- (a) the prevention of unauthorised access to the railway infrastructure (for example by means of lineside fencing);
- (b) the provision of a means of passenger communication with staff on trains;
- (c) the prevention of collisions and derailments (for example by means of adequate signalling systems);
- (d) the provision of adequate braking systems; and
- (e) the prevention of accidents to staff (for example trackside workers) from moving vehicles.

Railway Safety Regulations 1999

2.2 The Railway Safety Regulations 1999 ('RSR 99') make provision for the:

- (a) use of a train protection system;
- (b) prohibition of the use of Mark 1 rolling stock; and
- (c) prohibition of the use of hinged door rolling stock.

2.3 These provisions were linked together in one statutory instrument to achieve the aim of improving industry safety performance by driving a programme of rolling stock upgrades. Newer rolling stock was desirable to improve passenger safety by reducing the number of door-related

passenger incidents and increasing the ‘crashworthiness’ of the design of passenger carriages. Design flaws in Mark 1 rolling stock were identified as negative contributory factors in the outcomes of collisions at Clapham Junction, Hither Green and Cannon Street. Mandating the requirement for a train protection system was seen as necessary to achieve network-wide installation. The introduction of new rolling stock, necessitated by the prohibition of Mark 1 rolling stock, also provided an opportunity to install a train protection system as standard, rather than retrofit it to older rolling stock.

Railways Safety (Miscellaneous Amendments) Regulations 2001

2.4 The Railways Safety (Miscellaneous Amendments) Regulations 2001 (‘MAR 01’) were, for the most part, revoked when the Railways and Other Guided Transport Systems (Safety) Regulations 2006 (‘ROGS’) came into force. Only a single provision in regulation 17, which sets out an amendment to RSR 99, remains in force. Regulation 17 replaced the use of imperial speed measurements (miles per hour) to metric (kilometres per hour) in the definition of ‘railway’ set out in the schedule to RSR 99.

Previous reviews

2.5 We carried out a ‘better regulation’ review of RSR 99 and MPR 97 in 2007-2008, as a matter of good practice. No changes were made to either set of regulations at that time. Industry’s emerging Train Protection and Warning System (‘TPWS’) strategy² was yet to reach any conclusions on mapping out a policy for the management of train protection over the next 30 years and any changes to RSR 99 could have directly impacted on any recommendations made in the strategy. Responses to the consultation on the MPR 97 indicated a range of views on the usefulness of the requirements it contains, with no clear majority for de-regulation at that time.

Red Tape Challenge

2.6 The Red Tape Challenge (‘RTC’) is an initiative launched by the Prime Minister in 2011 as part of the Government’s project to review the total stock of secondary legislation (regulations and orders) in force in Great Britain. The Government has identified all legislation which is applicable within a particular sector (including railways) and invited comments from business, the civil sector

² <http://www.rssb.co.uk/SAFETY/Pages/TPWSSTRATEGY.aspx>

and individuals on whether these should be scrapped, improved or kept. Rail transportation systems are a vital part of the UK's transport network and effective regulation is important in enabling it to reach its full potential as a driver of growth.

2.7 Consultation on the maritime and rail sectors within the RTC took place during 2011. Over 200 instruments were identified as being directly applicable to the rail sector, covering a broad range of issues such as standards, fares, licensing, planning and health and safety matters.

2.8 The outcomes of the rail theme, which were published in 2012, form part of the wider efforts of the Government to improve the railways through its franchise reform programme and the proposals in the Department for Transport's Command Paper 'Reforming our Railways: Putting the Customer First'. Further details and more information about the RTC, can be found at www.redtapechallenge.cabinetoffice.gov.uk/2012/07/30-07-12-rail-transport-announcement.

2.9 ORR worked with the Department for Transport to inform its response to the RTC and identify genuine potential for deregulation within the rail theme, providing assessment and evidence supporting the proposals to keep, amend or scrap each of the individual instruments under scrutiny. We reviewed a range of legislative provisions in our capacity as independent safety and economic regulator for the railway, and provided feedback on possible deregulatory measures. The MPR 97, RSR99 and MAR 01 were all identified as potential candidates for deregulation. As part of our review we consulted informally with a stakeholder focus group which comprised a wide range of organisations including Angel Trains, the Association of Train Operating Companies, DB Schenker Rail (UK) Limited, the Heritage Rail Association, the Nation Union of Rail, Maritime & Transport Workers, Network Rail Infrastructure Limited, RSSB (formerly the Rail Safety and Standards Board) and Southern Railway Limited. This approach helped us identify where over-regulation brings a disproportionate burden to the rail industry without a similar benefit and where legislation remains the best means of securing the required outcome. The conclusion of our review has identified where deregulation is possible and has led directly to our proposal for the new regulations. The new regulations (at **Annex A**) aim to bring provisions in line with more recent legislation, such as ROGS, which places responsibility for the management of risks on those who generate them.

Consultation responses

2.10 We welcome your views on any aspect of this document, in addition to the specific consultation questions which are identified in boxes throughout the text. Please send your responses, preferably in electronic format, by 2 September 2014 to:

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London
WC2B 4AN
E-mail: paul.carey@orr.gsi.gov.uk
Tel: 0207 282 2067

2.11 Please note, when sending documents to us in electronic format that will be published on our website, we would prefer that you email us your correspondence in Microsoft Word format. This is so that we are able to apply web standards to content on our website. If you do email us a PDF document, where possible please:

- (a) create it from the electronic Microsoft Word file (preferably using Adobe Acrobat), as opposed to an image scan; and
- (b) ensure that the PDF's security method is set to 'no security' in the document properties.

2.12 If you send a written response, you should indicate clearly if you wish all or part of your response to remain confidential to ORR. Otherwise, we would expect to make it available in full on our website, and potentially to quote from it. Where your response is made in confidence, please provide a statement summarising it, excluding the confidential information, which can be treated as a non-confidential response. We may also publish the names of respondents in future documents or on our web site, unless you indicate that you wish your name to be withheld.

3. Railway Safety (Miscellaneous Provisions) Regulations 1997

3.1 At the time the Railway Safety (Miscellaneous Provisions) Regulations 1997 ('MPR 97') were drafted, the statutory instruments and other rail-related legislation they replaced were seen as too prescriptive in their approach. They reflected the prevailing view about management of safety on the railway at the time they were introduced and set a standard or level with no consideration of the context in which those standards or levels might, or might not, be met. The MPR 97 replaced the old approach to safety regulation with five 'goal-setting' provisions (see **Paragraph 2.1**). The new provisions were designed to move away from overly prescriptive measures and encourage those affected by the regulations to take greater responsibility for considering how their activities should be safely managed.

3.2 In the period since the MPR 97 came into force, the implementation of the European Railway Safety Directive 2004/49/EC, largely transposed by ROGS (as amended), has defined the legislative framework for the regulation of railway safety. The underpinning regulatory approach which this legislation encapsulates has taken the railway industry beyond simple 'goal-setting' towards greater ownership of the risks generated by its operations. We have considered whether the MPR 97 are aligned with this approach, whether there is scope again to modernise and, where any opportunity exists, to explore the possibility of reducing regulatory burdens on the sector. Our review has looked at each regulation and considered its purpose and function in the effective regulation of rail safety:

Regulation 3 – Unauthorised access

3.3 Regulation 3 requires measures to be in place to prevent or deter access to track and installations, by persons or large animals.

3.4 Section 3 of the Health and Safety at Work etc. Act 1974 ("HSWA") states that *'It shall be the duty of every employer to conduct his undertaking in such a way as to ensure, so far as is reasonably practicable, that persons not in his employment who may be affected thereby are not*

thereby exposed to risks to their health or safety. We considered whether in the conduct of their undertaking, an infrastructure manager would need to take measures to prevent trespass onto their track or installations thereon and concluded that we would view this as part of their duties. As result, it appeared that Regulation 3 of the MPR 97 was duplicating this requirement.

3.5 Furthermore, in the General Duties set out in Part 3 of ROGS, regulation 19 states that ‘A transport operator shall—

(a) make a suitable and sufficient assessment of the risks to the safety of any persons for the purpose of identifying the measures he needs to take to ensure safe operation of the transport system in question insofar as this is affected by his operation; and

(b) implement the measures referred to in sub-paragraph (a).’

3.6 Given that provisions in both HSWA and ROGS contain duties for transport undertakings and infrastructure managers to demonstrate how they will prevent trespass and how they will minimise the risk to others which is generated by their activities, we concluded that the retention of a specific regulation setting out these requirements would be a duplication of statutory obligations which existed elsewhere and could therefore be revoked.

Regulation 5 – Measures to prevent collisions and derailments

3.7 The purpose of Regulation 5 is to address a fundamental requirement for the safe operation of the railway. We considered whether this provision was covered by any other applicable safety legislation and concluded that we would expect safety certificate and safety authorisation holders to demonstrate what measures they had in place to prevent collisions and derailments in accordance with regulation 19(1) of ROGS (General duties) as above.

3.8 We therefore propose to revoke this requirement on the grounds that its aim – a mandatory application of fundamental principles of safe rail operation – is already met by requirements set out in ROGS (Part 3, Regulation 19, Risk Assessment).

Regulation 6 – Brakes

3.9 As with Regulation 5, the purpose of Regulation 6 is to address a fundamental requirement for the safe functioning of the railway. We considered whether this provision was covered by any other applicable safety legislation and looked again at duties under Part 3 of ROGS. We would expect that any operator of a rail vehicle would consider the need for a suitable and sufficient braking system as part of their safety management system requirement for a risk assessment and would implement appropriate measures accordingly.

3.10 We therefore propose to revoke this requirement on the grounds that its aim is now met by requirements set down in ROGS, and is also supported by requirements set down in HSWA, for the assessment of risk and the safe management of railway operations.

Regulation 7 – Accidents to persons at work from moving vehicles

3.11 We considered whether this provision was covered by any other applicable safety legislation, in particular HSWA, the purpose of which is to enshrine in law requirements for the safety of employees and other persons in the workplace. We concluded that the obligations placed upon an employer under section 2 of HSWA would give equivalent provision to ensure that they must provide a safe environment in which a person at work could carry out their duties. Regulation 19 of ROGS further reinforces this by requiring the assessment and management of risk as does Regulation 3 of the Management of Health and Safety at Work Regulations 1999. For this reason, we propose to revoke this requirement.

Q1: Do you agree that we should revoke Regulations 3, 5, 6 and 7 of MPR 97? If you do not support the revocation, please tell us why.

Regulation 4 – Means of Communication

3.12 Regulation 4 requires that *‘The operator of a vehicle which is being used for the carriage of fare paying passengers shall ensure that there is provided and maintained on such a vehicle a suitable and sufficient means whereby passengers can communicate with a person who is in a position to take appropriate action in the event of an emergency.’*

3.13 The reason for creating a mandatory requirement for passengers to be able to communicate with a person in charge of the vehicle in which they are travelling is to set out requirements that ensure passenger safety measures are uniformly in place across all operators of rail vehicles. Setting this as a regulatory provision ensures that passengers’ interests cannot be diminished by considerations of costs of installation or maintenance.

3.14 We considered whether this provision was covered by any other applicable safety legislation and found that the Railways (Interoperability) Regulations 2011 (‘RIR’) required compliance with Technical Specifications for Interoperability (‘TSIs’), which refer to passenger communications

standards³ being fitted to new, upgraded or renewed rolling stock. However, the scope of RIR does not currently extend beyond the mainline railway.

3.15 Current domestic legislation on means of communication covers mainline, non-mainline railways and tramways, and focuses on providing the ability for passengers to communicate with the person in charge of the vehicle.

3.16 We are therefore proposing to retain this provision because it addresses an on-going need for passenger safety and performs a function that is not met by any other safety related legislation. Relying on TSIs for the mainline railway, whilst introducing a separate regulation for non-mainline railway and tramways, could lead to confusion because operators could be subject to different statutory obligations. Furthermore, the increased occurrence of driver-only operation makes the ability of passengers to communicate with the driver more important and retaining this requirement is in the interests of passenger safety.

3.17 The wording of the regulation will remain similar, except for some minor updating of the drafting and one change of substance. We propose to remove 'fare paying' as a descriptor of the type of passengers who would need the benefit of a means of communication. This is designed to ensure that any passengers carried, regardless of payment status, are afforded the same safety provisions.

Q2: Do you agree that Regulation 4 (Means of Communication) should be retained in its modified form? If you do not support the retention of this provision, please say why.

³ See clauses 4.2.5.3 – 4 of the TSI available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:139:FULL:EN:PDF> .

4. The Railway Safety Regulations 1999

4.1 The Railways Safety Regulations 1999 ('RSR 99') were created to implement the recommendations of the Hidden Report into the incidents at Clapham Junction, Hither Green and Cannon Street, through the introduction of mandatory safety measures where there had previously been little market incentive. Train protection systems were expensive to install and the resulting cost per prevention of fatality was high. Furthermore, high costs associated with leasing rolling stock created a disincentive for passenger operators to instigate a programme of upgrades that would remove Mark 1 and hinged-door rolling stock from regular passenger use. The requirements in RSR 99 to install a form of train protection and modify or remove Mark 1 and hinged-door rolling stock;

- created the catalyst for infrastructure upgrade programmes;
- drove changes in franchise agreements relating to rolling stock specifications; and
- meant that it was possible to reduce the number of passenger injuries and fatalities resulting from both the operation of Mark 1 and hinged-door stock and signals passed at danger ('SPADs').

4.2 In our review, we have considered whether the requirements set out in RSR 99 are on-going, or whether they are in response to a 'moment in time' problem which has since been either concluded and no further regulatory intervention is required, or whether other pieces of legislation are now in place which are more effective at managing the issue.

Use of a train protection system

4.3 Regulation 3 of RSR 99 sets out the requirement for a train protection system to be in service on a train.

4.4 The purpose of this regulation is to mandate the requirement to install a train protection system on the mainline network and set out a specified time frame within which such equipment must be installed on trains and on the track.

4.5 Regulation 2(1) of RSR 99 defines a train protection system as, where it is reasonably practicable to install it, “*equipment which automatically controls the speed of the train to ensure, so far as possible, that a stop signal is not passed without authority and that the permitted speed is not exceeded at any time throughout its journey*”. Where it is not reasonably practicable to install such equipment, a train protection system is defined as “*equipment which ... causes the brakes of the train to apply automatically if the train –*

(i) passes without authority a stop signal such passing of which could cause the train to collide with another train; or

(ii) travels at excessive speed on a relevant approach”.

4.6 The Train Protection and Warning System (‘TPWS’) meets the definition of a “train protection system”, i.e. equipment which causes the brakes of the train to apply automatically if the train passes a signal at danger or travels at excessive speed on relevant approach. Installation of TPWS was completed on the mainline network by 2003.

4.7 We considered if the time was right to repeal this legislative requirement, given that one policy aim of these Regulations had been met. We looked at other rail safety legislation and concluded that no other statutory provision was so specific as to require the use of a train protection system as standard. We considered whether deregulation in this area could have a negative impact on safety and whether the requirements set out in Railway Group Standards could address the safety issue. However we found that Railway Group Standards would not provide sufficient scope for ORR to take targeted enforcement action to remedy failures because a breach of licence conditions would be the only course of action available for non-compliance.

4.8 We also considered that removing regulation in this area would not support the industry wide programmes designed to necessitate improvements to TPWS or any developments in train protection afforded by the European Rail Traffic Management System (‘ERTMS’).

4.9 In the new regulations, we are proposing to revise the definition of “train protection system” to align with how the industry has developed since RSR 99 were first drafted. The existing definition in RSR 99 is a reflection of proposals and expectations from the mid-1990s for the installation of

train protection systems. RSR 99 were drafted to mandate the installation of Automatic Train Protection ('ATP') systems, but also to allow TPWS to be installed as an interim measure where it could be demonstrated that it was not reasonably practicable to install ATP. In the fourteen years since RSR 99 came into force, the programme of installing train protection systems has developed on a different curve to the one predicted. Most operators have TPWS installed on their trains and the TPWS strategy issued by RSSB⁴ indicates that some existing TPWS will continue being operational on certain routes until the 2040s. We consider that any definition of a train protection system must allow operators to be compliant whilst they continue to use TPWS or ATP, but ensure the migration to ERTMS is not impeded.

4.10 We recognise that the industry has met one of the policy requirements of the RSR 99 and that installation of a train protection system has been routinely achieved. We are aware that industry has processes in place to maintain the train protection system and consider it is appropriate to set out those requirements in the legislation, to achieve consistency across the sector. In concluding that retention of this regulation is necessary, we therefore propose to revise the wording of the regulation to ensure that compliance with the legislation can be achieved by ATP systems (including ERTMS) or TPWS.

4.11 We have made it explicit that any train protection system must be properly maintained, in recognition that the requirement was about more than simply installing the system. To ensure uniformity across operators, we consider that the maintenance should include a management system for train protection to help mitigate against both technical and human error. This management system will:

- (i) identify and minimise any safety risks;
- (ii) provide for monitoring and regular assessment; and
- (iii) ensure continuous improvement to the safety performance achieved by any train protection system, so far as is reasonably practicable.

4.12 In practice, many operators already have these arrangements in place, which reflect the importance of maintaining high levels of safety on the railway and support technological development and its implementation. Train operating companies have committed to continuous

⁴ Available at <http://www.rssb.co.uk/SAFETY/Pages/TPWSSSTRATEGY.aspx>.

improvement to safety in their Safety Certificate and Safety Policy and it is our view that setting out expectations for managing train protection systems in regulation is consistent with this commitment and to furthering the industry's long-term TPWS strategy to which all operators have signed up.

4.13 Other definitions have been revised as follows:

(i) 'emergency crossover' now reads 'in accordance with *arrangements* established by the *infrastructure manager*'. This is to improve drafting;

(ii) 'excessive speed' : we propose to remove reference to 'relevant authority' approving additional speed limits. This is to reflect the change in regulatory approach away from the regulator giving permission;

(iii) 'infrastructure controller' to be replaced with 'infrastructure manager' in line with ROGS; and

(iv) 'relevant approach', we propose to replace 60 mph by equivalent measure in km/h, either 95km/h or 100km/h;

4.14 Lapsed or spent requirements have been removed and references to exempted networks have been improved to allow the exemption to rest with the network itself and not the entity which operates it.

4.15 Defences for operation without an operational train protection system have been clarified. There are now separate defences for infrastructure managers and railway undertakings and the elements of the defence in regulation 3(4) of RSR 99 have been amended and simplified. Additionally, following the revision to the definition of a train protection system, the defence in regulation 3(5) of the RSR 99 becomes redundant and has been removed, as provided either type of train protection system is in operation, no offence will have been committed.

Q3: Do you agree that we should retain a regulation to mandate the use of a train protection system? If not, why?

Q4: What are your views on the proposed changes to the drafting of the regulation on train protection systems? Are there any further changes you feel we should make?

Q5: In the proposed new definition of “relevant approach”, should 60mph be converted to 95km/h or 100km/h?

Prohibition of Mark 1 rolling stock

4.16 Regulation 4 specifically prohibits the use of Mark 1 rolling stock. This regulation was designed to remove a type of rolling stock vehicle from mainline passenger use as it was considered to be less crashworthy than newer rolling stock. Exemptions were written into the regulations for operations on particular networks (e.g. London Underground) and ‘modified’⁵ stock was allowed to be operated until 2005 on the mainline, to allow the transition to newer rolling stock. Compliance with this regulation, for mainline operations, was achieved in December 2005. Individual exemptions have been granted to operators of heritage rolling stock which is used on the mainline, subject to compliance with conditions requiring the improved crashworthiness of their construction.

4.17 The main aim of this regulation was to remove older rolling stock from regular passenger service. We considered whether, given that this policy aim had been met, a specific prohibition of Mark 1 rolling stock was still required. We looked at other rail safety legislation, passenger franchise agreements and rail vehicle TSIs. We concluded that for mainline, franchised passenger services, there were clear measures in place that set requirements for rolling stock which would go beyond the specifications and capabilities of a Mark 1 carriage and that a prohibition in RSR 99 would have no practical effect on a passenger operator’s choice of rolling stock, as Mark 1 carriages would not be considered a viable option for mainline use. However, we consider that for open access and charter operations there may be financial incentives or ‘rail-experience’ requirements that may result in the choice to reinstate Mark 1 carriages to mainline operations. We concluded that maintaining a prohibition on the use of unmodified carriages was therefore necessary to ensure that less-crashworthy stock was not re-introduced to mainline use.

⁵ Modification is defined as improvements made to rolling stock to increase the crashworthiness of the carriage. This includes measures such as the installation of couplings with lower shelf brackets and crash pillars.

4.18 Currently around 350 heritage vehicles are available for operation on the mainline network under exemptions (with conditions) issued by ORR. These types of operations will continue to form a part of the rail industry, and it is not the intention of these regulations to prohibit such operations, provided those conditions continue to be met. While we propose that the new regulations will provide for exemption applications, we acknowledge that the application process for an exemption can be burdensome, particularly if a carriage is operated by more than one railway undertaking. We therefore propose to include a standard exemption clause within the retained regulation which will state that Mark 1 vehicles which have been modified to increase their crashworthiness by:

- (a) the fitting of crash pillars and couplings to provide additional vertical resistance; and
- (b) having secondary door locks installed on any passenger operated hinged doors

will not need to apply for a specific exemption from ORR. A Mark 1 carriage modified in line with these conditions can be operated by a railway undertaking holding an operator licence and safety management system which covers the operation of Mark 1 carriages. ORR would not generally expect to grant an exemption in respect of any vehicle which did not meet the conditions set out in this requirement to operate on the mainline.

Q6: Do you agree that we should retain the regulation to prohibit the use of Mark 1 rolling stock, with the proposed changes to the exemption system? If you do not support the retention, please tell us why?

Prohibition of hinged doors

4.19 Regulation 5 of RSR 99 also places a prohibition on rolling stock with hinged doors. The policy intention behind this requirement was to reduce the number of passenger injuries and fatalities resulting from passenger operated hinged doors by removing from service the vast numbers of slam door trains working the heavily used commuter services in the South East.

4.20 With the removal of such stock from regular passenger use the potential for passenger injuries and fatalities was reduced. Further reductions were achieved by modifications to fit central door locking on rolling stock used for inter-city services and the eventual passenger rolling stock upgrade programme has removed hinged door rolling stock from standard mainline use.

4.21 We considered that rolling stock with hinged doors was unlikely to be returned to franchised or open access passenger use, particularly as meeting the requirements of Rail Vehicle Accessibility Regulations 2010 with hinged door designs would be very difficult.

4.22 For Mark 1 vehicles that operate on the mainline and have hinged doors, we considered that making secondary door locks a standard requirement for meeting modification conditions to achieve an exemption would be a simpler way to maintain safety requirements as set out in **Paragraph 4.18**. We considered that any residual use of non-Mark 1 hinged door stock was likely to be restricted to charter operators who have established procedures for staffing that would manage the risk at these doors..

4.23 For these reasons we believe it is no longer necessary to have a separate prohibition covering hinged doors and therefore propose to revoke this regulation.

Q7: Do you agree that regulation 5 (prohibition of hinged doors) should be revoked? If you do not support revocation, why do you think it should be retained?

Exemptions under the proposed Regulations and exemptions granted under the existing Regulations

4.24 We are proposing to retain an exemption power for ORR under the Regulations. The process is similar to that set out in the RSR 99 with respect to our power to grant an exemption subject to any consultation we consider appropriate, conditions that we may attach to the exemption, any other statutory requirements which may apply as well all other circumstances of the application.

4.25 We have granted a number of exemptions under the existing Regulations particularly in relation to the operation of Mark 1 rolling stock on the mainline railway. The proposed regulation includes transitional arrangements which allow any exemption certificate issued under the MPR 97 or RSR 99 to be treated as if it were granted under the new Regulations. We propose to review any exemptions that we have issued under the existing regulations in line with better regulation principles after the new Regulations have come into force.

Q8: Do you agree with our approach to issuing exemptions under the new Regulations? If not, please tell us why?

5. Railway Safety (Miscellaneous Amendments) Regulations 2001

5.1 The Railway Safety (Miscellaneous Amendments) Regulations 2001 ('MAR 01') were revoked, with the exception of regulation 17, by the Railways and Other Guided Transport Systems (Safety) Regulations 2006.

5.2 The remaining provision revises a reference in the Railway Safety Regulations 1999 to the definition of 'a railway' from '25 miles per hour' to '40 kilometres per hour'.

5.3 The new Regulations replicate this amendment in the definition of a 'railway'. This will enable MAR 01 to be revoked in their entirety.

Q 9: Do you agree that the remaining provision in force can be revoked? If not, please tell us why?

6. Impact Assessment

6.1 An impact assessment relating to retaining or amending provisions from the Regulations concerning TPWS, the use of Mark 1 vehicles and means of communication between passengers and the controller of the train can be found at **Annex B**.

6.2 Taken together, we consider that our proposals represent a reduction in the regulatory burden and no significant increase in costs for the industry.

Q10: Do you agree with our assumptions in the impact assessments? If not, please tell us why or if there are there any other factors that you think we should take into account?

7. Summary of the review of the existing regulations

Regulation	Policy aim	Lapsed or spent?	Met by other legislation?	Retain and revise	Revoke
<i>The Railway (Miscellaneous Provisions) Regulations 1997</i>					
3 Unauthorised access	Measures to prevent or deter access to track or installations must be in place	No	Yes, regulation 3 of HSWA and regulation 3 of the Management of Health and Safety at Work Regulations 1999	No	Yes
4. Means of Communication	Provision of means for passengers to contact persons outside of the carriage in which they are travelling in the event of an emergency	No	No	Yes – remove reference to ‘fare paying passengers’	No
5. Measures to prevent collisions and derailments	All operations should be carried out within a framework that minimises the potential	No	Yes, ROGS regulation 19 - Risk Assessment	No	Yes

	for incidents and accidents.				
6. Brakes	Mandatory consideration of a fundamental principle of safe operation of a moving vehicle	No	Yes, ROGS regulation 19 - Risk Assessment	No	Yes
7. Accidents to persons at work from moving vehicles	Mandatory consideration of a fundamental principle of safe operation of a moving vehicle	No	Yes, regulation 3 of HSWA, regulation 19 ROGS (risk assessment) and regulation 3 of the Management of Health and Safety at Work Regulations 1999	No	Yes
<i>The Railways Safety Regulations 1999</i>					
2. Interpretation	n/a	n/a	n/a	Revisions: Definition of 'emergency crossover' now reads 'in accordance with <i>arrangements</i> established by the <i>infrastructure manager</i> ' Definition of 'excessive speed' proposal to remove reference to 'relevant authority' approving additional speed limits. Definition of 'infrastructure	

				<p>controller' to be replaced with 'infrastructure manager' in line with ROGS</p> <p>Definition of 'relevant approach' will have 60 mph replaced by equivalent measure in kilometres per hour of [95 or 100] km/h.</p> <p>Definition of 'train protection system' will be revised so that compliance can be achieved by either ATP or TPWS – but must meet standards that demonstrate continuous improvement.</p>	
3. Use of a train protection system	Mandate the installation of a train protection system where none previously existed	Partially, transitional provisions now lapsed	No	<p>Yes</p> <p>Include a requirement that any train protection system must be properly maintained. Such maintenance must include a 'train protection management system'.</p> <p>Remove transitional provisions from 3(2);</p> <p>Revise references to exempted <i>operators</i> of networks to the networks, regardless of operator in 3(3);</p> <p>Revise defences set out in 3(4), splitting them into those relating to an infrastructure</p>	No

				<p>manager and those applicable to a railway undertaking.</p> <p>Deletion of regulation 3(5) as it is now redundant following the amendment to the definition of a train protection system.</p>	
4. Prohibition of Mark 1 rolling stock	Mandate the removal or modification of rolling stock considered to be less crashworthy	Partially, transitional provisions now lapsed	No	<p>Yes:</p> <p>Remove transitional provisions;</p> <p>Incorporate a standard exemption, which applies when specified conditions for modification and operation are met including a requirement for secondary door locks to be fitted if hinged doors without central locking are used.</p>	No
5. Prohibition of hinged door stock	Mandate the removal or modification of rolling stock with hinged doors for passenger operation	Partially, transitional provisions now lapsed	No	No (see also Prohibition of Mark 1 rolling stock amendments)	Yes
<i>The Railways (Miscellaneous Amendments) Regulations 2001</i>					
17. Amendment to the Railway Safety Regulations 1999	Revision of speed references in 'miles per hour' to 'kilometres per hour' in the definition of 'a railway'	Yes – modification can be incorporated into drafting of new statutory instrument	No	No	Yes

8. Enforcement flexibility

Introducing enforcement flexibility between ORR and HSE

8.1 We would like to take this opportunity to seek your views on a proposal which is unrelated to those already covered in this document.

8.2 We are considering options to introduce statutory flexibility to the current arrangements for the allocation of health and safety enforcement functions for railways. Our enforcement role is currently set out in the Health and Safety (Enforcing Authority for Railways and Other Guided Transport Systems) Regulations 2006 (EARR) [S.I. 2006/557]. EARR gives ORR responsibility for enforcement in relation to the operation of railways, tramways and other systems of guided transport, with certain listed exceptions which fall to the Health and Safety Executive (HSE) to enforce.

8.3 Our review of EARR in 2012 concluded that on the whole the regulations work well but identified that in a small number of cases, it is necessary for ORR and HSE to agree on an interpretation of the regulations leaving a degree of legal uncertainty as to whether ORR or HSE is the correct enforcing authority. This arises in areas of activity, such as construction, when it is often necessary for ORR and HSE to reach agreement on whether an activity falls within the term “operation of a railway”. In some cases there is uncertainty as to which enforcing authority should act until discussions have taken place as to the precise nature of an activity or incident. It is not possible for the regulations to list every possible scenario where this is likely to occur, as every situation is different.

8.4 We think it would benefit the industry, and other stakeholders, to have legal certainty in every case, so we are considering making a small amendment to EARR to provide a mechanism for ORR and HSE to agree to assign the enforcement function to either one of them in cases where

there is uncertainty. This will provide clarity for those affected by enforcement activity and would potentially speed up the enforcing authority's response to an incident.

8.5 Provision for the enforcement function to be assigned between two enforcing authorities already exists in similar legislation elsewhere and allows, for example, HSE and local authorities to assign responsibility for enforcement at premises where there is uncertainty in the particular case. This provision, which is contained in the Health and Safety (Enforcing Authority) Regulations 1988 [S.I. 1998/494] has worked well over many years and a similar provision is now in place to allow flexibility between the Office for Nuclear Regulation ('ONR') and ORR. ONR and ORR will be able to assign enforcement responsibility between them in cases where there is uncertainty.

8.6 The issue was considered by the Law Commission last year when it looked at Level Crossing Law. The Law Commission's report⁶ made a recommendation that the power to delegate enforcement responsibility should be available to HSE and ORR in cases where there is doubt. It also suggested that the Department for Transport should consider the benefits of such a power beyond enforcement at level crossings.

8.7 We do not believe that amending EARR to incorporate a flexibility provision would create any new regulatory or cost burdens for stakeholders and, in fact, would provide the benefit of clarity for industry. In practice, therefore, the introduction of a flexibility provision would give legal certainty to arrangements which are currently agreed between the two enforcing authorities in situations where interpretation of EARR is required.

8.8 Subject to your views, ORR intends to make a recommendation to the Secretary of State for Transport to make the necessary amendments to EARR as soon as possible. We will publish guidance on how the new provision will work in practice before any such provision comes into force.

Q11: Do you have any views that would help inform our development of an enforcement flexibility proposal?

⁶ See <http://lawcommission.justice.gov.uk/areas/level-crossings.htm> for more information.

9. Summary of questions

Railway Safety (Miscellaneous Provisions) Regulations 1997

Q1: Do you agree that we should revoke regulations 3, 5, 6 and 7 of MPR 97? If you do not support the revocation, please tell us why.

Q2: Do you agree that regulation 4 (means of communication) should be retained in its modified form? If you do not support the retention of this provision, please say why.

Railway Safety Regulations 1999

Q3: Do you agree that we should retain a regulation to mandate the use of a train protection system? If not, why?

Q4: What are your views on the proposed changes to the drafting of the regulation relating to train protection systems? Are there any further changes you feel we should make?

Q5: In the proposed new definition of "relevant approach", should 60mph be converted to 95km/h or 100km/h?

Q6: Do you agree that we should retain the regulation to prohibit the use of Mark 1 rolling stock, with the proposed changes to the exemption system? If you do not support the retention, please tell us why?

Q7: Do you agree that regulation 5 (prohibition of hinged doors) should be revoked? If you do not support revocation, why do you think it should be retained?

Q8: Do you agree with our approach to issuing exemptions under the new Regulations? If not, please tell us why?

Railways Safety (Miscellaneous Amendments) Regulations 2001

Q 9: Do you agree that the remaining provision in force can be revoked? If not, please tell us why?

Impact Assessments

Q10: Do you agree with our assumptions in the impact assessment? If not please tell us why or if there are there any other factors that you think we should take into account?

Enforcement flexibility

Q11: Do you have any views or evidence that would help inform our development of an enforcement flexibility proposal?

Annex A – Draft Regulations

2014 No.

HEALTH AND SAFETY

The Railway Safety (Train Operations etc.) Regulations 2014

<i>Made</i>	- - - -	***
<i>Laid before Parliament</i>		***
<i>Coming into force</i>	- -	***

The Secretary of State makes the following Regulations in exercise of the powers conferred by sections 15(1), (2), (3)(a) and (c), (4)(a), (5)(a) and (b), (6)(a) and (b), and 82(3)(a) of, and paragraphs 1(1)(a) and (c) of Schedule 3, to the Health and Safety at Work etc. Act 1974⁽⁷⁾ and section 14A of the Interpretation Act 1978⁽⁸⁾.

These Regulations are made for the purpose of giving effect without modifications to proposals submitted to the Secretary of State by the Office of Rail Regulation⁽⁹⁾ under paragraph 2(5) of Schedule 3 to the Railways Act 2005⁽¹⁰⁾, following consultation undertaken by the Office of Rail Regulation under paragraph 2(6) of Schedule 3 to the Railways Act 2005.

Citation and commencement

1.—(1) These Regulations may be cited as the Railway Safety (Train Operations etc.) Regulations 2014 and come into force on [].

Interpretation

2.—(1) In these Regulations—

“buffer stop” means a buffer stop at the end of a passenger platform;

“Docklands Light Railway” means the light rail system known by that name in London ;

⁽⁷⁾ 1974 c.37. Section 15 was amended by the Employment Protection Act 1975 (c.71), section 116 and Schedule 15, paragraphs 6 and 16 respectively; the general purposes of Part I referred to in section 15(1) were extended by section 117 of the Railways Act 1993 c.43; section 15(1) was amended by S.I. 2002/794, article 5(2) and Schedule 2; section 50(1A) was inserted by the Railways Act 2005 (c.14), sections 2 and 60 and Schedule 3, paragraph 13 respectively; there are amendments to the Act not relevant to these Regulations.

⁽⁸⁾ 1978 c. 30. Section 14A was inserted by the Enterprise and Regulatory Reform Act 2013 (c.24), sections 59(1) and (2) and 103 respectively.

⁽⁹⁾ See the Railways and Transport Safety Act 2003 c. 20, section 15 and Schedule 1; Schedule 1 was amended by S.I. 2012/2404, article 3(2) and Schedule 2, paragraphs 48(1) and (2) and by the Enterprise and Regulatory Reform Act 2013 (c.24), section 57 and Schedule 15, paragraph 41(a) and (b); there are amendments to the Act not relevant to these Regulations.

⁽¹⁰⁾ 2005 c. 14; there are amendments to the Act not relevant to these Regulations.

“emergency crossover” means a connection between two railway tracks to enable trains to change railway tracks and which is used—

- (a) in an emergency, or
- (b) to enable engineering work to be carried out,

in accordance with arrangements established by the infrastructure manager;

“excessive speed” means—

- (a) in relation to an approach to a stop signal or buffer stop, such speed as would prevent the train from stopping at that signal or buffer stop,
- (b) in relation to an approach to part of the railway where there is a speed restriction, such speed as would prevent the restriction from being complied with when the train enters that part;

“Glasgow Subway” means the underground train network in Glasgow;

“infrastructure” means fixed assets used for the operation of a transport system which shall include, without prejudice to the generality of the foregoing—

- (a) its permanent way or other means of guiding or supporting vehicles;
- (b) any station; and
- (c) plant used for signalling or exclusively for supplying electricity for operational purposes to the transport system;

“infrastructure manager” means the person who—

- (a) in relation to infrastructure other than a station, is responsible for developing and maintaining that infrastructure or, in relation to a station, the person who is responsible for managing and operating that station, except that it shall not include any person solely on the basis that that person carries out the construction of that infrastructure or station or its maintenance, repair or alteration; and
- (b) manages and uses that infrastructure or station, or permits it to be used, for the operation of a vehicle;

“line speed” means the highest of the permitted speeds on the railway concerned;

“locomotive” means any railway vehicle which has the capacity for self-propulsion (whether or not the power by which it operates is derived from a source external to the vehicle);

“Mark I rolling stock” means rolling stock which has a structural underframe which provides its own longitudinal strength and has a passenger compartment created on the underframe which relies mainly on the underframe for its longitudinal strength;

“network” means—

- (a) any railway line, or combination of two or more railway lines, and
- (b) any installations associated with any of the track comprised in that line, or those lines,

together constituting a system of track and other installations which is used for and in connection with the support, guidance and operation of trains;

“permitted speed” means the maximum speed permitted on the part of the railway concerned;

“railway” has the meaning assigned to it by the Schedule to these Regulations;

“relevant approach” means—

- (a) an approach to a stop signal referred to in sub-paragraph (b)(i) of the definition of “train protection system” in this regulation except where a train travelling at the maximum speed it could attain on that approach would be stopped within the distance between the signal and the point where it could collide with another train by reason of the train protection system installed at the stop signal;
- (b) an approach to part of the railway where there is a speed restriction if—
 - (i) the permitted speed on that approach is [95/100] kilometres per hour or more; and
 - (ii) in order to comply with the restriction, a train travelling at the permitted speed on that approach would need to have its speed reduced by one third or more;
- (c) an approach to a buffer stop;

“relevant authority” means the Office of Rail Regulation;

“rolling stock” means any carriage, wagon or other vehicle used on track and includes a locomotive;

“speed restriction” means a permitted speed other than the line speed;

“station” means a passenger stop, station or terminal on a transport system but does not include any permanent way or other means of guiding or supporting vehicles or plant used for signalling or exclusively for supplying electricity for operational purposes to a transport system;

“stop signal” means a signal conveying to the driver of the train an instruction that he should stop the train except that it does not include—

- (a) a signal provided for shunting purposes only;
- (b) a hand signal; or
- (c) a buffer stop;

“temporary speed restriction” means a speed restriction which is in place for no longer than three months and used in accordance with special procedures established by the infrastructure manager;

“train” means—

- (a) two or more items of rolling stock coupled together, at least one of which is a locomotive; or
- (b) a locomotive not coupled to any other rolling stock;

“train protection system” means equipment which—

- (a) automatically controls the speed of the train to ensure, so far as possible, that a stop signal is not passed without authority and that the permitted speed is not exceeded at any time throughout its journey; or
- (b) causes the brakes of the train to apply automatically if the train—
 - (i) passes without authority a stop signal such passing of which could cause the train to collide with another train, or
 - (ii) travels at excessive speed on a relevant approach; andis installed so as to operate at every stop signal referred to in sub-paragraph (b)(i), except a stop signal on the approach to an emergency crossover, and at an appropriate place on every relevant approach;

“train protection management system” means organisation and arrangements established by an operator to ensure the safe performance of the train protection system;

“transport system” has the meaning assigned to it by regulation 2(1) of the Railways and Other Guided Transport Systems (Safety) Regulations 2006⁽¹¹⁾;

“Tyne and Wear Metro” means the light rail system connecting Newcastle, Gateshead, Sunderland, North Tyneside and South Tyneside;

“vehicle” means a vehicle which is being used on a transport system and includes a mobile traction unit.

(2) Nothing in these Regulations shall require equipment referred to in sub-paragraph (b) of the definition of a train protection system to function in relation to a temporary speed restriction, and accordingly any reference in these Regulations to the permitted speed in relation to such equipment is, in a case where a temporary speed restriction is in place, a reference to the permitted speed which normally applies on that part of the line.

(3) Any reference in these Regulations to a person operating a vehicle, train or rolling stock is a reference to the person operating a vehicle, train or rolling stock for the time being in the course of a business or other undertaking carried on by him (whether for profit or not), but it does not include a self-employed person by reason only that he himself drives or otherwise controls the movement of a vehicle, train or rolling stock.

⁽¹¹⁾ 2006 No. 599, to which there are amendments not relevant to these Regulations.

(4) Any reference in these Regulations, except regulation 4, to a train colliding with another train does not include a reference to a train colliding with the rear of another train travelling in the same direction.

Use of train protection and management systems

3.—(1) A person must not operate, and an infrastructure manager must not permit the operation of, a train on a railway unless a properly maintained train protection system is in use in relation to that train and railway.

(2) For the purposes of paragraph (1), a train protection system is not properly maintained unless it is subject to a train protection management system which—

- (a) identifies any safety risks relating to use of the train protection system;
- (b) has procedures in place to ensure that action is taken to minimise the safety risks in relation to the performance of the train protection system;
- (c) provides for continuous monitoring and regular assessment of the safety performance achieved by the train protection system; and
- (d) ensures, so far as is reasonably practicable, that continuous improvement to the safety performance of the train protection system is achieved.

(3) Paragraph (1) does not apply if the train is being operated on a railway which—

- (a) forms part of the Docklands Light Railway, Glasgow Subway or the Tyne and Wear Metro; or
- (b) is used by London Underground Limited, and
- (c) in relation to which there is in use equipment which causes the brakes of the train to apply automatically if the train passes a stop signal without authority.

(4) In proceedings against a person for an offence under paragraph (1), it is a defence for that person to prove—

- (a) in the case where the fault is on the train—
 - (i) at the time of the contravention the train protection system had failed, or had been taken out of use, because of a fault;
 - (ii) the train had commenced its journey before the discovery of the fault or is being driven without passengers to a place for the purpose of repair; and
 - (iii) suitable measures had been taken after the discovery of the fault to mitigate the risk of trains colliding or derailling; or
- (b) in the case where the fault is on the railway—
 - (i) at the time of the contravention the train protection system had failed, or had been taken out of use, because of a fault;
 - (ii) the fault was remedied as soon as reasonably practicable after its discovery; and
 - (iii) suitable measures had been taken after the discovery of the fault to mitigate the risk of trains colliding or derailling.

Use of Mark I rolling stock

4.—(1) Subject to paragraph (2), a person must not operate, and an infrastructure manager must not permit the operation of, any Mark I rolling stock on a railway.

(2) Paragraph (1) does not apply to Mark I rolling stock which at the relevant time is being operated exclusively other than for the carriage of passengers, or on the Docklands Light Railway, Glasgow Subway, the Tyne and Wear Metro or by London Underground Limited.

(3) Paragraph (1) does not apply to Mark I rolling stock which has been—

- (a) fitted with secondary door locks; and
- (b) modified so as to ensure in the event of a collision—
 - (i) couplings attached to the vehicle provide additional vertical resistance to vehicle separation in derailments; and
 - (ii) the risk of the underframe of one vehicle overriding the underframe of another vehicle (whether or not the other vehicle is part of the same train) is minimised so far as is reasonably practicable.

Means of communication

5.—(1) The operator of a vehicle which is being used for the carriage of passengers must ensure that the vehicle is equipped with suitable and sufficient means for passengers to communicate with a person who is in a position to take appropriate action in the event of an emergency and such means are properly maintained for that purpose.

(2) In proceedings against the operator of a vehicle for an offence for contravening paragraph (1) it is a defence for that operator to prove—

- (a) the contravention was due to the act or default of another person not being one of the operator's employees; and
- (b) the operator took all reasonable precautions and exercised all due diligence to avoid the contravention.

Exemptions

6.—(1) The relevant authority may, by a certificate in writing, exempt any person or class of persons, railway, part of a railway or class of railways, train or rolling stock, or class of train or rolling stock from any prohibition imposed by these Regulations and any such exemption may be granted subject to conditions and to a limit of time and may be revoked by a certificate in writing at any time.

(2) Before granting an exemption the relevant authority must consult such persons as it considers appropriate.

(3) In deciding whether to grant any such exemption the relevant authority must have regard to—

- (a) the conditions, if any, which it proposes to attach to the exemption;
- (b) any other requirements imposed by or under any enactment which apply to the case; and
- (c) all other circumstances of the case.

Transitional arrangements

7. Any exemption certificate issued pursuant to Regulation 8 of the Railway Safety (Miscellaneous Provisions) Regulations 1997⁽¹²⁾ or Regulation 6 of the Railway Safety Regulations 1999⁽¹³⁾ shall have effect as if they were issued under Regulation 6.

Revocations

8. The following regulations are revoked—

- (a) The Railway Safety (Miscellaneous Provisions) Regulation 1997;
- (b) The Railway Safety Regulations 1999;
- (c) The Railway Safety (Miscellaneous Amendments) Regulations 2001⁽¹⁴⁾.

Review

9.—(1) Before the end of the review period, the Secretary of State must—

- (a) carry out a review of these Regulations;
- (b) set out the conclusions of the review in a report; and
- (c) publish the report.

(2) The report must in particular—

- (a) set out the objectives intended to be achieved by the regulatory system established by these Regulations;
- (b) assess the extent to which those objectives are achieved; and

⁽¹²⁾ 1997 No. 553

⁽¹³⁾ 1999 No. 2244

⁽¹⁴⁾ 2001 No. 3291

- (c) assess whether those objectives remain appropriate and, if so, the extent to which they could be achieved with a system that imposes less regulation.
- (3) “Review period” means the period of five years beginning with the day on which these Regulations come into force.

SCHEDULE

Meaning of Railway

1. “Railway” means a system of transport employing parallel rails which provide support and guidance for vehicles carried on flanged wheels and form a track which either is of a gauge of at least 350 millimetres or crosses a carriageway (whether or not on the same level), except that it does not include—

- (a) a tramway;
- (b) any part which runs along and at the same level as a street or in any other place to which the public has access (including a place to which the public has access only on making a payment);
- (c) any part where the permitted speed is such as to enable the driver to stop the train in the distance he can see ahead in clear weather conditions;
- (d) any part exclusively used other than for the carriage of fare paying passengers; or
- (e) such a system if the line speed on all parts of it is 40 kilometres per hour or less.

2. In this Schedule—

“carriageway” has the same meaning as in the [Highways Act 1980](#)⁽¹⁵⁾ or in Scotland, the Roads (Scotland) Act 1984⁽¹⁶⁾;

“street” means—

- (a) in England and Wales, a street within the meaning of [section 48](#) of the New Roads and Street Works Act 1991⁽¹⁷⁾, together with land on the verge of a street or between two carriageways;
- (b) in Scotland, a road within the meaning of [section 107](#) of the New Roads and Street Works Act 1991, together with land on the verge of a road or between two carriageways.

“tramway” means a system of transport used wholly or mainly for the carriage of passengers—

- (a) which employs parallel rails which—
 - (i) provide support and guidance for vehicles carried on flanged wheels; and
 - (ii) are laid wholly or partly along a road or in any other place to which the public has access (including a place to which the public only has access on making payment); and
- (b) on any part of which the permitted speed is such as to enable the driver to stop a vehicle in the distance he can see to be clear ahead.

Signed by authority of the Secretary of State for Transport

Name Minister of State/Parliamentary Under Secretary of State/Secretary of State for Transport

Date

⁽¹⁵⁾ 1980 c.66. See section 329(1); there are amendments to the Act not relevant to these Regulations.

⁽¹⁶⁾ 1984 c.54. See section 151(1) and (2); there are amendments to the Act not relevant to these Regulations.

⁽¹⁷⁾ 1991 c.22. There are amendments to the Act not relevant to these Regulations.

EXPLANATORY NOTE

(This note is not part of the Regulations)

These Regulations contain provisions with respect to the use of a train protection system, Mark I rolling stock and the provision and maintenance of a means of communication on a vehicle. They consolidate with minor amendments certain provisions of the Railway Safety (Miscellaneous Provisions) Regulations 1997 and the Railway Safety Regulations 1999 and revoke those Regulations together with the Railway Safety (Miscellaneous Amendments) Regulations 2001.

Regulation 2 contains interpretation provisions.

Regulation 3 prohibits the operation of a train on a railway unless a properly maintained train protection system is in use for that train and railway.

Regulation 4 prohibits the operation of Mark I rolling stock unless certain criteria are met.

Regulation 5 places a duty on operators of vehicles being used for the carriage of passengers to provide and maintain means of communication between passengers and a person who in an emergency is in a position to take appropriate action.

Regulation 6 enables the Office of Rail Regulation to grant certificates of exemption in respect of any prohibition imposed by these Regulations.

Regulation 7 contains the provisions for transitional arrangements for certificates of exemption.

Regulation 8 revokes the Railway Safety (Miscellaneous Provisions) Regulations 1997, the Railway Safety Regulations 1999 and the Railway Safety (Miscellaneous Amendments) Regulations 2001.

Regulation 9 requires the Secretary of State to review the operation and effect of these Regulations and publish a report within five years after the Regulations come into force. Following the review it will fall to the Secretary of State to consider whether the Regulations should be revoked or continue in force with or without amendment.

A full impact assessment of the effect that this instrument will have on the costs of business is available from the Office of Rail Regulation, One Kemble Street, London WC2B 4AN.

Annex B – Impact Assessment

Title: Railway Safety (Miscellaneous Provisions) Regulations 1997, Railway Safety Regulations 1999 and Railway Safety (Miscellaneous Amendments) Regulations 2001 IA No: DfT00270 Lead department or agency: Office of Rail Regulation Other departments or agencies: Department for Transport	Impact Assessment (IA)		
	Date: 29/04/2014		
	Stage: Consultation		
	Source of intervention: Domestic		
	Type of measure: Secondary legislation		
Contact for enquiries: Tracy Phillips 020 7282 3868 tracy.phillips@orr.gsi.gov.uk			

Summary: Intervention and Options	RPC Opinion: N/A
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Cost of Preferred (or more likely) Option			
Total Net Present Value	Business Net Present Value	Net cost to business per year (EANCB on 2009 prices)	In scope of One-In, Two-Out? Measure qualifies as
£0.05m	£0.02m	£0.00	Yes Zero Net Cost

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

The problem under consideration is that three existing sets of railway safety legislation are now out-dated and may in places be unduly burdensome on industry and duplicate other requirements. It is likely to be possible to improve these regulations by retaining provisions in two critical safety areas - the prohibition of unmodified Mark 1 rolling stock and requirements to install, maintain and manage train protection systems - whilst reducing some administrative burdens associated with applying for exemptions in standard cases. Government intervention is necessary as the current requirements are laid out in legislation so to update and modernise them would also require further legislative changes.

What are the policy objectives and the intended effects?

The policy objective in reviewing these regulations is to reduce the burden of regulatory compliance by removing duplicated or redundant provisions, without increasing operational risk or damaging the safe management of train operations. The management of these kinds of risk would be brought in line with the principles underpinning more recent legislation governing rail operations (for example, the Railways and Other Guided Transport Systems (Safety) Regulations 2006 (ROGS). Specific regulation will be retained only in those areas where this is not considered possible.

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

Option 1: Do nothing - three sets of existing legislation will stay in place.
Option 2: Create one set of new regulations to replace the existing Railway Safety Regulations 1999 (RSR 99), the Railway Safety (Miscellaneous) Provisions 1997 (MPR 97) and the Railway Safety (Miscellaneous Amendments) Regulations 2001 that retain the provisions required around prohibiting the operation of unmodified Mark 1 rolling stock (but reduce unnecessary burden on train operators) and requirements covering train protection systems.
Option 2 is preferred because it supports the deregulatory agenda and benefits business by improving clarity and reducing administrative burdens on some dutyholders, whilst preserving risk control in two essential areas.

Will the policy be reviewed? It will be reviewed. If applicable, set review date: 10/2019					
Does implementation go beyond minimum EU requirements?			N/A		
Are any of these organisations in scope? If Micros not exempted set out reason in Evidence Base.	Micro Yes	< 20 Yes	Small Yes	Medium Yes	Large Yes
What is the CO ₂ equivalent change in greenhouse gas emissions? (Million tonnes CO ₂ equivalent)			Traded: 0	Non-traded: 0	

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: Stephen Hammond Date: 9 June 2014

2. Summary: Analysis & Evidence

Policy Option 2

Description: Create new regulations to replace RSR99, MPR97, and Railway Safety 2001 that retain the provisions required prohibiting the operation of unmodified Mark 1 rolling stock and requirements covering train operating systems

FULL ECONOMIC ASSESSMENT

Price Base Year 2013	PV Base Year 2014	Time Period Years 10	Net Benefit (Present Value (PV)) (£m)		
			Low: £0.03	High: £0.07	Best Estimate: £0.05

COSTS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	£0	N/A	1. N/A
High	£0	N/A	N/A
Best Estimate	£0	£0	£0.03

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

The only monetised costs will fall to the public sector in undertaking a statutory review of the provisions within five years (and within every five subsequent year period). The costs of the initial review and one further review are the only ones that will fall in the 10 year period and together are estimated to be around £30,000 (Present Value).

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

1.) Familiarisation costs for industry associated with the new or changed legislation have not been monetised, as the Office of Rail Regulation (ORR) works closely with the affected stakeholders and believes the familiarisation costs which are associated with the legislation change will be relatively minimal. 2.) The impacts of clarifying the TPWS legislation have also not been monetised. However, ORR do not consider that there will be any additional costs associated with the reframing of the wording of this regulation.

BENEFITS (£m)	Total Transition (Constant Price) Years	Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	£0	£0.01	£0.07
High	£0	£0.01	£0.10
Best Estimate	£0	£0.01	£0.08

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

1. There would be admin savings to industry due to automatic exemptions of the use of Mark 1 vehicles being granted provided certain vehicle modifications have been made.
2. There would be admin savings to ORR as a result of only having to process bespoke exemptions which don't fall under the standard exemption criteria, which is assumed to only be around 3% of the total exemptions over the 10 years.

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

The benefits to industry of having clearer, modernised legislation have not been estimated.

Key assumptions/sensitivities/risks	Discount rate (%)	3.5%
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Due to the limitations of the available evidence, it has been necessary to make a number of assumptions in the impact assessment. The estimates presented in this impact assessment are therefore sensitive to both the evidence that has been used and the assumptions that have been made. For example, assumptions have been made regarding the profile of vehicle modifications over the next 10 years; and high and low estimates have been used to try to account for uncertainty surrounding this.

BUSINESS ASSESSMENT (Option 1)

Direct impact on business (Equivalent Annual) £m:			In scope of OITO?	Measure qualifies as
Costs: £0.00	Benefits: £0.00	Net: £0.00	Yes	Zero net cost

4. Evidence Base (for summary sheets)

1. Problem

The Railway Safety (Miscellaneous Provisions) Regulations 1997 (“MPR97”), Railway (Safety) Regulations 1999 (‘RSR 99’) and Railway Safety (Miscellaneous Amendments) Regulations 2001 contain provisions relating to a wide range of rail safety measures which are either:

5. redundant having served their purpose;
6. are out-dated and need to be modernised; or
7. could be modified to reduce the regulatory burden without compromising passenger safety.

The MPR 97 contains five regulations around unauthorised access to railway track and installations, measures to prevent train collisions and derailments, braking systems, accidents to persons at work from moving vehicles and means of communication between passengers and responsible staff. The majority of these have been overtaken by the implementation of European rail safety legislation requiring the industry to have safety management systems in place to manage such risks and the implementing legislation - the Railways and Other Guided Transport Systems (Safety) Regulations 2006 (ROGS) - now forms the central plank of rail safety legislation.

Currently RSR 99 mandates the requirement to install a train protection system but does not set out how this should be maintained or managed. Additionally, it prohibits the use of Mark 1 and hinged door vehicles on the mainline railway unless the vehicles are modified to a certain standard and an exemption has been received from the Office of Rail Regulation (ORR). The ORR considers that the administrative costs to heritage and charter operators of applying for these exemptions and to the ORR of providing these exemptions are costly and unduly burdensome. These costs are quantified in sections 8.2 and 9 of this IA.

Government intervention is therefore necessary because there is existing legislation in these areas which it is proposed needs to continue, but that needs updating and modernising.

2. Purpose & Intended Effect

The purpose of reviewing these three sets of regulations is to ensure that where legislation remains in place it is fully effective in enabling rail operators to run their undertakings safely but does not create unnecessary burdens.

The intended effect is to preserve and modernise regulatory requirements in the safety critical area of train protection and to maintain some prohibitions around the use of poor crashworthy rolling stock (referred to as Mark 1 for the purposes of this assessment) but, in the deregulatory climate, to remove other provisions wherever possible. Although the original prohibitions around Mark 1 rolling stock have been largely effective, whilst such stock remains – albeit in small numbers – there is a risk that it may be reintroduced to the network unmodified or that modifications made to vehicles already operating will not be maintained properly and we therefore consider that continuing regulation in this area is justified. However, we do believe that the administrative burdens associated with being exempted from the prohibition are onerous and the intended effect of our proposed new regulations is to minimise this as far as possible without increasing safety risks.

3. Better regulation and Red Tape Challenge

A review of the RSR 99 and MPR 97 was carried out in 2008. No changes were made to the regulations at that time on the basis that there were not clear conclusions regarding implementation and the responses to the consultation showed no consensus on de-regulation.

In 2011 the Cabinet Office launched the ‘Red Tape Challenge’ to reduce regulation across government and identified these regulations as falling within scope for potential removal. Our review of these regulations seeks to build upon work we carried out in 2008, and ORR is working closely with the

Department for Transport as part of the delivery programme for all ORR Red Tape Challenge recommendations.

4. Policy objectives

In determining the options for achieving the aim of reducing regulation by removing duplicated or redundant provisions, we considered the following criteria:

8. is there a reduced regulatory burden on operators?;
9. is there zero (or minimal) increase in operational risk?;
10. is there simplified enforcement?; and
11. does the option impact upon public expectations for safety management?

5. Background

5.1 MPR 97

The MPR 97 contain a number of goal setting provisions that were intended to move the industry away from the more prescriptive safety related legislation that had been in place up until that time. They cover what were considered five critical safety areas following a series of high profile rail accidents in the 1980s and 1990s –

12. measures to be put in place to prevent or deter access to track and installations by persons or large animals;
13. measures to prevent collisions between vehicles on a transport system, collisions with buffer stops and derailments resulting from excessive speed or incorrectly set points;
14. a requirement to provide and maintain suitable and sufficient braking systems for each vehicle and a train as a whole;
15. measures to be taken for the purpose of preventing persons at work on a transport system from being struck by, or falling from, moving vehicles; and
16. a requirement to provide and maintain a means of communication on all rail vehicles carrying passengers so that a passenger can alert appropriate staff in the event of a train defect which may present imminent danger or an assault on staff or passengers.

The implementation of the European Rail Safety Directive 2004/49/EC, transposed in the UK in 2006 as ROGS, has moved the rail industry beyond goal setting style regulations towards greater ownership of the risks generated by their operations. The main plank of ROGS is that transport operators must make a suitable and sufficient assessment of the risks to the safety of any persons affected by their operations and identify and implement the measures they need to take to ensure safe operation of their transport system. ORR issues safety certificates to railway undertakings and safety authorisations to infrastructure managers if it is satisfied that the minimum requirements for this “safety management system” have been met.

In practice, this means that the safety critical areas in the first four bullets above should now all be identified and addressed by the ROGS risk assessment and safety management system processes. The exception to this is considered to be means of communication (fifth bullet point). Primarily this prescribes that hardware must be installed so that passengers can communicate with a person who is in a position to take appropriate action in the event of an emergency. An informal stakeholder group set up to help ORR review RSR 99 and MPR 97 in the early stages of the project, agreed that the specificity of this requirement was not suitably covered by the more general ROGS requirements nor other more technical legislation that covers train equipment (which is limited in its scope to the mainline railway and then only new, upgraded or renewed rolling stock). There is therefore an ongoing need to preserve this important passenger safety provision which covers the mainline, non-mainline railways (for example the London Underground) and tramways currently, particularly when driver-only operations are increasing on the network.

5.2 RSR 99

Train protection systems are defined as equipment fitted to trains and on the track that can enforce speed restrictions required for the safe operation of the railway. These enforcements include controlling a train to a stop at signals and buffer stops. Whilst it is not always possible to avoid trains passing signals at danger, train protection systems are designed to reduce the likelihood of a collision to a very small probability. Consideration for train protection systems is necessary on all forms of rail transport systems.

The most common system in place is the Train Protection and Warning System (TPWS), installation of which was completed on the mainline network by 2003. At the time of drafting RSR 99, it was envisaged that the installation of TPWS would be an interim measure and that automatic train protection systems which provide a higher level of train protection would replace it in the near future. In line with European directives, the National network is now committed to a migration plan that will replace TPWS with ERTMS (European Rail Traffic Management System) over time but it is now known that TPWS will have to continue to operate safely on certain routes until the 2040s, significantly longer than had been envisaged.

The RSR 99 also prohibit the use of Mark 1 vehicles that have not been modified to improve crashworthiness (by preventing the underframe of one vehicle being able to ride over that of another in a collision, potentially causing a larger number of fatalities or injuries). The use of hinged door vehicles without central locking (which prevents the doors opening without a door release by either the driver or conductor and therefore stops passengers falling either from a moving train or from a stationary train at a location other than a station) is also prohibited. Where the required modifications have been made, an exemption for the vehicle can be sought from the ORR in order to operate it on the mainline together with a corresponding exemption covering the relevant infrastructure for Network Rail.

Current exemption holders include:

17. charter train companies who operate one-off, bespoke services across the mainline network that are not included as regular scheduled services in the passenger timetable and for which special tickets are required;
18. two charter train companies who operate regular seasonal passenger services;
19. heritage operators who run trains mostly for tourism on self-contained lines and rarely on the mainline network; and
20. freight train operators who generally operate services carrying goods but may provide locomotives and drivers to charter train companies.

Since the prohibition on the use of Mark 1 vehicles took full effect on 1 January 2005 the only exemption granted to a franchised passenger train operator or open access passenger operator was for operation of trains on the Lymington branch line and this has since expired and not been renewed. The ORR assumes that franchised passenger operators or open access operators are unlikely to use such vehicles in the future because of the age of the vehicles and the reputational harm from using dated rolling stock. The fact that there are no instances of them using these trains currently and these trains are only getting more dated in the meantime is evidence that this is an appropriate assumption.

Network Rail's National Vehicle Register shows that there are approximately 2000 Mark 1 vehicles still in existence and 345 of these vehicles currently have an exemption to operate on the mainline railway issued by ORR. Examination of the detail of the exemption certificates shows that the exempt Mark 1 vehicles have 13 different companies that own them. West Coast Railway Company (WCRC) is the largest owner with 33% of the exempt Mark 1 vehicles¹⁸ but does not operate them all itself. The detailed exemptions confirm that WCRC leases out a number of vehicles and is the largest provider of Mark 1 vehicles to charter train tour promoters. Given WCRC's size and experience in overhauling

¹⁸ Taken from ORR's website at <http://www.rail-reg.gov.uk/server/show/nav.1247>

Mark 1 vehicles for main line operation, we approached WCRC for information and figures for this impact assessment.

5.3 Railway Safety (Miscellaneous Amendments) Regulations 2001

These Regulations were largely revoked in 2006. The remaining regulation revises a “miles per hour” reference to a “kilometres per hour” one. This would carry forward into the revised set of regulations under option 2 but would allow for the 2001 regulations to be fully revoked. There is no further reference to these Regulations in this impact assessment.

6. Options

Given that we believe the vast majority of the requirements covered by the MPR 97 are now addressed by more modern legislation and that the removal of specific legislation in these areas would have no real impact (as set out above) but would ensure there was no potential for confusion, this impact assessment concentrates firstly on the two key areas of legislation covered by the RSR 99 – the prohibition of Mark 1 and hinged door stock and the requirement to install a train protection system – and considers the potential impact of each option against them. We then cover at paragraph 46 the one provision we propose to retain from the MPR 97 in the new regulations covering means of communication.

6.1 Option 1 - ‘do nothing’ and leave regulations unchanged

In relation to train protection systems

As explained above, the original purpose of the RSR in relation to train protection systems was to mandate their installation on the mainline network within a specified period of time in order to implement the recommendations of the Hidden Report¹⁹. At that stage it was envisaged that ERTMS would be rolled out in the short to medium term so train protection systems such as TPWS were very much considered to be the “interim” solution. To this end the Regulations have achieved their original goal to mandate installation but they are regarded as no longer fit for purpose. Whilst leaving the regulations unchanged would preserve the fundamental safety requirement to install a train protection system, the regulation as drafted does not reflect the ongoing need to maintain and manage that system in recognition of the fact that it will be in place for decades to come in some cases. Although ORR has not taken enforcement action under RSR 99 because the requirement to install train protection is absolute, legal clarity has been sought by operators who wish to clarify expectations as we move forward, given the longer life expectancy of the TPWS system. This review affords the opportunity to provide that.

In relation to Mark 1 rolling stock

Although, regulations 4 and 5 of the RSR 99 prohibit the operation of unmodified Mark I rolling stock and hinged door trains, ORR can issue exemption subject to certain modifications having been made. These modifications include:

21. installation of crash pillars - in the event of a collision, these pillars help prevent the underframe of one Mark 1 vehicle from penetrating the passenger compartment of another Mark1 vehicle;
22. installation of secondary locks – these prevent passenger misuse of the doors when not making a scheduled call at a station platform; and
23. upgrading of the couplings - these modifications help prevent Mark 1 vehicles couplings from breaking in a collision and therefore prevent Mark 1 vehicles from overriding one another.

Enforcement statistics collected by the ORR show that there have been no prosecutions brought or improvement notices issued under RSR 99 in relation to the Mark 1 provisions. ORR inspectors have

¹⁹ Available at http://www.railwaysarchive.co.uk/documents/DoT_Hidden001.pdf

confirmed that this is because of the active engagement with ORR by Mark 1 vehicle operators in order to ensure that the vehicles have been suitably modified before operation and are therefore compliant with requirements to obtain an exemption. A vehicle acceptance process whereby anybody wanting to operate a Mark 1 vehicle currently has to have it accepted onto a national vehicle register and approved for use by Network Rail (as the infrastructure manager) provides an early check and balance for this where some potential non-compliance with the legislative requirements in RSR 99 could be picked up early. An operator's safety management system, as required by ROGS, would also cover the rolling stock operated and provide confirmation that appropriate exemptions were in place and is subject to audit by ORR. For these reasons, we have assumed that there has been comprehensive compliance with the current regulations.

Whilst retaining the RSR 99 in their current form would mean Mark 1 rolling stock and hinged door prohibitions remained in force, the current process of individual applications for exemptions would prevail along with costs incurred by operators and infrastructure managers in making such applications and for ORR in processing them.

6.2 Revocation

As part of the development of options in this process of reviewing the existing regulations, we examined whether the regulations covering train protection, Mark 1 and hinged door stock could be revoked entirely.

Train protection

The RSR 99 requirement to fit a train protection system throughout the network followed a series of train collisions and derailments over the preceding 30 years which resulted in 269 passenger fatalities and some 9000 passenger injuries (figures taken from the Health and Safety Commission's 1998 consultation document for RSR 99) and also as a result of specific recommendations from accident enquiries, most notably the report by Sir Anthony Hidden.

The objective of installing train protection systems was to reduce the number of signals passed at danger (SPADs) and risks arising from overspeeding trains. TPWS – the most commonly used system currently - operates by a combination of train borne equipment and track mounted sensors that automatically apply the brakes on a train that has passed a sensor at a speed higher than it should thus minimising the consequence, which could be catastrophic. An enhanced version (TPWS+) prevents higher speed trains approaching signals and junctions at greater than the permitted speed, also reducing overall SPAD and overspeeding risks.

Since the introduction of RSR 99 the risk from SPADs has reduced considerably because TPWS has reduced the risks from the most hazardous events. For example between 2001/02 (two years after the regulations were introduced) and 2012/13 the number of highest risk SPADs (as categorised by the Rail Safety and Standards Board (RSSB))²⁰ reduced from 134 to 16²¹.

Revoking the existing train protection regulations is not a viable option as it would remove a fundamental legislative requirement for train protection on the operating railway; a requirement that is not replicated in other legislation and has that significant safety benefits as demonstrated above. Train protection systems that were already installed would be at risk of poor maintenance and falling into states of disrepair rendering them unsafe potentially.

Mark 1 vehicles

The construction of Mark 1 vehicles had structural weaknesses between the underframe and the train body. These weaknesses meant that in a collision vehicles tended to override one another with the

²⁰ SPAD information available at http://www.rssb.co.uk/SPR/Pages/signals_passed_at_danger.aspx

²¹ Reports available at <http://www.rssb.co.uk/SPR/REPORTS/Documents/2011-12%20-%20SPAD%20TPWS%20Report%20-%20Q3-2011-12.pdf> and <http://www.rssb.co.uk/SPR/REPORTS/Documents/2013-14-Q1-SPAD-TPWS-Report-v1.pdf>

underframe of one vehicle penetrating the body of another vehicle causing injuries and fatalities to passengers in that vehicle²².

The Hidden Report into the Clapham rail crash of 1988 said that ‘the structural integrity of passenger containment should be such that its boundaries are not breached in a collision’²³ and recommended British Rail (BR) should carry out research into the structural integrity of its rolling stock when involved in collisions by 1991. The report also said that BR should discuss these conclusions with the Railway Inspectorate (HMRI) with a view to seeking the HMRI’s agreement to any structural modifications necessary to Mark 1 vehicles. At the end of 1991 BR reported that no method had been found for improving crashworthiness which could be considered as being reasonable practicable given the limited residual life expectancy of the Mark 1 stock. Investigations to accidents after the Clapham rail crash involving Mark 1 vehicles highlighted Hidden report’s recommendations on Mark 1 stock crashworthiness and HSE conducted further study into crashworthiness improvements.

In 1996 the House of Commons Transport Select Committee recommended that the Health & Safety Executive (HSE) and the Office of Passenger Rail Franchising should agree a strategy for Mark 1 vehicle withdrawal and this withdrawal should take place by the end of 2003. Between 1997 and 1998 the HSE carried out a consultation of stakeholders on the introduction of regulations prohibiting the use of Mark 1 vehicles and hinged door vehicles after 2003 as well as commissioning WS Atkins to make a fresh study of the options available. WS Atkins identified a number of measures to improve crashworthiness and conducted tests on the options. Its report identified a series of measures which ‘have been shown to offer significant improvements in crashworthiness [to Mark 1 rolling stock] and therefore passenger safety’²⁴. Some of the conclusions on crashworthiness of this report were used to form the prohibitions and exemptions regime for the RSR 99.

Table 1 below shows the number of fatalities for collisions on the main line railway between 1988 and 2012. This period has been used as it is considered long enough to provide a sufficiently representative data sample. It includes data for passenger train collisions, derailments and overruns but no data for collisions involving trains and road vehicles.

Table 1: Table of rail collisions, derailments and overruns. Source ‘Fatal Train Accidents on Britain’s main line railways: End of 2012 analysis by Professor Andrew Evans’²⁵

Date	Location	Nature of accident	Rolling stock	Fatalities
23. 2.07	Grayrigg	Derailment	Post-Mark 1 Multiple Unit	1
10. 5.02	Potters Bar	Derailment	Post-Mark 1 Multiple Unit	7
17.10.00	Hatfield	Derailment	Post-Mark1 loco-hauled	4
5.10.99	Ladbroke Grove	Train collision, fire	Post-Mark 1 Multiple Unit	31
19. 9.97	Southall	Train collision	Post-Mark1 loco-hauled	7
8. 8.96	Watford Junction	Train collision	Post-Mark 1 Multiple Unit	1

²² Information on Mark 1 structural weaknesses is available at <http://www.rail-reg.gov.uk/upload/pdf/rsr99-tps-mk1-326.pdf>

²³ Paragraph 21

²⁴ Available at <http://goo.gl/yGfhme>

²⁵ The full table and report is available at <https://workspace.imperial.ac.uk/cts/Public/Docs/FTAB2012.pdf>

31.1.95	Ais Gill	Derailment, then collision	Post-Mark 1 Multiple Unit	1
15.10.94	Cowden	Train collision	Mark 1 Multiple Unit	5
25. 6.94	Branchton	Derailment	Mark 1 Multiple Unit	2
21. 7.91	Newton	Train collision	Mark 1 Multiple Unit	4
8. 1.91	Cannon Street	Buffer stop collision	Mark 1 Multiple Unit	2
4. 8.90	Stafford	Train collision	Post-Mark 1 Multiple Unit	1
6. 3.89	Bellgrove Junction	Train collision	Mark 1 Multiple Unit	2
4. 3.89	Purley	Train collision	Mark 1 Multiple Unit	5
12.12.88	Clapham Junction	Train collision	Mark 1 Multiple Unit	35
11.11.88	St Helens	Derailment	Post-Mark 1 Multiple Unit	1

'Post-Mark 1' means vehicle design introduced after Mark 1

'Multiple Unit' means self-propelled multiple unit either powered by diesel or electric

'Loco-hauled' means Mark 1 vehicle hauled by a locomotive

Table 1 shows that the absolute number of fatalities involving Mark 1 vehicles was only marginally higher than for those involving post-Mark 1 vehicle designs. However the Hidden Report as well as other independent inquiries into subsequent rail collisions at Cowden and Bellgrove highlighted the design deficiencies in Mark 1 vehicles as explained above. We consider that the recommendations made on vehicle design in these reports are still valid and the potential for a catastrophic accident resulting in a high number of fatalities is higher with Mark 1 vehicles than non-Mark 1 vehicles. The consequences therefore of removing the prohibition could be very serious. Although it is unlikely that these vehicles would be returned to the market in significant numbers because as we have previously explained they are unlikely to be used for franchised passenger services again, we consider that any unmodified use would significantly increase the risk to passenger safety.

Hinged door vehicles

The RSR 99 also – in a separate regulation - prohibited the use of hinged door vehicles that did not have central locking. In order to identify the safety benefits of this prohibition, statistics have been obtained to demonstrate that this requirement has had a direct impact on the number of fatalities and injuries sustained on the mainline prior to, during and after the introduction of the regulations. These are presented in table 2 as an annual average of fatalities and injuries.

Table 2: Annual average fatalities and injuries from hinged door train accidents. Source ORR's National Rail Trends Portal

	Fatalities	Major injuries	Reportable Minor injuries
Pre- regulations (1990 – 1999)	9.6	8.1	18.5
Transitional period (1999- 2005)	2.2	23.2	1
Post regulations (2005-2011)	0	0.71	0.14

Table 2 shows a significant reduction in the number of passenger fatalities and major injuries since the RSR 99 came into effect fully in 2005 following a six year transitional period. For the purpose of this assessment, hospitalised/serious injury categories have been classified as major injuries. This is to conform to the categories presented in DfT's rail injury classification. It is unclear why there was an

increase in major injuries during the transitional period; however the table clearly shows a decline in the number of major injuries between pre-regulations and post-regulations.

Figures from RSSB's annual Safety Performance Report 2012/13²⁶ show that there were 4 passenger fatalities and 299 major injuries to passengers, the majority of which were as a result of slips, trips or falls. There were no fatalities or major injuries in 2012/13 from train accidents. This comparison is to put into context that 9.6 fatalities and 8.1 major injuries in a year from incidents involving hinged door trains alone are actually very high numbers.

The original purpose of this regulation was to remove from service the vast number of slam door trains working the heavily used commuter services in the South East. Whilst much of this general hinged door stock has been removed as a result of RSR 99, it is known that remaining Mark 1 stock has these features. It is considered therefore too high risk to remove the prohibition of hinged doors in relation to Mark 1 stock given its known continuing use and the potential for major injuries and fatalities from unmodified stock. We consider that any residual use of non-mark 1 slam door stock is likely to be restricted to charter operators who it is known through ORR inspection regimes have established procedures for staffing that would manage the risk at these doors.

6.3 Option 2 – Create a new single set of regulations and revoke redundant provisions

In relation to train protection systems

The proposed new regulations would retain the requirement to install a train protection system but would update the provisions to address the fact that – now it is known that they need to prevail for decades to come in some cases - installed systems have to be maintained and managed to help mitigate against both technical and human error.

In practice, we consider that those impacted by these proposed regulations would have such arrangements in place already. This is because, as explained above, train operating companies are required to have a Safety Certificate issued by ORR and to have safety targets and a policy statement in place which includes a commitment to continuous improvement in respect of their safety arrangements. Network Rail as the infrastructure manager has corresponding commitments under its authorisation. As our proposed train protection regulation is framed around identifying and minimising risk, undertaking monitoring and assessment and promoting continuous improvement (and does not mandate specific upgrades of equipment or define ways forward) we consider this approach fully consistent with that which any dutyholder would be expected to take to manage risk and do not consider that there will be additional costs associated with the reframing of the wording of this regulation. We would be interested in views from industry on this point and in particular any evidence available.

We consider that the proposed new regulation would maintain the proven benefits of having train protection systems in place but would provide important clarity on expectations for managing train protection systems for the longer term. In addition, the industry has developed and signed up to a long-term TPWS strategy in recognition of the fact that TPWS will remain in operation for a considerable period beyond its original design life and that action will be needed to ensure continuing reliability and the availability of parts etc. A modernised train protection regulation is an important element of this strategic approach.

In relation to Mark 1 rolling stock

The proposed new regulations would retain the current prohibition relating to the use of unmodified Mark 1 vehicles but would include a provision which enabled an “automatic” exemption for the operation of such vehicles on the main line railway provided they met certain conditions on modifications to improve crashworthiness and to minimise risks from hinged doors – a common feature of such rolling stock. These conditions would require certain specified standards to be met in each of the categories under

²⁶ Figures taken from paragraph 5.8 of the report available at http://www.rssb.co.uk/SPR/REPORTS/Documents/ASPR_2012-13_FullReport.pdf

paragraph 22 and reflect the typical conditions that have been applied to Mark 1 exemptions over the years.

This would remove some administrative costs for operators and infrastructure managers in most instances as the exemption would become automatic and they would no longer have to go through the administrative process of applying for it from ORR. In a small number of cases we consider, based on previous exemptions that applications would still need to be made to ORR for specific exemptions if the vehicle did not meet the automatic exemption criteria and would require an exemption of a more bespoke nature.

We have considered the risk of operators not making the necessary safety modifications because they would no longer need to demonstrate that they have done so as part of the current exemption process, but consider this unlikely. We consider that any potential non-compliance would be picked up early either through the established engagement ORR has with the operators of such stock, through vehicle acceptance processes which have to be satisfied before a vehicle can operate on the mainline or through ORR's audits and inspection of operators' safety management systems.

We also considered whether more vehicles would be modified compared with the 'do nothing' option given the potential administrative savings from, in most cases, no longer having to apply for an exemption. We believe that, because the administrative costs associated with applying for an exemption are minor relative to the cost of modification, this would not impact on the decision as to whether to modify or not (see Table 6 for estimates of the cost of modification).

In relation to means of communication

The proposed new single set of regulations would retain the means of communication in an emergency provision from the MPR 97 but would allow revocation of all the other (now redundant) provisions in those Regulations. As explained above we consider this necessary because there is a fundamental need to preserve the safety requirement to have arrangements in place for passengers to communicate with a responsible person in the event of an emergency and this is not addressed sufficiently or comprehensively enough by other legislation.

Disaggregated costs for the provision and maintenance of equipment and arrangements for providing such means of communication are not available but, as we do not intend to amend the wording of the regulation (other than a very minor "tidying up" change with no effect), the status quo will prevail. There is, therefore, no further reference to this provision in this impact assessment.

7. Assumptions

7.1 Train protection requirements

The requirement to install a train protection system and to maintain and manage that system during its lifecycle to ensure its safe performance will impact:

24. train operating companies who will not be able to operate a train unless a properly maintained train protection system is in use in relation to that train; and
25. infrastructure managers who must not permit the operation of such trains on their network unless such a system is in place for that railway.

However, because dutyholder actions are already subject to the outcomes of individual risk assessment in respect of their operations and there are a range of factors that may influence how to best manage safety performance issues, we consider that it is unlikely that these new requirements will cause any additional costs or benefits. Regardless it would be very difficult to monetise impacts in a meaningful way, given the wide range of scenarios possible.

For example, under current risk management one train operating company operating on a route for which ERTMS rollout is still some way off may opt to upgrade their TPWS to later versions (which have improved features to help mitigate some of the human factors issues where a driver can manually reset a warning alarm and continue on his/her journey without contacting the signaller and can help prevent in-service failures of the TPWS equipment – both low risk but potentially high consequence

events and known interface system weaknesses). However, they may do this as part of a planned renewal or maintenance programme for their fleet anyway if it is more efficient or beneficial to do so.

Another operator, whilst carrying out risk management may be much closer to ERTMS rollout so might decide it would not be efficient to upgrade TPWS equipment (which will all be replaced by the ERTMS kit) so would opt to manage any risks identified in their risk assessment through driver training or driver competence management and through their general maintenance programmes.

Operators who are already running trains fitted with ERTMS may have eliminated some of the risks for example from driver resets (as the ERTMS equipment does not allow it) but may have other risks around how drivers transition between track that is fitted with ERTMS compatible signals and track which is not.

The requirement to install a train protection system and to maintain and manage that system during its lifecycle to ensure its safe performance would have had no impact on the above scenarios. As risk management will already be being undertaken as outlined at paragraph 40, it is likely there would be no cost impact but there will be better clarity for expectations on managing train protection systems. We would welcome any comments from stakeholders on the impacts of this aspect of the proposed regulations.

7.2 Assumptions on the number of exemptions for Mark 1 vehicles that would be needed

There is uncertainty about the total number of vehicles that will be modified in the future. Currently there are around 1,800 unmodified Mark I vehicles. This figure is taken from the Railway Heritage Register Carriage Survey Project and various other heritage operator data sources. However, these are in varying states of repair and running order, or may be used for spare parts. As explained, those that run regularly on a heritage line are excluded from the requirement to have an exemption, provided they remain under 25 mph.

West Coast Railway Company Limited (WCRC) has stated that all Mark I rolling stock that it has acquired over the last 20 years has already been upgraded and that it has withdrawn a number of standard class Mark 1 vehicles due to a change in market demands towards using 1st class Mark 1 vehicles. We have assumed that WCRC's comments suggest that the market for modifications of new vehicles will remain steady at the current pace as they progressively replace vehicles with those now suitable for 1st class carriage but would welcome consultees' views on this.

Since 2002 there have been 138 exemptions granted for the operation of Mark I vehicles on the mainline²⁷. Most of these exemptions were granted between 2003 and 2005 because these were the respective compliance dates that the prohibitions in Regulations 4 and 5 in the RSR 99 came into effect and also again in 2012 because many of previous exemptions granted had an expiry date of March 2013 so for train operators to remain within the law they required a new exemption. ORR has also changed the way it processes exemptions. Since 2012 we issue an exemption to an operator with a schedule listing the vehicles to which the exemption applies. Mark 1 vehicle owners may update this schedule on application to us and for the purposes of this impact assessment such changes as well as granting an exemption to a new owner of Mark 1 vehicles are collectively referred to as 'exemptions'.

The table below shows the pattern of exemptions issued over the last 12 years and highlights the peak in 2003, most of which were renewed and reissued in the new style in 2012. This analysis has been helpful in predicting what the likely demand for new or renewed exemptions might be were the regulations were to remain as currently worded i.e. that an exemption application is needed in each case.

Table 3: Exemptions granted since 2002 showing year and number of exemption certificates issued (includes exemptions to train operator and infrastructure manager) Source: ORR

²⁷ List of exemptions since 2002 available at <http://www.rail-reg.gov.uk/server/show/ConWebDoc.8865>

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Number of exemptions (number of total exemptions that were renewed exemptions in brackets)	12	20	10	14	0	16	4	2	4	0	48 (48)	8 (6)

7.3 Time Period

Given the uncertainty over the demand for these types of vehicles in the long run and the finite demand described above (paragraph 55) we believe that 10 years is an appropriate period for this analysis. Although the life of some of the modifications are longer than 10 years, that will be the same under option 1 and 2 so the choice of time period does not affect our analysis. 10 years is also the default recommended in the Better Regulation Framework Manual.

7.4 Option 1 – Do nothing

Although the exact level of exemptions each year is erratic, we think averaging over the past 5 years may give the best possible estimate for the future 10 years if the legislation did not change. This 5 year period includes short term exemptions, renewals and additions to an existing exemption.

By excluding the renewals from the last 5 years we have attempted to calculate how many new exemptions there might be in each year over the next 10 years. There were 8 new exemptions over the last 5 year period giving an average of 1.6 a year. 54 renewals were granted following the rump of exemptions that were due to expire in 2013 but 16 exemptions were not renewed (because of change of operators/vehicles etc). This means around 23% were not renewed. We have no reason to believe this proportion would increase or decrease in 2023 (the date the renewed exemptions expire) as we consider that the reasons for not renewing are likely to be similar to those in 2013. We are therefore assuming a similar proportion not to be renewed. In the interest of taking a proportionate approach, we will assume this for our high medium and low estimates.

Given the uncertainty involved in our assumptions we have done some sensitivity analysis around this medium estimate. We have no evidence to suggest that the market for these vehicles will increase in the future so we believe doubling the medium estimate provides an appropriate high level estimate. Equally, WCRC as the largest player has given us some reason to believe that they think the market will be relatively stable which would give us an estimate of less than two new exemption requests per year. If this estimate was halved which seems like a reasonable low estimate given we are still seeing demand in this industry, these numbers would fall to just under 1 a year. The information provided by WCRC has been used to create our estimates about future demand for modified vehicles for the purposes of this impact assessment. We consider this a proportionate approach given the relatively small benefits these proposals are expected to realise. However, we are very keen for industry to provide any evidence they have on their expectations for the future. The figure for the year 2023 for all 3 estimates includes an assumption that around 23% of the 54 exemptions due to expire in 2023 will not be renewed as explained in paragraph 60. It is therefore assumed that 41.7 exemptions due to expire in 2023 will be renewed. These three scenarios are presented in Table 4 below.

We would welcome any further evidence during the consultation on the numbers of exemptions the industry thinks will occur.

Table 4: Estimates of the number of exemptions under 'Option 1- the 'do nothing' scenario

Scenario	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
High	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	44.9

Best Estimate	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	43.3
Low	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	42.5

7.5 Option 2

Under option 2 we would expect the future profile of modified vehicles to look the same as in the table above. This is because we have made the assumption that this proposed policy change would not impact on the number of vehicles that owners wanted to modify. This is because the only potential saving for owners is due to the administrative savings of applying for an exemption and this is a very small compared to the cost of modifying a vehicle as expressed in paragraphs 64 onwards. The impact would be on the number of exemptions granted except for those that are bespoke exemptions and still require application to ORR for a specific exemption. Since 2002, only 4 exemptions from a total of 138 exemptions would not have been covered by the general exemption provisions we are proposing be built into the regulation and would require therefore a specific exemption request/grant. It is assumed that the same ratio of “automatic” and “specific” exemptions remains constant over the 10 year period at around three per cent as we have no reason to believe that the type of modification to be done would change as these are all historic vehicles.

8. Costs – industry

8.1 Physical costs

Physical costs of modifications will not change between option 1 and 2. This analysis therefore is to explain our assumption that the savings from the administration costs in option 2 are not large enough to cause a higher demand for modifying these vehicles. This section estimates the costs of modification for standard exemptions. Bespoke exemptions would likely cost more. These numbers can be compared with the administration cost estimates in the next section to see that the admin costs are relatively small.

The industry investment costs associated with the initial upgrade of the Mark I vehicles has been estimated. WCRC have provided an average estimation of these costs based on its previous experience as well as details of service life of components relating to the modifications however these costs will vary case by case. The estimated industry investment costs required to upgrade Mark I vehicles are shown in Table 5. It should be noted that based on examinations of the detail of the exemptions issued by ORR, most of those granted over the last 5 years have been for vehicles which are already modified. Based on previous exemptions, most Mark 1 vehicles require all three elements of investment, so it is assumed that each vehicle will incur all the costs below.

Table 5: Industry investment costs to upgrade Mark I vehicles (2013 prices) Source: WCRC

Cost item	£/carriage	Description
Crash pillars	£ 5,000.00	Total cost of 4 crash pillars for each carriage
Door locks	£ 158.00	Total cost of locks (£70 for 4) and labour (4hrs at £22/hr)
Couplings	£ 467.00	Total cost of coupling £360, Lower shelf brackets £40, Knuckle pins £23 and labour £44 (2hrs at £22/hr)

WCRC also explained that from its experience, the condition of the crash pillars can retain their integrity for up to thirty years although ‘patch’ repairs are occasionally appropriate as an intermediate measure. The buckeye couplers do wear over a very long period of time. The service life of the crash pillars and couplings has therefore been estimated to be 30 years. The door locks are considered to have a much shorter lifespan of only 10 years. It is assumed that door locks will be replaced during major refurbishments which often include a full interior refit which generally takes place after 10-12 years.

The maintenance costs associated with upgrading Mark I vehicles are also variable, depending on the frequency of use of the vehicle and the wear and tear related to each individual route. Patch repairs to crash pillars generally take place during a major refurbishment, which takes place roughly every ten years, as suggested by WCRC. Given that a major refurbishment would still be undertaken, the maintenance costs associated with crash pillars are considered by WCRC to be negligible. The couplings also do not require frequent repair and are therefore also considered by WCRC to be negligible. WCRC's previous experience with door locks, suggested that approximately 15 out of every 400 locks installed are faulty and require replacement. This equates to replacing 3.75% of total locks installed so we have just added 3.75% to the cost of locks in the impact assessment to allow for this.

Option 1 – Do nothing

Under the do nothing option, operators wishing to use a Mark 1 vehicle would still have to pay for these modifications and maintain them over time. Because the largest owners of Mark 1 vehicles have already modified their vehicles, we consider that the number of newly modified vehicles over the 10 year period will be relatively low. We have assumed that for each exemption, 6 vehicles will be modified. This figure is taken from the average number of vehicles per exemption (that were not renewals) over the last 5 years (source ORR). It is assumed that the vehicles will need both crashworthiness improvements and secondary locking as most vehicles require both upgrades.

Table 6: Estimated industry physical costs under option 1- the 'do nothing' scenario

Scenario	Present value cost of modifications (dependent on number of modifications) under option 1										
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Total
High	£108,110	£104,460	£100,930	£97,510	£94,220	£91,030	£87,950	£84,980	£82,100	£79,330	£930,610
Best Estimate	£54,060	£52,230	£50,460	£48,760	£47,110	£45,510	£43,980	£42,490	£41,050	£39,660	£465,310
Low	£27,030	£26,110	£25,230	£24,380	£23,550	£22,760	£21,990	£21,240	£20,530	£19,830	£232,650

Option 2

It is assumed that the profiles of costs are the same for option 2 as under option 1 because train operators will still have to make the modifications before operating on the main line for two reasons. Firstly we have assumed and argued above that the savings to business possible under option 2 are not sufficient enough to change the level of demand for these modifications and therefore the same number of modifications will occur under option 1 and 2. Secondly, we have also assumed and explained in paragraph 44 above that the compliance rates will not vary between option 1 and 2.

8.2 Administrative costs

Option 1

Under the 'do nothing' option, there are industry administration costs associated with applying for an exemption. WCRC said that generally previous applications for exemption from Regulations 4 and 5 of RSR 99 have been based upon the work done during initial risk assessments. For a typical exemption this will include a report on the vehicle condition with supporting photographs. WCRC said that this equates to approximately £420 (2013 prices) per exemption, which is equivalent to 14 management hours at £30 per hour. This is the costs for the exemptions that are not bespoke in nature and therefore under option 2 would become automatic. We would welcome views from other stakeholders on whether these costs reflect your experience for standard exemptions?

We also need to consider the costs associated with a non-typical/more bespoke application. WCRC said that for a recent bespoke application it needed approximately 100 management hours for a non-standard application plus additional specialist advice. We have estimated the costs therefore to be £3,000 for a non-standard application, although the different nature of non-standard applications will mean this will vary.

For each operator exemption granted, Network Rail as infrastructure manager is issued a corresponding one as the regulations prohibit “the operation of” the rolling stock on their infrastructure. However, in practice this is an administrative process - it is for the operator to make the case and demonstrate that the necessary modifications have been made – so costs for Network Rail are estimated to be very small. Network Rail has its own processes and procedures for assuring itself that vehicles running on the mainline meet its standards and these would be applied regardless of whether option 1 or 2 were pursued.

Table 7 uses the modification assumptions from Table 4 and the costs provided in paragraph 70 and 71 to estimate the administration costs of applying for exemptions from ORR under the current legislation. As explained in paragraph 63, we are assuming around 3% of the exemptions in table 7 are considered bespoke and therefore subject to the costs in paragraph 71 with the rest being general exemptions and therefore subject to the costs in paragraph 70.

Table 7: Estimated industry administration costs under option 1 (includes “automatic” and “bespoke” Mark 1 exemptions)

Scenario	Present value of administrative costs for total exemptions (‘typical’ and ‘bespoke’ exemptions) under option 1										
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Total
High	£1,580	£1,530	£1,480	£1,430	£1,380	£1,330	£1,290	£1,240	£1,200	£16,290	£28,750
Best Estimate	£790	£770	£740	£710	£690	£670	£640	£620	£600	£15,700	£21,940
Low	£400	£380	£370	£360	£350	£330	£320	£310	£300	£15,410	£18,530

Option 2

Option 2 would have savings (benefits) compared with option 1. This is because the majority of cases where the modifications are necessary will fall under the automatic exemption provisions in the regulations and the industry would not incur any administrative costs associated with being able to legally operate modified Mark 1 vehicles. Only the bespoke cases, which we have estimated account for around 3% of all exemptions would still need to go through the administrative process of applying for an exemption.

Table 8: Estimated industry administration costs under option 2 (“bespoke” Mark 1 exemptions only)

Scenario	Present value of administrative costs for total exemptions under option 2										
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Total
High	£280	£270	£260	£250	£240	£230	£230	£220	£210	£2,860	£5,050
Best Estimate	£140	£130	£130	£130	£120	£120	£110	£110	£110	£2,760	£3,860
Low	£70	£70	£70	£60	£60	£60	£60	£60	£50	£2,710	£3,260

Table 8 shows the remaining administrative costs that industry would still face after removing the admin costs for standard exemptions. The benefits of option 2 compared with the ‘do nothing’ are the savings in admin costs for standard exemptions which are estimated in table 9.

Table 9: Benefits of option 2 to industry

Scenario	Benefits to industry from reduced administrative costs (option 2 compared to the ‘do nothing’) (Present Value)										
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Total
High	£1,310	£1,260	£1,220	£1,180	£1,140	£1,100	£1,060	£1,030	£990	£13,420	£23,700
Best	£650	£630	£610	£590	£570	£550	£530	£510	£500	£12,940	£18,080

estimate											
Low	£330	£320	£300	£290	£280	£280	£270	£260	£250	£12,710	£15,270

9. Costs to ORR of granting exemptions

9.1 Option 1

Under the current arrangements there are also costs associated with ORR processing each exemption and these are set out below assuming a 36 hour working week, and 47 working weeks per year and includes pension and national insurance contributions.

Table 10: ORR salary costs- source ORR (2013 prices)

	Band F	Band D	Band C (London)	Band C (regional)	Band A
Salary range	£31,806	£47,193	£60,989	£57,227	£76,907
	£26,171	£38,788	£50,101	£46,339	£63,154
Average	£28,989	£42,991	£55,545	£51,783	£70,031
Estimated total average (incl. 30% pension + NI costs)	£37,685	£55,888	£72,209	£67,318	£91,040
Salary per hour	£22.27	£33.03	£42.68	£39.79	£53.81

For a typical exemption application, we anticipate that the Bands F and D would carry out the administrative process of the exemption; the Band C would review application details, consider the risk assessment, consult colleagues for views on applicant/application and respond to the policy team with views on the application. The Band A would approve the exemption. For a non-standard application the Band C would also carry out a site visit which would incur travel expenses, which have been estimated to be £39.54 per site visit, which is based on the total travel and subsistence expenditure for inspectors in 2012-13 and is an average daily rate assuming 20 working days per month.

We anticipate that a typical exemption would take 28 hours of a Band F's time, 3 hours of a Band D's time, 14 hours of a London Band C's time and 2 hours of a Band A's time. For a non-standard application where an inspection is required, we expect that the application would take 35 hours of a regional Band C's time instead.

There may also be small additional costs such as postage and stationery, however, these costs will be far outweighed by labour costs and are assumed to be absorbed in everyday business.

Summing all the values above, the cost for a standard exemption therefore is estimated to be about £1,428. For a bespoke exemption it is estimated to be around £2,262.

9.2 Option 2

Under option 2 there will be a reduction in ORR's administrative cost as we assume that we will only receive a very low number of non-standard applications per year (assessed over the 10 year period considered in this impact assessment). As referred to in paragraph 63 we have only issued 4 exemptions since 2002 which contain non-standard elements not covered by the automatic exemption provision proposed in the regulations. We have assumed that the proportion of bespoke exemptions to total exemptions will stay constant over the next 10 years.

Table 11: ORR costs from processing exemptions. Source ORR

Scenario	Option 1 Total cost of applications over the 10 years ('automatic' and 'bespoke' exemptions)	Option 2 Total costs of applications over the 10 years ('bespoke' exemptions only)
High	£84,380	£3,810
Best estimate	£64,380	£2,910
Low	£54,380	£2,460

Table 11 above shows that under Option 1 as we need to consider the cost of granting all exemptions, costs are higher than under option 2. Under option 2 ORR only incurs the costs of granting bespoke exemptions.

10. Costs – transition costs

The only transitional costs or benefits of these proposals are those incurred with respect to becoming familiar with any changes to the legislation. We are working very closely with industry in this process so new regulations as proposed under option 2 would not come as a surprise. We also believe these changes would be beneficial to industry. Although option 2 would require new legislation which would require familiarisation, redundant legislation would be removed and other parts would be modernised which should make the legislation clearer and therefore less burdensome to understand. With this in mind, an attempt to try to estimate these costs would be difficult and not proportionate given this measure would be beneficial to business and the impacts very small.

We would welcome views from stakeholders on any transition impacts they believe could occur.

11. Costs and benefits – evaluation of the options

The table below sets out the PV of the costs and benefits of option 2 compared with option 1, the do nothing.

Table 12: Overall benefits under option 2 compared with option 1 (Present Value)

	Option 2		
	Low	Medium	High
Benefits to industry from reduced administrative costs (Present Value)	£15,270	£18,080	£23,700
Benefits to ORR from reduced costs of processing exemptions (Present Value)	£51,920	£61,470	£80,560

Costs to the ORR of undertaking Statutory Reviews (Present Value)	£33,110	£33,110	£33,110
Total Benefits (Present Value)	£34,080	£46,440	£71,150

12. Summary of preferred option

Option 2 is the preferred option on the basis that it:

26. removes lapsed and spent requirements from rail safety regulations;
27. provides the means to create a revised set of new regulations that set out legislative requirements for measures where mandate is the best means of achieving the policy aim of ensuring safe railway operations; and
28. reduces costs incurred by duty holders for complying with the proposed regulations.

13. Direct costs and benefits to business calculations (following OITO methodology)

Our preferred option is 'deregulatory' according to the Better Regulation Framework Manual. This is because it is a recast of previous legislation where recast is defined as,

'The consolidation or reformulation of existing legislation or guidance to improve clarity and reduce the administrative cost of compliance, where there is no change the scope of the regulation.'

When calculating the EANCB however the monetised value of these administrative savings are rounded to £0.00 and so this is classified as a Zero Net Cost measure.

14. Costs to the ORR of undertaking Statutory Reviews

The Government's policy is that there should be a statutory obligation on the Secretary of State to review, no later than five years after coming into force, all policies that have not qualified for the fast track and are not time limited. The draft Regulations contain provision requiring that, within five years of the Regulations coming into force (and every subsequent five years), the Secretary of State must review their provisions and publish the conclusions.

The Post Implementation Review Plan (at **Annex 1**) sets out more information about the proposed review which the Department expects will take 1/3 person-years to complete. The estimated costs of each review, including the publication of the results, are therefore around £21,000²⁸ (2013 prices).

The benefits of a Ministerial duty to review the Regulations are that it will assist to:

- prevent over-regulation;
- ensure the Order is working as intended;
- determine whether the assessment of impacts was accurate; and
- assess where burdens on business and others might be further reduced.

²⁸ This assumes: the average salary of a grade D plus overheads at a rate of 30 per cent from table 10 of £55,888 in 2013 prices; the full time equivalent required is a third of a person-year; and an additional £2,000 for publication of the Command Paper.

15. Specific impact tests

The Department for Transport has considered the potential impact of the Regulations on the following areas in line with relevant guidance. No specific disproportionate impacts have been identified given the nature of the proposed measure.

Equality

ORR envisages no impact on an individual with any of the particular protected characteristics because the proposals will have neither a positive or negative bearing on these characteristics. The protected characteristics are:

29. age;
30. disability;
31. gender reassignment;
32. marriage and civil partnership;
33. pregnancy and maternity;
34. race;
35. religion and belief;
36. sex; or
37. sexual orientation.

Competition

ORR envisages that the proposed Regulations will have no impact on competition matters.

Small and Micro Business Assessment

These regulations apply to any size firm whether the owner of a single Mark 1 vehicle, micro or large undertaking to ensure protection of the public from risks of danger and injury.

However the policy results in streamlining of requirements for securing an exemption to operate Mark I carriages on the mainline and will result in administrative savings for industry. This policy therefore benefits small firms as well as larger firms. Due to the benefits of this policy in reducing administration costs and the fact that there are no disproportionate burdens on these firms we do not believe that any exemptions or mitigating options are necessary for small firms.

Greenhouse gas emissions

The measures being proposed are administrative and are not expected to have a material impact on greenhouse gas emissions.

Wider environmental impact

These regulations are not expected to have a wider environmental impact.

Health & well being

Major incidents on the railway 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 Regulations is likely to provide assurances that safety risks are being managed appropriately.

Human rights

These regulations are not expected to have an impact on human rights.

Justice impact

These regulations are not expected to have a justice impact.

Rural proofing

The railways affect both urban and rural areas and 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

These Regulations do not have a material effect on sustainable development.

16. Annex 1: Post Implementation Review (“PIR”) Plan

Basis of the review:

1. The basis of the review of the Regulations is a statutory obligation on the Secretary of State to undertake a review of their provisions within five years of coming into force (and within every subsequent five years).

Review objective:

The review will be a check that the Regulations as drafted remain fit for purpose, proportionate and suitable to be retained for the future.

Review approach and rationale:

The review will establish how effective the current provisions have been through an external stakeholder consultation with the industry and other interested parties. We intend to keep the scale of the review proportionate to the scope of proposed changes.

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

Baseline:

The baseline position will be the ‘do nothing’ as described in this IA. A review will take place in 2019.

Monitoring information arrangements:

ORR has designated policy staff who will monitor the effectiveness of the Regulations through feedback from inspectors and duty holders. The ORR legal team gives advice on the interpretation of the Regulations to inspectors and notes any problematic areas to the policy team. An issues log has been created to capture areas of concern and support the statutory review.

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