

INTERIM ADVICE NOTE 189/16 Policy on Managing Fatigue in the Workplace

Summary

Policy on managing fatigue in the service provider workplace, in order to reduce risks to employees and improve the health, safety & wellbeing of employees.

This IAN provides policy to service providers on the management of risk associated with employee fatigue, especially with regard to split shift working, night time working and very long working times.

Instructions for Use

This IAN is supplementary to (but does not replace any elements of) existing legislation and HSE guidance documents relating to managing fatigue in the workplace.

This IAN is to be implemented by all service providers no later than Friday 30 December 2016, noting that separate guidance on managing fatigue in the workplace for Vehicle Recovery Operators is in preparation.

This IAN supersedes the 'Raising the Bar 22' document 'Fatigue' which was issued in March 2014 and is now withdrawn.

This IAN should be read in conjunction with IAN 190/16 Guidance on Processes for Managing Fatigue in the Workplace.

Executive Summary

ES1 Introduction

Highways England introduced the Health and Safety 5 Year Plan in October 2015 with the overarching aim that “no one should be harmed when travelling or working on the strategic road network”. This means there is a continuing need to significantly reduce health & safety risks to employees, eliminating employee fatalities and serious injuries and significantly reducing employee personal injury accidents and “near miss” incidents.

Currently many of Highways England activities require shift work, or split shift work, or night time working, which if not correctly managed, have the potential to result in employee fatigue. Poorly designed working arrangements, shift work and very long working hours that do not balance the demands of work with time for rest and recovery can result in fatigue, accidents and ill health.

This IAN provides policy for all service providers on the management of risk associated with employee fatigue, using a Fatigue Risk Management System, which includes the monitoring of “door to door times”, “working times” and “driving times” and having suitable and sufficient mitigation measures in place to ensure employee fatigue risks are minimised.

This IAN is to be implemented by all service providers, noting that separate guidance on managing fatigue in the workplace for Vehicle Recovery Operators is in preparation.

This IAN is supplementary to (but does not replace any elements of) existing legislation and HSE guidance documents relating to managing fatigue in the workplace.

ES2 Recommendations

The policy included within this IAN is to be implemented by Fri 30.12.16:

1. Prepare and implement a **Fatigue Risk Management System**, as appropriate for the risks.

Use the **HSE Fatigue Tool** to plan for and monitor employee fatigue. If the HSE Fatigue Tool shows that the thresholds for Fatigue Index (FI) or Risk Index (RI) have been exceeded, then suitable and sufficient “control measures” should be implemented.

Review and update the Fatigue Risk Management System annually by 31 March.

2. Use timesheets to record “**door to door times**”, as well as “**working times**”.

“**Door to door time**” is a period of time identified as the combined total of commuting time, travel time and working time.

“**Door to door time**” records should be kept for at least 2 years, which is consistent with legal requirements to keep “working time” records.

3. **Daily time limits** for all service provider employees:

- The door to door time should not be planned to exceed a maximum of 14 hours.
- The working time should not be planned to exceed 12 hours in any 24 hour period, with the exception of “night workers” as defined by the Working Time Regulations.
- For night workers, the working time in any reference period (normally 17 weeks) shall not exceed an average of 8 hours for each 24 hours, as defined by the Working Time Regulations.
- **Night workers whose work involves special hazards or heavy physical or mental strain** shall not work for more than 8 hours in any 24 hour period, during which the night worker performs night work, unless a collective agreement or workforce agreement is in place, in accordance with the Working Time Regulations.

4. **Weekly time limits** for all service provider employees:

- The working time in any reference period (normally 17 weeks) shall not exceed an average of 48 hours for each 7 days, as defined by the Working Time Regulations. However, a worker can agree (in writing) to “opt out” of this requirement.
- For workers who opt out, the weekly working time should not be planned to exceed a maximum of 60 hours in any 7 day period, unless permitted by the risk assessment and outputs from use of the HSE fatigue tool.
- The weekly working time in any 14 day period should not exceed an average of 72 hours for each 7 days.

Contents

1. Introduction	5
1.1 Background	5
1.2 Financial Reasons for Managing Fatigue Risk	5
1.3 Scope	4
1.4 Current Legal Requirements	6
2. Fatigue Risk Management System	8
2.1 Fatigue Process – Introduction	8
2.2 Fatigue Process - Detailed	9
2.3 Fatigue Process – Standard Rules	9
3. Contacts.....	12
4. Normative References	12
5. Informative References	12

1. Introduction

1.1 Background

Highways England introduced the Health and Safety 5 Year Plan in October 2015 with the overarching aim that 'no one should be harmed when travelling or working on the strategic road network. This means there is a continuing need to significantly reduce health & safety risks to employees, eliminating employee fatalities and serious injuries and significantly reducing employee personal injury accidents and "near miss" incidents.

The Health and Safety 5 Year Plan set out 122 separate Actions which are targeted at reducing safety risks.

Action 61 is one of many within the Health & Safety 5 Year Plan with the aim of reducing risks to Highways England service providers, with particular focus on employee fatigue caused by night time working, very long working times or split shift working.

Many of Highways England activities require shift work, or split shift work, or night time working which, if not correctly managed, have the potential to result in employee fatigue. Poorly designed working arrangements, shift work, very long working hours and excessively long "on call" periods, that do not balance the demands of work with time for rest and recovery can result in fatigue, accidents and ill health.

Fatigue is generally considered to be a decline in mental and/or physical performance that results from prolonged exertion, sleep loss and/or disruption of the internal body clock. It is also related to workload; employees are more easily fatigued if their work is machine-paced (e.g. assembly line work), complex or monotonous.

Fatigue results in slower reactions, reduced ability to process information, memory lapses, absent-mindedness, decreased awareness, lack of attention, underestimation of risk and reduced coordination. Refer to the Health and Safety Executive (HSE) website for further details.

1.2 Financial Reasons for Managing Fatigue Risk

Fatigue increases the risk of errors, accidents, incidents and ill-health and is often a contributory factor to major accidents or catastrophic incidents. As a result, fatigue increases an **employer's costs**. It has been estimated that sleep-related accidents within the construction industry could cost UK companies some £7.8-16.3 million per year.¹

Fatigue makes expensive mistakes more likely, reduces productivity and morale, and increases absenteeism. Thus, there are financial, as well as legal and moral reasons for effectively managing fatigue risk.

¹ Based on 6.8% of all UK work place injuries occurring in the construction industry (<http://www.hse.gov.uk/statistics/pdf/cost-to-britain.pdf>) and HSE's figures relating to work place injuries and accidents caused by fatigue (<http://www.hse.gov.uk/humanfactors/topics/fatigue.htm>).

Furthermore, when employees are not sufficiently rested they can demonstrate:

- A reduction in mental alertness particularly between the hours of 03.00 and 06.00.
- Performance impairment and a reduction in alertness with as little as a 2 hour sleep loss.²

Employees suffering from fatigue contribute to on the job errors - the cost of which affects an organisation's performance, safety and profitability. Refer to the HSE's guidance on "Managing Shiftwork" and the ORR's guidance for "Managing Rail Staff Fatigue" for more details.

1.3 Scope

This IAN 189/16 provides policy to service providers on managing fatigue in the workplace and is to be implemented by all service providers, by Fri 30.12.16, noting that separate guidance on managing fatigue in the workplace for Vehicle Recovery Operators is in preparation.

This IAN 189/16 applies to all service providers working directly or indirectly with regard to the Highways England network and property in England and the Historic Railways Estate in England, Scotland and Wales. Application of this document to service providers working with regard to any other road is subject to approval for its use being given by the appropriate Highway Authority.

This IAN 189/16 outlines how the management of risk associated with employee fatigue, especially with regard to night time working, very long working times or split shift working, may be assessed using a Fatigue Risk Management System (FRMS). The monitoring of "door to door times", "working times" and "driving times" and having suitable and sufficient mitigation measures in place to ensure employee fatigue risks are minimised.

This IAN 189/16 is supplementary to (but does not replace any elements of) existing legislation and HSE guidance documents relating to managing fatigue in the workplace.

This IAN 189/16 supersedes the Highways Agency 'Raising the Bar 22' guidance 'Fatigue' which was issued in March 2014.

IAN 190/16 provides guidance to service providers on the processes needed for managing fatigue in the workplace, as part of a FRMS.

1.4 Current Legal Requirements

The Working Time Regulations 1998 (as amended) lay down the minimum legal requirements on how to organise working time.

Under Management of Health and Safety at Work Regulations 1999, employers are required to make an assessment of the risks to employees from work activities and make a commitment to introduce measures that are 'reasonably practicable' to remove or control these risks. This includes (but is not limited to) the number of hours worked and how these hours are scheduled.

The Working Time Regulations detail limits on working hours and specify break times.

² HSE Validation and development of a method for assessing the risks arising from mental fatigue, 1999. (http://www.hse.gov.uk/research/crr_pdf/1999/crr99254.pdf)

Summary of the Working Time Regulations

- The working time in any reference period (normally 17 weeks) shall not exceed an average of 48 hours for each 7 days. However, a worker can agree (in writing) to “opt out” of this requirement.
- For workers who opt out, the weekly working time in any 14 day period should not exceed an average of 72 hours for each 7 days.
- For night workers, i.e. those regularly working at least 3 hours between 23:00 and 06:00, the working time in any reference period (normally 17 weeks) shall not exceed an average of 8 hours for each 24 hours. Refer to the definitions in IAN 190/16, Glossary of Terms.
- Night workers whose work involves special hazards or heavy physical or mental strain shall not work for more than 8 hours in any 24 hour period, during which the night worker performs night work, unless a collective agreement or workforce agreement is in place, in accordance with the Working Time Regulations.
- An ‘adult worker’ (18+ years old) is entitled to a rest period of not less than 11 consecutive hours in each 24 hour period during which they work for their employer (commuting is not counted as work and therefore is considered as rest time with respect to Working Time, but should be taken account of during any risk assessment looking at fatigue).
- Where an ‘adult worker’s’ daily working time is more than 6 hours, they are entitled to a rest break.
- The rest break provided is an uninterrupted period of not less than 20 minutes, and the employee is entitled to spend it away from his workstation if they have one.
- Employees have the right to an uninterrupted 24 hours without any work during each week or to an uninterrupted 48 hours during each fortnight.
- Employees working nights are entitled to receive regular health assessments, as defined in the Working Time Regulations.
- The duration of shifts is to be no more than 12 hours including rest breaks and overtime.
- Employees are to have 5.6 weeks paid leave a year.

The aforementioned rules apply to ‘adult workers’, however there are different rules for employees under the age of 18:

- The weekly limit is 40 hours per week and 8 hours per day;
- They are entitled to longer rest breaks;
- They cannot work at night; and
- Importantly, employees under 18 cannot opt out of the maximum weekly limit, nor can their hours be averaged over a number of weeks.

2. Fatigue Risk Management System

2.1 Fatigue Process – Introduction

This IAN expands on the processes previously recommended in the superseded Highways Agency “Raising the Bar 22” guidance, published in March 2014.

It is recommended that all service providers:

- Prepare and implement a Fatigue Risk Management System (FRMS) by Friday 30th December 2016, as described in this IAN.
- Review and update the FRMS annually by 31 March.

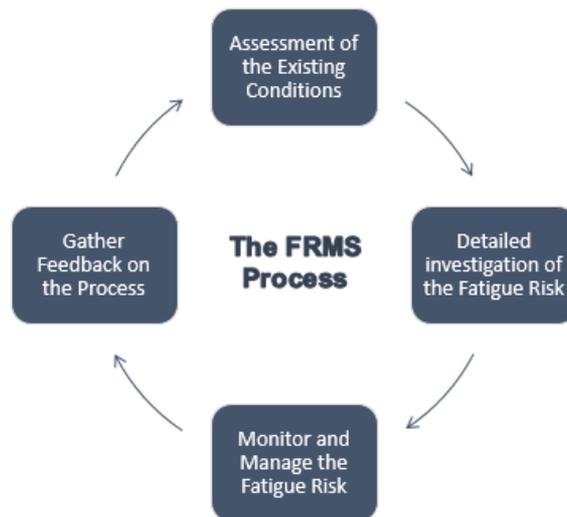


Figure 1: FRMS Process.

The FRMS process was developed following research into the methods used in the Rail, Nuclear and Oil and Gas industries with regards to management of employee fatigue in the workplace. It provides recommendations on how to reduce, as far as reasonably practicable, the risk of fatigue contributing to, or causing, an Incident / Accident. Refer to Figure 1.

The FRMS identifies and draws together all the preventive and protective measures which help an organisation control risks from fatigue. It uses several layers of defence to prevent fatigue and fatigue-induced errors from developing into incidents or accidents.

The FRMS process contains four successive, repeating, steps which lead to continuous improvement and reductions in fatigue related risk.

The starting point of the process is to **assess the risks** associated with fatigue on the health, safety and wellbeing of employees.

This can be carried out by looking at the impact of current work patterns and operations on personnel, which should include assessment of the number of fatigue related errors and incidents.

It is recommended that timesheets are used to record “**door to door times**”, as well as “working times”. “Door to door time” is a period of time identified as the combined total of commuting time and working time.

It is recommended that “Door to door time” records should be kept for at least 2 years, which is consistent with legal requirements to keep “working time” records.

Following an understanding of the risks that are present, they may be **investigated in detail** to find the root causes of fatigue. This analysis should consider the likely occurrence of fatigue, as well as the possible consequences. **It is recommended that all service providers use the HSE Fatigue and Risk Index Calculator Tool (the “HSE Fatigue Tool”) for this purpose.**

The FRMS must include the legal requirements as outlined in the Working Time Regulations and summarised in Section 1.4 of this IAN, as well as the recommended daily and weekly time limits for all service provider employees shown in Figure 3.

Based on the findings from the investigation, service provider managers can work with their personnel to **monitor and manage** the risk of fatigue. This can be carried out by encouraging an open dialogue with staff regarding fatigue risks, implementing appropriate control measures and by completing the detailed risk assessments recommended in this IAN.

One of the most important areas is the **gathering of feedback**, as this will lead to the continual improvement of the FRMS process. Evidence can be gathered from incident records and investigations, personal experiences from staff at all levels within the service provider organisation and from monitoring feedback from service provider employees.

Highways England will commence monitoring of compliance with this IAN in January 2017.

2.2 Fatigue Process - Detailed

It is recommended that a detailed FRMS process is developed, implemented and monitored on a regular basis and should be classed as an iterative process to ensure the appropriate action is taken to safeguard employee’s health, safety and wellbeing.

The recommended detailed process for a FRMS is outlined in Figure 2.

Records of the FRMS development, implementation, and monitoring procedure should be kept for at least two years and should be made available to the overseeing organisation for monitoring or audit on request.

In addition to the FRMS process, fatigue should be considered in accident and incident reporting and dissemination of lessons learned.

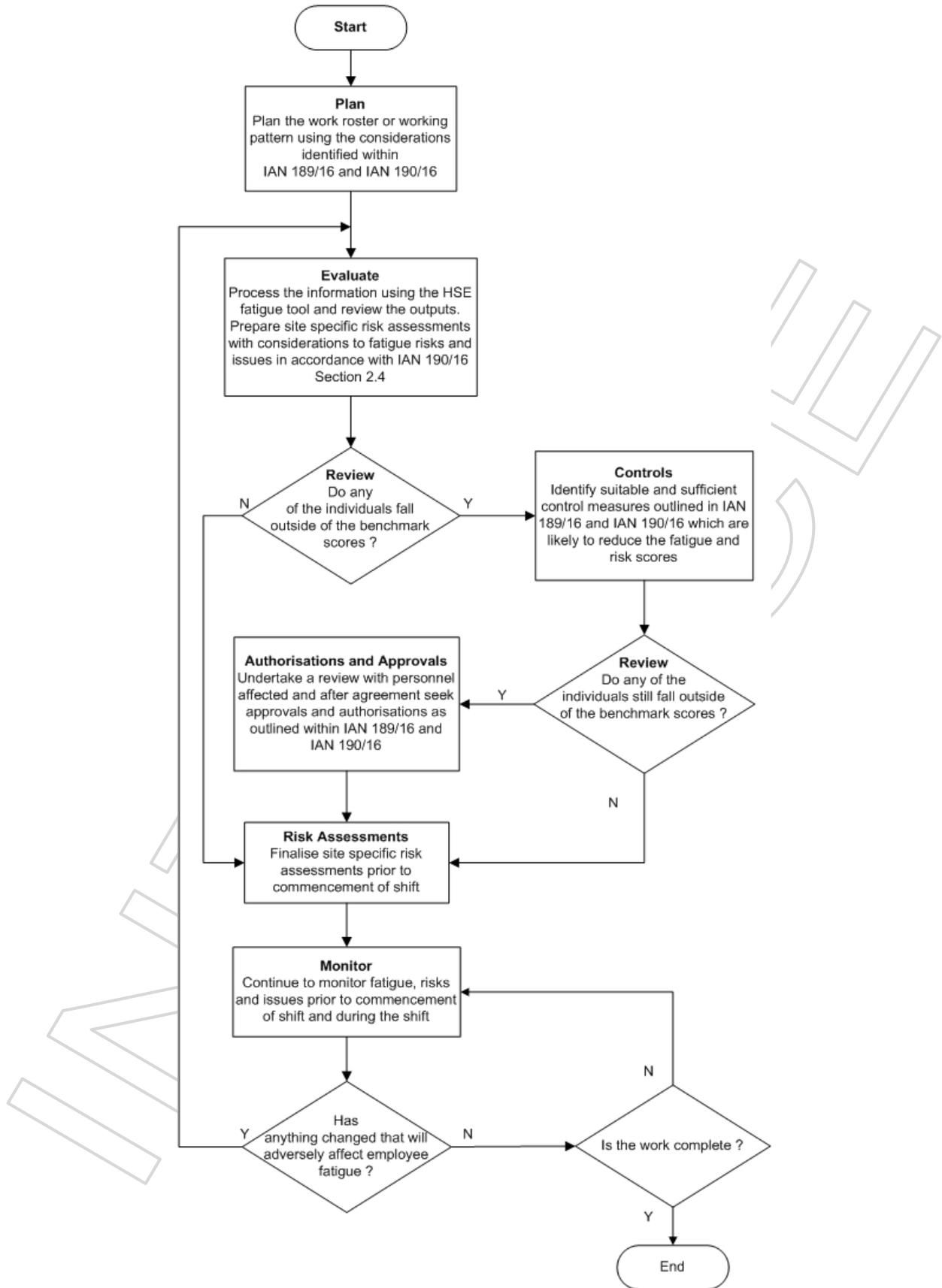


Figure 2: FRMS Process – Detailed Steps.

2.3 Fatigue Process – Standard Rules

In addition to the legal requirements in the Working Time Regulations, supplementary Standard Rules (recommended limits) have been developed, in order to mitigate risks causing employee fatigue. These Standard Rules have been developed considering best practice from other business areas including the Rail, Nuclear and Oil & Gas industries and are shown in Figure 3.

Guidance in the use of the HSE Fatigue Tool is available on the HSE website and in IAN 190/16. The benchmark scores are also summarised in Figure 3 for reference.

STANDARD RULES	HSE FATIGUE TOOL BENCHMARK SCORES	EXAMPLES OF CONTROL MEASURES (not an exhaustive list)
The working time should not be planned to exceed 12 hours in any 24 hour period, with the exception of "night workers"	Maximum Fatigue Index for Daytime working only of "35"	Lodging in overnight accommodation
Minimum 12 hours rest period between shifts, this includes commuting time		Reduction in shift lengths
The door to door time should not be planned to exceed a maximum of 14 hours per shift	Maximum Fatigue Index Score or Night Time Working (or combination of day & night working) of "45"	Change shift start / finish times
The weekly working time should not be planned to exceed a maximum of 60 hours in any 7 day period, unless permitted by the risk assessment and outputs from use of the HSE fatigue tool		Increase frequency / lengths of breaks
The weekly working time in any 14 day period should not exceed an average of 72 hours for each 7 days	Maximum Risk Index Score of "1.6" at all times	Reducing commuter time
No more than 13 shifts to be worked in any 14 day period		Rotation of alternative staff

Figure 3: FRMS Standard Rules and HSE Fatigue Tool Benchmark Scores.

3. Contacts

Further information may be obtained from:

Mark N. Pooley,
Health & Safety Division,
Professional & Technical Solutions,
Highways England,
Bridge House,
1 Walnut Tree Close,
Guildford,
Surrey, GUI 4LZ.

Tel: 0300 470 1227.

Email: Standards_Enquiries@highwaysengland.co.uk

4. Normative References

Legislation

The Working Time Regulations 1998 (as amended).
<http://www.legislation.gov.uk/uksi/1998/1833/contents/made>

The Working Time (Amendment) Regulations 2003.
<http://www.legislation.gov.uk/uksi/2003/1684/contents/made>

The Management of Health & Safety at Work Regulations 1999.
http://www.legislation.gov.uk/uksi/1999/3242/pdfs/uksi_19993242_en.pdf

5. Informative References

HA Raising the bar guidance 22, published March 2014:
<https://www.gov.uk/government/publications/health-and-safety-for-major-road-schemes-fatigue>

IAN 190/16 Guidance on Processes for Managing Fatigue in the Workplace.

HSE guidance “Managing Shiftwork”, published 2006:
<http://www.hse.gov.uk/pubns/priced/hsg256.pdf>

HSE update on research.
<http://www.hse.gov.uk/research/rrhtm/rr446.htm>

HSE the development of a fatigue and risk index for shift workers, 2006.
<http://www.hse.gov.uk/research/rrpdf/rr446.pdf>

HSE fatigue and risk index calculator guidance.
<http://www.hse.gov.uk/research/rrpdf/rr446g.pdf>

HSE fatigue and risk index calculator tool:
www.hse.gov.uk/research/rrpdf/rr446cal.xls

HSE Validation and development of a method for assessing the risks arising from mental fatigue, 1999

http://www.hse.gov.uk/research/crr_pdf/1999/crr99254.pdf

Evaluation of the UK Rail Sector Initial Fatigue & Risk Index Thresholds: Identifying Good Practice

http://orr.gov.uk/_data/assets/pdf_file/0004/4378/sres-EvalRailFRIT.pdf

ORR Managing rail staff fatigue, 2012.

http://orr.gov.uk/_data/assets/pdf_file/0005/2867/managing_rail_fatigue.pdf

Management of Fatigue: Control of working hours for staff undertaking safety critical work

<http://standards.globalspec.com/std/1466231/nr-l2-erg-003-issue-5>

