9. Occupational health

ORR’s strategy for occupational health

ORR will continue its 2014-19 Health Programme “Making It Happen” because we believe the industry as a whole can significantly improve its worker health management performance and secure the economic benefits that arise from better health management.

In particular, ORR will over the next 5 years want to see duty holders improve the health of their workers by striving for:

- excellence in health risk management;
- greater engagement with employees and others;
- better efficiency and reduced costs from people suffering work-related ill-health; and
- enabling improvements in competency, information, co-ordination and control.

More details on the 2014 -19 Health programme can be found at:

We want to see all train, freight, tram, and heritage operators as well as infrastructure managers and railway contractors:

- Proactively managing health risks: from hand-arm vibration, stress, musculoskeletal disorders, have effective risk assessments with controls and solutions on how the health risk will be managed, provide health surveillance and ensure RIDDOR reporting is working;
- Implement a health policy: with senior management commitment, identifiable resources, and driving continuous improvement;
- Sign up as partners to the Department of Health Responsibility Deal;
- Drive innovation in health risk management: by better use of specialist resource, implementing NICE guidance, preventing cardiovascular disease or promoting physical activity;
- Pursue the activities of the RSSB Industry Roadmap;
- Pursue early intervention on musculoskeletal disorders and ensure that trauma management is consistent with good practice;
- Improve the use of good health data, develop trend & comparators;
- Work openly with trade unions;
- Share good practice on what works via the ORR website;
- Be aware of costs, “at least as good as comparators”;
- Raise awareness and competence on health risk assessment, particularly among front line managers and supervisors; and
- Raise the standard of passenger experience and satisfaction on perceptions of health risks and cleanliness.
Introduction

1. Occupational or work-related ill health describes those conditions that are caused, or made worse by work. When we use the term “health” we mean three things:

   - **the effect of work on health** – for example the adverse effects of exposure to dust, asbestos or work-related stress;

   - **fitness for work** – this includes people’s fitness for tasks and covers for example, drug and alcohol management, medical assessments and capability for work; and

   - **general well-being** – this includes health and life-style, rehabilitation.

2. Worker health has historically had a far lower profile than worker and passenger safety in the rail sector. However, our experience shows that occupational ill-health is an area of risk that must be better managed by all railway duty holders (including for new projects such as Crossrail and HS2), not least because we have found evidence of failure to meet minimum legal requirements across the industry.

3. Data from the Health and Safety Executive (HSE) in ORR’s 2010 overview of work related ill health in the rail industry indicate that railway workers report a higher incidence of work related ill health than other transport and also construction workers, including for cases of respiratory disease and stress/mental health problems. Updated HSE data to 2013/14 will be reported in our 2014 position paper on health risk management in the rail industry, to be published in June 2015. However, interim data from HSE to 2011/12 again show an increased incidence of work related ill health among rail workers when compared with the wider transport sector.

What success looks like…….a more proactive management approach

A health risk management system that includes:

- Health policies and clear objectives – documented processes;
- Health risk management – risk assessments, surveys, reporting;
- Health assurance – data driven, audits, performance reviews;
- Health promotion & employee engagement e.g. health fairs, communications, training.

Leadership and public commitment to ill-health reduction;
Meets legal compliance and striving for excellence;
Rail companies informed on the cost of work-related ill-health;
Credible, informed, engaged active service-provider – internal/external;
Collaboration and working together across industry including trade unions;
Raised awareness at managerial/supervisory level and active role for line managers;
Pride and communicating to others what works!
4. ORR has published occupational health data for the rail industry on the National Rail Trends (NRT) data portal. We have updated industry data on manual handling and shock-trauma incidents for 2013-14, and added two new reports to show the overall trends in these data for the mainline over the past eight years. Overall, the data show continuing downward trends in manual handling and shock-trauma incidents, including those resulting in lost time. In 2013-14, however, there was a slight upturn in the number of shock-trauma incidents.

5. We have also published data for 2013-14 on occupational diseases reported to ORR under RIDDOR 2013, see Figure 1. RIDDOR 2013 replaced RIDDOR 2005 and saw the long-standing Schedule 3 replaced by Regulations 8 and 9 requiring reports to the enforcing authority for just six short latency diseases and occupational cancers. The six short latency conditions are: carpal tunnel syndrome, cramp in the hand or forearm, Hand Arm Vibration Syndrome (HAVS), legionella, leptospirosis and occupational asthma.

<table>
<thead>
<tr>
<th>Disease Type</th>
<th>2010-11</th>
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<td>Tendonitis or tenosynovitis in hand or forearm</td>
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</table>

Figure 1: Number of RIDDOR reports from 2010-2014, from ORR

6. In June 2011, ORR published its review on work related ill-health in the rail sector in 2010. In June 2015, ORR will be publishing a review paper for 2014, the final year of our first health programme and this will include further detail on the extent of ill-health in the rail sector.

7. Research carried out by the Rail Safety and Standards Board (RSSB) in 2013 showed that the rail industry should have a proactive approach to reduce the onset of preventable sickness. Their analysis calculated that the total annual cost to the industry of impaired health, which combines sickness absence and presenteeism, is around £790M. By comparison, the total spend on occupational health and wellness programmes is around

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£24M each year. Thus, for every £13 lost to sickness absence amongst employees in the railway industry, only £1 is spent on supporting their health. Put another way, for every £1 spent on better health management, up to £13 could be saved in avoidable costs from ill-health.

8. In April 2014, ORR published its second occupational health programme following extensive consultation workshops with the rail industry. This includes an extensive number of activities structured under the “4E” themes. ORR will over the next 5 years want to see railway companies improve the health of their workers by striving for:

   a) **Excellence** in health risk management;

   b) greater **Engagement** with employees and others;

   c) **Efficiency** and reduced costs from people suffering work-related ill-health; and

   d) **Enabling** improvements in competency, information, co-ordination and control.

9. The **2014-19 programme** picks up the cross-government agenda on health and engagement and encourages rail companies to become partners of the Department of Health led Responsibility Deal. It recognises that some of the traditional ways of working on the railway require specialist intervention in order to develop better working equipment and practices.

10. In 2014 ORR published position statements on three key areas of ill-health for the rail sector: stress and mental health, HAVS and asbestos management that set out in more detail our on-going strategy for addressing these topics with stakeholders.

11. A major improvement across the industry is the publication of company strategies and action plans for addressing health risk. RSSB published the industry road-map, Network Rail its Health and Wellness strategy and 6-point action plans, as well as many of the train or freight operators taking a more strategic view on health risks.

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3 More information can be found at https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&cad=rja&uact=8&ved=0CCMQFjAA&url=https%3A%2F%2Fresponsibilitydeal.dh.gov.uk%2F&ei=95wFVNKhijYntaLqXgK&usg=AFQjCNG6_nr5S1lyuXHjeElEqdW78-o0Pg&bvm=bv.74115972,d.d2s.


Our view of the industry

Mainline

Compliance with Control of Substances Hazardous to Health (COSHH)

12. We commonly find weaknesses in assessment and control of hazardous substances by mainline companies. Inspectors have challenged operators’ systems of work and control of diesel exhaust emissions, ballast dust, welding fume, and isocyanate-based paint fumes. There is evidence of too much reliance on the use of bought-in packages to assess certain risks to health when companies could achieve more effective results if their own competent staff took ownership of the assessment and risk management process.

13. We have found failures to identify the risk associated with the by-products from an activity (e.g., metal fumes when welding). Such a lack of detailed assessment is significant because it inevitably leads to inadequate controls.

14. We have also seen some good practice in the management of hazardous substances. The Ballast Dust Working Group brings together companies across the sector and is led by Network Rail. It has done good work to promote better practice in the management of ballast dust but our inspectors still find inadequate management at some sites they visit. Clearly, “making it happen” on the ground at work sites is the challenge that mainline companies need to address.

Manual handling

15. Industry data for the mainline shows a downward trend in the reported manual handling injuries over the last five years. There were 2618 reports in 2013/14, of which almost 34% resulted 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 – 2013/14 saw 49% fewer lost time incidents reported into SMIS than in 2005.

16. ORR has worked with the industry to develop risk assessments both for taking wheelchairs and also catering trollies on and off trains. Enforcement Notices were served in relation to the handling of concrete troughs by track maintenance workers, where individual pieces over 46 Kg in weight were being frequently handled.

Hand Arm Vibration (HAVS)

17. From a total of 79 RIDDOR occupational disease cases reported to ORR in 2013/14, 76 were HAVS, with a further two cases of carpal tunnel syndrome linked to use of vibrating tools. Of the 75 HAVS cases reported to us by Network Rail, around three quarters were newly diagnosed cases or those where symptoms had significantly worsened; a number resulted in workers being declared permanently unfit for work with vibrating tools. The remainder were repeat diagnoses of existing stable HAVS cases, which had not been previously reported to us under RIDDOR.
18. The increase in HAVS cases reported under RIDDOR since 2010 (302 cases) reflects the marked improvements in HAVS health surveillance arrangements on the mainline, and we expect to see this trend continue in the short term as health surveillance and reporting systems further improve. This data shows the value of health surveillance in identifying vulnerable workers early, but also the need for better risk assessment and more robust control of exposure to hand arm vibration among staff working on mainline infrastructure maintenance.

19. As set out in the HAVS position paper, in order for the rail industry to achieve consistent compliance and move towards excellence in proactively managing HAVS risk, we would expect to see:

- the hierarchy of control of risks adopted and properly used, with priority given to elimination and technical controls, rather than organisational controls such as job rotation;
- monitoring and assurance, including internal audits, within railway companies to check and demonstrate that the risks are being properly managed;
- eliminating or minimising HAVS risk considered at the design stage and during work planning, and increasing evidence of innovation, for example elimination of HAVS risk by more use of remotely operated machines;
- clients setting out clear expectations on HAVS management by their contractors, and active monitoring and assurance on HAVS throughout the supply chain;
- the procurement process for purchase or hire of tools actively seeking use of lower vibration tools;
- where HAVS exposure cannot be eliminated, workers’ exposures are effectively managed to the lowest level reasonably practicable, including, for example, targeted use of continuous vibration monitoring equipment for higher risk tasks to provide assurance that controls remain effective; and
- adequate health surveillance arrangements are in place to detect early signs of disease in workers at risk of HAVS and, if they reveal ill health, trigger arrangements to prevent further harm. As well as protecting and managing symptoms in individual workers, collective health surveillance results are used to identify groups of workers or specific tasks at higher risk, and put in place improved risk controls.

20. ORR will:

- encourage those duty-holders engaged in maintenance or renewals of premises (includes buildings, rolling stock or infrastructure) to develop a health policy which specifically addresses HAVS risk;
• carry out targeted inspections on management of HAVS risks, particularly on infrastructure maintenance and renewals, using ORR’s railway management maturity model (RM3) - health to assess key elements of management capability; and

• continue to track progress by Network Rail, at central and route level, in delivering priority work on HAV under their Health and Wellbeing Strategy and action plan.

Stress

21. Although industry datasets do not capture all incidences of work related stress (arising from 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, are a marker for work related stress.

22. Over 716 shock/trauma incidents are being reported into the industry’s data collection system (SMIS) annually. About 34% result in lost time from work. The number of incidents reported has slowly declined since 2005/6.

23. ORR’s stress position statement advocates a primary focus on work and how it is carried out to prevent harmful levels of stress. A secondary focus should be on the individual and the need for that individual to have adequate coping skills. There is a third level of focus, which is on support after a traumatic event. The resource devoted to each of these three areas should be balanced, with adequate priority given to prevention. ORR collaborated with RSSB Health and Wellbeing Project to film a video case study on how to proactively manage stress.6

Asbestos

24. The Control of Asbestos Regulations 2012 carried forward requirements previously contained in the 2006 asbestos regulations. Licensed asbestos work will continue to be enforced by HSE, non-licensed work by ORR. As stated in the Asbestos position paper all employers in the rail industry must:

• know the location and condition of any asbestos containing materials (ACMs) on their premises;

• share this information with anyone whose work may be liable to disturb ACM;

• work to prevent exposure to those ACMs; and

• adequately manage any risks of accidental asbestos exposure.

25. The legal requirement for an asbestos plan and survey has not been complied with by some rail companies, and ORR has served Enforcement Notices when this has been found.\(^7\)

26. ORR will:

- ensure that rail duty holders’ health policies specifically address any risks from asbestos containing materials in railway premises, including buildings, infrastructure, and rolling stock;
- carry out targeted inspections on management of risk from asbestos, using RM3-health to assess key elements of management capability;
- continue to track progress by Network Rail, at central and route level, in delivering priority work on asbestos under their Health and Wellbeing Strategy and action plan;
- work collaboratively with the minor railways and rolling stock leasing companies (ROSCOs) to further build understanding of, and check compliance with, the exemptions on the sale or transfer of rolling stock containing asbestos;
- continue work with Network Rail to improve visibility of their health management measure on potential asbestos exposures, via Network Rail’s License and published Annual Return;\(^8\) and
- continue to raise awareness of any changes to legal requirements, guidance and good practice in managing asbestos, via our web site, quarterly update on health, and our periodic health e-bulletin.

**Industry activity**

27. In 2013, Network Rail introduced its Health and Wellbeing Strategy – Everyone Fit for the Future with a focus on six key areas: health data and management information, hand-arm vibration syndrome, occupationally-related respiratory conditions, mental well-being, musculoskeletal conditions and healthy facilities.

28. We know that many other mainline rail companies have health management strategies in place, with targeted health management programmes. Amongst train operating companies (TOCs), for example, work was carried out to produce guidance on legionella control. First ScotRail worked with ORR and published a case study on the measures taken to control legionella associated with train washes in depots.\(^9\)

29. The trade unions have been supportive and welcomed the ORR Health Programme and are active in providing advice and information for their membership.

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\(^7\) Details about ORR enforcement notices can be found either on our [website](#) or on the [ORR Public register](#).


\(^9\) Details of our health case studies can be found on the [ORR website](#).
30. RSSB has published the industry’s health and well-being roadmap and a policy group has been formed to lead activities to implement it. An annual industry health conference is being organised. RSSB’s Health Policy Group is exploring opportunities to extend its work to include facilitating collaboration and sharing of good practice among its Railway Group Members; improve the collection, analysis and use of health data (including creating a health risk model for the mainline industry); and setting out of industry strategic objectives on both occupational health and public health.

31. We believe that with the support of its members, RSSB will sustain the good work it has done so far in supporting and improving the health and fitness of the industry’s workforce and in doing so, reduce the significant costs and minimize the inefficiencies associated with work-related ill health.

**ORR activity**

32. Network Rail’s overall level of occupational health performance continues to require significant improvement. National leadership and commitment to occupational health now appears strong, with the development of a clear corporate strategy and implementation programme. At route level and within project work ORR’s experience currently is that there remains a lack of ownership, responsibility and commitment for delivering better occupational health performance. Network Rail has recognised in its strategy and implementation programme that more needs to be done to deliver solutions at route level, and has set out a framework for achieving this.

33. Our primary focus with Network Rail will continue to be on managing the risks from HAVS, manual handling and asbestos (as set out in the specific paragraphs above). However we will also continue to do proactive work on other COSHH issues such as the use of paints containing isocyanates and ballast dust on construction sites, and will monitor and encourage Network Rail’s progress with implementing and embedding its occupational health strategy and delivery of solutions at route level.

34. Our focus with the TOCs will continue to be handling of on-board trolleys and wheelchair assistance, and securing compliance with the requirements of COSHH e.g. risk assessments for changing engine oil, risks from diesel fume, use of isocyanate based paints, washing of train under-frames. Greater use of the RM3-health will be encouraged by the train and freight operators in driving improvement in some managerial components for a range of health risk. Other issues, e.g. compliance with the Display Screen Equipment Regulations, 1992 for assessments in ticket offices will be addressed during routine inspection activity.

35. ORR will seek to influence discussions within ERA and the European Commission to provide more clarity and consistency to the requirements for medical assessments of train drivers in Annex II of the Train Driver Licensing Directive.

36. Three areas of health have been defined as requiring a “mandatory investigation” by ORR health and safety inspectors when reported to us. These are legionellosis (legionnaire’s
disease) where the source of infection may be on a railway location enforced by ORR; any suspension from work of a worker due to high blood lead levels; and any report of a case of occupational asthma resulting from exposure to a “respiratory sensitizer”, such as isocyanate paint.

37. ORR has updated its RM3 to give the benchmark for excellent management of health risks.  

38. ORR is working on developing a dashboard of indicators covering the maturity of health risk management in the rail sector.

39. Our occupational health programme now includes a comprehensive suite of activities to identify and promote best practice in occupational health management.

Summary

Workforce occupational health is an area that we intend to pursue with duty holders. The risks are widespread and varied and we have already identified examples of good practice as well as duty holders who are not complying with legal minimum standards. We are encouraged by the growing awareness and activity in the area of occupational health and stress the business advantages of properly addressing the risks.

London Underground

40. London Underground (LU) is generally recognised as being at the forefront of the industry on health related matters, particularly in its rehabilitation interventions for lower back pain, and its efforts on stress (e.g. stress reduction workshops and associated programme for stress, anxiety and depression). It has been particularly proactive in demonstrating the considerable 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.

41. Occupational health issues on LU are similar to those on the mainline railway albeit exacerbated by the need to work extensively underground and to access such work via stations, a significant number of which were created in the Victorian era. Consequently the main risks are from manual handling, HAVS and noise which are a particular issue in maintenance due to the constricted size of the working environment.

Industry activity

Manual handling

42. LU data shows a decrease in manual handling injuries between 2011/12 and 2013/14, with a 39% reduction in the total number of handling injuries and a 41% reduction in lost time

injuries. Over this period LU used initiatives aimed at preventing MSDs and reducing absence times, including lower limb classes and lower back pain physiotherapy services. 2010/11 saw a marked upturn in the number of manual handling injuries reported in LU, with a 42% increase on those reported in 2009/10. This increase in absolute numbers may not reflect an actual increase in manual handling incidence rates, as 2011 saw Tube Lines employees transferred to LU, increasing the size of the maintenance workforce (a high risk group) significantly.

**Workforce Trauma**

43. LU data shows 761 reported cases of trauma over the five year period from 2009/10 to 2013/14; 52% of these resulted in lost time injuries. The number of reported trauma events in 2013/14 with no lost time was almost half the number compared to five years previously in 2009/10; the number of more serious lost-time incidents had also decreased, by over 21% in the same period of time. Since 2004/05 LU has implemented a number of stress management initiatives across the company aimed at both post-traumatic stress support and building personal resilience. LU is one of the industry leaders for its stress reduction workshops and associated programme for stress, anxiety and depression.

**ORR activity**

44. Our experience of the good occupational health arrangements at London Underground has led us to conclude that it should not be a priority for our proactive inspection programmes. Instead we monitor current activity and investigate selected incidents and complaints from the workforce on occupational ill health issues.

**Heritage**

45. Evidence gathered from our sample inspections of the heritage sector found a lower than expected awareness of some specific ill-health management required by law. There were particular weaknesses in record-keeping: for example, flaws in maintenance records for local exhaust ventilation equipment, failings in maintaining registers on the possible location of asbestos, and some examples of inadequate control for exposure to antimony and lead used in small-scale metal-casting activities, and risks from manual handling, for example when handling sleepers.

**Industry activity**

46. Evidence from our sample inspections found that in general ill-health risks from worker exposure to hazards such as noise, vibration, and hazardous substances were controlled in the heritage sector because worker exposure was limited in scale due to a limited duration of exposure and the working methods used: for example, hand-sanding and painting rather than grit-blasting and paint-spraying.
ORR activity

47. We have identified some weaknesses in the way skin-disease causing hazardous substances such as oil, grease, and man-made mineral fibres used in boiler- lagging were managed; and in the management of worker exposure to noise and vibration (HAVS-related risks), particularly during the maintenance and repair of vehicles. These are issues we will continue to monitor and address as part of routine inspection work.

Our conclusions on occupational health

Since the start of our 2010 occupational health programme, ORR has positively engaged with rail companies, stakeholders and trade unions and has noted that many rail companies have improved their proactive management strategies and action plans.

Health risk management, particularly compliance with the requirements of the COSHH Regulations 2002 and Control of Asbestos Regulations 2012, have been weak and (to date) we have served 24 enforcement notices for failures associated with employers not controlling risks to their employee’s health. This illustrates that we are driving companies to be as good at health risk management as they are at safety risk management and aim towards excellence in both.

Currently worker health issues have a lower profile than worker and passenger safety issues, but some companies have recognised the costs and benefits of improving their management of occupational health. Some companies have produced and shared case studies to show the financial benefits of specific occupational health management improvement initiatives. We seek to build an evidence base of these case studies because we believe occupational health improvements can provide value for the money invested and will act as a powerful driver for improvement. However, we believe there is significant scope for the rail sector to make quicker and better use of established good practice and well-tested health management tools.

We will continue to influence the industry to secure sustained cross-industry leadership at senior management level on health issues and seek to ensure that their message is understood and applied throughout organisations. Our quarterly occupational health updates are instrumental to this approach. We plan to continue this through our health programme for 2014-19.
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<tr>
<th>Acronym</th>
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