



OFFICE OF RAIL REGULATION

ORR overview of work related ill health in the GB rail industry in 2010

June 2011

Contents

| | |
|---|----|
| Executive summary..... | 1 |
| A. Purpose | 2 |
| B. Scale and costs of occupational ill health across all industry..... | 2 |
| B1 Scale..... | 2 |
| B2 Costs | 3 |
| C. Scale and costs of occupational ill health in the rail industry..... | 4 |
| C1 Scale..... | 4 |
| C2 Causes of work related ill health in rail | 7 |
| Manual handling | 8 |
| Stress | 9 |
| C3 Costs to rail industry | 10 |
| D Where is the industry now in managing occupational health? | 11 |
| D1 Industry leadership on health..... | 11 |
| D2 Industry awareness of health management issues..... | 14 |
| D3 Culture of excellence in health management within rail companies..... | 14 |
| Good practice | 15 |
| Areas of weakness | 16 |
| Specific health risks | 16 |
| Health management issues | 18 |
| E. Assessing the impact of ORR’s occupational health programme | 19 |
| E1 Results from 2010 baseline survey of key dutyholders..... | 20 |
| Incidence of work related ill health..... | 20 |
| Costs of work related ill health | 22 |
| Public visibility on work related ill health | 23 |
| Industry awareness of occupational health | 23 |
| F. Developing trajectories from baseline indicators..... | 24 |
| F1. Towards achieving excellence – external influences | 25 |
| G. The way forward..... | 26 |
| Appendix 1 | 27 |
| RIDDOR data on reportable incidents with potential for exposure to harmful substances for January 2005 to September 2010..... | 27 |
| Appendix 2..... | 29 |
| Railway specific health risks identified in ORR Health Programme..... | 29 |
| Appendix 3..... | 31 |

| | |
|---|----|
| SMIS data for mainline railway 1 April 2005 to 31 March 2010 | 31 |
| 3.1 Manual handling injuries | 31 |
| 3.2 SMIS shock/trauma incidents | 32 |
| Appendix 4 | 34 |
| LUL LUSEA data for 1 April 2005 to 31 March 2010 | 34 |
| Appendix 5 | 35 |
| Copy of baseline survey request sent to 93 rail dutyholders by ORR December 2010..... | 35 |
| Appendix 6 | 38 |
| Summary of key baseline indicators on occupational health for 2009/10 based on dutyholder survey returns | 38 |

Executive summary

Work related ill health is a significant problem across all GB industry. However, HSE data indicate that railway workers report a higher incidence of work related ill health when compared with construction workers; other transport drivers and mobile machine operatives; and with the transport, storage and communications sector as a whole. Reliable, accurate data on occupational ill health within the rail industry are difficult to obtain. Rail industry datasets, including RSSB's SMIS and London Underground Limited's LUSEA, are useful but do not capture all sectors of the industry or types of ill health. RIDDOR data is unhelpful when looking at manual handling and stress, generally perceived as the key work related ill health issues for the industry. There is some evidence to suggest under reporting of prescribed occupational diseases under RIDDOR. Although RSSB's recent review of RIDDOR reporting by Network Rail and its contractors did not address ill health, it seems reasonable to conclude that weaknesses in RIDDOR reporting procedures for lost time injuries, and the underlying cultural issues, may also have impacted on ill health reporting.

Many parts of the rail industry appear largely unsighted as to the true costs of occupational ill health for their business, with only limited sharing of good practice and associated cost benefits within the industry. There is also little visible leadership on health at a senior level, and public reporting on worker health is less well developed than for worker and passenger safety. In general the rail sector remains rather inward looking on health, and appears slow to adopt established good practice and well tested health management tools, although there are emerging signs of progress in this area.

Despite seeing some pockets of excellence, we report evidence of basic failures in compliance with key legal requirements on health risks. In some cases we found arrangements for control of specific health risks well below those we would expect to find in similar sized companies outside the rail industry, and formal enforcement resulted.

Many rail companies still appear to adopt a largely reactive approach to ill health, with an emphasis on pre-employment screening, palliative care and managing for attendance, rather than prevention of work related ill health. In many parts of the industry, occupational health is still seen largely as the remit of the human resources or safety department and of specialist occupational

health service providers, rather than being embedded as a key line management role in the same way as worker safety.

We report against a few baseline indicators on health, against which we aim to assess progress with the key themes in our health programme – promoting excellence in management of health, better leadership, and improved awareness.

A. Purpose

1. The aim of this paper is to provide a qualitative overview of the likely scale of work related ill health in the GB rail industry and the current arrangements for its management. ORR's strategy for moving the industry forward from its current position on health management towards consistent achievement of best practice in occupational health is set out in our [Health Programme for 2010-14](#).

2. This paper contributes towards the aim of promoting a culture of excellence in health management, by establishing a baseline against which any impact arising from delivery of our Health Programme can be assessed. It is necessarily a brief summary and reflects a snapshot view during the first year of our four year Health Programme. The intention is that the picture be revisited in 2014/15, including a review of trends in a small number of baseline indicators on health management. This baseline paper is informed by intelligence gathered from published sources and reports; from ORR inspection and investigation work on occupational health (OH); and from discussions with industry stakeholders/employees, including opinions aired at the OH workshop which ORR hosted for the rail industry in November 2009, and which informed development of our health programme.

B. Scale and costs of occupational ill health across all industry

B1 Scale

3. Based on HSE self reported data for all employment sectors¹, in 2009/10 an estimated 1.3 million people who had worked in the last 12

¹ [HSE Health and Safety Statistics 2009/10 – self reported ill health data from Labour Force Survey](#).

months, and a further 0.8 million former workers, suffered from ill health which they thought was work related. Of the total working days lost, work related ill health accounted for 82% (23.4 million days lost) compared with workplace injury at 18% (5.1 million days). Of the working days lost due to ill-health, work related stress (9.8 million days) and musculoskeletal disorders (MSDs) (9.3 million days) accounted for the large majority. Current estimates suggest that the annual number of work-related cancer deaths is around 8000, with about half of these due to past exposure to asbestos.

B2 Costs

4. As part of the Government's *Health, Work and Well-being - Caring for our Future* initiative², Dame Carol Black (National Director for Health and Work) considered the economic costs of work related ill health as part of her wide ranging review 'Working for a healthier tomorrow'. This report estimated the annual costs of sickness absence and worklessness associated with working age ill health to be over £100 billion – greater than the annual budget for the NHS. It also estimated that illness in workers resulted in productivity losses in excess of £60 billion/year.

5. The CBI/Pfizer Absence and Workplace Health Survey 2010³ estimated that employee absence cost the UK economy £16.8bn in 2009, with long term sickness absence accounting for 22% of all working time lost, at a cost of £3.7bn. A 2003 report⁴ by The Centre for Mental Health estimated the business costs of mental health problems at work to be £26 billion a year, equivalent to £1035 for every employee in the UK workforce; 2009/10 estimates put the output losses to the UK economy at over £30 billion.

² ['Working for a healthier tomorrow' - Dame Carol Black's review of the health of Britain's working age population, March 2008.](#)

³ [The CBI/Pfizer Absence and Workplace Health Survey 2010.](#)

⁴ ['The economic and social costs of mental illness', The Sainsbury Centre for Mental Health, 2003.](#)

C. Scale and costs of occupational ill health in the rail industry

C1 Scale

6. In 2008/09, ORR estimates put the size of the GB rail industry workforce at around 123,000. RSSB estimates⁵ for 2010 of 35,000 Network Rail (NR) employees, with another 65,500 contractors, indicate that the figure may now be closer to 150,000.

7. Reliable data on the extent of occupational ill health within the rail industry are currently difficult to obtain. The legal requirements for ill health reporting under the Reporting of Injuries, Diseases, and Dangerous Occurrences Regulations 1985 (RIDDOR) fail to capture all types of occupational ill health in a way which permits objective and comprehensive assessment. RIDDOR data are particularly unhelpful in looking at manual handling and stress, key work related ill health issues for the rail sector. Work related stress is not reportable under RIDDOR. Lost time injuries (over 3 day injuries) due to manual handling are reportable; however it is often not possible from the reports to identify what type of work activity caused the injury, or whether acute handling injuries resulted in ongoing MSDs such as back or upper limb pain. RSSB's recent report on RIDDOR reporting by NR and its contractors⁵ revealed misunderstanding of RIDDOR reporting requirements where employees have pre-existing conditions, such as back pain, and subsequently suffer a work injury which triggers absence. This has led to under reporting of such lost time injuries into RIDDOR by NR and its contractors in the past five years. HSE proposals to increase the lost time injury period for reporting under RIDDOR from three to seven consecutive days, in response to in Lord Young's 2010 report 'Common Safety Common Sense'⁶ would further reduce the reliability of the RIDDOR dataset on injuries related to manual handling for example. The focus is therefore likely to shift further towards use of rail industry data, including SMIS, for ill health incidence.

⁵ [RSSB Independent Review of RIDDOR Reporting by Network Rail and its contractors January 2011.](#)

⁶ [October 2010 report 'Common Safety, Common Sense' by Lord Young to the Prime Minister.](#)

8. Some major injuries and dangerous occurrences involving potential for exposure to harmful substances, and prescribed occupational diseases, are RIDDOR reportable. A review of RIDDOR returns received by ORR for the 5 ½ years from January 2005 to September 2010 shows only 53 reported incidents/dangerous occurrences involving potential exposure to harmful substances; any longer term implications for worker health were not reported. These included six cases of potential asbestos exposure, as well as inhalation exposure to/skin contact with battery acids, diesel, hydraulic fluid and oils, cleaning chemicals, ammonia, dust, smoke and carbon monoxide. A breakdown of reporting of ill health incidents under RIDDOR by key dutyholder groups is provided at Appendix 1.

9. Many of the occupational diseases reportable under RIDDOR Schedule 3 are relevant to the rail sector, including Hand Arm Vibration Syndrome (HAVS), other upper limb disorders, occupational asthma, dermatitis, asbestos related disease, tetanus, legionella and leptospirosis, but we see few reported cases. Between 2005 and 2010, only seven cases of prescribed occupational disease were reported to ORR; these included four cases of HAVS plus one case each of bursitis, Legionnaires' disease, and dermatitis. Under-reporting of prescribed diseases may, in part, be attributable to long latency in health problems and the need for a medical diagnosis of an occupational causation, coupled with significant movement of the workforce between employers.

10. There is some evidence to suggest under-reporting of Schedule 3 diseases under RIDDOR. In 2002, as a result of a targeted health surveillance exercise at a single train depot, 24 cases of HAVS were diagnosed and reported under RIDDOR, showing the value of effective health surveillance. Weaknesses in NR's reporting arrangements have resulted in 23 HAVS cases, identified in 2009 as a result of their HAVS management and health surveillance initiative, failing to be reported. These cases have now been reported (but are not included in the five year RIDDOR data analysis used for this report) and internal reporting arrangements improved. RSSB's review of RIDDOR reporting by NR and its contractors⁵ did not address ill health; however, it seems reasonable to conclude that the weaknesses in RIDDOR reporting procedures for lost time injuries, and particularly the underlying cultural issues leading to under reporting, may also have also impacted on ill health reporting in recent years. Promoting and securing improved compliance by rail dutyholders with RIDDOR requirements on reporting ill health is an

area that ORR will need to actively pursue as part of our liaison and inspection work.

11. HSE's ill- health data¹ allow a useful comparison between rail and other industry sectors. Based on Labour Force Survey (LFS) data for 2003/04 to 2009/10 (which is self reported), railway workers⁷ have a higher incidence of work related ill health (5850 per 100,000 employed) when compared with similar occupation groups (including construction operatives, and also other transport and mobile machine operatives) and with the transport, storage and communications sector (3740 per 100,000) as a whole.

HSE LFS data⁸ on estimated prevalence and rates of self-reported illness caused or made worse by current or most recent job, by occupation, for people working in the last 12 months, averaged 2003/04-2009/10

| | Illness ascribed to their current/most recent job | | | | | |
|---|---|----------|------|--|----------|------|
| | Averaged prevalence (thousands) | | | Averaged rate per 100 000 employed in the last 12 months | | |
| | central | 95% C.I. | | central | 95% C.I. | |
| | lower | upper | | lower | upper | |
| Railway Operatives ^a | 3 | 2 | 4 | 5850 | 3780 | 7920 |
| Transport associate professionals (inc.pilots/train drivers) (SOC: 351) | 3 | 2 | 5 | 5460 | 3810 | 7110 |
| Construction operatives (SOC: 814) | 7 | 6 | 9 | 4800 | 3820 | 5790 |
| Transport drivers and operatives (SOC: 821) | 33 | 30 | 36 | 3510 | 3170 | 3850 |
| Transport (SIC: Section I) | 73 | 68 | 78 | 3740 | 3490 | 3980 |
| All Industry (illness ascribed to current or most recent job) | 1027 | 1008 | 1046 | 3470 | 3410 | 3540 |

^a Defined by the following SOC codes (3514, 8143 & 8216)

⁷ Based on [Standard Occupation Classification \(SOC\) 2000 codes](#) 3514 train drivers, 8143 rail construction and maintenance operatives, and 8216 rail transport operatives.

⁸ Prevalence is the total number of cases of work-related ill health occurring in the period, from long standing to new cases. The Labour Force Survey (LFS) is a national survey of over 50 000 households each quarter which provides information on the UK labour market. The Health and Safety Executive commission annual questions in the LFS to gain a view of work-related illness and workplace injury based on individuals' perceptions. The

12. HSE's THOR data (reporting of work related ill health by a sample of specialist consultants and GPs) support this finding, although the small sample size for rail workers means that the THOR results need to be interpreted with some caution. THOR data on diagnoses by specialists in respiratory disease (mainly asbestos related) and psychiatric disorders, plus the sample of GPs reporting into THOR, indicate higher than average incidence of work related ill health for rail workers when compared with the wider employed population. RSSB research in 2005⁹ concluded that sickness absence levels in the rail sector (approximately 4%) were above the general UK industry average of 2.7%.

C2 Causes of work related ill health in rail

13. Despite the relative poor quality of ill health data for the rail industry as a whole, MSDs and stress are generally perceived by the industry as their major work related ill health issues. RSSB research⁹ has identified the main health problems of concern to the rail industry (in descending order of concern) as MSDs, psychological (stress), and assaults. The 2010 TUC biennial survey of safety representatives¹⁰ identified, across the wider transport and communications sector, stress as the most frequently identified hazard (59%), with bullying/harassment (43%), back strains (35%), slips on level (40%) and long hours (31%) also in the top five concerns. Rail trade unions maintain an ongoing focus on MSDs in driving cabs following a 2008 court ruling against Arriva Trains North in relation to design and selection of drivers' seats under the Provision and Use of Work Equipment Regulations 1998, and a 2009 civil claim against Arriva Trains Wales for lack of adequate risk assessments in relation to carpal tunnel syndrome suffered by three drivers. In our health programme, ORR has identified a wider range of work related health problems, plus health issues relating to general wellbeing, to

LFS survey data is used to make inferences about the whole population. When data obtained from a sample is used in this way, there is an element of sampling error, or uncertainty, about the sample estimate. Confidence intervals represent the range of uncertainty resulting from the estimate being derived from a sample of people, not the entire population. They are calculated in such a way that the range has a 95% chance of including the true value in the absence of bias - that is the value that would have been obtained if the entire population had been surveyed.

⁹ [RSSB research project T389 Management of Health Needs Report 1: The current position across the rail sector, 2005.](#)

¹⁰ ['Focus on health and safety' Trade unions trends survey – TUC biennial survey of safety reps 2010.](#)

which railway workers may be at risk (reproduced at Appendix 2) which employers need to consider in their risk assessments.

14. The main industry datasets on causes of ill health available to ORR are RSSB's SMIS for Railway Group members, plus London Underground Limited's (LUL) LUSEA database. These do not capture all categories of ill health or parts of the industry (they exclude light rail, heritage, and some rail contractors and freight operations¹¹). Reliability of reporting into SMIS, particularly among contractors, may also impact on the data. RSSB's recent review of lost time injury reporting by NR and its contractors⁵ looked at SMIS reporting of lost time injuries by a sample of NR's key contractors. This sample review indicated that only 33% of the incidents requiring SMIS reports were actually in SMIS. RSSB's report also identified the trend towards the increasing use of temporary ('zero hours' type) contracts as potentially acting as a disincentive to full reporting due to a combination of job insecurity, mobile workforce, and less familiarity with reporting procedures.

15. Despite these limitations, data on manual handling (as an indicator for MSDs) and shock/trauma (as an indicator for work related stress) for the five years 1 April 2005 to 31 March 2010 were sampled for this baseline analysis. A graphical analysis of the sample SMIS data is contained in Appendix 3; LUSEA data is presented in Appendix 4

Manual handling

16. SMIS manual handling data for the mainline show 3720 reported manual handling injuries over the five years, with almost 30% of these resulting in some lost time. The overall trend in manual handling incidents since 2005 has been downwards; this has been particularly evident in the numbers of lost time incidents - 2009 saw 28% fewer lost time incidents reported into SMIS than in 2005. A breakdown of the SMIS manual handling data by industry sector shows, not surprisingly, that NR and the TOCs reported 84% of all the manual handling incidents. Manual handling injuries to FOC staff in depots and yards, for example, are not fully captured by SMIS¹¹, potentially skewing the data and there are potential issues with contractors reliably reporting into SMIS.

¹¹ Incidents in freight yards and depots, or to freight company staff at customers sidings or terminals are not currently mandatory reportable incidents under SMIS.

17. LUL data show 1118 manual handling injuries over the same five year period, with 23% resulting in lost time (lower than the 30% for the mainline). The data show a marked downturn in manual handling injuries between 2005/06 and 2008/09, with a 55% reduction in the total number of handling injuries and a 40% reduction in lost time injuries. Over this period LUL further developed initiatives aimed at preventing MSDs and reducing absence times, including lower limb classes and lower back pain physiotherapy services. 2009/10 saw a marked upturn in the number of manual handling injuries reported in LUSEA, with a 60% increase on those reported the previous year. This increase in absolute numbers may not reflect an actual increase in manual handling incidence rates, as December 2008 saw Metronet Rail employees transferred to LUL, increasing the size of the maintenance workforce (a high risk group) significantly.

Stress

18. Although industry datasets do not capture all incidences of work related stress (e.g. due to workload, job quality or working patterns), incidents involving shock or trauma arising from verbal/physical assault or SPADs, or witnessing traumatic events such as suicides or accidents, can act as a marker for possible precursors to work related stress.

19. Over the five year sample period, 6412 shock/trauma incidents were reported into SMIS. 19% resulted in lost time from work. The number of incidents reported remained fairly stable during the sample period, however 2009/10 saw a marked downturn. In 2009/10 there were 22% fewer no lost time injuries and 17% fewer lost time injuries reported compared with the average for the previous four years; this decline was particularly evident in the TOC data. This may reflect continued co-ordinated efforts by the TOC community to tackle work related violence via the cross industry Rail Personal Security Group. Not surprisingly, the vast majority of the shock/trauma events (94% no lost time incidents and 97% of lost time incidents) were reported by TOC staff – the main industry sector with public facing roles. Other sources of work related stress, for example arising from working patterns and workloads will also contribute to overall work related ill health and may, for example, feature more strongly among other sectors or groups e.g. infrastructure maintenance workers, or managers, however this data is not captured by SMIS.

20. LUL data show 1597 reported cases of trauma over the five year period; 37% of these resulted in lost time from work (higher than the 24% for mainline TOCs seen in SMIS). The number of reported trauma events with no lost time remained relatively stable over the sample period; however the number of more serious lost time incidents has dropped by over a third since 2007/08 when compared with the 2005/06 baseline. Since 2004/05 LUL has implemented a number of stress management initiatives across the company aimed at both post traumatic stress support and building personal resilience.

C3 Costs to rail industry

21. RSSB research⁹ in 2005 estimated that the rail industry lost about 1.17 million working days per year through sickness absence. The associated direct payroll costs of ill health were estimated at about £100M per year, around ten times that of the total expenditure on OH provision at that time. RSSB estimates put the total costs of ill-health in the rail sector at somewhere between £218 – 327 million per year.

22. Some rail companies have costed specific health initiatives and shared this within the industry. LUL has been particularly active in promoting the business case for its back pain and stress prevention and rehabilitation programmes¹². LUL report that the cost of absences due to stress fell from £5.3M in 2004/05 to £1.6M in 2008/09 as a result of their stress reduction programme. LUL report that their Lower Back Pain Service provided net savings of £2.4M, an estimated return of 14:1. Introduction of primary healthcare into LUL, via a physiotherapy service, produced an estimated return on investment of 10:1 from reduced sickness absences due to back pain, coupled with a 74% reduction in MSD medical retirements over the ten years of the programme, providing additional cost savings¹³. First Scotrail reported¹⁴ a reduction in sickness absence from 6.2% to 4.2%, saving around £3M per annum, following introduction of health and wellbeing initiatives including physiotherapy and ergonomic interventions.

¹² Dr Olivia Carlton, LUL, presentation to Infrastructure Safety Liaison Group for mainline contractors November 2010, plus additional case study information provided to ORR for inclusion on our website.

¹³ Internal London Underground report 'Mental Health report 2009-10', A Dunn et al.

¹⁴ [Business in the Community March 2009 Health People = Healthy Profits.](#)

23. Many other rail companies will have developed business cases for health management initiatives but these are not currently shared more widely. A key workstream in ORR's programme is to collate and promote costed case studies to persuade key decision makers of the financial benefits of managing work related ill health.

D Where is the industry now in managing occupational health?

24. Our view on how the industry currently manages OH is informed by our inspections and other interventions with rail dutyholders and industry groups; from listening to and speaking with industry managers and employees; and from published sources such as company reports and plans. Evidence and observations on OH management will clearly not apply to every dutyholder but will contribute to a picture of the maturity of the rail industry in managing health. The key themes in our health programme – leadership, awareness, and excellence - are used to structure an overview on the position in 2010.

D1 Industry leadership on health

25. Currently there is little visible cross industry leadership at senior/board level on health, an area that the ORR health programme is seeking to address. The [Railway Industry Advisory Committee](#) considers health within its wider remit, but strategic initiatives to move the industry forward on health have been limited. ATOC, via its HR Directors Forum and Train Operators Safety Group, sponsored some RSSB research on health⁹ in 2005 and has reportedly facilitated some informal sharing of experience on health between TOCs, but a visible role in leading the TOC community on health appears to have been limited.

26. The [Association of Rail Industry Occupational Health Practitioners](#) (ARIOPS) provides an important source of leadership on medical matters in the rail sector, but understandably has a narrow focus. ARIOPS' main areas of interest, where it continues to seek to drive change, are in relation to medical fitness assessments and professional standards for rail occupational health practitioners.

27. The [Infrastructure Safety Liaison Group](#) (ISLG) for contractors working on Network Rail infrastructure, which includes in its membership the [Rail Industry Contractors Association](#) (RICA), is currently developing a leadership

role on health, which is to be commended, with the production of an occupational health strategy for 2011-13, appointment of a health champion, and sharing of good practice.

28. The level of visibility on health provided by rail companies to their shareholders or wider public is also variable. Reporting on health and wellbeing via Annual Reports and/or Corporate Social Responsibility (CSR) reports appears less well developed than for worker and passenger safety, and this has therefore been included as one of our baseline indicators. Independent research for Business Action on Health¹⁵ has shown a marked upturn in the proportion of FTSE 100 companies reporting publicly on employee health, up to 85% in 2009. Those FTSE 100 companies that reported quantitatively to their shareholders on employee health were found to have outperformed the rest of the FTSE 100 companies on average total shareholder returns for 2009.

29. The leadership role of RSSB for passenger and worker safety on the mainline network is not currently replicated for occupational health. The current focus within RSSB on health is on research and associated guidance, managed via its health research topic plan. A number of good practice guides and toolkits on specific health risk areas have been produced (for example on colour vision, diabetes, safe use of medicines, drug and alcohol standards), as well as nine short good practice guides on OH management issues. Research is currently under way on management of MSDs in train drivers¹⁶, prompted by a successful civil claim for work related carpal tunnel syndrome by three drivers at Arriva Trains Wales.

30. Use of industry standards on health also focuses mainly on pre-employment screening and fitness for work; we believe that there is scope for the current suite of Railway Group Standards on health to be extended to address proactive management of work related ill health.

31. The RSSB Executive has recognised the potential for the industry to work together more effectively on OH management, and a stronger strategic role for RSSB in achieving this as part of it's driving out unnecessary costs

¹⁵ [FTSE 100 Health and Wellbeing reporting trends research by Ipsos Mori May 2010.](#)

¹⁶ RSSB Research project [T940 Identifying, quantifying and managing the risk of musculoskeletal injuries and illness among train drivers.](#)

and reducing inefficiencies agenda. RSSB's Safety Policy Group has explored proposals¹⁷ to extend its work to include facilitating collaboration and sharing of good practice among Railway Group Members; improved collection, analysis and use of health data (possibly extending to the creation of a health risk model); and setting of industry strategic objectives on both occupational health and public health. RSSB's role on OH is stated clearly in its [2009-14 Strategic Business Plan](#), with one of its stated core activities being the *'provision of research, analysis, data sharing and facilitation of co-operation in the area of health to enable members to more proactively manage significant health issues'*. Despite recognition within RSSB of a potential broader role in supporting industry towards better OH management, there currently appears to be little appetite from Railway Group Members for this work to be resourced. The current view of Railway Group members is that as OH is not a system safety or interface issue, RSSB would add little value to the efforts of individual dutyholders, and that RSSB resource on OH should be limited to its research function.

32. ORR believes that RSSB has a legitimate wider role and could do more to support the industry in improving the long term health and fitness of its workforce, and so reduce costs and inefficiencies associated with work related ill health. This was explicitly addressed in our 2010 review of RSSB¹⁸, Section 3.8

'An issue raised in our consultation was RSSB's role in occupational health. Many consultees said this should not be a significant role and indeed the RSSB board has in the past decided that there should be only be a limited role for RSSB in respect of occupational health risks. In our view the costs associated with ill health are a burden on the industry that have not yet been properly recognised and managed. RSSB is well placed to do more to help the industry improve management of occupational health, by helping duty holders to comply with their legal obligations and seeking potential business efficiencies. For example, RSSB could collect and analyse industry health data to identify trends, and disseminate good practice. We therefore conclude that health should continue to be part of the primary objective.'

¹⁷ [RSSB paper November 2007 to Safety Policy Group 'Industry risk and opportunities – occupational health'](#).

¹⁸ [ORR's review of RSSB's function, governance, and funding arrangements 2010](#).

The RSSB Chairman's response to our Review in October 2010 did not address this specific issue, with proposed revised wording for RSSB's Constitution Agreement limited to its safety role.

D2 Industry awareness of health management issues

33. Current evidence indicates that worker health has a far lower profile than worker and passenger safety in the rail sector. There is some recognition of the costs of poor health management, and some companies have produced and shared costed case studies to show the benefits of specific initiatives. This is an area that our health programme is seeking to build on, as we believe that evidence of cost effective interventions on health will act as a powerful driver for improvement. There are also emerging signs of a higher profile for health at board level, with some rail companies developing performance indicators on health (including some leading indicators), and benchmarking on health management both inside and outside the sector. NR, for example, has reported benchmarking against several leading UK employers in implementing its Health and Wellbeing Strategy.

34. However, the rail sector generally remains rather inward looking on health, and appears slow to adopt established good practice and well tested health management tools such as the [Business Link Workplace Well-being Tool](#); [NHS Health for Advice line](#); [HSE stress management standards](#); and the [Constructing for Better Health](#) model. This broad conclusion was reported in the 2005 RSSB research project⁹ and was confirmed by delegates at the 2009 ORR workshop. There are, however, some signs of encouraging progress in this area; recently Crossrail has publicly committed¹⁹ to including membership of Constructing Better Health into its supplier specification. Prompted by our inspection work and related enforcement on bridge refurbishment, NR held a forum in October 2010 for all its coatings contractors to share good practice and set out expectations on managing exposure to lead and isocyanates.

D3 Culture of excellence in health management within rail companies

35. The focus on health within our inspection programme has increased significantly in the past two years, and this is set to continue through the four years of our health programme. Recent proactive work has looked at

¹⁹ [Press release 17 September 2010 on Constructing Better Health website.](#)

musculoskeletal risks in construction, and from signal lever pulls, on the mainline; lead and isocyanate exposures in bridge refurbishment on the mainline and light rail infrastructures; OH management arrangements in selected TOCs and FOCs; stress management in selected TOCs; noise exposure in Class 66 freight cabs; staff assault risk in TOCs; asbestos management in NR, LUL, and heritage; health risk management in heritage carriage restoration. This sample inspection programme has, not surprisingly, produced evidence of a mixed picture.

Good practice

36. ORR has encountered many examples of positive initiatives to manage work related ill health among rail companies across all sectors of the industry.

37. LUL is generally recognised as one of the industry leaders on health, particularly in its rehabilitation interventions for lower back pain, and its stress reduction workshops and associated programme for stress, anxiety and depression. It has been particularly proactive in demonstrating the cost benefits of its targeted health initiatives, going beyond sickness absence rates to explore links with medical retirements, return to work times, and medical claims costs.

38. NR introduced its Health and Wellbeing Strategy in 2007 with a focus on six key areas: health screening and surveillance (including programmes for noise and HAVS); risk reduction (focus on workstation safety/display screen equipment issues); mental illness and stress; health promotion and education; rehabilitation, mainly for MSDs; and better information and metrics. On MSDs for example, responding to ORR inspection work on manual handling risks from mechanical signalling and points, NR has completed detailed manual handling risk assessments at over 300 heavy signal lever pulls, resulting in an extensive ongoing programme of remedial work, including motorisation of the highest risk levers, coupled with improved maintenance and testing regimes.

39. We know that many other rail companies have health management strategies in place, with targeted health management programmes. Among TOCs, for example, provision of stress counselling and post traumatic stress support for drivers and other staff liable to witness suicides and those at risk of abuse/assault is known to be widespread. Other known good practice health initiatives include provision of digital hearing aid trials to allow drivers to continue work (South West Trains, Arriva); developing use of Key

Performance Indicators (KPIs) and/or leading health indicators to report on health at board level (Arriva, South West Trains); management training on health (Virgin); physiotherapy for MSDs (First Scotrail); management of HAVS exposure including trials with reduced vibration tools; use of remote breakers; use of HAVmeters, colour coded tool tags and personal swipe card for hand held tool use (Tubelines; Bam Nuttall; J Murphy and Sons); identification, risk assessment and engineering controls to reduce station staff exposure to background radon levels (Northern Rail); use of engineering controls to reduce noise and vibration exposures in Class 66 freight locomotive cabs; personal dust sampling by freight operators during loading/unloading at third party sites such as mines and quarries (GB Rail Freight).

40. There may well be many other examples but, because there is relatively little visible sharing and promotion of health initiatives, they are not more widely recognised. We know that there are also many examples of wider health and wellbeing programmes, mainly targeting lifestyle, exercise and nutrition, among many rail employers, and this is to be commended. We will continue to work with industry to collate and promote examples of good practice in occupational health management, with particular emphasis on the associated business benefits.

41. There is encouraging evidence of many rail companies now gearing up to do more on occupational ill health, as the business benefits are recognised; as part of their wider corporate social responsibility agenda; and also in response to a closer focus by ORR on health management issues.

Areas of weakness

Specific health risks

42. Despite pockets of good practice across the industry, recent ORR inspection work has found some basic failures in compliance, with patchy awareness of legal requirements designed to protect workers' health, and failure to implement established good practice. Recent examples have included failures to adequately assess and manage health risks arising from: spraying of isocyanate paint and removing lead paint from bridges; cleaning of train under frames (microbiological hazards); manual operation of signalling/points levers; manual handling risks during construction and maintenance work on the mainline; weaknesses in management of asbestos in railway structures (stations, depots, signal boxes, tunnels) and lineside

locations (location cabinets, troughing). Recent ORR investigation activity on health has included the fatality on the Tay Bridge in January 2010 where a painter was exposed to paint solvent in a confined space; and RMT concerns regarding exposure to respiratory crystalline silica from high output ballast cleaning plant, which has prompted NR and its contractor to plan a programme of further dust monitoring to confirm adequacy of control.

43. In some of our recent inspection work we found arrangements for control of specific health risks well below those we would expect to find in other industry sectors. In some cases formal enforcement action resulted²⁰. In many other cases dutyholders agreed to suspend work and/or put in place additional controls quickly, without recourse to formal enforcement action.

44. An inspection finding common across several sectors of the industry was an over-reliance on the use of proprietary generic COSHH assessment packages. We found widespread evidence of failures in understanding the role of such systems in helping to inform COSHH assessments (rather than them delivering full legal compliance), with over reliance on generic 'assessments' which did not reflect the health risks involved in a specific job. As well as weaknesses in the assessment of health risks, we found inadequate recognition of the importance of maintenance regimes for control measures (including respiratory protective equipment), particularly when used in remote locations, and instruction and training for workers.

45. Sample inspection in the heritage sector found lower awareness of some specific legal requirements, particularly on record keeping (for example, maintenance records for local exhaust ventilation; keeping asbestos registers) and some examples of inadequate control for exposure to antimony and lead from small scale metal casting operations. In the main, however, we found that health risks arising from exposure to noise, vibration, and hazardous

²⁰ Summarised from [ORR enforcement register](#) – Improvement Notice (IN) March 2010 First Great Western Ltd for failure to assess health risks from manual cleaning of train under frames; 2 x INs July 2010 Strada Rail Ltd for failure to assess and control risks from isocyanate paints; IN November 2010 Network Rail Infrastructure Ltd for failure to ensure employee welfare including adequate washing facilities. Prohibition Notice (PN) June 2010 J Murphy and Sons Ltd re failure to manage potential exposure to asbestos when excavating trench; PN July 2010 Strada Rail Ltd – failure to control exposure to harmful fumes when paint spraying; PNs October 2010 on Birse Rail Ltd and Mains Roofing Ltd for failure to provide safe access to station roof, including for handling heavy materials.

substances in heritage operations were managed by virtue of the small scale (short duration exposure) and the method of work (for example hand sanding and painting rather than grit blasting and spraying). An issue identified for further inspection work is management of potential skin problems from handling of oil, grease, and manmade mineral fibres used in boiler lagging, as well as further work on noise and vibration exposure in boiler repair.

46. Building on these findings, our planned inspection work for 2011/12 targets the areas of most significant risk, including stress and HAVS, as well as those known areas of inadequate compliance, including controlling exposure to hazardous substances and RIDDOR reporting.

Health management issues

47. When compared with other similar industries, the rail sector appears to have a relatively reactive approach to worker ill health, with the emphasis largely on pre-employment screening and managing for attendance, rather than prevention of work related ill health absence. A focus on the role of the individual, rather than the organisation, in health risk management is illustrated by the industry's overall approach to stress management. From the evidence available it appears that stress management interventions tend to focus mainly on building personal resilience, provision of palliative care via counselling/support, and managing for attendance to encourage return to work, rather than on the prevention of stress via a systematic assessment of organisational arrangements. There appears to be an emphasis on 'changing the individual' rather than 'changing the organisation and/or the job', and many in the rail industry have been slow to apply best practice, for example using the HSE Management Standards approach. Raising industry awareness and promoting adoption of this wider organisational approach to stress management is a workstream in our ongoing health programme.

48. In many rail companies, OH has been seen largely as the remit of the human resources (via their role in managing sickness absence) or safety departments, and of specialist occupational health professionals, in terms of advising on rehabilitation to work. Comprehensive monitoring of trends in work related ill health is yet not widespread, with attendance management tending to drive the collection of sickness absence data.

49. Some of the larger rail companies have in-house OH expertise but most contract it in (90% respondents in RSSB research), with the current

focus of OH advice being rehabilitation and fitness for work, rather than providing direct support for managers in ill-health prevention. The perception of a peripheral role for OH specialists in the rail industry was voiced by some delegates at ORR’s external workshop, with OH seen effectively as ‘a *vocation for individuals rather than actively managed and resourced by most companies*’. A lack of in-house OH expertise may mean that rail companies are less able to challenge and improve the ‘standard’ services offered by external providers. Those companies with in-house OH expertise report the ability to specify a carefully tailored OH service package which meets their business needs, providing much better value for money.

50. There is a general perception of a relatively low level of engagement on health issues at senior management and particularly board level, although there are emerging signs of increased awareness on health in many companies. This view is reinforced by the findings of the 2005 RSSB research⁹ which indicated no discernable use of KPIs to monitor OH activity.

E. Assessing the impact of ORR’s occupational health programme

51. Evaluating the impact of our health programme will be difficult give the paucity and quality of the data currently available on the incidence of work related ill-health in particular. However a few baseline indicators have been developed against which we aim to assess progress against three key themes in our health programme – excellence in management of health, leadership, and awareness.

| Baseline health measures for 2009/10 and 2014/15 | ORR health programme theme |
|---|---|
| <p>A measure of incidence of work related ill-health</p> <ul style="list-style-type: none"> • proportion of available working time lost due to work related ill health, as reported to ORR by key dutyholders | Culture of excellence in management of health |
| <p>A measure of <i>cost of work related ill health</i></p> <ul style="list-style-type: none"> • number and value of employers’ liability claims related to occupational ill health, as reported to ORR by key dutyholders | Culture of excellence in management of health |
| <p>A measure of <i>visible leadership on OH</i></p> <ul style="list-style-type: none"> • proportion of rail companies who report publicly (e.g. to their shareholders) on OH against | Industry leadership on health |

| Baseline health measures for 2009/10 and 2014/15 | ORR health programme theme |
|--|--|
| quantitative targets, as reported to ORR by key dutyholders | |
| A measure of level of reporting under RIDDOR <ul style="list-style-type: none"> • number of reports of prescribed diseases (under Schedule 3 to RIDDOR) received by ORR²¹ | Industry awareness on health |
| A measure of <i>industry awareness on health</i> <ul style="list-style-type: none"> • number of visits on ORR's web pages on health | Industry awareness Added value by the regulator |

E1 Results from 2010 baseline survey of key dutyholders

52. We approached 93 key railway industry dutyholders (excluding heritage operators) in December 2010, asking for their help in completing a baseline survey on some key occupational health indicators (Appendix 5). We wrote directly to 45 infrastructure managers, passenger and freight train operators, light rail and tram operators, and 48 railway contractors represented on the ISLG and RICA. 56% of the target audience responded (response rate of 50% for contractors, and 62% for non contractors), indicating a willingness within the industry to engage with us on occupational health, which is encouraging. A summary of the baseline indicators for 2009/10 is given in Appendix 6, with further discussion of the findings below.

Incidence of work related ill health

53. Key findings from the survey returns for the sample period 1 April 2009 to 31 March 2010 were:

- Total number hours lost due to work related ill health = 3.5 million, which represents 27 hours work related sickness absence for every one of 129,000 individuals employed.

²¹ Rationale for limiting RIDDOR reports to Schedule 3 diseases –there is clear, objective link to occupational ill health – dangerous occurrences and lost time injuries captured by RIDDOR require subjective interpretation to extract health related incidents. Also implementation of Lord Young's recommendation to extend the period for reporting lost time injuries from 3 to 7 days is likely before 2014 and would therefore distort any comparison with baseline figures.

- 35% respondents (18) reported zero work related ill health absence – surprisingly these included 10 companies employing > 200 people, 3 of which employed >1000. 12 of the 18 ‘zero work related sickness absence’ respondents were contractors.
- A further 12% of respondents (6) were unable to identify work related sickness from their overall sickness absence totals; 5 of these were larger companies employing >1000.
- Lost time absence rate - Proportion of the total hours worked lost due to work related sickness absence = 1.4%
- When contractor data (where 67% respondents either reported zero work related ill health absence or were unable to provide a figure) is excluded, the lost time absence rate for non-contractor companies increases to 1.7% total hours worked.

54. The survey responses indicate that a significant number of rail employers, particularly contractors, may be failing to recognise the extent, and therefore the costs, of work related ill health absences. In gauging the incidence of work related ill health, the lost time absence rate (the proportion of working time lost to work related sickness absence) probably provides the best estimate based on the data available, however we have some reservations about the reliability of this measure. A significant number of dutyholders, particularly among contractors, reported zero work related ill health absence over the 12 month baseline period. From the survey returns it wasn't always clear whether dutyholder records genuinely confirmed no work related ill health absence (unlikely for all but the smallest employers), or whether they were unable to distinguish work related ill health absences from their overall sickness absence figures (more likely) and therefore gave a 'zero' return. Also, based on feedback from several respondents, we suspect that some dutyholders may have excluded absences due to chronic MSDs (eg back pain) from their ill health data, counting them as lost time injuries instead. We believe that these factors will affect the reliability of the baseline indicator measure for incidence of work related ill health, with the baseline lost time measure likely to be a significant under-estimate. Clarification to the survey wording for 2014/15 should help to improve the reliability of future responses for this indicator.

55. The main purpose in setting the baseline measures was to allow for a simple comparison of trends in key markers on OH management within the rail sector between 2010 and 2014. We deliberately sought absence data based on hours worked (rather than weeks or days), due to the highly variable nature of working patterns within the sector, particularly among contractors. This makes any direct comparison with HSE's work related illness incidence rate data, for example, problematic; we will however explore further with HSE whether there is any scope to benchmark the baseline survey data against HSE's wider Labour Force Survey dataset.

56. We have, however, looked for pan-industry estimates of sickness absence data, by way of comparison. [The Chartered Institute of Personnel and Development \(CIPD\) 2010 Absence Management Survey](#) reports an average annual sickness absence rate of 3.4% across industry sectors; for the transport, distribution, and storage sector the overall sickness absence figure is 4.1%. Although an overall figure for the work related element of sickness absence is not given, the CIPD report does provide a breakdown of absences by causation, including those due to MSDs, back pain, stress, and mental ill health. Even if we make the assumption that **all** absences due to MSDs, back pain, stress and mental ill health are work related, which would give a 'worst case' estimate, then extrapolating from the CIPD data²² we might infer that the work related element of total sickness absence in the wider transport sector might be of order of 1.4%. This aligns with the lost time estimate from our baseline survey; however it is likely that the baseline figure for the rail sector, where almost 50% respondents either reported no work related ill health or were unable to identify it, represents an under-estimate.

Costs of work related ill health

57. Key findings from the survey returns for the sample period 1 April 2009 to 31 March 2010 were:

- Total costs of Employers Liability Insurance claims settled for work related ill health = £2.76 million

²² Using CIPD 2010 Absence Management Survey data for manual workers – 18% short term absences and 63% long term absences reported due to MSDs, back pain, stress, & mental ill health. Short term absence accounts for two thirds of 4.1% absence rate = 2.7%, and long term absence represents 1.4% of total absence. Short term absence work related element is 18% of 2.7% = 0.5% work related; long term absence work related element is 63% of 1.4% = 0.9%, giving total work related contribution of 1.4%.

- Represents an insurance claim cost for every employee = £21
- Number of claims lodged for work related ill health = 336
- 58% respondents (30) reported zero claims settled for work related ill health. Although many will be genuine 'no claims settled', some companies may have been unable or unwilling to identify or disclose their health related claims (some survey responses were N/A for example). The total claims cost figure is therefore likely to be an underestimate.

Public visibility on work related ill health

58. Key findings from the survey returns for the sample period 1 April 2009 to 31 March 2010 were:

- 15% respondents (8) report on ill health against quantitative targets in annual report and accounts – three quarters of these are contractors.
- 46% respondents (24) report on worker and/or passenger safety against quantitative targets in their annual reports and accounts – 14 of 24 are contractors.
- 29% respondents (15) report on ill health publicly (but not necessarily against quantitative targets) via CSR reports or similar.

59. The survey returns indicate stronger public visibility on managing passenger and worker safety than for worker health, consistent with the lower profile generally afforded to occupational health within the industry. Rail contractors, many of whom are allied to the wider construction sector, were ahead of the other rail dutyholders, in terms of public reporting on ill health management. It was encouraging to note that three respondents indicated that quantitative performance measures on worker health for inclusion in future annual reports were being developed.

Industry awareness of occupational health

60. We also looked at some internal indicators of industry awareness on health:

- number of reports of prescribed diseases under Schedule 3 to RIDDOR received by ORR = 4 (1 dermatitis, plus 3 HAVS)

- number of visits on ORR's [webpage on health](#) (including linked health pages) = 849, which represents 8.5% of visit rate to ORR's main health and safety regulation page over the same 6 month period²³.
- As more health related pages have been added (for example reporting on health under RIDDOR and baseline survey request on occupational health data), 'health' has seen more traffic with a 22% increase in visits in December 2010 - February 2011, compared with the previous 3 months.

F. Developing trajectories from baseline indicators

61. In order to align with the proposed trajectories for delivering theme 2 'excellence in health and safety culture and risk control' in ORR's corporate strategy 2009-14²⁴, movement in the baseline indicators for occupational health could be expressed as qualitative trajectories. In assessing the impact of our health programme in moving the industry towards excellence in managing health, by the end 2014, we would expect to see:

- An increase in the proportion of dutyholders who collect reliable data on work related sickness absence, and allied to this a probable increase in the reported incidence of work related ill health. In the longer term, once data collection had improved, we would expect to see a decreasing trend in the incidence of work related ill health.
- Decreasing trend in the value and/or number of employers' liability claims as one measure of the cost of work related ill health.
- Increasing trend in the visible leadership measure, particularly in those companies reporting publicly on worker health against quantitative targets.
- Increasing trend in awareness on health, as measured by improved reporting of Schedule 3 diseases under RIDDOR.

²³ 2010 baseline figure for ORR website visits covers 6 months from 3 September 2010, when ORR health pages went live, until 28 February 2011.

²⁴ [Promoting Safety and Value in Britain's railways: our strategy for 2009-14.](#)

- Increasing trend in awareness, as measured by increased use of ORR's web pages on health.

F1. Towards achieving excellence – external influences

62. In seeking to measure the impact of ORR's health programme in moving the industry towards excellence in health management, we need to recognise that the direction of movement will be strongly influenced by external economic and political factors, including structural changes arising from the McNulty Rail Value for Money study²⁵. As a result caution will be needed in any comparison of baseline indicators, and interpretation of associated trajectories.

63. Occupational health metrics may be influenced by a number of factors, particularly the recession and an unstable jobs market. For example, a continued increase in work related stress, due to job insecurity and increased job demands/intensity, is foreseeable over the next few years. Despite this, stress related sickness absence rates might actually fall, due to perceived pressure to attend even when unwell ('presenteeism') in a climate of job cuts. With increased job insecurity, greater staff movement between employers may also impact on reporting of work related ill health.

64. The implementation of recommendations in Lord Young's 2010 report 'Common Safety Common Sense'⁶, in particular curtailing the 'compensation culture' and the review of RIDDOR, could well contribute to a downturn in both reporting and compensation claims for work related ill health. The introduction of 'fit notes' may trigger employers to do more to tackle work related ill health, thereby reducing sickness absence and claims, or they could potentially increase the success of work related ill health claims if they are used in the legal process.

65. Drivers towards better health management, including wider government initiatives such as Health, Work and Wellbeing, or European legislation (on train driver licensing or the Musculoskeletal Directive, for example) may increase industry awareness and stimulate better management of health risks, enhancing any impact from ORR's health programme. The current franchising arrangements might potentially deter TOCs and FOCs from investing in health

²⁵ [Realising the potential of GB Rail: Report of the Rail Value for Money study](#), 2011.

management initiatives which may take a long time to repay. The recent decision to move towards longer franchises, typically 15 years, may well have a positive impact.

66. Health is not specifically included in the High Level Output Specification (HLOS) passenger and worker safety metric for 2009-14, which drives the mainline industry's safety performance planning and underpins the RSSB's Safety Strategic Plan 2009-14. Inclusion of company performance targets on worker health, as opposed to passenger and workforce safety, is therefore not driven directly by the current economic regulation model.

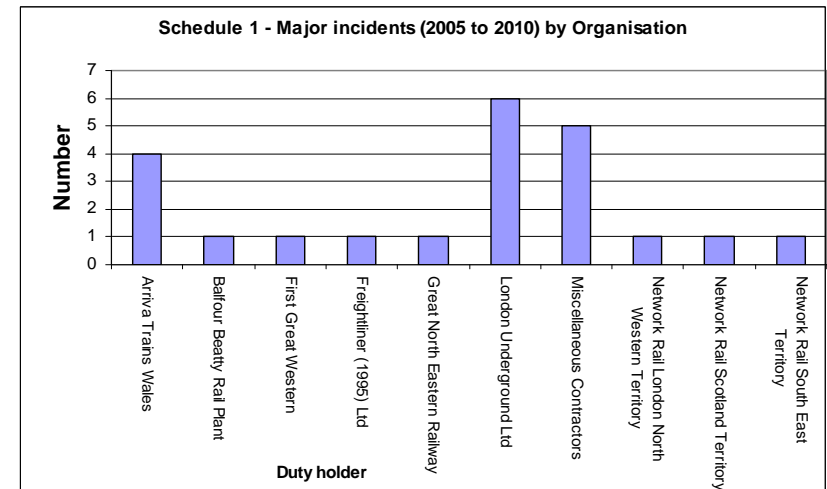
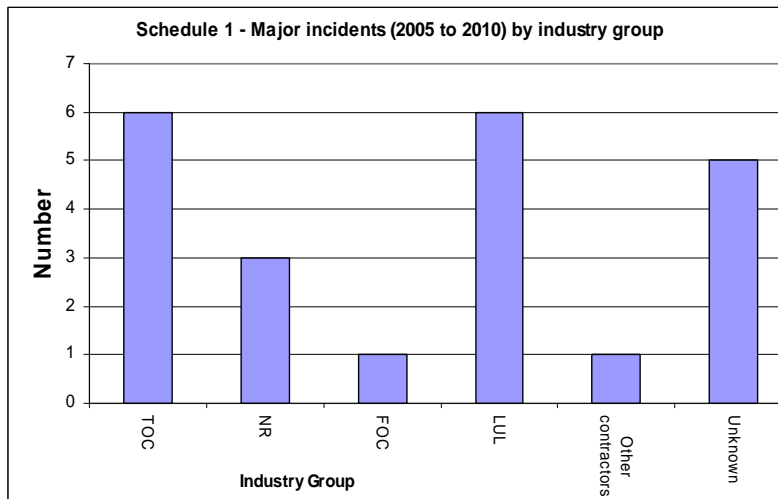
G. The way forward

66. Publication of this baseline review is intended to promote discussion and encourage improved leadership and awareness on health in the industry, in support of our health programme. We welcome comments from those in the industry and will publish any comments received alongside this paper. We intend to repeat the dutyholder occupational health survey request in 2014 and report progress against the baseline position.

Appendix 1

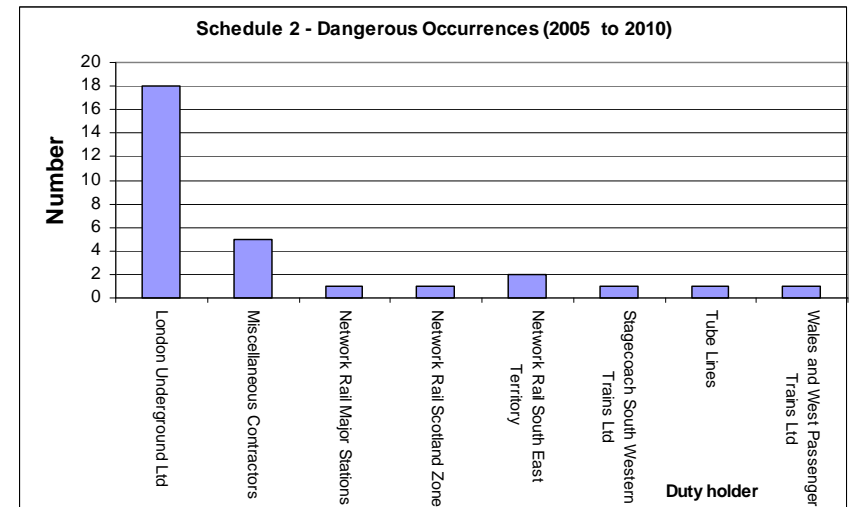
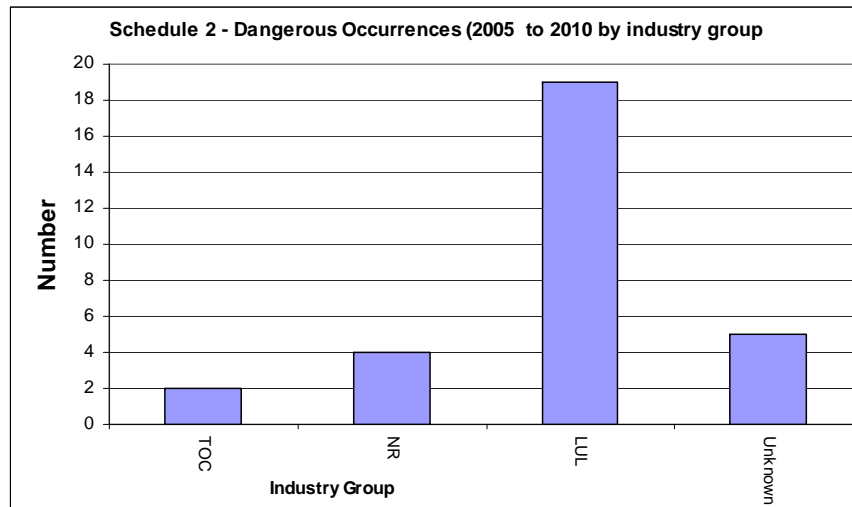
RIDDOR data on reportable incidents with potential for exposure to harmful substances for January 2005 to September 2010

Major incidents²⁶ with potential for exposure to harmful substances reported to ORR under RIDDOR Schedule 1 between January 2005 and September 2010 by industry sector and dutyholder



²⁶ Relevant Schedule 1 major injuries include loss of consciousness due to asphyxia or exposure to harmful substances; acute illness or loss of consciousness due to inhalation, ingestion or skin absorption; acute illness resulting from exposure to biological agents, toxins or infected materials.

Dangerous occurrences²⁷ with potential for exposure to harmful substances reported to ORR under RIDDOR Schedule 2 between January 2005 and September 2010 by industry sector and dutyholder



²⁷ Relevant Schedule 2 dangerous occurrences include malfunction of breathing apparatus; release or escape of biological agent likely to cause illness; and accidental release of any substance in sufficient quantity to damage health.

Appendix 2

Railway specific health risks identified in ORR Health Programme

Health issues for rail industry related mainly to the effect of work on health

| Health issue | Law and guidance: | Notes |
|--|---|---|
| Musculo-skeletal disorders | Management of Health and Safety at Work Regulations 1999 Manual Handling Operations Regulations 1992 Provision and Use of Work Equipment Regulations 1998 | Infrastructure Managers (IMs):Track work Signallers: lever pulls TOCs/FOC maintenance staff: size of sand bags for filling sanding hoppers (usually 50kg) Driving cab seating and controls Ground staff and shunters: lever pulls on ground frames. |
| Stress | Management of Health and Safety at Work Regulations 1999 Guidance on stress management standards on the HSE website | TOCs/FOCs: trauma from suicides; SPADs; workplace violence; verbal & physical assaults (revenue protection); shift work. |
| Hand arm vibration Whole body vibration | Management of Health and Safety at Work Regulations 1999 Control of Vibration at Work Regulations 2005 | IMs and construction contractors Tamper machines |
| Noise | Management of Health and Safety at work Regulations 1999 Control of Noise at Work Regulations 2005 | IMs, TOCs, FOCs and construction contractors. Cab noise on locomotives |
| Substances hazardous to health | Management of Health and Safety at Work Regulations 1999 Control of Substances Hazardous to Health Regulations (COSHH) 2002 as amended | For example, diesel engine exhaust emissions, silica dust, isocyanates, solvents. |
| Lead | Management of Health and Safety at Work | Particular problem for IMs dry blasting |

| Health issue | Law and guidance: | Notes |
|-------------------|---|---|
| | Regulations 1999, Control of Lead at Work Regulations 2002 | prior to re-painting structures. |
| Asbestos | Management of Health and Safety at Work Regulations 1999 Control of Asbestos Regulations 2006. | Issue for heritage maintenance of old rolling stock. May be found in buildings that are owned by Network Rail but leased to the TOCs. Asbestos may be found lineside in cabinets/troughing as well as buildings/structures. |
| Microbial hazards | Management of Health and Safety at Work Regulations 1999 COSHH 2002 | Legionella, leptospirosis, those associated with needle stick injuries and train cleaning where exposure to body fluids can include blood-borne viruses |

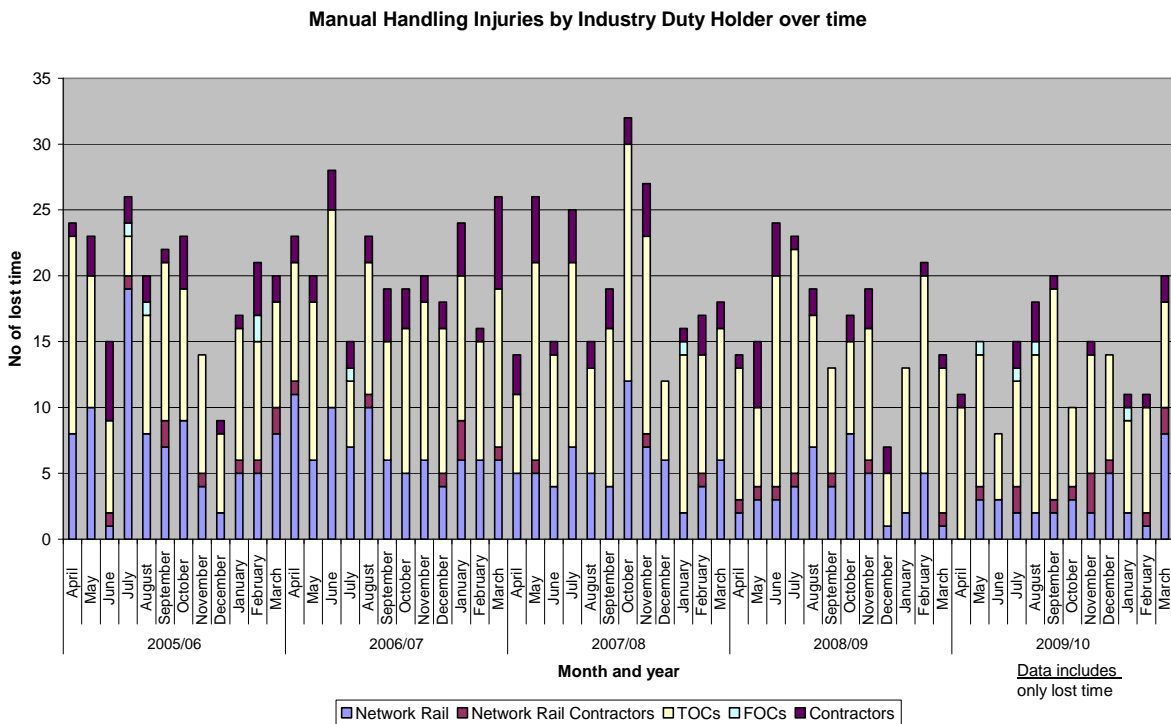
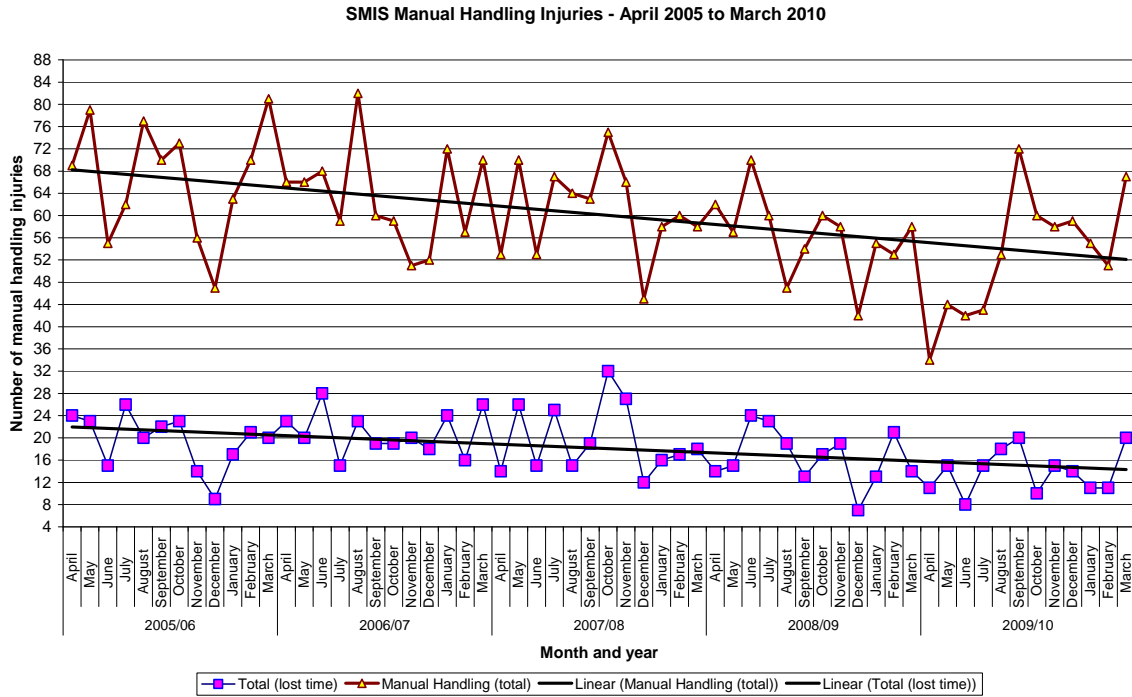
Health issues for rail industry mainly related to general wellbeing including health and lifestyle, and sickness absence management

| Health issue | Notes |
|---|---|
| Shift work issues | Fatigue, sleep disorders, and possible links to higher rates of heart disease. |
| Hypertension Cardiovascular problems | Encouraging 'wellness' through better diet and exercise will help to prevent certain types of occupational health problems such as obesity and related illnesses. |
| Back pain. | |

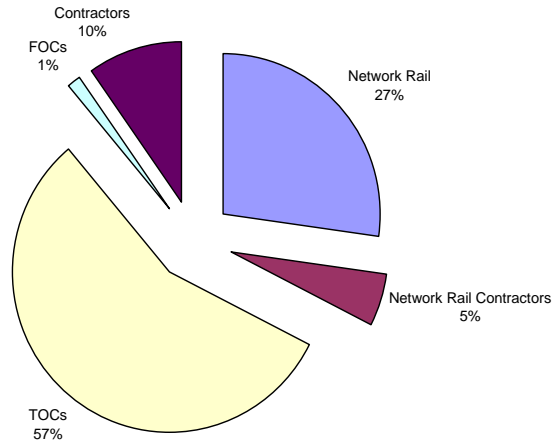
Appendix 3

SMIS data for mainline railway 1 April 2005 to 31 March 2010

3.1 Manual handling injuries



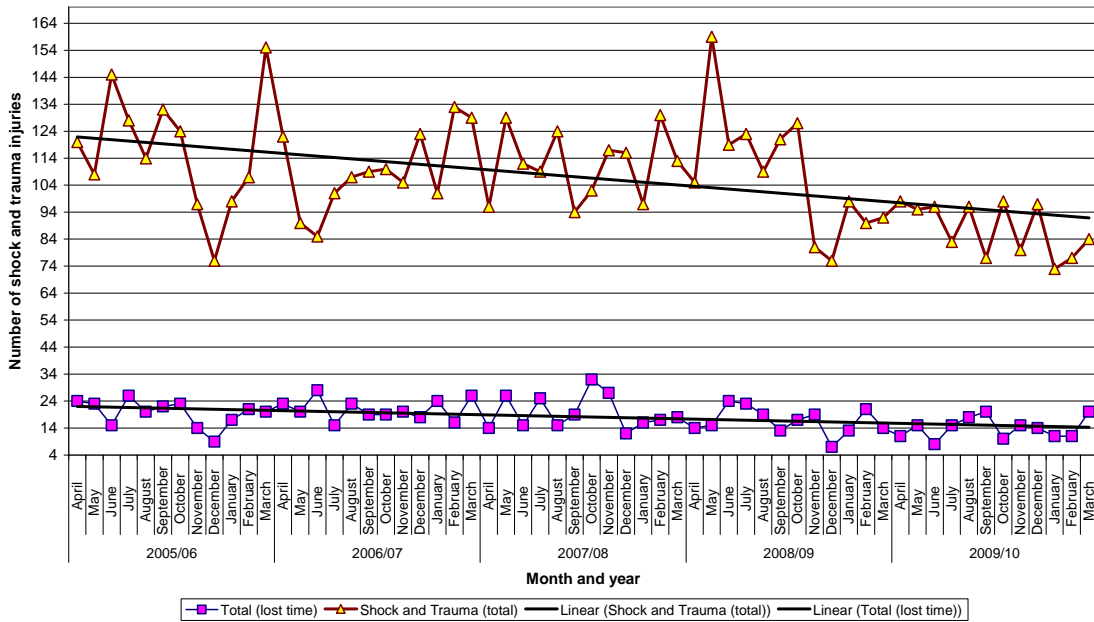
Total SMIS manual handling injuries April 2005 to March 2010 by dutyholder



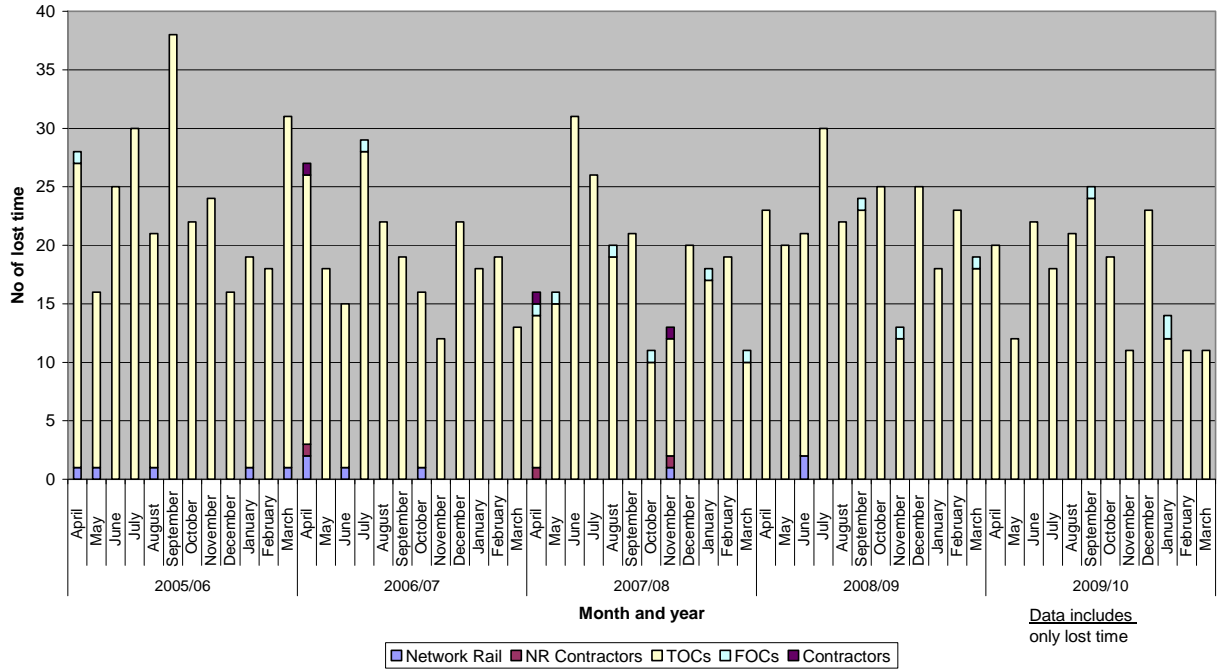
Data includes:
no lost time, lost
time, not entered

3.2 SMIS shock/trauma incidents

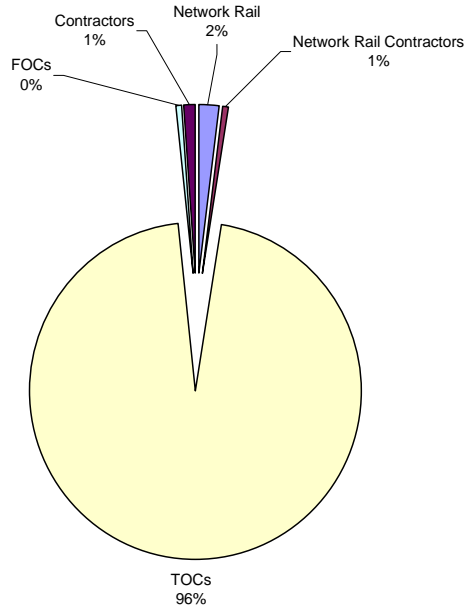
SMIS shock and trauma injuries - April 2005 to March 2010



SMIS shock and trauma injuries by dutyholder group

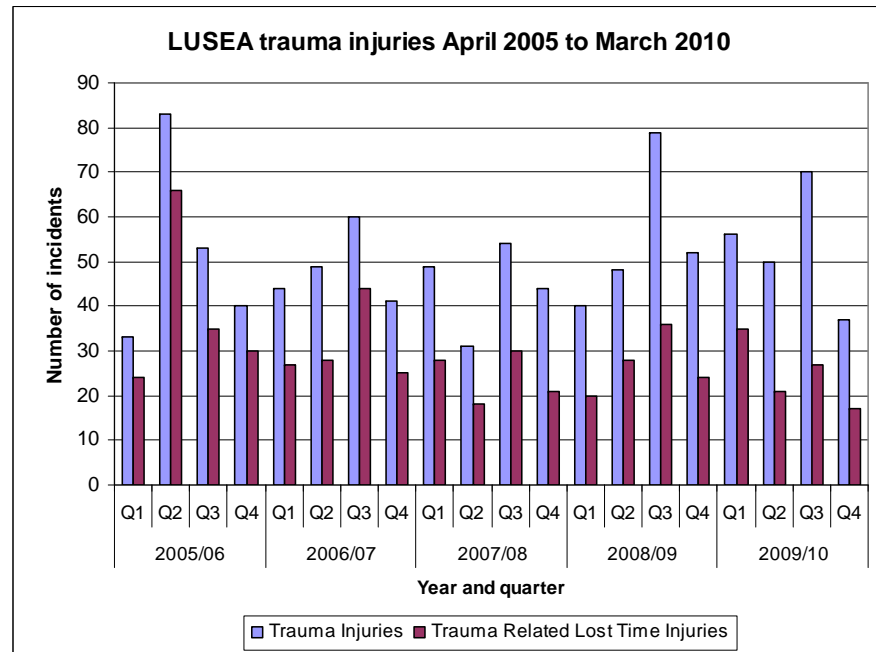
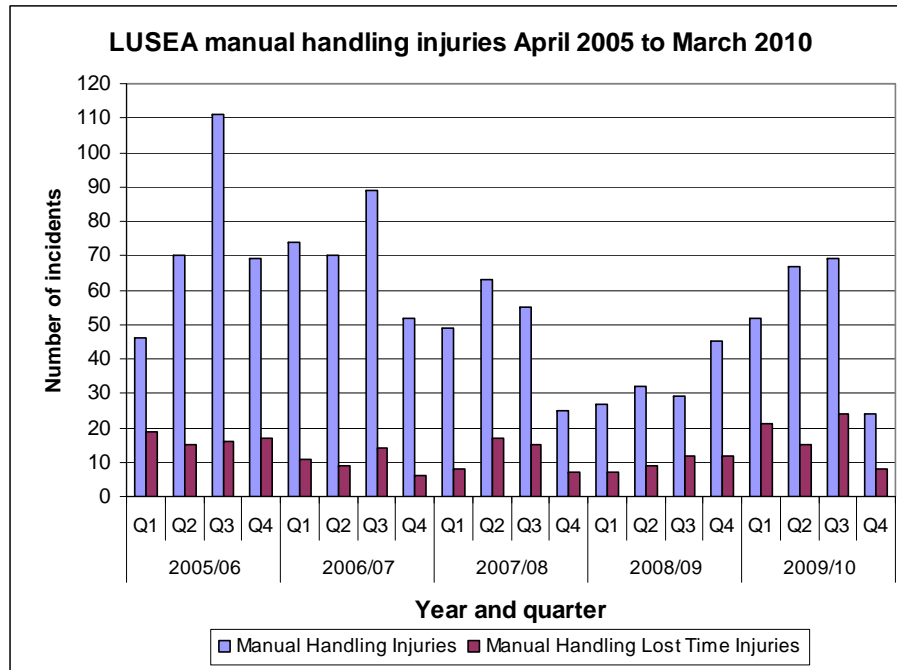


Total SMIS shock and trauma injuries covering April 2005 to March 2010 by dutyholder group



Appendix 4

LUL LUSEA data for 1 April 2005 to 31 March 2010



Appendix 5

Copy of baseline survey request sent to 93 rail dutyholders by ORR December 2010



ORR request for baseline data on occupational health

Please provide responses for 1 April 2009 to 31 March 2010 only

Infrastructure contractors to provide information for your employees working in the rail sector (rather than in general construction)

| Measure A Incidence of work related ill health | Response |
|--|----------|
| A1- total number people employed on 31 March 2010 | |
| A2- total number of working hours for all employees between 1 April 2009 and 31 March 2010 [please see explanatory note below on providing a best estimate] | |
| A3- total number working hours lost due to <u>work related ill health</u> between 1 April 2009 and 31 March 2010 [please see explanatory note below on providing a best estimate] | |
| Measure B Insurance claims (input to cost of ill health) | |
| B1 - total number of health related employers' liability insurance claims submitted/lodged between 1 April 2009 and 31 March 2010 | |
| B2 - total value of health related employers' liability insurance claims settled between 1 April 2009 and 31 March 2010 (even if claims were submitted before 1 April | |

| | |
|--|--|
| 2009) | |
| Measure C Visible leadership on occupational health | |
| C1 - Do you report on <u>occupational health issues</u> in your Annual Report and accounts against quantitative targets? | |
| C2 - Do you report on public and worker safety issues in your Annual Report and accounts against quantitative targets? | |
| C3 - Do you report on occupational health in any other report aimed at the public/shareholders, for example Corporate Social Responsibility Reports? | |
| Note 1: It would be helpful if you could attach relevant extracts on health issues from your latest company reports. | |
| Note 2: Please could you provide your contact details in case we need to get back to you to discuss your response. | |

Explanatory note on measures A2 and A3

Please provide your best estimate of hours worked (and lost due to work related ill health) based on the 'typical' working pattern for the majority of your workforce. Apply a 'standard' average working hours figure to all your employees, regardless of individual contractual differences across job types or grades, e.g. 100 employees x 35 hour 'standard' working week x 45 week 'standard' working year = 157 500 hours)

Thank you for providing this information

If your company does not gather this information, please say so.

Please email your response to folusho.amusan@orr.gsi.gov.uk or alternatively return this completed form in the attached postage - paid envelope to:

Folusho Amusan
Information and Analysis Team
Office of Rail Regulation
One Kemble St
London WC2B 4AN

For any general enquiries on ORR's baseline occupational health data request, please contact Sharon Mawhood on 0845 301 3352, or alternatively email sharon.mawhood@orr.gsi.gov.uk

Appendix 6

Summary of key baseline indicators on occupational health for 2009/10 based on dutyholder survey returns

| Indicators on occupational health for 2009/10 and 2014/15 | 2010 baseline position (1 Apr 2009 - 31 Mar 2010) |
|--|--|
| <p>A measure of incidence of work related ill-health</p> <ul style="list-style-type: none"> proportion of available working time lost due to work related ill health, as reported to ORR by key dutyholders | <p>1.4% total hours worked lost due to work related ill health (total 3.5 million hours)</p> |
| <p>A measure of <i>cost of work related ill health</i></p> <ul style="list-style-type: none"> number and value of employers' liability claims related to occupational ill health, as reported to ORR by key dutyholders | <p>Total value of claims settled for work related ill health = £2.76 million</p> <p>Number of claims submitted for work related ill health = 336</p> |
| <p>A measure of <i>visible leadership on OH</i></p> <ul style="list-style-type: none"> proportion of rail companies who report publicly (e.g. to their shareholders) on OH against quantitative targets, as reported to ORR by key dutyholders | <p>15% respondents report on ill health against quantitative targets in annual report and accounts, compared with 46% who do so for worker and/or passenger safety</p> |
| <p>A measure of level of reporting under RIDDOR</p> <ul style="list-style-type: none"> number of reports of prescribed diseases (under Schedule 3 to RIDDOR) received by ORR. | <p>4 cases (1 dermatitis, plus 3 HAVS)</p> |
| <p>A measure of <i>industry awareness on health</i></p> <ul style="list-style-type: none"> number of visits on ORR's web pages on health [covers main OH page and linked health pages over approximately 6 months, from 6 September 2010 when main ORR health page went live, until 28 Feb 2011] | <p>849 visits</p> <p>22% increase in last 3 months (476) compared with first 3 (382), as more health pages added</p> <p>8.5% of visit rate to ORR main health and safety regulation page</p> |



Office of Rail Regulation
One Kemble Street
London
WC2B 4AN

T: 020 7282 2000

F: 020 7282 2040

www.rail-reg.gov.uk

© Crown copyright 2011

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence. To view this licence, visit <http://www.nationalarchives.gov.uk/doc/open-government-licence/> or email: psi@nationalarchives.gsi.gov.uk.

Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.