Formal Inquiry Recommendations
Report 2003/04
Period 1 April 2003 to 31 March 2004
Formal Inquiry
Recommendations
Report 2003/04
Period 1 April 2003 to 31 March 2004

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Executive summary

Learning from accidents is recognised as a vital component of the rail industry’s overall safety management system. This year’s report incorporates commentary and analysis as well as reporting the status of each recommendation.

In 2003/04 14 formal inquiry reports were issued with 164 recommendations (of which 47 recommendations were from the Southall East Junction report), compared to 10 reports and 72 recommendations in 2002/03. The recommendations have been categorised into the areas of the industry’s safety management system to enable the analysis that follows. Data has only been collated in this format since 2002/03.

Although the number of recommendations made has risen there is a consistency in the pattern year on year, suggesting the need for greater focus on the following specific management system areas:

- **Rules, standards and instructions** (43 recommendations): suggesting a need for better operational level prescription, company standards, specifications, procedures and instructions. Emphasis is on duty holders reviewing prescription applicable to their activities (particularly maintenance activities). There are two recurrent themes: i) delivering a safe and reliable infrastructure and ii) improving the safety of the workforce undertaking maintenance.

- **Infrastructure asset assurance** (42 recommendations): suggests that improved arrangements are needed to enable maintenance of the infrastructure in a safe condition and control risks to staff.

- **Competence management** (37 recommendations): suggesting a need to improve competence management systems to achieve prescribed delivery and track worker safety objectives. It also indicates a need to address wider cultural issues to promote behaviours in line with the formal framework.

Inadequate planning was a common underlying cause and was a significant driver behind recommendations in all categories.

Actions undertaken to address underlying systems have arisen from industry change and recommendations. Some organisations’ responses to recommendations do not demonstrate their having considered the underlying issues, particularly in relation to transferable lessons and recurring issues. Where this has been identified Rail Safety and Standards Board (RSSB) has raised the issue with the Railway Group member (RGM) concerned.

Some duty holders have effectively engaged their supply chain in the delivery of actions in response to formal inquiry recommendations.

RSSB seeks to continuously improve the formal inquiry process including increasing the effectiveness of outputs resulting from recommendations by collaborating with different segments of the rail industry, briefing inquiry chairmen and participants on good practice in relation to conducting formal inquiries and developing recommendations.

Actions have been taken to address the problems that have arisen with the safety management information system (SMIS) application, the system used for recording and extracting responses to recommendations.

RSSB monitors responses by duty holders to individual recommendations and will issue another summary report next year that builds on the analytical foundation in this year’s report.

The period covered by this year’s report is in line with the Constitution Agreement but not aligned with the Annual Safety Performance Report (ASPR), which is for the calendar year. Permission will be sought to align the two in future.
1. Introduction

On 1 April 2003 RSSB was formed with responsibilities that include the tracking of recommendations as set out in Railway Group Standard (RGS) GO/RT3473. This document is intended to demonstrate the progress that the industry is making in responding to recommendations from formal inquiries and to inform the industry of key issues arising from reports issued in the period April 2003 to March 2004 and builds on previous reports issued by Railway Safety\(^1\).

Learning from accidents is a vital component of the overall industry safety management system. Unlike other areas of management systems that highlight risks (such as risk assessment techniques, monitoring, audit, confidential incident reporting etc) it is based on concrete evidence of how risks or hazards led to accidents and significant loss.

The formal inquiry process provides an independent view of the causes of the more serious accidents that occur on Network Rail controlled infrastructure, without apportioning blame or liability, and identifies opportunities to address specific non-compliances or to consider changes to systems to improve the management of risks.

The effectiveness of the process depends on the recognition that the way to make real advances in managing risks is through addressing the underlying systems that are designed to control them.

Between February 2002\(^2\) and 31 March 2004, 24 formal inquiry reports were published, containing 236 recommendations\(^3\). Of those, the 14 reports published in the period 1 April 2003 to 31 March 2004 contained 164 recommendations.

A further 55 recommendations had been carried over from the previous period for tracking by Rail Safety and Standards Board (RSSB).

Under the terms of the Constitution Agreement the report must also be submitted to the Office of the Rail Regulator (ORR) and Health and Safety Executive (HSE).

The basis of this document is the information reported into the safety management information system (SMIS) database by RGMs. The report indicates the status of recommendations as at the time of data extraction in late April 2004. However RSSB has an ongoing dialogue with some RGMs over some responses and progress of actions reported here.

2. Objectives of this report

- Report the progress of those recommendations that have arisen in the 12 months to 31 March 2004.
- Report the progress to recommendations carried over from the previous period (1 April 2002 to 31 March 2003) under RGS GO/RT3473.
- Provide categorisation, analysis and high-level synopsis relating to the information arising.

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1 Railway Safety was a not for profit company owned by Network Rail, that ceased operation on 31 March 2003 with the transfer of its activities to RSSB.
2 Railway Group Standard GO/RT3473 came into force in February 2002.
3 Figures do not include the Potters Bar provisional report into the derailment that occurred on 10 May 2002. A final report into this accident is expected summer 2004.
3. Findings

3.1 Progress against 2003/04 recommendations
This section summarises the industry’s progress towards implementing recommendations arising from formal inquiry reports published in the year from 1 April 2003 to 31 March 2004. The table in figure 1 lists the reports issued in the period and describes the type of accident to which each report pertains. The table notes the number of recommendations per report, indicating the number accepted and of those how many have been completed. (See also Appendix 1)

<table>
<thead>
<tr>
<th>Formal Inquiry</th>
<th>Event Description</th>
<th>Event Date</th>
<th>Recs Issued</th>
<th>Total Recs</th>
<th>Accepted</th>
<th>Complete</th>
<th>Carried forward</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHIREBROOK JUNCTION</td>
<td>Signalling irregularity, points mechanism fault</td>
<td>05-Sep-02</td>
<td>14-Apr-03</td>
<td>13</td>
<td>13</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>CHICHESTER</td>
<td>Train collision</td>
<td>03-Oct-02</td>
<td>06-May-03</td>
<td>12</td>
<td>10</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>CHEDDINGTON</td>
<td>Contractor fatality</td>
<td>20-Jun-02</td>
<td>06-Jun-03</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>SOUTHALL EAST JUNCTION</td>
<td>Derailment</td>
<td>24-Nov-02</td>
<td>08-Jul-03</td>
<td>47</td>
<td>39</td>
<td>12</td>
<td>27</td>
</tr>
<tr>
<td>STEWARTS LANE VIADUCT</td>
<td>Train failure</td>
<td>07-Feb-03</td>
<td>09-Jul-03</td>
<td>8</td>
<td>8</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>KINCLAIR VIADUCT</td>
<td>Contractor injury</td>
<td>13-Feb-03</td>
<td>06-Aug-03</td>
<td>3</td>
<td>3</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>CHELFORD</td>
<td>Contractor fatality</td>
<td>23-Feb-03</td>
<td>25-Jul-03</td>
<td>11</td>
<td>11</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>ABERYSTWYTH</td>
<td>Derailment</td>
<td>12-May-03</td>
<td>21-Oct-03</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>GLEN DOUGLAS</td>
<td>Train collision</td>
<td>12-Jun-03</td>
<td>15-Dec-03</td>
<td>11</td>
<td>11</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>MARSTON GREEN</td>
<td>Contractor injury</td>
<td>01-Jul-03</td>
<td>17-Feb-04</td>
<td>10</td>
<td>4</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>HUDDLESFORD</td>
<td>Derailment</td>
<td>15-Jul-03</td>
<td>06-Jan-04</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>KING'S CROSS</td>
<td>Derailment</td>
<td>16-Sep-03</td>
<td>31-Jan-04</td>
<td>17</td>
<td>11</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>OAKLEY</td>
<td>Contractor fatality</td>
<td>07-Aug-03</td>
<td>08-Mar-04</td>
<td>9</td>
<td>7</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>EARLSWOOD</td>
<td>Derailment</td>
<td>30-Jun-03</td>
<td>31-Mar-04</td>
<td>4</td>
<td>4</td>
<td>-</td>
<td>4</td>
</tr>
</tbody>
</table>

Figure 1: summary of progress made by the industry in 03/04 period against recommendations issued in the same period

3.2 Recommendations not yet published
By the end of the period to 31 March 2004, eight other formal inquiries had been convened but had not yet produced reports. The recommendations from these reports will be tracked once published.

3.3 Progress against 2002/03 recommendations in 2003/04
This section of the report indicates the progress made by the Railway Group in implementing recommendations made in the previous period.

The table in figure 2 lists the formal inquiry reports issued in the period 1 April 2002 to 31 March 2003, registers the number of recommendations per report and how many were accepted. It indicates the number of recommendations completed in the
period 2002/03 and the progress made in 2003/04 in terms of numbers of recommendations closed in that period. Shading is used to show where actions against all accepted recommendations in a report have been recorded as complete (see also Appendix 2).

<table>
<thead>
<tr>
<th>Formal Inquiry</th>
<th>Event</th>
<th>Date</th>
<th>Recs Issued</th>
<th>Total Recs</th>
<th>Accepted</th>
<th>2002-03 completion</th>
<th>2003-04 progress</th>
<th>Complete as at 31/03/2004</th>
<th>Carried forward</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRANBERRY</td>
<td>Track worker Injury</td>
<td>13/02/2002</td>
<td>23/05/2002</td>
<td>10</td>
<td>8</td>
<td>0</td>
<td>8</td>
<td>8</td>
<td>-</td>
</tr>
<tr>
<td>CHESHUNT</td>
<td>Derailment</td>
<td>11/02/2002</td>
<td>12/07/2002</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1 (rec 10.1)</td>
</tr>
<tr>
<td>BLAXHALL LEVEL CROSSING</td>
<td>Collision with HGV</td>
<td>15/04/2002</td>
<td>14/08/2002</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1 (rec 18.2)</td>
</tr>
<tr>
<td>CLAY CROSS</td>
<td>Track worker injury</td>
<td>05/06/2002</td>
<td>24/10/2002</td>
<td>7</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>HARLOW MILL</td>
<td>Track worker injury, OLE</td>
<td>05/05/2002</td>
<td>12/11/2002</td>
<td>9</td>
<td>7</td>
<td>0</td>
<td>7</td>
<td>7</td>
<td>-</td>
</tr>
<tr>
<td>DR DAYS JUNCTION</td>
<td>Points run through, SPAD</td>
<td>31/07/2002</td>
<td>11/11/2002</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>6</td>
<td>6</td>
<td>-</td>
</tr>
<tr>
<td>QUINTINSHILL</td>
<td>Derailment</td>
<td>17/06/2002</td>
<td>13/12/2002</td>
<td>8</td>
<td>8</td>
<td>0</td>
<td>6</td>
<td>6</td>
<td>2 (recs 10.7&amp; 10.8)</td>
</tr>
<tr>
<td>PURLEY</td>
<td>Fire on train, fatality</td>
<td>05/07/2002</td>
<td>21/01/2003</td>
<td>7</td>
<td>7</td>
<td>0</td>
<td>7</td>
<td>7</td>
<td>-</td>
</tr>
<tr>
<td>EAST CROYDON</td>
<td>Track worker fatality</td>
<td>08/09/2002</td>
<td>03/02/2003</td>
<td>9</td>
<td>8</td>
<td>0</td>
<td>7</td>
<td>7</td>
<td>1 (rec 10.2)</td>
</tr>
<tr>
<td>DALSTON JUNCTION</td>
<td>Signalling irregularity, two trains in same section</td>
<td>14/08/2002</td>
<td>28/02/2003</td>
<td>8</td>
<td>6</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>1 (rec 10.8)</td>
</tr>
</tbody>
</table>

Figure 2: summary of progress made by the industry in 03/04 period against recommendations issued the previous period.

3.4 Categorisation of recommendations

The recommendations have been allocated to 10 categories broadly based on the management systems for operating the UK rail network. The purpose of the categories is to identify trends in the issue of recommendations designed to mitigate risks arising in those management systems. The 2002/03 and 2003/04 data is presented in the table in figure 3 and the chart in figure 4.
<table>
<thead>
<tr>
<th>Cat Code</th>
<th>Recs Category</th>
<th>Description</th>
<th>02/03</th>
<th>03/04</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Signalling system</td>
<td>Lineside SPAD controls, signal sighting issues, train planning and regulation, operation of the signalling equipment</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>Competence management</td>
<td>Training and development, driver management, competence systems, briefing, assessment, staff selection procedures, drugs and alcohol, fitness for duty, fatigue</td>
<td>24</td>
<td>37</td>
</tr>
<tr>
<td>C</td>
<td>Rules, standards and</td>
<td>Modification /development of rules and predefined standards for operation, Standards /process change management</td>
<td>18</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>instructions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Vehicle operation and</td>
<td>Train-borne safety equipment, fire protection, vehicle maintenance, train data recorders, crash worthiness, in-cab ergonomics</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>integrity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Infrastructure asset</td>
<td>Managing contractors, track /signalling maintenance operations, work planning, technical specifications, method statements</td>
<td>12</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>assurance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>Event management/</td>
<td>SPAD management, public accident investigation, site investigations, post accident management, formal investigations, formal inquiries, public inquiries [and RAIB investigations], fault reporting, emergency procedures</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>investigation/ reporting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>Monitoring and audit</td>
<td>Monitoring activities, safety performance monitoring, follow-up processes</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>H</td>
<td>Research and development</td>
<td>Suggested research topics/ specific areas of research</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>J</td>
<td>Safety communications</td>
<td>Defining and communicating safety responsibilities, general safety related communications, meetings, techniques, methods and equipment</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>K</td>
<td>Culture</td>
<td>Management commitment, organisational change</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Totals</td>
<td></td>
<td>72</td>
<td>164</td>
</tr>
</tbody>
</table>

Figure 3: summary of categorised recommendations arising in periods 2002/03 and 2003/04
3.5 Direction of recommendations/issues

The table in figure 5 displays the number of recommendations arising between 1 April 2003 and 31 March 2004 in specific categories directed at particular organisations to address.

Notes:

1) For any recommendation directed at an infrastructure maintenance contractor in relation to undertaking work under Network Rail’s Railway Safety Case (RSC), Network Rail is responsible for ensuring that the recommendation is adequately addressed. Therefore where this has been identified an additional score has been added to Network Rail (if not already stipulated in the recommendation) to aid statistical analysis. In earlier reports this relationship was not recorded.

2) Recommendations are only directed solely at an infrastructure maintenance contractor (IMC) where the recommendation pertains to activities performed under their own RSC ie relate to the operation of on-track vehicles/machines.

3) The table includes an element of double counting other than that described above. Where one recommendation is directed at more than one organisation the recommendation issued is scored against all parties.

4) Where recommendations were directed at ‘all IMCs’, ‘all TOCs’ or ‘all RGMs’ the scores for individual organisations within those groups have not been increased because the issues raised might not necessarily be applicable to them.
The table in figure 6 presents the data from the table in figure 5 to show a comparison of the issues to be acted upon by the various industry sectors in the different categories identified. Peaks are shown in bold text.

<table>
<thead>
<tr>
<th>Delivering sector</th>
<th>Total issues</th>
<th>Signalling system</th>
<th>Competence management</th>
<th>Rules, standards and instructions</th>
<th>Vehicle operation and integrity</th>
<th>Infrastructure asset assurance</th>
<th>Event Management</th>
<th>Monitoring/audit</th>
<th>Research and development</th>
<th>Safety communications</th>
<th>Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Rail</td>
<td>131</td>
<td>4</td>
<td>31</td>
<td>27</td>
<td>2</td>
<td>42</td>
<td>11</td>
<td>11</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>(of which IMCs)</td>
<td>(79)</td>
<td>(1)</td>
<td>(21)</td>
<td>(3)</td>
<td>-</td>
<td>(41)</td>
<td>-</td>
<td>(8)</td>
<td>-</td>
<td>(4)</td>
<td>(1)</td>
</tr>
<tr>
<td>TOCs</td>
<td>26</td>
<td>-</td>
<td>8</td>
<td>3</td>
<td>9</td>
<td>-</td>
<td>5</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>RSSB</td>
<td>20</td>
<td>-</td>
<td>-</td>
<td>17</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ROSCOs</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>All RGMs</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Figure 6: Industry sectors delivery of recommendations

3.6 Responses to recommendations

The table in figure 7 presents the status of 2003/04 recommendations within their particular categories and indicates the extent to which issues highlighted by reports are being addressed or rejected.

<table>
<thead>
<tr>
<th>Category</th>
<th>Accepted</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ongoing</td>
<td>Closed</td>
<td>Reject</td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Signalling system</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competence management</td>
<td>17</td>
<td>15</td>
<td>5</td>
<td>37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rules, standards and instructions</td>
<td>26</td>
<td>9</td>
<td>8</td>
<td>43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle operation and integrity</td>
<td>7</td>
<td>2</td>
<td>-</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infrastructure asset assurance</td>
<td>23</td>
<td>7</td>
<td>12</td>
<td>42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Event management/ investigation/ reporting</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitoring and audit</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research and development</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety communications</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Culture</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>89</strong></td>
<td><strong>45</strong></td>
<td><strong>30</strong></td>
<td><strong>164</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 7: Responses to categorised 2003/04 recommendations
3.7 Use of SMIS
Much of the data that was used to compile this report was extracted from SMIS. Inquiry reports are issued to RGMs with a letter asking them to submit their responses to recommendations via SMIS within about six weeks of receipt.

Thereafter RGMs are asked to update their progress towards implementing actions by June and December for RSSB to extract status reports at those times.

With the implementation of an upgraded version of SMIS (ISMIS) on 1 December 2003, a number of difficulties occurred, which led to a backlog of data entry and problems extracting data from the system. This may have adversely affected the quality of some of the data extracted for this report.

On 10 May 2004 an improved iteration was released which comprised a number of changes to resolve defects in the recommendations tracking module. Early indications are that there is a marked improvement.

IBM’s dedicated SMIS helpdesk can now be contacted either directly by users or by their respective IT service providers, to log problems with the SMIS application. In addition processes have been enhanced to ensure that when a problem is resolved, the user who logged the call is notified.

Some organisations have indicated that they use in-house databases in addition to SMIS to track their actions in response to formal inquiry recommendations. RSSB is working with stakeholders to overcome any duplication of effort in data entry.

3.8 Process development
During 2003/04 there was a lack of distinction between recommendations for systems change and remedial actions that are designed to address non-compliances. The formal inquiry process tends not to differentiate between the two, nor is the distinction recognised in GO/RT3473. Guidance note, GO/GN3673, does indicate the need to generate recommendations to address system issues. RSSB is working with inquiry chairmen to encourage greater emphasis on the development of recommendations of this nature.

RSSB is continuing to make improvements to the recommendations management process and constantly engages with Association of Train Operating Companies (ATOC), Network Rail and other RGMs, Infrastructure Safety Liaison Group (ISLG) and Rail Freight Group (RFG) etc to ensure that approaches adopted represent stakeholders’ needs. Initiatives currently being developed are: i) an approach to a single action that addresses multiple recommendations and; ii) a risk-based approach to prioritising actions.

Currently duty holders and specifically those involved in the circumstances of each accident, respond individually to recommendations generated by formal inquiries. This has the potential for organisations to separately reject recommendations believing that the other parties are best placed to take action.

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4 IBM (International Business Machine) is the company procured by RSSB to undertake upgrading and maintenance of SMIS
4. Recommendations analysis

4.1 Basis for analysis
The number of reports issued constitutes a small sample with which to undertake significant statistical analysis. The analysis undertaken combined some interpretation of quantitative data with a qualitative assessment of information obtained from SMIS and other sources.

The analysis that follows looks at:
- the types of events occurring in the period
- the number of recommendations
- the acceptance of recommendations
- key categories and the systems around which those categories are based.
- reasons for recommendations being rejected

4.2 Primary analysis
4.2.1 2003/04 recommendations
- Of the reports, five were for derailments, three accidents resulting in fatalities, two serious injury accidents and two train collisions.
- 134 of 164 recommendations issued were accepted (81%)
- 45 (34%) accepted recommendations reported as complete at 31 March 2004
- 89 accepted recommendations are carried over for tracking in 2004/05

4.2.2 2002/03 recommendations
- 60 of 72 recommendations issued were accepted (83%)
- Of those recommendations accepted completion reported increased from 8% on 31 March 2003 to 90% (54) by 31 March 2004
- Six accepted recommendations are still ongoing and will be carried forward for tracking in the period 1 April 2004 to 31 March 2005.

4.3 Number of recommendations
The table in figure 3 displays a sharp rise in the number of recommendations year on year, in part due to the number of inquiries in each data set. In period 2002/03 there were 10 inquiry reports issued under GO/RT3473 (averaging 7.2 recommendations per report) compared to 14 in 2003/04 (averaging 11.7 recommendations per report). In addition the formal inquiry report into the derailment at Southall East Junction on 24 November 2002 contained 47 recommendations in total, including explicit measures for track asset maintenance. Without this report the average for the remainder is 9 (adjusted average).

4.4 Management systems
The table in figure 3 and the chart in figure 4 display the number of recommendations in specific categories arising in 2003/04 compared to those in 2002/03. The data shows that broadly the systems that were most frequently highlighted as requiring change in 2003/04 were the same as those indicated in 2002/03 using the same categorisation.

4.5 Key categories
4.5.1 Rules, standards and instructions
Twenty-six percent (26%) of recommendations issued in the period related to the prescriptive nature of the rail industry. The prominence of this category reflects the ongoing need for clarity in all levels of prescriptive safety requirements.
Of the 43 recommendations made in the period, 75% required action by Network Rail although initially not necessarily directed at them (see section 3.5) and 47% required action by RSSB usually to review and modify RGSs or Rule Book modules. This suggests that the majority of prescription needed or change needed was at an operational level rather than strategic.

Those recommendations aimed at RSSB suggesting RGS or Rule Book change or clarification followed no particular trend in terms of topic, nor did they highlight any major deficiencies in standards. Feedback from RSSB suggested that:

- Some recommendations for Rule Book or RGS change did not give sufficient justification for change to be implemented.
- Recommendations for RGS change were made even though the underlying causes of the accident indicated non-compliance with existing standards and that changing the standard would not have affected the outcome of the accident. Indicating cultural issues surrounding non-compliance rather than RGS deficiencies.

One recommendation that recurred from the previous year was for the clarification in, and harmonisation between, the Rule Book and Network Rail’s company standards surrounding the use of form ‘C’ overhead lines permit to work (ref Harlow Mill recommendation 1 and Marston Green recommendation 1). Although RSSB has confirmed that its action in relation to this issue is complete, Network Rail has yet to confirm that they have brought RT/E/S/29987 in line with the Rule Book.

A number of previous recommendations had asked for clarification of rules in the Rule Book and to remove ambiguities. The new modular Rule Book was issued in December 2003 and was awarded a ‘Plain English Campaign’ crystal mark. Although the basis of the rules has not changed, the improved clarity has been welcomed by the industry.

As a result of its policy to implement the new RGS Code, at the beginning of April 2004, RSSB committed to a new process for progressing formal inquiry recommendations for RGS or Rule Book change. On receiving such recommendations RSSB now conducts a technical review in the context of the accident and the report. This will be submitted along with the details of the change proposed to the relevant Standards Subject Committees (SSC) for them to determine what action to take.

Of the eight recommendations in this category that were rejected, five were directed at RSSB. Again none of these followed a specific trend, but had they been implemented they would either have introduced further constraints on activities or reversed decisions previously agreed with duty holders without any obvious safety benefits.

The other 3 rejected recommendations were about the vehicle acceptance body (VAB) process, bolstering signalling procedures and strengthening component-ordering procedures.

4.5.2 Infrastructure asset assurance

About a quarter of the recommendations (25.6%) made in the period relate to the arrangements in place for ensuring the integrity of the infrastructure eg track maintenance activities and contractor management, etc. This is a fundamental element of the railway and one that has been the subject of much scrutiny by government, public and industry

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5 Standards Subject Committees are comprised of representatives of organisations within the Railway Group, likely to be affected by changes to RGSs in specific disciplines, and technical experts.
bodies, following accidents such as Hatfield and Potters Bar.

Of the 42 recommendations made in this category 30 were accepted, seven of which the industry has already reported as complete. Twelve were rejected, of which five resulted from the Southall East Junction formal inquiry report. It has already been discussed that these recommendations were very prescriptive in the way that they were worded eg grinding of fishplates. Comments received from duty holders appeared not to be responding to the underlying system issues but rather to the, particularly explicit, wording of the recommendations.

Five of the rejected recommendations were centred on planning and organising of infrastructure maintenance, and result from the need to ensure that adequate arrangements are made to facilitate the maintenance. Duty holders justified their rejection of these on the grounds that they believed that existing arrangements were adequate.

Red Zone working has been a factor in four inquiry reports issued since 31 March 2003 and a further three accidents where the report is yet to be issued. Of these seven accidents, four resulted in contractor fatalities and the rest in serious injuries being sustained by staff. Two of the accidents resulted from work being undertaken with the conductor rail energised. Several recommendations have been made in the past two years about maximising the use of Green Zones (East Croydon, Cheddington and Oakley).

In response Network Rail intends to specify in more detail the types of work that it will allow in Red Zones and will continue its efforts to ensure that it makes maximum use of Green Zones through better planning of possessions.

As detailed previously in this document, infrastructure maintenance is a growing issue for Network Rail and elements of this category are inextricably linked to systems within two other key categories – competence management and rules, standards and instructions.

In terms of progress against recommendations in this category a major factor is Network Rail’s substantial organisational change to ensure that it is able to effectively discharge its maintenance undertaking. However this action is not necessarily as a result of recommendations from formal inquiry reports but of the rail industry’s drive to ensure consistent application of high standards of maintenance, make efficiency savings and make continued improvements in track-side safety standards. This significant change means Network Rail needs to redefine its relationship with labour suppliers and contractors, to ensure that it has adequate resources to undertake planned and short notice maintenance.

A significant part of this involves ensuring that the requirements for maintaining the infrastructure are properly defined in appropriate levels of prescription (standards, specifications, instructions, etc). Network Rail is reviewing much of the documentation relating to the maintenance requirements of its network, that it has inherited from former suppliers to identify best practice. The next stage is to develop a harmonised set of instructions for maintaining Network Rail’s infrastructure. Clearly this takes time, so in the interim Network Rail’s approach is to use existing transferred standards whilst evaluation and consolidation takes place.

As with any change it is important to consider the effect on the overall workforce and to ensure this is properly managed. Like defining standards for infrastructure maintenance, Network Rail also needs to act upon management systems for competence of its workforce in various roles engaged in infrastructure maintenance (and indeed all elements of the organisation). The company is engaged in revising the inherited
systems into one that is able to ensure that standards for infrastructure maintenance are delivered.

It is likely that although Network Rail is incorporating whole organisations by TUPE⁶ transfer, a proportion of the labour force for the maintenance will still need to be sourced from external suppliers. Any competence management system that Network Rail develops needs to be established with this in mind, not just from a point of view of maintaining the infrastructure in a safe condition but also considering the risks to staff and non-employees.

4.5.3 Competence management
Twenty-two percent (22%) of the recommendations made were about improving competence management. Collectively this highlighted a need for industry companies to review and ensure that the systems and arrangements for managing the competence of staff are robust, not simply to achieve each individual recommendation.

The majority of recommendations in this category related to ensuring the competence of staff involved in infrastructure maintenance activities, although there were also some centred around the arrangements to ensure signaller competence.

Eight recommendations about competence were directed at either individual TOCs or at TOCs in general and only one was rejected. This was the recommendation from Chichester that suggested training for staff should include that in emergencies the ‘RIO is in charge’. The majority of respondents replied that this recommendation was ‘not applicable’ although perhaps more accurately this is a basic element of the training for on-train staff. Four of the recommendations in this category for TOCs have already been actioned and are now closed.

Of the 37 recommendations made in this category 32 have been accepted, of which 15 have already been reported as complete. Of the five recommendations that were rejected two were centred on reviewing the overall systems and arrangements for ensuring the competence of staff engaged in track maintenance:

- Kings Cross (FI2674) recommendation 9 - “The cascade briefing process employed by Jarvis Rail and Network Rail should be reviewed to ensure, as far as practicable, that work site and signalling staff all receive and understand the implications of the briefing subject matter as related to their work and locations at which it is carried out. Objective: To ensure that important safety requirements are understood and acted on”

- Oakley (FI2636) recommendation 5 - “When employees are transferred to new duties BBRIS should review their training and experience and provide additional briefing, training and competence assessment as appropriate. Objective: To improve personal safety by increasing personal knowledge of hazards, control measures and safe working methods”

In both instances Network Rail rejected the recommendations because it believed that the arrangements they already have in place are the most appropriate and effective to ensure the competence of track staff and signallers.

The rejected recommendations highlight a specific risk, namely the competence of on track staff to ensure their safety whilst working on the infrastructure. This becomes even

⁶ Network Rail conducted a TUPE (Transfer of Undertakings, Protection of Employment Regulations 1981) transfer of entire infrastructure maintenance organisations (and employees) into the company, in order to satisfy its resource needs in undertaking infrastructure maintenance ‘in-house’.
more pertinent considering the recent changes in the arrangements for maintaining the infrastructure. Now that Network Rail has taken its infrastructure maintenance activities ‘in-house’ it brings a more direct scrutiny of the company’s discharge of its responsibility for these activities and for ensuring the competence of those involved.

Although the majority of individual recommendations about improving competence appear to be addressed, it is important that a system approach is taken to reducing the risks. The competence management system (CMS) outlined in HSE Railway Safety Principles and Guidance Part 3 Section A, entitled “Developing and Maintaining Staff Competence”\(^7\) consists of 5 phases:

1. **Establish requirements of CMS**
   - Identify activities and assess risks to a) occupational health and safety of staff and b) safety operation of the railway.
   - Select or develop standards to ensure risks are controlled. See rules standards and instructions above.

2. **Design**
   - Develop processes, procedures and methods that ensure consistent achievement of expected results.
   - Establish suitable means to develop and assess staff to meet competence requirements.
   - Establish the requirements for training, development and assessment of staff, new recruits and managers.
   - Maintain managers competencies to operate the CMS and ensure they understand their responsibilities.

3. **Implement**
   - Select and recruit staff using suitable standards and methods eg aptitude testing etc.
   - Train, develop and assess staff using appropriate methods for the competence standard required.

4. **Maintain competence**
   - Establish controls to ensure that only staff assessed as competent undertake specific activities.
   - Monitor and reassess staff performance to ensure that required quality of output is consistently being produced.
   - Update the competence of individuals in response to change.
   - Manage substandard performance through appropriate means, retraining, disciplining etc.
   - Maintain records of assessments and other development activities

5. **Audit and review CMS**
   - Verify and audit the CMS to ensure that it is achieving what it aims to.
   - Review and analyse performance data and feedback into phases 1 or 2.

The HSE document elaborates on the practical elements of a CMS and is a useful reference guide for all railway organisations that intend to review the arrangements for their competence management system.

Particular attention should also be given to Railway Group Standard GO/RT3260 Competence Management for Safety Critical Work which outlines CMS requirements for Safety Critical Work as defined under the Railways (Safety Critical Work) Regulations. It includes work on track and structures, electrification, plant operation maintenance and inspection, all elements that have been the subject of formal inquiry recommendations in the past 12 months.

### 4.6 Rejection of recommendations

A slightly lower proportion (81% compared to 83%) of recommendations were accepted this period compared with the previous. There may be various reasons for the rejections but analysis of the responses received and discussions with duty holders suggests:

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\(^7\) HSE Railway Safety Principles and Guidance Part 3 Section A entitled “Developing and Maintaining Staff Competence” 2002
- Duty holders misinterpret the intention of the recommendations despite RSSB distributed guidance on their practical implementation.
- Some recommendations were perceived as being too prescriptive. Those from the Southall East Junction report for example were perceived as dictating exactly what should be done.
- In some cases duty holders reacted to the exact wording of the recommendations rather than understanding the risks that they were designed to mitigate.

4.7 Other issues arising

4.7.1 Planning

Analysis of the reported underlying causes shows that failures in planning of a range of activities has been a major contributor to accidents.

- Failure to plan adequate resources or arrangements for work evidenced by deficient method statements, inadequate safe systems of work, poor working practices and insufficient monitoring eg Cheddington, Kinclair Viaduct, Chelford and Marston Green.
- Failure in the planning for movement of trains – eg Glen Douglas and Chichester.
- Failure to properly plan maintenance or inspections results in poor quality track eg Kings Cross, Huddlesford, Earlwood and Southall East Junction. At Kings Cross last minute changes to the plans were also a cause.
- Failure of plans for rescue of failed trains – eg Chichester and Stewarts Lane Viaduct.

4.7.2 Vehicle operation and integrity

The findings show that although this category in the overall context features relatively few recommendations, it was the most significant area for train operating companies (TOCs) with nine recommendations being made (see table in figure 6). This category relates to physical aspects of trains and the arrangements to ensure that they remain suitable. It includes the fitness for purpose of train-borne safety equipment, fire protection equipment, train data recorders, crashworthiness, in-cab ergonomics and vehicle maintenance arrangements. All nine recommendations were accepted and one has been closed already.

There was evidence here that some of the issues directed at specific TOCs were also being discussed in conjunction with rolling stock operating companies (ROSCOs). This is a positive move particularly where recommendations relate to vehicle design, manufacture and maintenance issues.

Improving the integrity of trains is a key objective of the industry and RSSB is progressing research on its behalf into many issues surrounding vehicle design and in particular crashworthiness. The output of research is regularly issued to industry stakeholders and information is published on RSSB’s website.

4.7.3 Timescales to implementation

Organisations have the opportunity to address issues as they arise in formal inquiries, through their panel members who can highlight areas of concern to them to ensure that risks are managed early. This avoids the need to wait for published reports. The risk of recurrence of accidents by the same causes is exacerbated if timescales to taking actions on serious issues are elongated, especially when aimed at addressing seasonal effects.
4.7.4 **Emergency services**
In the space of a few months, two separate reports highlighted the delay in emergency services arriving at site as an issue. In both instances this was caused by the nature and accuracy of the information supplied to emergency services about site access points. It was reported that Network Rail conduct table-top-reviews with emergency services over the response to accidents and the information that each service in each area requires. It has since been suggested that although different services in different areas require different location reference data (postcodes, street names, station names, etc) this might just be so that they can then identify the Ordnance Survey (OS) map grid reference from it.

4.7.5 **Safety critical work**
The Glen Douglas report brought to the attention of one train operator the potential risks of safety critical workers exceeding working hours limits, not purely through their employed activities but those in voluntary roles on private railways. The train operating company (TOC) concerned reviewed the report and identified this as an issue and has put in place procedures to monitor hours worked in safety critical roles for them and others. Another TOC, which is aware of its drivers undertaking safety critical work in their leisure time, has put in place additional measures to control the risks this brings. Other TOCs may need to do the same if they have not already done so.

4.7.6 **Supply chain**
Network Rail is currently undergoing major organisational change to bring all infrastructure maintenance operations ‘in-house’. In future all recommendations regarding infrastructure maintenance operations need to be considered by Network Rail.

On a positive note, some formal inquiry recommendations are penetrating the layer of the supply chain. Direct responses received from ROSCOs and train manufacturers was evidence of this, although it is unclear if this regularly includes organisations engaged in system design – where perhaps implementing change would be most effective. Encouragingly one train manufacturer expressed its commitment to directly respond to appropriate recommendations when issued.

4.7.7 **Transferable lessons**
The extent of the application of transferable lessons is not visible. Responses received from the majority of RGMs in SMIS have not displayed that such lessons are being considered.

Where recommendations are directed at groups eg all TOCs or all RGMs there are very few entries in the organisation response field. Hence there is not enough data to state firmly how each recommendation of that type is received by the industry. This may highlight opportunities for RSSB to further develop the process that the industry uses in defining its actions as a result of formal inquiries and to help the industry in its use of SMIS.

4.7.8 **The process**
Occasionally duty holders misinterpret recommendations and consequently generate actions that miss their intent. To counter this, RSSB distributes, with formal inquiry reports, guidance on the practical implementation of the recommendations.

The formal inquiry process may benefit from a change to enable better development of recommendations. There needs to be a clear distinction between remedial actions that should be geared to involved parties fixing identified failures in order to return to compliance and recommendations that indicate the need for consideration of wider system issues.
Although recommendations are directed to parties involved in accidents, there is the potential for residual risks to remain if each party implicated in a recommendation redirects it at others. This could be avoided if duty holders’ resultant actions were based on an industry position reached between the parties involved in the accident. Where recommendations require consideration by the wider RG there is the opportunity for the involvement of representative bodies and full consultation with the industry to reach a collective viewpoint.

The problems experienced by SMIS users have affected the ability to extract data from the database for this report in a timely and effective manner. Following implementation of a revised version, the performance of SMIS now appears to be improving. However the system in its current form may not easily facilitate the proposed next stages of evolution of the recommendations response process (eg one action to address several recommendations) and hence tracking process. RSSB will work with stakeholders to overcome any need for duplication of data entry whilst maintaining a clear audit trail.
5. Conclusions

- There were more inquiries held and more recommendations made in the 2003/04 period compared to 2002/03 figures.
- The industry reported significant progress to close recommendations issued in the 2002/03 and 2003/04 periods.
- Inadequate planning was a common underlying cause. Failure to adequately plan was evident by inadequate provision of resources, unsuitable arrangements or equipment etc sometimes due to late changes.
- Inquiries now focus on specific systems for improvement (rules, standards and instructions, competence management and infrastructure asset assurance).
- Formal inquiry recommendations issued in the past year have highlighted the need to address the same underlying systems as the industry has begun to progress through structural change. It is too early to gauge the effect of these changes.
- Engaging the supply chain organisations in dialogue over what actions to take as a result of accidents forges better industry collaboration to reduce system risks.
- More active learning could be demonstrated if duty holders stated what alternative actions they intend to take, to better control the risks, when justifying rejection of recommendations.
- Further benefits may be gained from the continuous improvement of the formal inquiry process and the way industry parties respond to reports eg increased efficiency of effort.
- Issues relating to the implementation of SMIS are being addressed. To enable efficient tracking of responses to recommendations.
- RSSB continues to monitor responses by duty holders to individual recommendations and will issue another summary report next year that builds on the analytical foundation in this report.
- RSSB continues to feedback to inquiry chairmen the industry’s responses to formal inquiry recommendations to assist the development of meaningful and practicable recommendations.
6. Appendices

Notes
The appendices that follow indicate the status of recommendations as reported by the organisations to which they were directed, at the time the data was extracted from SMIS after 31 March 2004.

The status of a recommendation is shown as ‘Accept’ if the organisation to which it is primarily directed, accepted it. Those shown as ‘Closed’ were accepted, and actions now reported by the relevant organisation as complete. For ease of reference these entries are shaded in the tables.

The absence of shading signifies accepted recommendations where actions were not complete at 31 March 2004.

Where a recommendation is shown as being rejected the duty holder has supported the rejection with a justification. Where there has been cause to question any responses, RSSB has opened dialogue with organisations in order to clarify their understanding of the intent of the recommendations and resolve any issues. Dialogue with organisations over some responses was ongoing at the time of data extraction.

Again for ease of reference, only the status column is shaded to signify rejected recommendations.

RSSB utilises a thorough cross company review process to consider each recommendation directed to it. It is only as a result of this formal process that the status of ‘accepted’, ‘rejected’ and ‘closed’ is confirmed.

Categories A, B, C, etc as in figure 3 of the report.

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DALSTON JUNCTION 14-Aug-02 (FI2085) ................................................................. 48
EAST CROYDON 08-Sep-02 (FI2107) .............................................................. 49
**Appendix 1 – Status of recommendations issued in 2003-04**

<table>
<thead>
<tr>
<th>Rec no</th>
<th>Directed to</th>
<th>Recommendation</th>
<th>Cat code</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jarvis Rail</td>
<td>Re-brief the requirement to use signal maintenance testing handbook (SMTH) test plans and in particular CA01 for single wire removals. Objective: To reduce the likelihood of a recurrence of the incident.</td>
<td>B</td>
<td>Accept</td>
</tr>
<tr>
<td>2</td>
<td>Network Rail</td>
<td>Review the requirements of SMTH test plan PW01 to provide: 1. clarity on disconnection before installation work 2. process for the restoration of power supplies 3. clarity in testing polarity 4. requirements of functional testing of the power arrangements Objective: To reduce the likelihood of a recurrence of the incident.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>3</td>
<td>Network Rail</td>
<td>Review Appendix D of Part B of SMTH to include emphasis on the system safety risks of working on power supplies especially where two wire polar circuits are used. Objective: To reduce the likelihood of a recurrence of the incident.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>4</td>
<td>Network Rail</td>
<td>Review and update the guidance given in RT/E/S/10064, which includes disconnection of power supplies as permissible work in Section E X3.2.2. Brief the resulting document. Objective: To reduce the likelihood of a recurrence of this type of incident.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>5</td>
<td>Network Rail</td>
<td>Consider the introduction of competence standards, assessment plans, training plans and certification for signalling technicians in the use of Section E similar to that used for Sections B and T of the Rule Book within the Sentinel scheme. Objective: To reduce the likelihood of a recurrence of the incident resulting in an accident.</td>
<td>B</td>
<td>Accept</td>
</tr>
<tr>
<td>6</td>
<td>RSSB</td>
<td>Review the usage of Section E exposing barriers to correct use and recommend actions to persuade signalling technicians/signallers to use formal arrangements. This shall include improvements to the presentation of the new Rule T(i) A in the new modular Rule Book proposed for December 2003. Objective: To reduce the likelihood of a recurrence of the incident resulting in an accident.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>7</td>
<td>Jarvis Rail</td>
<td>Re-Brief Section E of the Rule Book to signalling technicians. Objective: To reduce the likelihood of a recurrence of the incident resulting in an accident.</td>
<td>B</td>
<td>Accept</td>
</tr>
<tr>
<td>8</td>
<td>Jarvis Rail</td>
<td>Issue clear instructions to ensure that work teams always have clarity about the person in charge managerially. Objective: To reduce the likelihood of a recurrence of the incident.</td>
<td>J</td>
<td>Accept</td>
</tr>
<tr>
<td>9</td>
<td>Network Rail</td>
<td>Review the use of digital meters and investigate the availability of meters with clearer polarity display or audible warning. Objective: To reduce the likelihood of a recurrence of the incident.</td>
<td>E</td>
<td>Accept</td>
</tr>
<tr>
<td>10</td>
<td>Jarvis Rail</td>
<td>Ensure that the company competence management system includes clear arrangements to control mentoring and rebrief these arrangements to all Jarvis signal engineering staff. Objective: To reduce the likelihood of a recurrence of the incident.</td>
<td>B</td>
<td>Accept</td>
</tr>
<tr>
<td>11</td>
<td>Network Rail</td>
<td>Mandate that wiring for new works shall use red wire for the positive of DC power supply circuits. Mandate that permanent bead labels shall be fitted when work is done involving disconnection of wires from battery chargers. Objective: To reduce the likelihood of a recurrence of the incident.</td>
<td>C</td>
<td>Closed</td>
</tr>
<tr>
<td>Rec no</td>
<td>directed to</td>
<td>Recommendation</td>
<td>Cat code</td>
<td>Status</td>
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<tr>
<td>12</td>
<td>Jarvis Rail</td>
<td>Rebrief the company standard on working hours. Objective: To reduce the likelihood of error due to fatigue.</td>
<td>B</td>
<td>Accept</td>
</tr>
<tr>
<td>13</td>
<td>Network Rail Eastern Region</td>
<td>Implement training/briefing of Retford maintenance teams in good practice in battery maintenance. Objective: To improve the asset condition.</td>
<td>B</td>
<td>Closed</td>
</tr>
</tbody>
</table>

**CHICHESTER 03-Oct-02 (FI2121)**

1. **Wessex Trains**
   - Wessex Trains should review its maintenance arrangements with a view to improving the provision of trained, competent and experienced personnel to deal with faults and failures on its trains within a reasonable period of time throughout the whole of its area of operation. Objective: To improve safety and performance.
   - Status: B Closed

2. **TOCs**
   - Train operating companies should brief the importance of conducting pullaway tests when units are being coupled together. Objective: To improve safety.
   - Status: B Closed

3. **Network Rail**
   - Network Rail should stress through training and briefing the importance of rail incident officers (RIOs) taking firm control of all activities on site in emergency situations and that RIOs must take positive steps to make sure that they are clearly identified as the person in charge. They must familiarise themselves with the significant features of the site. Objective: To ensure a single clear focus of control for all site activities in emergency situations.
   - Status: B Closed

4. **TOCs**
   - Train operating companies should ensure through training and briefing that their staff are aware that in emergency situations RIOs are the railway personnel in charge of site activities and co-operate with them. They should take positive steps to ensure that they identify the RIO. Objective: To aid control and improve co-ordination of on site activities in emergency situations.
   - Status: B Reject

5. **Network Rail**
   - RIOs in conjunction with other railway personnel should give serious consideration to the evacuation of passengers from failed trains as soon as possible balancing the risks of evacuation against those of remaining on board including psychological factors. Objective: To improve passenger care and safety.
   - Status: F Closed

6. **Network Rail Southern Region**
   - Network Rail Southern Region should arrange for all personnel required to act as RIOs to be assessed and certificated in accordance with the provisions of Railway Group Guidance Note GO/GN3671 as required by version 3 of its emergency plan. Objective: To improve safety and performance.
   - Status: B Closed

7. **Network Rail Southern Region**
   - Network Rail Southern Region should arrange for the relief field manager (Havant) to be retrained assessed and certificated as a RIO before undertaking these duties again. Objective: To improve safety by complying with the provisions of version 3 of its emergency plan.
   - Status: B Closed

8. **Network Rail Southern Region**
   - Network Rail Southern Region should ensure that wherever possible traction current isolations are taken to protect staff working on the line in emergency situations. Objective: To improve safety.
   - Status: F Closed

9. **TOCs**
   - Train operating companies should consider making gradient information easily available to drivers. Objective: To aid route knowledge.
   - Status: C Closed

10. **Network Rail, TOCs**
    - Network Rail and train operating companies should review the adequacy of their arrangements for carrying out ‘for cause’ testing where several people are involved. Objective: To improve care of employees.
    - Status: F Closed
<table>
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<tbody>
<tr>
<td>11</td>
<td>Network Rail</td>
<td>Network Rail should liaise with the police to avoid railway personnel being breathalysed in public view. Objective: To improve care of employees and public relations.</td>
<td>F</td>
<td>Accept</td>
</tr>
<tr>
<td>12</td>
<td>Network Rail Southern Region, South West Trains</td>
<td>Network Rail Southern Region and South West Trains should review their policy of caring for their personnel who have been involved in incidents or accidents. Objective: To improve care of employees.</td>
<td>F</td>
<td>Reject</td>
</tr>
<tr>
<td>1</td>
<td>RSSB</td>
<td>Rail Safety and Standards Board should undertake a human factors study to assess the robustness of the Rule Book's dependence on, and suitability of, arbitrary and subjective assessment of distances for safety critical activity as a basis for establishing safe systems of work, and make recommendations based upon the findings of this study identifying possible alternative methods of judging and/or demarcating distances and implementing such measures for future consideration. Objective: To provide support to the judgment of staff required to set up and implement safe systems of work. To reduce the probability of an accident.</td>
<td>H</td>
<td>Accept</td>
</tr>
<tr>
<td>2</td>
<td>RSSB</td>
<td>Time criteria should be applied after which, and before which, red zone working is prohibited. This should be based on the defined time for sunset and sunrise for the day on which work will take place and the location of that work. COSS’s judgement of other factors will still be required, which might require more restrictive arrangements to apply. Objective: To provide guidance to COSS and reduce subjectivity. To reduce the probability of an accident.</td>
<td>C</td>
<td>Reject</td>
</tr>
<tr>
<td>3</td>
<td>RSSB</td>
<td>Rule M(ii) should include a general instruction that if a train accident of any type may have occurred then all lines should be closed until the further information on the potential train accident can be ascertained. Objective: To reduce the risk of a subsequent accident compounding an incident that may have already occurred. To reduce the consequences of an accident.</td>
<td>C</td>
<td>Reject</td>
</tr>
<tr>
<td>4</td>
<td>RSSB</td>
<td>Better support should be provided in the Rule Book to enable the COSS to take a systematic and documented approach as to why green zone working is not possible. The rule should include acceptable arrangements for crossing lines when red zone working is unavoidable and cover working at night. Objective: To reduce red zone working to a minimum and remove areas of existing differences of interpretation. To reduce the probability of an accident.</td>
<td>C</td>
<td>Closed</td>
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<tr>
<td>5</td>
<td>Network Rail, IMCs</td>
<td>A process for briefing method statement elements relevant to a COSS should be designed and implemented. The process should ensure that the briefing, if verbal, is from a person who is competent and experienced as a COSS, or is in a written form. Objective: To ensure COSSs are properly advised of all considerations developed during the work planning relevant to their activity. To reduce the probability of an accident.</td>
<td>B</td>
<td>Closed</td>
</tr>
<tr>
<td>6</td>
<td>RSSB</td>
<td>The Rule Book should specifically require that a lookout stands in a position of safety. Objective: To reduce the probability of an accident. Note: Recommendations 4, 5 and 6 are addressed by the December 2002 Rule Book changes and new Network Rail Company Standard RT/LS/S/019</td>
<td>C</td>
<td>Closed</td>
</tr>
<tr>
<td>1</td>
<td>Network Rail HQ</td>
<td>Produce a specification for forged fishplates that includes E</td>
<td>E</td>
<td>Reject</td>
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<td>2</td>
<td>IMCs</td>
<td>Remove forging flash from existing stocks of forged fishplates before installing them in track. Objective: To improve the durability of rail joints.</td>
<td>E</td>
<td>Reject</td>
</tr>
<tr>
<td>3</td>
<td>IMCs</td>
<td>Institute a process for continually re-tightening, at a suitably high frequency, the bolts fitted to forged fishplates that may have been installed recently with residual forging flash. Objective: To ensure the removal under traffic of forging flash.</td>
<td>E</td>
<td>Accept</td>
</tr>
<tr>
<td>4</td>
<td>Network Rail HQ</td>
<td>Modify the specifications for plain rail and for cast crossings to give: - Clear dimensional tolerances for the vertical spacing of fishing surfaces. - Details of the final quality control method Objective: To improve the durability of rail joints.</td>
<td>E</td>
<td>Reject</td>
</tr>
<tr>
<td>5</td>
<td>Network Rail HQ</td>
<td>Modify Standard Drawing RE/PW/729 to prescribe 6½in fishbolts for new installations and replacements of fishbolts. Objective: To ensure that Nyloc nut inserts are fully engaged.</td>
<td>E</td>
<td>Accept</td>
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<tr>
<td>6</td>
<td>Amey Rail</td>
<td>Check the competence of the staff involved in basic visual and supervisory track inspection. Objective: To improve the effectiveness of the inspection process.</td>
<td>E</td>
<td>Closed</td>
</tr>
<tr>
<td>7</td>
<td>Amey Rail</td>
<td>Review the effectiveness of the Amey Rail system whereby senior staff from Amey Rail carry out occasional track inspections together with local engineers or supervisors as a check on inspection and repair standards. Objective: To avoid reduction in standards due to familiarity.</td>
<td>E</td>
<td>Accept</td>
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<tr>
<td>8</td>
<td>Network Rail HQ</td>
<td>Modify RT/CE/S/103 to require supervisors (as defined in S/103 sections 4.2.2 and 13.2) to carry out the following procedure: Having inspected each red or super red 1/8 mile as currently required within one month/one week, record a decision in a standard format as to: - Whether it is proposed to carry out repairs and if so what repairs. - When any such repairs are planned for. - What effect the repairs are designed or expected to achieve in SD terms. - Whether a TSR is required in the meantime to conform to last paragraph of S/103 section 13.2 or for other reasons. Repeat the process after the next track recording run if the SD has increased, or at their next inspection scheduled in accordance with S/103, whichever is the sooner. Objective: To improve the management of non-compliant track.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>9</td>
<td>RSSB and Network Rail HQ as appropriate.</td>
<td>Modify GC/RT/5021 and RT/CE/S/103 to clarify whether patrollers and supervisory inspectors are required to examine all S&amp;C from the four-foot on every patrol. Objective: To achieve full understanding of the intention of the standards.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>10</td>
<td>Amey Rail and other IMCs as appropriate.</td>
<td>Identify sites where tracks are more than a standard 10ft apart and where the IMC believes it is practicable to inspect two tracks during a single patrol. Apply for derogations as</td>
<td>E</td>
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<td>necessary in relation to S/103 paragraph 4.1. Objective: To achieve flexibility in the application of S/103 paragraph 4.1.</td>
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<td>11</td>
<td>Network Rail HQ</td>
<td>Define in RT/CE/S/103 section 4.1 second paragraph the precise meaning of standard ten-foot. Objective: To remove possible ambiguity.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>12</td>
<td>Amey Rail</td>
<td>Re-brief patrollers about their duties in respect of the inspection of the line adjacent to the one they walk on. Objective: To improve the effectiveness of track inspection.</td>
<td>B</td>
<td>Closed</td>
</tr>
<tr>
<td>13</td>
<td>AMEY Rail</td>
<td>Review and modify the basic visual track inspection and work planning processes to ensure that they are capable of identifying, recording, and rectifying all types of faults that develop during the intervals between supervisory inspections, whatever the degree of urgency of repair. Objective: To improve the effectiveness of track inspection.</td>
<td>E</td>
<td>Accept</td>
</tr>
<tr>
<td>14</td>
<td>Network Rail HQ</td>
<td>Expand the first paragraph of section 4.3 of S/103 to make it clear that those carrying out basic visual inspections should identify defects that will need the attentions of a repair gang between the day of the inspection and the next supervisory visual inspection. Objective: To improve the effectiveness of track inspection.</td>
<td>C</td>
<td>Accept</td>
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<tr>
<td>15</td>
<td>AMEY Rail</td>
<td>Instruct patrollers to record on their report forms all locations where they find cracked or broken fishplates. Objective: To enable clusters or unusual repetitions of such occurrences to be identified.</td>
<td>B</td>
<td>Accept</td>
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<tr>
<td>16</td>
<td>AMEY Rail</td>
<td>Design and implement a recorded process for fulfilling the S/103 requirement to ascertain the cause of the fracture when cracked or broken fishplates are found and to take action to prevent a recurrence. Objective: To improve the likelihood of recurrent problems at the same site.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>17</td>
<td>RSSB</td>
<td>Consider the practice of using one lookout for two patrollers on a four track railway where the traffic directions are 'Down/Up/Down/Up' and provide guidance for the industry as appropriate. Objective: To ensure that the intent of the Rule Book is clarified in such cases.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>18</td>
<td>AMEY Rail</td>
<td>Instruct inspection supervisors to: - Check the effectiveness of the patroller every time a supervisor carries out an inspection. - Inform patrollers of the results of every check. Objective: To improve the effectiveness of track inspection.</td>
<td>E</td>
<td>Accept</td>
</tr>
<tr>
<td>19</td>
<td>AMEY Rail</td>
<td>Introduce formal competence certification and assessment processes for those carrying out supervisory Inspections as prescribed in GC/RT5021. Objective: To enable compliance with the SCW Regulations.</td>
<td>B</td>
<td>Accept</td>
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<tr>
<td>20</td>
<td>Network Rail HQ</td>
<td>Define the installation requirement, and the maintenance and safety limits for the gap between rail ends at a 'tight' joint. Instruct inspection staff to report locations where the maintenance limit is breached. Objective: To prevent the occurrence of high impact forces from trains crossing 'tight' joints that are insufficiently tight.</td>
<td>E</td>
<td>Accept</td>
</tr>
<tr>
<td>21</td>
<td>AMEY Rail</td>
<td>Institute a process for regularly tightening high tensile fishbolts at a frequency that experience of each location suggests is necessary. Objective: To ensure the continued tightness of such bolts.</td>
<td>E</td>
<td>Closed</td>
</tr>
<tr>
<td>22</td>
<td>Network Rail HQ</td>
<td>Prescribe the method to be used for tightening fishbolts and include it in the successor document to CEC/C/0005. The method should include the need to: - Tighten fishbolts to their required torque through at least five increments.</td>
<td>C</td>
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<td>- Retighten after a quantified initial period of traffic&lt;br&gt; - The details of the method should then be promulgated to all IMC maintenance staff concerned, and included in future training material for such staff. Objective: To ensure that any initial loss of bolts tension is replaced</td>
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<tr>
<td>23</td>
<td>Network Rail HQ to initiate the process.</td>
<td>Brief out to all frontline IMC staff that lift fishplates should not be fitted to cast monobloc crossing joints so that they lift one of the two legs at each end of the crossing. Explain the implications for fitting lift plates that lift plain rails abutting cast monobloc crossings. Objective: Network Rail HQ to initiate the process.</td>
<td>B</td>
<td>Closed</td>
</tr>
<tr>
<td>24</td>
<td>AMEY Rail</td>
<td>Review track maintenance workbanks periodically, using work planning or other systems, to establish whether they are increasing, steady, or declining, and when necessary adjust resource levels or take other appropriate action to maintain the safety of traffic. An increase in the number of items prioritised as 'M0' (or equivalent) in automated planning systems must be recognised as requiring action. Objective: To ensure that the maintenance resources match the maintenance workload.</td>
<td>E</td>
<td>Accept</td>
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<tr>
<td>25</td>
<td>Network Rail HQ</td>
<td>Modify RT/CE/S/103 to require track engineers (as defined in S/103 paragraph 4.2.3) to carry out the following procedure: Inspect the site of each repeat L2 exceedence in order to decide:&lt;br&gt; - Whether it is repairable by normal maintenance methods (ie that the last effort was inadequate) or requires more drastic action such as formation treatment.&lt;br&gt; -When the necessary work will be done. Record these decisions in a standard format. If necessary follow up to ensure normal maintenance methods are being effectively applied. Objective: To reduce the number of L2 exceedences.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>26</td>
<td>AMEY Rail</td>
<td>Instruct Amey Rail staff to record the action taken to repair L2 exceedences when signing them off on the action report form. Objective: To ensure compliance with the laid down requirement.</td>
<td>E</td>
<td>Accept</td>
</tr>
<tr>
<td>27</td>
<td>AMEY Rail</td>
<td>Instruct supervisory staff responsible for the effectiveness of the repair of L2 exceedences and other routine maintenance work to check the effectiveness of an adequate proportion of these repairs. Objective: To maintain the quality of track repair work.</td>
<td>E</td>
<td>Accept</td>
</tr>
<tr>
<td>28</td>
<td>AMEY Rail</td>
<td>Consider how best to manage compliance with the mandatory follow-up actions to track recording runs prescribed by RT/CE/S/104. Objective: To reduce the disruption to plans for routine maintenance caused by frequent new lists of L2 defects.</td>
<td>C</td>
<td>Closed</td>
</tr>
<tr>
<td>29</td>
<td>Network Rail HQ</td>
<td>Establish whether there is a cost and/or safety based case for replacing in advance of the end of their normal lives any non-welded cast crossings remaining in Category 1A, 1, and 2 lines. Objective: To optimise safety and performance.</td>
<td>E</td>
<td>Accept</td>
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<tr>
<td>30</td>
<td>AMEY Rail</td>
<td>Brief track inspection and maintenance staff as to how high strength fishbolts should be tightened. Objective: To enable staff to correctly tighten high strength fishbolts to their design torque.</td>
<td>B</td>
<td>Closed</td>
</tr>
<tr>
<td>31</td>
<td>AMEY Rail</td>
<td>Develop procedures (or fully implement existing procedures) to ensure that the competence assessment requirements of RT/CE/C/033 are met. Objective: To ensure that staff are demonstrably competent.</td>
<td>B</td>
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<tr>
<td>32</td>
<td>IMCs, Network Rail Zones and HQ.</td>
<td>Monitor the numbers of repeat L2 faults by contract area and if possible sub area/lowest management unit. Objective: To help measure maintainer effectiveness.</td>
<td>E</td>
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<tr>
<td>33</td>
<td>Network Rail HQ</td>
<td>Develop an automated method of identifying repeat L2 exceedences. Objective: To facilitate the implementation of recommendation 4.1 above.</td>
<td>G</td>
<td>Closed</td>
</tr>
<tr>
<td>34</td>
<td>Amey Rail, Network Rail HQ</td>
<td>Add the following topics to those covered by Amey level 1 and Level 2 checks, and to checks by the Zone: - Competence of staff undertaking supervisory visual track inspections - Numbers and trends of L2 repeats - Sampling of L2 exceedence sign-off Objective: To improve the effectiveness of management checks and audits</td>
<td>G</td>
<td>Accept</td>
</tr>
<tr>
<td>35</td>
<td>AMEY Rail</td>
<td>Develop a process of checking what is actually happening out on the ground in key safety critical areas, as an addition to the existing office based checking of records. Objective: To improve the effectiveness of management checks and audits.</td>
<td>G</td>
<td>Accept</td>
</tr>
<tr>
<td>36</td>
<td>AMEY Rail</td>
<td>Modify the organisation of the London area, and other areas if appropriate, with the aim of: - Putting those staff carrying out basic visual inspection in the same organisational leg as those carrying out supervisory inspections - Giving the responsibility for the quality of the work of the repair gangs to the supervisors and managers of those gangs Objective: To increase ownership and effectiveness in the track maintenance field.</td>
<td>K</td>
<td>Closed</td>
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<tr>
<td>37</td>
<td>AMEY Rail</td>
<td>When it is anticipated that a manager or supervisor may have to cover two posts, one or both of which are safety critical, for a long period, identify the essential safety tasks that must be covered and instruct the manager or supervisor accordingly. Objective: To prevent safety items being overlooked.</td>
<td>B</td>
<td>Closed</td>
</tr>
<tr>
<td>38</td>
<td>AMEY Rail</td>
<td>Inspect the joints at the leg ends of all existing cast monobloc crossings to check by the use of feeler gauges (say 0.1mm or 0.15mm) whether there are gaps at the fishing surfaces at each of the four bolt positions above or below each fishplate. Appropriate shimming techniques should be devised to deal with any such gaps. Before applying feeler gauges the fishbolts should be checked for tightness. Objective: To identify and make safe any out of tolerance fishing surfaces.</td>
<td>E</td>
<td>Reject</td>
</tr>
<tr>
<td>39</td>
<td>Network Rail HQ</td>
<td>Remind all those members of staff involved in the inspection of cast crossings in relation to RT/CE/S/054 that those parts of the underside of a casting that can be visually inspected with the use of a hand mirror should be so inspected. Ensure that this procedure is taught at the training school and checked during workplace assessments. Objective: To improve the maintenance of longitudinal track geometry.</td>
<td>C</td>
<td>Closed</td>
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<tr>
<td>40</td>
<td>Network Rail HQ</td>
<td>Modify RT/CE/S/054 to give more guidance about what should be looked for in respect of the longitudinal hogging and rail end batter of monobloc cast crossings, and about remedial action for such features. Objective: To improve the maintenance of longitudinal track geometry.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>41</td>
<td>Network Rail Zones</td>
<td>If an infrastructure contract sum for a period is acknowledged to be insufficient to comply with mandatory Railtrack Company Standards, then this expected on</td>
<td>E</td>
<td>Reject</td>
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<td>42</td>
<td>Great Western Zone and other zones as appropriate</td>
<td>Using the incident categorisation within NR’s Emergency Plan, devise a competence assessment system for RIOs so that staff appointed to take charge of the more serious incidents are sufficiently competent. Objective: To improve the effectiveness of the management of major incidents.</td>
<td>B</td>
<td>Accept</td>
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<tr>
<td>43</td>
<td>Great Western Zone and other zones as appropriate</td>
<td>Develop a checklist for RIOs who may be involved in major incidents and a separate checklist for evidence coordinators at such incidents. Arrange for both lists to be carried by such RIOs and hold copies at zone control. Objective: To assist RIOs and evidence co-ordinators during major incidents.</td>
<td>B</td>
<td>Reject</td>
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<tr>
<td>44</td>
<td>RSSB</td>
<td>Modify GO/RT3472 to require where necessary the continuous supervision by an independent person or agency of the sites of derailments and similar incidents until all the evidence has been collected or examined. Place the responsibility for arranging this on the RIO (or the evidence co-ordinator if one is appointed). Objective: To avoid the disturbance of site evidence.</td>
<td>C</td>
<td>Reject</td>
</tr>
<tr>
<td>45</td>
<td>Great Western Zone</td>
<td>Undertake training of RIOs in the changes made to incident management procedures set out in GO/RT3472. Objective: To give RIOs an understanding of the changed procedures.</td>
<td>A</td>
<td>Reject</td>
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<tr>
<td>46</td>
<td>Network Rail HQ with the assistance of AEAT.</td>
<td>Develop a site investigation checklist for use by specialist derailment investigators. Objective: To improve the effectiveness of site investigations</td>
<td>F</td>
<td>Accept</td>
</tr>
<tr>
<td>47</td>
<td>FGW and other TOCs as appropriate.</td>
<td>Develop an action checklist for use by traincrew during major incidents. Arrange for a copy of the list to be held by the TOC control centre. Objective: To assist traincrew in their decision making during such incidents.</td>
<td>F</td>
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**STEWARTS LANE VIADUCT 07-Feb-03 (FI2383)**

1 Eurostar

A technical review of Eurostar Class 373 trains to be undertaken to establish the feasibility of:

(i) providing enhanced protection for electro-pneumatic contacts in the event of loss of main air supply;

(ii) providing extended battery life for auxiliary systems in failure situations;

(iii) improving the security and integrity of flexible air hose connections between vehicles.

Objective: To reduce the likelihood of a recurrence.

2 Eurostar

An operational review of driver support arrangements to be undertaken, which will include:

(i) information provided through the on board diagnostic computer (and any paper-based equivalent)

(ii) the ‘Livret Formulaire’ procedures and the extent to which these may need to be revised or extended

(iii) redesign or enhancement of the ‘Livret Lignes’ route guide arrangements to provide more robust and ‘user friendly’ documentation

(iv) consideration of whether adoption of ‘Channel Tunnel’ operating rules and arrangements on Network Rail infrastructure would improve the management of incidents on Eurostar services.

Objective: To reduce the likelihood of a recurrence.

3 Eurostar and Network Rail

A review of requirements for language competence, and the standards required to be met, for all staff involved or engaged at the interface, with international operations.

Objective: To reduce the likelihood of a recurrence.

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<td>4</td>
<td>Eurostar and Network Rail</td>
<td>A review of emergency and contingency plans in both Eurostar and Network and Network Rail to ensure procedures and arrangements remain robust in the light of the incident involving 9O46, and ensure that lessons learned are incorporated in future staff training/briefing and competence assessment. Objective: To reduce the likelihood of a recurrence.</td>
<td>F</td>
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<td>5</td>
<td>Eurostar and Network Rail</td>
<td>The importance of consistently adhering to laid down procedures in dealing with emergency services personnel, including BTP, must be re-stressed in briefings within Network Rail and Eurostar and EUKL. These considerations should be explicitly assessed in a competence assessment module for all Control Office staff. Objective: To reduce the likelihood of recurrence.</td>
<td>B</td>
<td>Accept</td>
</tr>
<tr>
<td>6</td>
<td>Eurostar</td>
<td>The reliability and effectiveness of the rescue set operated by EUKL should be reviewed, and an action plan developed to ensure the availability, in a fit and proper condition, of a suitable resource in the future. Objective: To reduce the likelihood of a recurrence.</td>
<td>D</td>
<td>Accept</td>
</tr>
<tr>
<td>7</td>
<td>Eurostar</td>
<td>Consideration should be given to the provision of long life span emergency drinking water supplies on-board Eurostar trains, under the control of the train manager. Objective: To reduce the likelihood of a recurrence.</td>
<td>D</td>
<td>Closed</td>
</tr>
<tr>
<td>8</td>
<td>Eurostar and Network Rail</td>
<td>Eurostar and Network Rail should cooperate to provide training and/or briefing for key personnel who may be required to manage at the site of an incident involving Eurostar trains, to ensure that all such staff are competent to discharge their duties and obligations. Objective: To reduce the likelihood of a recurrence.</td>
<td>B</td>
<td>Closed</td>
</tr>
</tbody>
</table>

**CHELFORD 23-Feb-03 (FI2389)**

<p>| 1      | Route 7 Alliance, Network Rail, Amec Spie Rail and other Infrastructure Contractors | Realistic timescales should be set for production of possession workplans, their approval, review and acceptance to give sufficient time for the workplan to be briefed to staff and for key staff responsible for undertaking the work to understand the requirements. Objective: To ensure that all staff responsible for site safety understand their responsibilities. | E        | Accept |
| 2      | Route 7 Alliance, Network Rail, Amec Spie Rail and other Infrastructure Contractors | During the work site planning process, specific consideration should be given to the ability of the engineering supervisor to undertake all the necessary tasks. Adequate supervisory resources should be identified to ensure that the engineering supervisor is able to discharge the prime function of train and machine control. Objective: To ensure that the engineering supervisor is able to verify that the planned competent staff are on site and is able to undertake necessary safety checks before authorising train and machine movements in the work site in accordance with the Rule Book. | E        | Closed |
| 3      | Route 7 Alliance, Network Rail, Amec Spie Rail and other Infrastructure Contractors | In future the title engineering supervisor assistant must not be used in possession planning documents and workplans. Only terms and arrangements set out in the Rule Book should be used. Objective: To ensure that the responsibility of the engineering supervisor for authorising train movements in a possession is not compromised. | E        | Closed |
| 4      | Route 7 Alliance, Network Rail, Amec Spie Rail and other Infrastructure Contractors | The information contained in the workplan must accurately represent the situation found on site by the staff responsible for undertaking the work. Objective: To ensure that site supervisors and engineering supervisors are not presented with unnecessary problems resulting from inaccurate workplans. | E        | Accept |</p>
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<tbody>
<tr>
<td>5</td>
<td>Route 7 Alliance, Network Rail, Amec Spie Rail and other Infrastructure Contractors</td>
<td>Method statements should be prepared for repetitive site work and these should be cross referenced from the workplan. Objective: To ensure that all key staff are aware of the processes to be used during the work.</td>
<td>E</td>
<td>Accept</td>
</tr>
<tr>
<td>6</td>
<td>Route 7 Alliance, Network Rail, Amec Spie Rail and other Infrastructure Contractors</td>
<td>Risk assessments used in conjunction with the work plan should be reviewed to ensure that they cover all likely risks and that control measures are recognised during the work planning process. Objective: To ensure that all key staff are aware of site risks and the control measures to be used during the work.</td>
<td>E</td>
<td>Accept</td>
</tr>
<tr>
<td>7</td>
<td>Route 7 Alliance, Network Rail, Amec Spie Rail and other Infrastructure Contractors</td>
<td>Site workplans and possession information packs should accurately identify by job title and name the key staff responsible for supervision and safety of the site. If names are not available at the time the workplan is approved it should be cross referenced to a staff list in the information pack. Objective: To ensure that all key staff are aware of their responsibilities and are appropriately prepared.</td>
<td>E</td>
<td>Closed</td>
</tr>
<tr>
<td>8</td>
<td>Route 7 Alliance, Network Rail, Amec Spie Rail and other Infrastructure Contractors</td>
<td>When radios are used to communicate safety critical movement information to trains and machines within a worksite, a protocol must be established so that each train and machine is uniquely identified. Communication must be in accordance with Section A of the Rule Book. Compliance should be monitored by recording conversation. Objective: To prevent a recurrence of the accident.</td>
<td>J</td>
<td>Closed</td>
</tr>
<tr>
<td>9</td>
<td>Route 7 Alliance, Network Rail, Amec Spie Rail and other Infrastructure Contractors</td>
<td>Procedures should be introduced to verify that all key work site staff attend either the possession brief or the worksite brief. Records should be kept on attendance at each session and cross-checked to ensure everyone responsible for safety and supervision of the work has attended one of the briefing sessions. Objective: To ensure that all those responsible for supervision of work and safety of the worksite understand their responsibility.</td>
<td>B</td>
<td>Accept</td>
</tr>
<tr>
<td>10</td>
<td>Route 7 Alliance, Network Rail, Amec Spie Rail and other Infrastructure Contractors</td>
<td>The frequency of random worksite tests on staff for drugs and alcohol should, in future, be increased. All worksite staff should be made aware of the increased frequency of testing and the results should be published. Objective: To deter staff working on site when they constitute a risk to themselves and others.</td>
<td>B</td>
<td>Closed</td>
</tr>
<tr>
<td>11</td>
<td>Network Rail</td>
<td>A review of the information held by the North Western zone control relating to signal post telephone (SPT) location and the most convenient track access point should be undertaken. This will avoid the situation at Chelford when the emergency services were sent to a more distant and more difficult access point than Chelford Station. Objective: To ensure speedy easy track access point for the emergency services.</td>
<td>F</td>
<td>Accept</td>
</tr>
</tbody>
</table>

**KINCLAIR VIADUCT 13-Feb-03 (FI2384)**

1. Network Rail, First Engineering Ltd other IMCs
   - Network Rail and First Engineering Ltd to carry out audits of method statements to see if there is an over-reliance on generic documentation, which is not suitable for the work concerned. Objective: To improve the understanding of the specific task and the safety measures required.
   - Cat code: G
   - Status: Accept

2. Network Rail, First Engineering Ltd and Pendrich Height Services
   - First Engineering Ltd require Pendrich Height Services to provide evidence of auditing compliance with their approved methods of working at a height, and advise First Engineering Ltd of the results. Objective: To ensure that working practices are maintained to the high standard.
   - Cat code: G
   - Status: Accept
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>3</td>
<td>Network Rail, First Engineering Ltd.</td>
<td>First Engineering Ltd. review their process for the appointment of on-site supervision, so that the competency required is determined and the responsibilities are clearly defined. Objective: To ensure that work is carried out in accordance with the approved method of work, by on-site control.</td>
<td>B</td>
<td>Accept</td>
</tr>
<tr>
<td>1</td>
<td>Wales &amp; Borders Trains and Angel Trains Ltd</td>
<td>Carry out a full product and process audit of the Gmeinder final drive overhaul facility at Crewe. Objective: To verify that the specified overhaul procedures are fully understood and are being rigorously observed.</td>
<td>G</td>
<td>Closed</td>
</tr>
<tr>
<td>2</td>
<td>Wales &amp; Borders Trains and Train Leasing Companies</td>
<td>The design of the safety hoop for the 'C' shaft on the Class 158 vehicles and other DMU vehicles with a similar arrangement should be improved to: i) ensure that a failed cardan shaft is adequately contained ii) eliminate the risk of the balance weights of a failed shaft wearing through the safety hoops. In the event that timescales exceed 6 months for a full solution, an interim solution should be considered. Objective: To improve the likelihood that a failed cardan shaft will be detected before the safety containment has failed.</td>
<td>D</td>
<td>Accept</td>
</tr>
<tr>
<td>3</td>
<td>Wales &amp; Borders Trains and Angel Trains Ltd</td>
<td>Review the current oil sampling regime and consider the introduction of: i) Guideline criteria for depot action based upon oil analysis results. ii) Microscopic examination of particulate matter when sudden changes of PQI level occur. iii) The recording and monitoring of cumulative wear debris figures All records should be re-initialised when a replacement final drive is fitted. Objective: To improve the probability that final drive failures will be prevented from occurring in traffic.</td>
<td>D</td>
<td>Accept</td>
</tr>
<tr>
<td>4</td>
<td>Wales &amp; Borders Trains and Angel Trains Ltd</td>
<td>Where practical, overhauled Gmeinder final drives should be filled with the corresponding oil to that used on the maintenance depot. Objective: To remove the need for unnecessary oil changes</td>
<td>D</td>
<td>Accept</td>
</tr>
<tr>
<td>5</td>
<td>Wales &amp; Borders Trains and Train Operating Companies</td>
<td>Encourage train staff to be alert for unusual noises and if in doubt, draw these to the attention of the conductor or driver. Objective: To maximise the chance of detecting a developing failure</td>
<td>B</td>
<td>Closed</td>
</tr>
<tr>
<td>6</td>
<td>RSSB</td>
<td>Review the purpose, performance and management of the SMIS and USRD database systems. Objective: To ensure that the two systems are compatible and that comprehensive and retrievable incident records are kept</td>
<td>F</td>
<td>Accept</td>
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**HUDDLESFORD 15-Jul-03 (FI2621)**

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<tbody>
<tr>
<td>1</td>
<td>Network Rail</td>
<td>The Project Maintenance Strategy defining the responsibilities of the maintenance contractor, renewal contractor and Network Rail should be reviewed for adequacy. In particular it should require timely maintenance of newly installed track so that defects are not allowed to develop closer to safety limits than is desirable. Objective: To provide the required headroom between actual condition and safety limits.</td>
<td>E</td>
<td>Reject</td>
</tr>
<tr>
<td>2</td>
<td>Network Rail</td>
<td>The revised Project Maintenance Strategy defining the responsibilities of the maintenance contractor, renewal contractor and Network Rail be fully briefed and</td>
<td>E</td>
<td>Reject</td>
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<tr>
<td>3</td>
<td>Network Rail</td>
<td>Individual relatively minor defects can often have much greater significance if they occur in combination. Network Rail should take steps to ensure that persons responsible for track inspection gather all relevant information and those responsible for assessment of track condition take account of combinations of features and defects. Objective: To ensure that track maintenance staff can understand where defects may be in combination and therefore more significant.</td>
<td>B</td>
<td>Closed</td>
</tr>
<tr>
<td>4</td>
<td>Network Rail</td>
<td>Timber sleepers are common in both new and existing CWR. Some installations are very short, that is a few sleepers. There should be clarity and consistency with regard to the assumed stability of such CWR. Objective: Improved safety management of timber sleepered CWR.</td>
<td>E</td>
<td>Reject</td>
</tr>
<tr>
<td>5</td>
<td>Network Rail</td>
<td>The effect on rail stress in CWR as a result of major disturbance such as occasioned by ballast cleaning should be reassessed. Objective: Improved safety management of all CWR.</td>
<td>E</td>
<td>Accept</td>
</tr>
<tr>
<td>6</td>
<td>Network Rail</td>
<td>RT/CE/S/011 should be reviewed to clarify the position with regard to locations where a full ballast shoulder cannot be installed. Objective: Improved safety management of all CWR.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>7</td>
<td>Network Rail</td>
<td>A review of the robustness of the Fastclip fastening system to damage from derailed vehicles and the potential safety consequences should be undertaken. Objective: To minimise consequential damage and risk derailed trains and to trains passing a derailment.</td>
<td>E</td>
<td>Reject</td>
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</table>

**GLEN DOUGLAS 12-Jun-03 (FI2573)**

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<tbody>
<tr>
<td>1</td>
<td>West Coast Railways</td>
<td>West Coast Railway Company Ltd. review their procedures for controlling access to locomotive cabs. Objective To make sure that only those persons properly authorised are admitted to locomotive cabs.</td>
<td>C</td>
<td>Closed</td>
</tr>
<tr>
<td>2</td>
<td>West Coast Railways</td>
<td>West Coast Railway Company Ltd. review their procedures for planning train crew rosters in respect of hours on duty exceedences. Objective To make sure that train crew hours of duty are properly controlled.</td>
<td>C</td>
<td>Closed</td>
</tr>
<tr>
<td>3</td>
<td>Network Rail</td>
<td>Daily advice notices for special trains should show the actual train length Objective To allow signallers to know accurately train lengths and to be able to plan crossings with other trains more positively.</td>
<td>A</td>
<td>Closed</td>
</tr>
<tr>
<td>4</td>
<td>Network Rail</td>
<td>Training for train planners on RETB lines should be formalised by the production of written procedures. Objective To make sure that job knowledge is gained in a structured way.</td>
<td>B</td>
<td>Accept</td>
</tr>
<tr>
<td>5</td>
<td>RSSB</td>
<td>Group Standard GI/RT7033 Lineside Operational Safety Signs should specify the form, shape and colour of fouling point markers. Objective To provide a common, consistent standard for fouling point markers throughout the national rail network, wherever they are in use.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>6</td>
<td>RSSB</td>
<td>Group Standard GK/RT0054 Radio Electronic Token Block should mandate the use of fouling point markers at crossing loops and other locations where running movements could come to a stand foul of adjacent running lines. Objective To formalise the use of fouling point markers on RETB systems.</td>
<td>C</td>
<td>Accept</td>
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<tr>
<td>7</td>
<td>RSSB</td>
<td>Group Standard GK/RT0054 Radio Electronic Token Block should be reviewed to make sure that it meets current operational needs and practices. Objective To make sure that all current operational needs are catered for.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>8</td>
<td>RSSB</td>
<td>The RETB train signalling regulations be standardised throughout the national rail network, have the same status as other train signalling regulations and become a group standard. Objective To achieve consistency throughout the network.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>9</td>
<td>Network Rail</td>
<td>Network Rail to make adequate provision for the maintenance of fouling point markers on RETB controlled lines, including adequate vegetation control to ensure their visibility from any location within the crossing loop area. Objective To make sure that the fouling point markers can be easily seen by train crews</td>
<td>E</td>
<td>Accept</td>
</tr>
<tr>
<td>10</td>
<td>Network Rail</td>
<td>The publication Single lines worked by RETB – Instructions to train crews and others to be updated to: (1) require drivers of trains departing from crossing loops to check visually that the line between the stop board and the loop facing points is physically clear. (2) require drivers of all trains to notify the signaller of any change to the length of their train which occurs at any intermediate location in the RETB area. Objective (1) To safeguard against any error in reporting trains clear inside a fouling point marker. (2) To make sure that signallers to know accurately train lengths at all times.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>11</td>
<td>Network Rail</td>
<td>Network Rail review the arrangements for carrying out for cause drugs and alcohol screening in remote areas. Objective To make sure that screening can be achieved within the mandated times.</td>
<td>F</td>
<td>Accept</td>
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**MARSTON GREEN 01-Jul-03 (FI2605)**

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<tbody>
<tr>
<td>1</td>
<td>RSSB, Network Rail</td>
<td>The inconsistencies between the instructions relating to the issue of overhead line permit to work (Form C) detailed in Rule Book Section Z (part i) clause 23 and in module 7 of Network Rail Company Standard RT/E/S/29987 (The AC electrified lines instructions) to be resolved. The revised instructions must ensure that the form of words specifying who should be issued with Form C is identical in each document. Network Rail must ensure that Form C is issued in accordance with these instructions. Objective: To ensure that a safe system of work is established and clearly understood.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>2</td>
<td>Network Rail</td>
<td>The use of blockade arrangements for the issue of overhead line permit to work (Form C), as defined in module 7, clause 16.1 of Network Rail Company Standard RT/E/S/29987 (The AC electrified lines instructions) to be adequately documented with alternative procedures for the issue of Form C. Objective: To ensure that a safe system of work is established and followed.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>3</td>
<td>Network Rail</td>
<td>Network Rail to audit contractors to ensure that blockade arrangements can only be implemented when the isolations details form has been supported by a method statement, approved by REPE, which gives details as to how working parties will be advised of the information given on Form C. Objective: To ensure that procedures are being followed.</td>
<td>G</td>
<td>Accept</td>
</tr>
<tr>
<td>4</td>
<td>Network Rail</td>
<td>The procedure to get the overhead line electricity switched off in an emergency in accordance with clause 7 of Rule Book Section Z (part i), AC electrified lines, should be briefed to all staff. Objective: To ensure that staff are aware of their responsibilities.</td>
<td>B</td>
<td>Reject</td>
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<tr>
<td>5</td>
<td>Network Rail</td>
<td>The information relating to emergency road access to railway locations, provided to engineering supervisors and others, to be reviewed to include the street name of roads at bridges, level crossings and stations. Objective: To assist the emergency services to respond promptly to calls for assistance to track access locations.</td>
<td>F</td>
<td>Reject</td>
</tr>
<tr>
<td>6</td>
<td>RSSB, Network Rail</td>
<td>To review the VAB acceptance process to ensure that suitable arrangements are in place to prevent access to hazardous areas of vehicles, as part of that process. Objective: To reduce the likelihood of a similar accident occurring.</td>
<td>C</td>
<td>Reject</td>
</tr>
<tr>
<td>7</td>
<td>Network Rail</td>
<td>To review the assessment criteria for the competency of COSSSs and machine controllers to ensure that the current competency assessment is adequate to enable them to fulfil their responsibilities. Objective: To ensure that staff are properly trained and aware of their responsibilities.</td>
<td>B</td>
<td>Accept</td>
</tr>
<tr>
<td>8</td>
<td>Network Rail</td>
<td>To review the information provided in site specific method statements to include a list of key factors from generic method method statements as an Aide Memoire. Objective: To ensure that engineering supervisors and others are presented with information in a way that can be easily understood.</td>
<td>E</td>
<td>Reject</td>
</tr>
<tr>
<td>9</td>
<td>Network Rail</td>
<td>To review the arrangements for the monitoring of site safety procedures and documentation by site supervisors and management. Objective: To ensure that safe systems of work are established and maintained and thus reduce the likelihood of a recurrence.</td>
<td>G</td>
<td>Reject</td>
</tr>
<tr>
<td>10</td>
<td>Network Rail</td>
<td>To develop a risk assessment process that can be used by signallers and electrical control operators in conjunction with contractors’ staff, to assess and communicate the effect that a delay in granting possessions and isolations may have on the completion of physical work. Objective To ensure that the effects of delays are fully considered in order that safe systems are adopted for the completion of the planned work.</td>
<td>E</td>
<td>Reject</td>
</tr>
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KINGS CROSS 16-Sep-03 (FI2674)

1. Network Rail
   Network Rail LNE Region should review its order request tracking procedures to ensure that when a proposal or request is made for a safety critical component it is ordered and delivered or a positive decision is made not to proceed. Objective To ensure that infrastructure components are available when required.
   C  Reject

2. Network Rail, Jarvis Rail
   Network Rail and Jarvis Rail should ensure that when a short notice possession has been planned for a particular task, requests to undertake additional significant work within the same possession should only be accepted after the full implications have been discussed and agreed by engineers and managers of all disciplines involved. Objective To minimise the risk to the safety and operation of the railway resulting from tasks being undertaken that cannot be completed within the time allocated.
   E  Accept

3. Network Rail, Jarvis Rail
   Network Rail should ensure that when any part of a switch or crossing is replaced by a length of plain rail, resulting in a single route over the switch and crossing, the switch blades must be clipped scotched and padlocked, irrespective of measures taken to restrict the routes available by signal disconnections. This requirement must be re-briefed and enforced. Jarvis procedure JF/GI Z04 reviewed and amended as necessary. Objective To prevent train derailment following the fitting of plain rail in place of switch.
   E  Accept
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<tr>
<td>4</td>
<td>Network Rail, Jarvis Rail</td>
<td>Network Rail should ensure that method statements are prepared for all tasks and used to brief the staff involved with the task on the process and procedures to be adopted. In any situation where local staff consider that there is insufficient time to prepare a written method statement, an engineer must be informed and authority sought before the start of work. Procedures should be strengthened to cover this issue. Objective To ensure that all aspects of a task are considered in advance of work commencing and that all involved are aware of the requirements.</td>
<td>E</td>
<td>Closed</td>
</tr>
<tr>
<td>5</td>
<td>Network Rail</td>
<td>Procedures should be strengthened to ensure signalling supervisors and signallers assess the practicability and acceptability of possession limits, particularly those contained in late notices. Problems should be addressed immediately on receipt and not at the start of the possession. Objective To avoid delays in establishing possessions and confusion during hand back.</td>
<td>C</td>
<td>Reject</td>
</tr>
<tr>
<td>6</td>
<td>Network Rail, Jarvis Rail</td>
<td>Network Rail should ensure that when it is proposed to restrict routes by removing signal links in accordance with the Signal Maintenance Testing Handbook, these must be documented and checked by an independent competent person. Links removed must also be checked independently and a functional check of the signalling carried out to verify the restricted routes are not available to the signaller. Jarvis Instructions and Method Statement should be revised and re-briefed to staff. Objective To ensure that the signalling system is safe to operate after disconnections have been made.</td>
<td>A</td>
<td>Accept</td>
</tr>
<tr>
<td>7</td>
<td>Network Rail, RSSB</td>
<td>In all situations when the signalling is to be handed back after completion of work with restrictions, Rule Book, section E (Part i), paragraph X.2.3 form RT3187 must be used. Currently there is ambiguity about its application and responsibility for initiation of the RT3187 process. The Rule Book and other instructions should be reviewed to make the requirement for RT3187 clear. Simplifying the form should also be considered to make it more user friendly to signallers and technicians. The signaller should be required to sign the form. In the meantime, instructions should be issued to Signalling Technicians and Signallers on the use of RT3187. Objective To ensure that the signaller is aware of the condition of the infrastructure after engineering work.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>8</td>
<td>Network Rail</td>
<td>Shift handover practices and documentation should be reviewed in Kings Cross signal box to avoid, where possible, a short intermediate hand over between the outgoing and the rostered incoming signaller especially when possessions are imminently ending or there is degraded working and restrictions. Objective To minimise the risk of communication errors between signallers.</td>
<td>C</td>
<td>Closed</td>
</tr>
<tr>
<td>9</td>
<td>Network Rail, Jarvis Rail</td>
<td>The cascade briefing process employed by Jarvis Rail and Network Rail should be reviewed to ensure, as far as practicable, that work site and signalling staff all receive and understand the implications of the briefing subject matter as related to their work and locations at which it is carried out. Objective To ensure that important safety requirements are understood and acted on.</td>
<td>B</td>
<td>Reject</td>
</tr>
<tr>
<td>10</td>
<td>Jarvis Rail, Network Rail</td>
<td>Targeted audits and surveillance assessments of new safety critical procedures (such as use of RT3187, clipping out of use points and possession processes etc) should be introduced to assure compliance with requirements. Objective To ensure work standards meet stipulated</td>
<td>G</td>
<td>Closed</td>
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<td></td>
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<td>requirements.</td>
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<tr>
<td>11</td>
<td>Network Rail</td>
<td>The testing and inspection frequency established to monitor track component defects should be related to the severity of the defect and its rate of propagation. In low speed areas where a temporary speed restriction is inappropriate, other mitigation measures should be considered. Objective To facilitate prioritised and planned replacement of the component.</td>
<td>G</td>
<td>Reject</td>
</tr>
<tr>
<td>12</td>
<td>Network Rail</td>
<td>Track Engineering standards should be revised to make clear under what circumstances allowances and dispensations are open to local engineers. Objective To ensure consistent application of standards.</td>
<td>C</td>
<td>Reject</td>
</tr>
<tr>
<td>13</td>
<td>RSSB</td>
<td>The Rule Book B(ii) X.3.7 should have clear unambiguous instructions on the situations in which points must be clipped. This must include situations where there are defective or missing track components. Objective To ensure all track workers and signallers understand when points must be clipped.</td>
<td>C</td>
<td>Reject</td>
</tr>
<tr>
<td>14</td>
<td>Network Rail</td>
<td>Possession requirements shown in Weekly Operating Notices and Late Notices (eg DCM Wires) should always give an indication of work to be carried out when this will result in restrictions to signalling equipment on hand back. Objective To ensure signallers are warned of changes affecting train operation.</td>
<td>A</td>
<td>Accept</td>
</tr>
<tr>
<td>15</td>
<td>RSSB</td>
<td>Consideration should be given to introducing a requirement in the Rule Book, or elsewhere, such that the ES and PICOP always have competent assurance that the railway is safe for traffic prior to handing back a possession to the signaler and a specified way of formally advising signallers of any restriction that may be necessary following work. Objective To ensure the safety of the railway.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>16</td>
<td>Network Rail</td>
<td>Discussions should be held with the HSE to agree the processes to be used to obtain information from vehicle based data recorders without the risk of losing or corrupting the data. Objective To ensure the data important for establishing the cause of incidents is not lost.</td>
<td>D</td>
<td>Accept</td>
</tr>
<tr>
<td>17</td>
<td>RSSB, Network Rail, Railway Group members</td>
<td>Processes should be established so that minority recommendations included in formal inquiry/formal investigation reports are considered for action together with the majority recommendations. Objective To ensure all recommendations from accidents and incidents are considered.</td>
<td>F</td>
<td>Closed</td>
</tr>
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</table>

**OAKLEY 07-Aug-03 (FI2636)**

<table>
<thead>
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<tbody>
<tr>
<td>1</td>
<td>Network Rail, BBRIS</td>
<td>Network Rail and BBRIS should examine the planning process to seek to make more use of Green Zone working. Objective To improve personal safety by increasing the amount of work undertaken in safer working conditions.</td>
<td>E</td>
<td>Accept</td>
</tr>
<tr>
<td>2</td>
<td>Network Rail</td>
<td>Network Rail should consider the types of work it permits to be carried out in close proximity to the live conductor rail. Objective To ensure consistency of safety standards throughout the network</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>3</td>
<td>Network Rail, BBRIS</td>
<td>For work that is to be done in close proximity to live conductor rail, BBRIS* should ensure that there are method statements defining the safe system of work and detailing the necessary effective precautions to be taken to guard against the risk of accidental contact with the live rail. Objective To improve personal safety by reducing exposure to electrical hazards.</td>
<td>E</td>
<td>Accept</td>
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<tr>
<td>4</td>
<td>Network Rail, BBRIS</td>
<td>BBRIS should consider the extent of formal training and possible certification necessary for persons required to work on or near live conductor rails and associated equipment. Staff should be trained to carry out work in accordance with the method statement for the work. Objective To improve personal safety by increasing personal knowledge of hazards, control measures and safe working methods.</td>
<td>B</td>
<td>Accept</td>
</tr>
<tr>
<td>5</td>
<td>Network Rail, BBRIS</td>
<td>When employees are transferred to new duties BBRIS* should review their training and experience and provide additional briefing, training and competence assessment as appropriate. Objective To improve personal safety by increasing personal knowledge of hazards, control measures and safe working methods.</td>
<td>B</td>
<td>Reject</td>
</tr>
<tr>
<td>6</td>
<td>Network Rail, BBRIS</td>
<td>BBRIS should ensure that persons required to work adjacent to live equipment are issued with the appropriate personal protective equipment (PPE) and know how to check and use it. Management checks should verify it is being worn correctly. Objective To improve personal safety by reducing the risk of accidental injury arising from site hazards.</td>
<td>E</td>
<td>Reject</td>
</tr>
<tr>
<td>7</td>
<td>Network Rail, BBRIS</td>
<td>BBRIS should clarify the wording relating to work within 300mm of a live conductor rail in its Contractor Assurance Case. Objective Clarity of instruction.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>8</td>
<td>Network Rail, BBRIS</td>
<td>BBRIS should review its system of management safety checks to ensure that all working groups are seen performing work activities. Objective To improve personal safety by checking compliance with safety instructions and identifying unsafe acts.</td>
<td>G</td>
<td>Closed</td>
</tr>
<tr>
<td>9</td>
<td>Virgin Trains</td>
<td>Virgin Trains should examine whether the emergency equipment provided in Class 221s is best placed for rapid deployment in an emergency. Objective To enable the quickest possible response in emergency situations.</td>
<td>D</td>
<td>Closed</td>
</tr>
</tbody>
</table>

**EARLSWOOD/REDHILL 30-Jun-03 (FI2604)**

1. Network Rail

The definition of the role of the track quality supervisor needs to be common throughout the industry. A competence standard and associated training and assessment framework (including management surveillance) should be mandated for the role of track quality supervisor, to meet the requirements of RT/CE/S/103 Track Inspection Requirements, Appendix G. Such a framework should include an understanding of the capability of tamping machine control system software and the availability and use of necessary gauges to complement such control systems. Objective To reduce the risk of recurrence.

2. Network Rail

When suitable software is fitted to tampers, it should always be used on all running line tamping work, so that a post work record is immediately available to the track quality supervisor on completion and that records are archived for future reference. Objective To reduce the risk of recurrence.

3. Network Rail

A review should be conducted of software systems available for tamping machines that can have key track parameters for particular sites incorporated so that post-tamping acceptance by the track quality supervisor is made easier. Following this review, consider mandating that tamping machines incorporate appropriate software and that staff receive appropriate training and competence assessment on its use. Objective To reduce the risk of recurrence.
<table>
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</thead>
<tbody>
<tr>
<td>4</td>
<td>Network Rail</td>
<td>Organisations which manage tamping operations should review their tamping supplier’s competence management systems to ensure that competence assessment processes, including management surveillance, adequately control risks, such as the cessation of the good practice of moving clear of the end of tamping, and that training/competence assessment adequately covers any software in use. Objective To reduce the risk of recurrence.</td>
<td>G</td>
<td>Accept</td>
</tr>
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</table>
## Appendix 2 – Status of recommendations issued in 2002/03

<table>
<thead>
<tr>
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<tr>
<td>1</td>
<td>Network Rail</td>
<td>Railtrack should provide control and signalling centres with ordnance survey grid references and details of access to level crossings, bridges, tunnels etc.</td>
<td>BLAXHALL 15-Apr-02 (FI1951)</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Objective: To facilitate and minimise response times by the emergency services.</td>
<td></td>
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<tr>
<td>2</td>
<td>Network Rail</td>
<td>In anticipation of the revised Railway Group Standard requiring AOCLs and open crossings to be converted within the next 10 years, Railtrack should: a) seek ways of considerably reducing the costs of conversion to barriered crossings b) produce, by means of cost benefit analyses, a prioritised list of crossings for conversion</td>
<td></td>
<td>C</td>
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<tr>
<td></td>
<td></td>
<td>Objective: To reduce accident risks at level crossings and comply with future Group Standards.</td>
<td></td>
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<tr>
<td>3</td>
<td>Network Rail</td>
<td>Railtrack should consider whether the limit of 1 in 100,000 (used in line procedure RT/D/P/061) below which no action need be taken provided the risks are as low as reasonably practicable is still satisfactory.</td>
<td>CRANBERRY 13-Feb-02 (FI1979)</td>
<td>C</td>
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<tr>
<td></td>
<td></td>
<td>Objective: To meet HSE criteria.</td>
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<tr>
<td>4</td>
<td>Network Rail</td>
<td>A review of the COSS assessment process should be undertaken to establish a system that is consistent across the industry and independent of the employer. The panel was informed that Railtrack HQ Assurance and Safety has work in hand to rationalise COSS assessment. This work, if completed, would discharge this recommendation. (Ref 7.8.3 and 8.6.1)</td>
<td></td>
<td>B</td>
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<td></td>
<td></td>
<td>Objective: To reduce the likelihood of a recurrence of the accident.</td>
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<tr>
<td>5</td>
<td>Network Rail</td>
<td>A pre-work information system available on site for checking worker experience, competence and hours worked etc should be established so that a COSS, or another supervisor, is able to confirm that the planned manpower resources are available. The panel was informed of the work being undertaken by Railtrack HQ Assurance and Safety to assess the effectiveness of the Netengines Protocol. If successful and implemented, this would meet the recommendation.</td>
<td></td>
<td>E</td>
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<td></td>
<td></td>
<td>Objective: To reduce the likelihood of a recurrence of the accident.</td>
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<td>6</td>
<td>Network Rail</td>
<td>A training course for newly appointed track workers should be established with the objective of ensuring that the workers are able to carry out their maintenance activities with knowledge of the hazards and the established safety arrangements. The panel was informed that a course which would meet this recommendation is being established by Railtrack HQ.</td>
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<td></td>
<td></td>
<td>Objective: To reduce the likelihood of a recurrence of the accident.</td>
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<tr>
<td>7</td>
<td>SkyBlue</td>
<td>SkyBlue associates do not have the opportunity to take part in formal safety meetings at which they can raise concerns and their supervisors and managers feature safety initiatives. Regular safety meetings at which attendance is compulsory must be established.</td>
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<td></td>
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<td>Objective: To reduce the likelihood of a recurrence of the accident.</td>
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<tr>
<td>8</td>
<td>Network Rail</td>
<td>A review of the COSS assessment process should be undertaken to establish a system that is consistent across the industry and independent of the employer. The panel was informed that Railtrack HQ Assurance and Safety has work in hand to rationalise COSS assessment. This work, if completed, would discharge this recommendation. (Ref 7.8.3 and 8.6.1)</td>
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<td></td>
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<td>Objective: To reduce the likelihood of a recurrence of the accident.</td>
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<tr>
<td>5</td>
<td>GT Railway Maintenance</td>
<td>GTRM must establish a process in their depots to relate applications to Railtrack for Temporary Speed Restrictions with the confirmation of approval. (Ref 7.1.4, 7.1.5, 7.5.4, 7.6.2, 8.1.2 and 8.1.3) Objective: To reduce the likelihood of a recurrence of the accident.</td>
<td>B</td>
<td>Closed</td>
</tr>
<tr>
<td>6</td>
<td>GT Railway Maintenance</td>
<td>GTRM must establish a system for monitoring long term vacancies in supervisory and managerial positions and if necessary make alternative arrangements for undertaking safety related duties of the posts. Objective: To reduce the likelihood of a recurrence of the accident.</td>
<td>B</td>
<td>Closed</td>
</tr>
<tr>
<td>7</td>
<td>Network Rail Midlands Region, GTRM</td>
<td>Railtrack and GTRM should review their audit arrangements to ensure that the system recommended in rec. 6 is included in the assessment plan. Objective: To reduce the likelihood of a recurrence of the accident.</td>
<td>G</td>
<td>Closed</td>
</tr>
<tr>
<td>8</td>
<td>Network Rail Midlands Region</td>
<td>Voice recording equipment should be installed in all signal boxes or linked to signal box phones which may carry safety related conversations. Objective: To facilitate the investigation into the accident.</td>
<td>J</td>
<td>Rejected</td>
</tr>
<tr>
<td>9</td>
<td>Network Rail Midlands Region</td>
<td>Information should be clearly available in signal boxes showing access points to the railway in a form which can readily be passed to the emergency services. The information should also be made available to the emergency services. Objective: To facilitate the timely arrival of emergency services.</td>
<td>C</td>
<td>Rejected</td>
</tr>
<tr>
<td>10</td>
<td>Network Rail</td>
<td>Priority should be given to the work being carried out by Railtrack HQ Assurance and Safety to review protection arrangements and introduce a system which, in the case under review, would enable a safe system of work to be implemented quickly between the COSS and the signaller. Objective: To reduce the likelihood of a recurrence of the accident.</td>
<td>E</td>
<td>Closed</td>
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<tr>
<td>CHESHUNT 11-Feb-02 (FI1982)</td>
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<tr>
<td>1</td>
<td>Network Rail</td>
<td>Railtrack should provide that training and assessment of signallers should include specific degraded situations in the location in which they are required to work. Where possible this should incorporate a practical demonstration or simulation of the situations which the signaler could encounter. Assessments at work should continue when a degraded situation occurs during the assessment. Objective: To reduce the likelihood of a recurrence of the accident.</td>
<td>B</td>
<td>Accept</td>
</tr>
<tr>
<td>2</td>
<td>RSSB</td>
<td>Railway Safety should consider amendments to Section D of the Rule Book to make the communication between a signaler and driver more specific. The Panel suggests that the signaler should specifically remind the driver of the 15 mph limit, and instruct the driver to check all points and switches. The driver should require the signaler to confirm that points and switches are set correctly and secured. Objective: To reduce the likelihood of a recurrence of the accident.</td>
<td>C</td>
<td>Rejected</td>
</tr>
<tr>
<td>3</td>
<td>Network Rail</td>
<td>Railtrack should risk assess the present procedure where signallers are required to continue to caution trains past a signal at danger, when the track circuit has been restored following a failure, but a final test has not been completed. Objective: To reduce the likelihood of a recurrence of the accident.</td>
<td>A</td>
<td>Rejected</td>
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<td>Rec</td>
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<td>Recommendation</td>
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<tr>
<td>4</td>
<td>West Anglia &amp; Great Northern, TOCs</td>
<td>All train operating companies should rebrief their drivers to ensure that they are fully aware of the requirement in Section D of the Rule Book to approach points and crossings at 15 mph, and observe the position of points and switches. Objective: To reduce the likelihood of a recurrence of the accident.</td>
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<tr>
<td>5</td>
<td>Network Rail</td>
<td>Railtrack should make arrangements where possible to provide a competent person to support, and to check the actions of, a signaller in degraded situations. Objective: To reduce the likelihood of a recurrence of the accident</td>
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<td></td>
</tr>
<tr>
<td>1</td>
<td>RSSB, Network Rail</td>
<td>The instructions relating to the issue of an OLE permit to work (Form ‘C’) detailed in Rule Book Section Z(i) Clause 23 and in module 7 of Railtrack Company Standard RT/E/S/29987 (The AC Electrified Lines Instructions) to be rewritten to ensure that the form of words specifying exactly who should be issued with Form ‘C’ is identical in each document. Railtrack to ensure that Form ‘C’ is issued in accordance with these instructions.</td>
<td></td>
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<tr>
<td>2</td>
<td>RSSB, Network Rail</td>
<td>The provision of ‘working limits’ signs to be fixed to the OLE structure at the limit of isolation to be considered. Objective: To provide a positive marker for the limit of isolation and so reduce the likelihood of a similar accident occurring.</td>
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<tr>
<td>3</td>
<td>RSSB, Network Rail</td>
<td>Information relating to the risks associated with standing in open wagons under live OLE to load or unload materials to be included in Rule Book Sections B(i) and Z(i), and in RT3170, Personal Track Safety Handbook. Relevant information is only available in RT/E/S/29987, module 3, section 9 which is not generally issued to contractors personnel. Objective: To reduce the likelihood of a similar accident occurring.</td>
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<tr>
<td>4</td>
<td>Network Rail</td>
<td>The principles of the OLE permit to work system, Form ‘C’, to be included in the basic electrification information provided to trainees for personal track safety certificate. Objective: To reduce the likelihood of a similar accident occurring.</td>
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<tr>
<td>5</td>
<td>Grant Rail Ltd</td>
<td>GrantRail must revise the content of their method statement for track renewals to address the risks associated with working under live OLE, and to emphasise that OLE must be considered to be live at all times until made safe in accordance with Rule Book Sections B(i) and Z(i). (Reference 7.1.5, 8.1.3, 8.1.4, 8.1.5, 8.7.3, 8.7.5) Objective: To reduce the likelihood of a similar accident occurring.</td>
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<tr>
<td>6</td>
<td>Grant Rail Ltd</td>
<td>GrantRail to ensure that the management of method statements and associated documents allows for the robust management of changes to plan and the communication of relevant safety information to those concerned. Objective: To reduce the likelihood of a similar accident occurring.</td>
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<tr>
<td>7</td>
<td>Grant Rail Ltd, MCs</td>
<td>GrantRail must ensure that all site supervisors, COSSs and ESs are briefed about the management and control of the OLE Permit to Work (Form ‘C’). Objective: To reduce the likelihood of a similar accident occurring.</td>
<td></td>
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<tr>
<td>8</td>
<td>Grant Rail Ltd,</td>
<td>GrantRail and their OLE isolation sub-contractors must</td>
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<tr>
<td></td>
<td>IMCs</td>
<td>ensure that changes in the working limits of OLE isolations are agreed prior to the work commencing in order that the information can be advised to all concerned. Objective: To reduce the likelihood of a similar accident occurring.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Grant Rail Ltd, MCs</td>
<td>GrantRail to ensure that each ES and COSS has a clear understanding of their role and responsibilities for the management of site activities. Objective: To reduce the likelihood of a similar accident occurring.</td>
<td>B</td>
<td>Closed</td>
</tr>
<tr>
<td></td>
<td>Network Rail, Zones with contractors</td>
<td>Staff should be instructed to gain access to cabinets and other fixed equipment or buildings on the trackside via access points and routes which do not require the crossing of running lines open to traffic wherever these are practicable and offer a lower risk. Objective: to minimise the risk of personnel to being hit by a train.</td>
<td>B</td>
<td>Closed</td>
</tr>
<tr>
<td></td>
<td>Network Rail, Zones with contractors</td>
<td>Access points and routes to equipment etc which avoid the necessity to cross running lines open to traffic as far as is practicable, and to minimise this in other cases, should be drawn up and routinely included in method statements and safety briefings. Objective: To facilitate recommendation 12.1.</td>
<td>E</td>
<td>Closed</td>
</tr>
<tr>
<td></td>
<td>RSSB</td>
<td>Staff needing to cross the line where sighting distance is not sufficient to comply with the Rule Book requirement of being in a position of safety at least 10 seconds before a train arrives, should contact the local signal box to verify that it is safe to cross. (The panel believe that the new T(i) section of the Rule Book due to be introduced in December 2002 will cover this). Objective: To minimise the risk of personnel being hit by a train.</td>
<td>C</td>
<td>Closed</td>
</tr>
<tr>
<td></td>
<td>Network Rail</td>
<td>Staff requiring to go on or near the track, whether walking or working, should notify the local signal box of their presence on arrival, and again on departure. (The panel believe that the new T(i) section of the Rule Book due to be introduced in December 2002 will cover this). Objective: To aid the process of incident management.</td>
<td>C</td>
<td>Rejected</td>
</tr>
<tr>
<td></td>
<td>Network Rail Midlands Region, BBRP</td>
<td>BBRP should introduce a formal arrangement for monitoring the absence of staff from safety briefings and take remedial action where this occurs. Objective: To ensure that staff receive all safety briefing material.</td>
<td>B</td>
<td>Closed</td>
</tr>
<tr>
<td></td>
<td>Network Rail, Zones with contractors</td>
<td>Generic method statements must be augmented by local details where these are potentially important to safety. Objective: To provide comprehensive details of safety risks.</td>
<td>C</td>
<td>Closed</td>
</tr>
<tr>
<td></td>
<td>RSSB</td>
<td>IWAs should be required to complete a COSS risk assessment form as part of their preparation for working alone. Objective: To encourage IWAs to consciously consider the risks when on or near the line.</td>
<td>E</td>
<td>Closed</td>
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</table>

**CLAY CROSS 05-Jun-02 (FI2038)**

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<tbody>
<tr>
<td>1</td>
<td>Network Rail, Zones with contractors</td>
<td>Staff should be instructed to gain access to cabinets and other fixed equipment or buildings on the trackside via access points and routes which do not require the crossing of running lines open to traffic wherever these are practicable and offer a lower risk.</td>
<td>B</td>
<td>Closed</td>
</tr>
<tr>
<td>2</td>
<td>Network Rail, Zones with contractors</td>
<td>Access points and routes to equipment etc which avoid the necessity to cross running lines open to traffic as far as is practicable, and to minimise this in other cases, should be drawn up and routinely included in method statements and safety briefings.</td>
<td>E</td>
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**QUINTINSHILL 17-Jun-02 (FI2047)**

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<tbody>
<tr>
<td>1</td>
<td>English, Welsh &amp; Scottish Railways Ltd</td>
<td>Recognising that a full fleet check of the bearings of OTA vehicles in service was carried out immediately following the incident, a check of the bearings on all out of service vehicles should be carried out prior to any vehicle re-entering service. Consideration of other vehicle types with similar bearings should be included. Objective: To ensure that no vehicle continues in service</td>
<td>D</td>
<td>Closed</td>
</tr>
<tr>
<td>Rec</td>
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<td>Recommendation</td>
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<tr>
<td>2</td>
<td>English, Welsh &amp; Scottish Railways Ltd</td>
<td>EWS to review the design of suspension and axle bearing assembly with a view to affording greater resilience to minimise fatigue crack initiation and growth from impact/shock loads in normal service operation. Objective: To reduce the potential for bearing failure.</td>
<td>D</td>
<td>Closed</td>
</tr>
<tr>
<td>3</td>
<td>English, Welsh &amp; Scottish Railways Ltd</td>
<td>Any bearing, SKF or otherwise, which is considered unsuitable for safe operation by design, manufacture or application, to be removed from service. Objective: To mitigate against catastrophic bearing failure due to other external influences on the bearing due to the application.</td>
<td>D</td>
<td>Closed</td>
</tr>
<tr>
<td>4</td>
<td>RSSB</td>
<td>Dialogue to be opened with the bearing manufacturers to encourage them to actively participate in incident investigations. Objective: To improve the disclosure of information required to assist the incident investigation process.</td>
<td>F</td>
<td>Closed</td>
</tr>
<tr>
<td>5</td>
<td>English, Welsh &amp; Scottish Railways Ltd</td>
<td>A requirement for suppliers to notify customers of changes in specification of materials or their performance to be included in all supply contracts for safety critical components. Objective: To allow the end user to become aware of changes in material performance specifications.</td>
<td>C</td>
<td>Closed</td>
</tr>
<tr>
<td>6</td>
<td>Network Rail Scotland Region</td>
<td>Railtrack Scotland to improve the zone’s process for implementing new and altered Railway Group Standards. Objective: To ensure that the requirements of Railway Group Standards are properly evaluated and adequate and robust procedures are put in place to carry these requirements out.</td>
<td>C</td>
<td>Closed</td>
</tr>
<tr>
<td>7</td>
<td>Network Rail Scotland Region</td>
<td>Railtrack Scotland requires to implement a robust process to manage day-to-day HABD performance, particularly in respect of outages and ensure that the process satisfies the requirements of Group Standard Objective: To ensure that HABD outages are kept to the minimum duration practicable.</td>
<td>E</td>
<td>Accept</td>
</tr>
<tr>
<td>8</td>
<td>English, Welsh &amp; Scottish Railways Ltd</td>
<td>The existing HABD installations on WCML should be given special technical attention to bring them up to the highest standard of reliability that is practicable, pending their replacement by the new installations envisaged by the WCRM plan. Objective: To ensure that the risk of further derailments due to axle bearing failure is reduced to ALARP.</td>
<td>E</td>
<td>Accept</td>
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**PURLEY 05-Jul-02 (FI2063)**

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<tbody>
<tr>
<td>1</td>
<td>South Central Trains</td>
<td>South Central should review under utilised late night services to determine if risks can be eradicated by service withdrawals. The Strategic Rail Authority (SRA) should support such an exercise and assist in overcoming any inappropriate public service requirement (PSR) issues. Objective: To reduce the likelihood of a recurrence of the accident.</td>
<td>D</td>
<td>Closed</td>
</tr>
<tr>
<td>2</td>
<td>South Central Trains</td>
<td>South Central should remind all employees that they have a personal responsibility to advise their manager if they have any medical conditions (permanent or temporary) which might be exacerbated by undertaking certain duties or activities. Objective: To reduce the likelihood of a recurrence of the accident.</td>
<td>B</td>
<td>Closed</td>
</tr>
<tr>
<td>3</td>
<td>South Central Trains</td>
<td>South Central should urgently revise the fire training modules to include explicit warnings that employees with</td>
<td>C</td>
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<tr>
<td></td>
<td></td>
<td>medical conditions (either permanent or temporary) that may be exacerbated by fire and/or smoke must not get involved in any aspects of fighting fires. Objective: To reduce the risk from such an accident.</td>
<td></td>
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</tr>
<tr>
<td>4</td>
<td>South Central Trains</td>
<td>South Central should review which employees receive the on-train fire training module and include station staff and on-call supervisors/managers as appropriate. Objective: To reduce the risk from such an accident.</td>
<td>B</td>
<td>Closed</td>
</tr>
<tr>
<td>5</td>
<td>RSSB</td>
<td>Railway Safety should promote an industry review of current fire training to determine if the policy of training all staff to deal with fires of a minor nature should be modified or revised under any particular circumstances (Paragraphs 5.4.4 and 6.2.6).</td>
<td>B</td>
<td>Closed</td>
</tr>
<tr>
<td>6</td>
<td>TOCs, Train Operators</td>
<td>Train operators and owners should put positive procedures in place such that when standards of protection are improved, particularly with regard to fire protection, materials procured as spares and replacement parts should be procured to those improved standards. Objective: To reduce the likelihood of, and the risk from, such an accident.</td>
<td>D</td>
<td>Closed</td>
</tr>
<tr>
<td>7</td>
<td>TOCs, Train Operators</td>
<td>Train operators, owners and other interested parties should together assess the safety risk and consequences of delaying, due to contractual issues, any vehicle refurbishment programme in which significant vehicle improvement would take place and as a result of which the fire protection standards would be brought nearer to those required in RGS GM/RT2120. Objective: To reduce the likelihood of, and the risk from, such an accident.</td>
<td>D</td>
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**DR DAY’S JUNCTION 31-Jul-02 (FI2078)**

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| 1   | English, Welsh & Scottish Railways Ltd | An urgent review to be undertaken of driver training arrangements in EWS, to provide training, assessment and assurances processes which:  
- provide proper structured route learning opportunities within a defined and robust programme.  
- recognises the capabilities of and acts upon the individual needs of trainee drivers to ensure adequate knowledge retention.  
- ensure adequate assessment and validation of knowledge before 'passing out'.  
- provide robust post-qualification assessment, which addresses any perceived or actual shortfalls in driver performance following training, including additional training/monitoring where required.  
Cover human factors, in order that drivers understand the influences of stress, distraction etc. and the effect they may have on driving behaviour. Objective: To reduce the likelihood of recurrence. | B        | Closed |
| 2   | Network Rail Great Western Region | Instructions relating to the use of NRN in emergencies, both in the Zone control in Swindon, and Bristol PSB, to be reviewed to ensure:  
- clarity in relation to 'emergency' and 'non-emergency' telephone lines.  
- consideration of the use of standard scripts for emergency broadcasts, to improve consistency, clarity and speed of delivery.  
Briefing of the revised instructions, which will reinforce understanding of the system and its use. (section 7.6) Objective: To reduce consequences of recurrence. | C        | Closed |
<p>| 3   | Network Rail Great Western | If possible, the programming of a telephone concentrator in Bristol PSB to allow the emergency NRN telephone number to be dialled from the concentrator to allow for directing NRN calls to the appropriate service. | J        | Closed |</p>
<table>
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<tbody>
<tr>
<td>1</td>
<td>Network Rail</td>
<td>The signaller should undertake a full and rigorous independent assessment before resuming signalling duties. Objective: To prevent, or reduce the likelihood of, the occurrence of a similar accident or incident.</td>
<td>B</td>
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<tr>
<td>2</td>
<td>Network Rail</td>
<td>Box specific training and assessment of signallers should include degraded working situations in the location in which they are to work. This should include the non provision of TD (train describer) operation where TD is provided. The use of simulators for this purpose should be considered. Training needs analysis should be carried out to identify the training requirements for signallers when transferring between boxes and the training required for degraded situations. Objective: To prevent, or reduce the likelihood of, the occurrence of a similar accident or incident.</td>
<td>B</td>
<td>Closed</td>
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<tr>
<td>3</td>
<td>Network Rail</td>
<td>Network Rail Eastern Region should ensure that a properly documented assessment requirements procedure is provided for all box specific competence assessments. Objective: To prevent, or reduce the likelihood of, the occurrence of a similar accident or incident.</td>
<td>B</td>
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</tr>
<tr>
<td>4</td>
<td>Network Rail</td>
<td>The use of route setting cards in degraded situations should be rebriefed to signallers, and training and supervision should place greater emphasis on their use. Objective: To prevent, or reduce the likelihood of, the occurrence of a similar accident or incident</td>
<td>B</td>
<td>Rejected</td>
</tr>
<tr>
<td>5</td>
<td>Network Rail</td>
<td>Route setting cards should be placed within the direct line of sight of signallers working at their panel or frame. Objective: To prevent, or reduce the likelihood of, the occurrence of a similar accident or incident.</td>
<td>A</td>
<td>Rejected</td>
</tr>
<tr>
<td>6</td>
<td>TOCs</td>
<td>All train operating companies should ensure that their drivers are fully aware of the requirement in Section D of the Rule Book to approach points and crossings at 15 mph, observe the position of points and switches, and be prepared to stop short of any obstructions or points. Objective: To prevent, or reduce the likelihood of, the occurrence of a similar accident or incident.</td>
<td>B</td>
<td>Closed</td>
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<tr>
<td>7</td>
<td>Network Rail</td>
<td>Network Rail Eastern Region should review its processes for ensuring reliability of signalling equipment and aids to signallers. Objective: To prevent, or reduce the likelihood of, the occurrence of a similar accident or incident.</td>
<td>A</td>
<td>Closed</td>
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<tr>
<td>8</td>
<td>RSSB</td>
<td>Railway Safety should consider whether the Rule Book should be amended to clarify the position regarding a delay between a driver being authorised to move his train and the movement taking place. Objective: To prevent, or reduce the likelihood of, the occurrence of a similar accident or incident.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>1</td>
<td>AMEC Rail, IMC's</td>
<td>Split tubing cable work should be included in the possession planning programme to maximise the opportunity to undertake the work with the conductor rail isolated. Records of work completed and the number and location of cables to be fitted in total and during particular work sessions should be maintained. Objective: To ensure that, where possible, the work can be undertaken with the conductor rail isolated in a green zone.</td>
<td>E</td>
<td>Closed</td>
</tr>
<tr>
<td>2</td>
<td>Network Rail PLC, RSSB, IMC's</td>
<td>A review of the standards, procedures and equipment for undertaking work on track with the conductor rail live should be undertaken with the objective of reducing the risk of accidental contact with the live rail when it is not practicable to undertake the work with the conductor rail isolated. Objective: To enable the RGSP objectives 5a and 5b to be achieved.</td>
<td>C</td>
<td>Accept</td>
</tr>
<tr>
<td>3</td>
<td>AMEC Rail</td>
<td>AMEC should produce a method statement which sets out the process and equipment necessary to fit split tubing round traction current cables safely in all circumstances. The method statement should be used to brief work teams and during site technical work assessments. In parallel Task Safety Data Sheet No 73 should be reviewed. (Ref 7.2.2, 7.2.3, 7.2.4, 7.4.5, 7.4.6, 8.1.3, 8.1.4, 8.1.5) Objective: To improve the understanding of the task and safety measures.</td>
<td>E</td>
<td>Closed</td>
</tr>
<tr>
<td>4</td>
<td>Network Rail Southern Region, AMEC Rail</td>
<td>The arrangements for communicating a trackside emergency and initiating action should be reviewed to clarify the information given in the Rule Book and AMEC emergency hotline instruction. All individuals involved in responding to emergencies must be given appropriate training and their understanding verified through assessment processes. (Ref 7.5.1, 7.5.3 to 7.5.8, 7.5.10, 8.2.5, 8.5.2 to 8.5.6) Objective: To ensure emergency response is quick and effective.</td>
<td>B</td>
<td>Rejected</td>
</tr>
<tr>
<td>5</td>
<td>AMEC Rail</td>
<td>The emergency communications details referred to in the AMEC COSS briefing record book and Safety Procedure C3-034 should be reviewed and then communicated to staff to ensure all understand that it is the number of and the name of the organisation to which the emergency communication is to be made that should be recorded. (Ref 7.2.5, 7.4.2, 8.2.5) Objective: To improve post incident response.</td>
<td>C</td>
<td>Closed</td>
</tr>
<tr>
<td>6</td>
<td>Network Rail Southern Region</td>
<td>Network Rail Southern Region should review the programme of and attendees at table top emergency exercises to include AMEC Rail and where appropriate other Infrastructure Maintenance Contractors. (Ref 7.5.10) Objective: To ensure effective and consistent emergency processes are adopted.</td>
<td>F</td>
<td>Closed</td>
</tr>
<tr>
<td>7</td>
<td>Network Rail Southern Region</td>
<td>The present arrangement by which all emergency calls made on the railway phone system are routed to Glasgow and then back to the local emergency call centre should be reviewed to verify that it is the most effective way of communicating emergencies, particularly in the Network</td>
<td>F</td>
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<td>Rec</td>
<td>Directed to</td>
<td>Recommendation</td>
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</table>
|     | Rail Southern Region area.  
Objective: To minimise delays to calls to the emergency services. | | | |
| 8   | AMEC Rail   | Resources available at Norwood depot should be reviewed so that appropriate managerial and technical checks on work processes are undertaken.  
Objective: To ensure safe working practices are maintained on site. | G        | Closed |
| 9   | AMEC Rail   | The IFC should set the adjustment frequency for the operator voice recorder clock so that it is always within 15 seconds of the correct time.  
Objective: To ensure call timing records are accurate. | J        | Closed |
7. Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>ALARP</td>
<td>as low as is reasonably practicable</td>
</tr>
<tr>
<td>ASPR</td>
<td>Annual Safety Performance Report</td>
</tr>
<tr>
<td>ATOC</td>
<td>Association of Train Operating Companies</td>
</tr>
<tr>
<td>BBRIS</td>
<td>Balfour Beatty Rail Infrastructure Services</td>
</tr>
<tr>
<td>BBRPL</td>
<td>Balfour Beatty Rail Plant Ltd</td>
</tr>
<tr>
<td>BTP</td>
<td>British Transport Police</td>
</tr>
<tr>
<td>CMS</td>
<td>competence management system</td>
</tr>
<tr>
<td>COSS</td>
<td>controller of site safety</td>
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<tr>
<td>CWR</td>
<td>continuous welded rail</td>
</tr>
<tr>
<td>DMU</td>
<td>diesel multiple unit</td>
</tr>
<tr>
<td>ES</td>
<td>engineering supervisor</td>
</tr>
<tr>
<td>EUKL</td>
<td>Eurostar (UK) Ltd</td>
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<tr>
<td>EWS</td>
<td>English Welsh and Scottish Railways Ltd</td>
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<tr>
<td>GTRM</td>
<td>GT Rail Maintenance Ltd</td>
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<tr>
<td>HABD</td>
<td>hot axle box detector</td>
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<tr>
<td>HGV</td>
<td>heavy goods vehicle</td>
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<tr>
<td>HSE</td>
<td>Health and Safety Executive</td>
</tr>
<tr>
<td>IBM</td>
<td>International Business Machine</td>
</tr>
<tr>
<td>IFC</td>
<td>infrastructure fault control</td>
</tr>
<tr>
<td>IMC</td>
<td>infrastructure maintenance contractor</td>
</tr>
<tr>
<td>ISLG</td>
<td>Infrastructure Safety Liaison Group</td>
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<tr>
<td>IWA</td>
<td>individual working alone</td>
</tr>
<tr>
<td>NRN</td>
<td>national radio network</td>
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<tr>
<td>OLE</td>
<td>overhead line electrification</td>
</tr>
<tr>
<td>ORR</td>
<td>Office of the Rail Regulator</td>
</tr>
<tr>
<td>OS</td>
<td>Ordnance Survey</td>
</tr>
<tr>
<td>PICOP</td>
<td>person in charge of possession</td>
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<tr>
<td>PPE</td>
<td>personal protective equipment</td>
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<tr>
<td>PSB</td>
<td>power signal box</td>
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<tr>
<td>RAIB</td>
<td>Rail Accident Investigation Branch</td>
</tr>
<tr>
<td>RETB</td>
<td>Radio Electronic Token Block</td>
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<td>RFG</td>
<td>Rail Freight Group</td>
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<td>RGM</td>
<td>Railway Group member</td>
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<td>RGS</td>
<td>Railway Group Standard</td>
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<td>RGSP</td>
<td>Railway Group Safety Plan</td>
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<td>RIO</td>
<td>Rail incident Officer</td>
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<td>ROSCO</td>
<td>rolling stock operating company</td>
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<td>Railway Safety Case</td>
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<td>RSSB</td>
<td>Rail Safety and Standards Board</td>
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<td>S&amp;C</td>
<td>switches and crossings</td>
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<td>S&amp;SD</td>
<td>Railtrack Safety &amp; Standards Directorate</td>
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<td>SCW</td>
<td>Railways (Safety Critical Work) Regulations 1994</td>
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<td>SMIS</td>
<td>safety management information system</td>
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<td>SMTH</td>
<td>signal maintenance &amp; testing handbook</td>
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<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>SPAD</td>
<td>signal passed at danger</td>
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<tr>
<td>SPT</td>
<td>signal post telephone</td>
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<td>SRA</td>
<td>Strategic Rail Authority</td>
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<td>SSC</td>
<td>Standards Subject Committees</td>
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<td>TD</td>
<td>train describer</td>
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<td>TOC</td>
<td>train operating company</td>
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<td>TSR</td>
<td>temporary speed restriction</td>
</tr>
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<td>TUPE</td>
<td>Transfer of Undertakings, Protection of Employment Regulations 1981</td>
</tr>
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<td>UK</td>
<td>United Kingdom</td>
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<td>VAB</td>
<td>vehicle acceptance body</td>
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<td>WCML</td>
<td>west coast main line</td>
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8. References

<table>
<thead>
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<td>1. Railway Group Standard GO/RT3473 formal investigations and formal</td>
<td>Feb 2002</td>
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<td>2. Railway Group Guidance Note GO/GN3673 formal investigations and formal</td>
<td>Aug 2002</td>
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<td>3. RSSB Constitution Agreement</td>
<td>Apr 2002</td>
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<td>4. SMIS database (submissions from individual RGMs)</td>
<td>Extracted Apr 2004</td>
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<td>2004</td>
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<td>7. RSSB Recommendations Paper</td>
<td>May 2004</td>
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<td>10. HSE Railway Safety Principles and Guidance Part 3 Section A “Developing and Maintaining Staff Competence”</td>
<td>2002</td>
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<td>36. EARLSWOOD (FI2604)</td>
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Report 2003/04
Period 1 April 2003 to 31 March 2004