

# **Health & Safety Executive Rail Delivery Programme**

## **Management of Contractors Project**

### **Proposals for the Essential Elements of a HSE Strategy for Management of Contractors (MoC)**

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## FOREWORD

Recommendations relating to the better management of contractors in the rail industry were included in Part 2 of Lord Cullen's report into the crash at Ladbroke Grove.

In May 2002 the HSC published a report on 'The use of contractors in the maintenance of the mainline railway infrastructure' which described the background to the industry's use of contractors for maintenance and steps taken by both the industry and HSE, through its enforcement activity, to improve contractor health and safety management. A commitment to develop a management of contractors strategy was given in the HSC's 'Strategy for Improving the Health and Safety on the Railways 2002-2005'.

Management of contractors in the rail industry was given fresh prominence by the implementation of arrangements within London Underground to contractise all their infrastructure maintenance, and the HSC Interim report into the Potters Bar train derailment which endorsed Lord Cullen's recommendations on contractors. Subsequently Network Rail decided to take infrastructure back in house.

The development of a strategy for Her Majesty's Railway Inspectorate's (HMRI's) interventions in the management of contractors became a project within HSE's Rail Delivery Programme, (2003 –05). HSE commissioned W S Atkins to develop proposals for the strategy and this report is the result of that work. It does not go as far as finalising a strategy but makes a number of recommendations based on an analysis of the position current at autumn 2004. The analysis and opinions in the report are those of the W S Atkins.

HSE would find it helpful in finalising its strategy to receive the views of the industry and other interested parties. The W S Atkins report therefore forms the basis of this consultation exercise. We would be grateful for any written comments on the report by 7<sup>th</sup> October 2005. We then intend to invite stakeholders to a workshop on 10<sup>th</sup> November 2005 to discuss the responses to the consultation and other relevant issues in greater detail.

Written comments, using the form at the end of this document, should be sent to:

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In e-mail responses please use "Management of Contractors Consultation" as the subject header.

Or use the on-line feedback template that can be found at

<http://www.hse.gov.uk/consult/live.htm>

## EXECUTIVE SUMMARY

The Health and Safety Executive (HSE) commissioned Atkins Rail to develop proposals for a HSE Management of Contractors Strategy (MoC) Framework Strategy. The purpose of such a strategy is to enable the HSE to deploy its resources as effectively as possible so as to minimise the safety risk associated with the use of contractors in the rail industry in Great Britain (GB).

The development of the proposals for a strategy commenced in August 2004 and was first issued to the HSE in November 2004. This version of the report has been prepared for wider circulation and publication.

The Report sets out the findings from the research and investigations of:

- current legislation and regulations covering the rail industry;
- current arrangements for the management of contractors in the rail and other high risk industries;
- accident and incident reports and data;
- generic risk factors.

The Report describes proposed measures whereby the HSE can use its influence to enhance the management of contractors in the rail industry, with the objective of improving safety. The Report outlines how these measures could be implemented.

The research and investigations have led to three key findings:

- 1 Firstly, the investigations confirm that, on the one hand, GB Regulations appear to provide a sufficient framework for the effective management of contractors in the industry. On the other hand, there are deficiencies in aspects of the management of contractors as currently implemented within the railway industry. This is clearly indicated by the recommendations from the inquiries into recent accidents.
- 2 Secondly, the investigations indicate that HSE's powers under the existing permissioning and monitoring arrangements for the rail industry appear to be sufficient for the effective management of contractors. These arrangements include responsibilities under the Railways (Safety Case) Regulations which require the HSE to assess and approve the safety cases and to assess the annual independent audit reports submitted by the Duty Holders. In addition HMRI has powers to undertake HMRI inspections, providing the opportunity to focus effort on areas of weakness as revealed by the findings from the annual audit reports.
- 3 Thirdly, the Duty Holders' Railway Safety Cases generally appear to establish suitable a framework for the effective and safe use of contractors. This framework also includes audits and feedback arrangements, and is supported by industry-specific standards and procedures.

The findings also indicate that the effective management of contractors requires a collaborative approach, with the HSE, Duty Holders and contractors each playing their part and co-operating fully with all other parties.

Six measures are proposed for further development into a HSE Framework Strategy for the Management of Contractors. These measures address the findings of the research and investigations and the relevant recommendations from recent accident inquiries.

The proposed measures are:

- i) Develop a MoC inspection strategy<sup>1</sup> that the HSE/HMRI can employ in the Rail industry.
- ii) Enhance the guidance for the individuals who review Railway Safety Cases prior to approval.
- iii) Encourage the rail industry to improve their MoC and develop mechanisms to ensure this is as effective as possible in respect of safety.
- iv) Encourage the rail industry to establish a single contractor / supplier accreditation scheme for the whole industry.
- v) Encourage contractual arrangements that provide more effective incentives for safe performance.
- vi) Provide further railway-specific guidance on good practice in ensuring safety in a contractual environment.

The risk of 'perverse safety incentives' being introduced by the contractual arrangements is worthy of special mention because it has been identified by more than one area of research and is addressed by a recommendation from one of the recent accident inquiries. The avoidance of perverse incentives requires an appropriate balance to be struck between safety and commercial issues. This risk is addressed explicitly by Measures (iii) & (v) and is further supported by Measure (vi).

Progress is currently being made on a supplier accreditation scheme for the main line sector of the GB rail industry. However, it is considered that a single contractor / supplier accreditation scheme for the whole industry would be more beneficial, particularly in view of the PPP arrangements on London Underground and the continuing extensive use of contractors by Network Rail.

It is concluded that improvements are needed in the way that the railway industry implements the arrangements for ensuring safety where contractors are involved and that positive action should be taken by the HSE to bring about improvements, both through the measures identified in this Report and in recent accident inquiry recommendations. Consequently, it is concluded that the HSE strategy for MoC, which is to be developed later, should address the implementation of these measures.

### **New Safety Regulations**

Whilst the forthcoming Railways and Other Guided Transport Systems (Safety) Regulations (which are expected to replace three existing sets of Regulations) were outside the strict scope of this investigation, it was nevertheless considered prudent to review the draft Regulations because they are likely to come into force before a MoC strategy can be fully implemented. The new Regulations will reshape the existing framework for rail safety in response to the European Railway Safety Directive, which will be implemented within the next year to eighteen months (the HSC's Consultative Document [ref.: 3] refers). The findings from this review are also detailed in this Report.

It is concluded that the new Safety Regulations taken into account in the HSE's MoC strategy but that it is for the HSE to decide whether this should be included within the strategy currently under development, or whether a separate strategy should be developed.

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<sup>1</sup> The definition of 'inspection' for the purposes of this report is (as defined in Appendix A):  
"All activities which HMRI Inspectors might undertake to obtain information, including assessment of safety cases, review and audit of documentation, for example hazard logs, risk assessments, proposals for new works, submissions under ROTS etc, and physical on site inspections of operations, plant, equipment, systems and work."

# 1 INTRODUCTION

## 1.1 *Background*

This Report presents the Findings, Conclusions and Recommendations of the Research performed by Atkins Rail to investigate the essential elements of a Framework for a HSE Management of Contractors Strategy.

The remit was to identify, and propose to the HSE, appropriate measures that can be used to form the basis of an HSE MoC strategy. The aim of the strategy is to provide guidance for the HSE as to how to optimise the use of its resources in ensuring that the GB Railway Industry is managing its contractors safely and in full compliance with current legislation and regulations.

The use of contractors to undertake important safety-related and safety-critical work in the rail industry in GB is not new. Contractors have been employed on work across the whole life-cycle of railway work. Recent serious incidents on Network Rail and London Underground have focused the rail industry's and the public's attention on the use of contractors on the railways. Lord Cullen expressed particular concerns within the Ladbroke Grove Rail Inquiry Part 2 Report [ref.: 1] and made a number of specific recommendations. The HSE has been monitoring the rail industry's implementation of these recommendations and Network Rail's management of contractors.

The HSE is funding a number of projects under their Rail Delivery Programme (RDP), one of which is the production of a framework for a Management of Contractors Strategy. The HSE has commissioned this work to be undertaken in order to identify the most effective way for the HSE to deploy its resources in promoting safe contractor management in the industry.

## 1.2 *Scope*

The scope of the Report addresses the identification of measures appropriate for developing the HSE MoC Strategy. The Strategy itself will be developed at a later stage, once the approach and the measures to be used have been agreed by the HSE. The measures identified in the report have been developed from the findings of the research carried out during the Project. The report also provides a summary of the findings from each of the tasks in Appendix C.

The overall aim and scope of the Project was based on current legislation and regulations. However, it has been considered necessary to extend the scope to take account of the draft Railways and Other Guided Transport Systems (Safety) Regulations, which are included in a HSE Consultative Document [ref.: 2 & 3]. The main reason for this is the imminent nature of the new Regulations mean that they are likely to be introduced before the MoC strategy can be fully implemented.

The title of the Project has itself been the subject of some discussion, because it can give the impression that responsibility for ensuring safety where contractors are involved rests only or primarily with those organisations that employ contractor organisations. Responsibility in fact rests with both parties to a contract, and of course in many cases contractors also employ sub-contractors.

It should be noted that the work described in this Report was carried out between August and November 2004. This version of the Report has been compiled for publication by HSE. The reader should be aware that the findings, conclusions and recommendations have not been revised or re-visited since the report was first issued to the HSE in November 2004.

### **1.3 *The Use of Contractors in the Rail Industry***

The use of contractors for railway engineering work is not new, but before privatisation of the national rail network in Great Britain, British Rail used its extensive technical resources to monitor and control closely the work of all contractors, and a substantial proportion of all work was undertaken by BR's own staff.

After privatisation Railtrack was, by intent, much more dependent on contractors, not only because almost all engineering work was performed by contractors but also because they did not have sufficient resources to monitor the contractors' work as closely as British Rail had done. Although Network Rail is now undertaking more work in-house than its predecessor, the use of contractors is fairly extensive.

The nature of working within a contractual environment in any industry is such that there is a joint responsibility for safety, the arrangements for which have to be established and applied, with an inherent potential for confusion over the division of responsibility.

Furthermore, the longer the chain (in both organisational and contractual terms) linking those undertaking safety-related/critical activities and those specifying the requirements and procedures, the greater the risk of poor communication between the ends of the chain. This is particularly so where a contractual interface is involved.

There is also the potential for a contracted company to place undue emphasis on the commercial and contractual nature of the work, possibly at the expense of their specific safety responsibilities, and quite likely at the expense of considering the impact of their actions upon overall railway system safety. By contrast, a direct employee of the main Client is more likely to consider the whole system, i.e. the railway network, in undertaking his/her actions and duties.

The generic process of contracting out and performing work is shown on Figure 2, Appendix E. The diagram illustrates the key safety-related aspects of establishing a contract to perform work, and highlights some of the errors, omissions and gaps in understanding that can lead to unsafe conditions. [N.B. Figure 2 is not discussed in detail in this report and is included to illustrate the lifecycle considered during the supporting research.]

### **1.4 *Regulatory Context***

The HSE is the government's safety regulatory body for many industries which use contractors, including the rail industry, and therefore has experience of the issues associated with performing work through contractual agreements.

In common with other major hazard industries, (including nuclear, offshore and some other chemical industries) railways have, since their privatisation, been subject to a Safety Case regime. Railway operators can operate only if they have had a Railway Safety Case accepted by the HSE which sets out their arrangements for ensuring safety, including their arrangements for the management of contractors.

Where contractors are involved in railways, the HSE has the option of regulating contractor safety by monitoring and enforcing Duty Holder compliance with undertakings made in their Railway Safety Case, or by monitoring and enforcement action directly on contractors and sub-contractors using general powers under the Health and Safety at Work Act.

For some types of work, involving new or upgraded works, plant or equipment, the end product of the contractors' activities may be subject to approval under the long-established approvals regime, the current embodiment of which is the ROTS Regulations.

## 2 KEY FINDINGS AND PROPOSED MEASURES

### 2.1 Introduction

This section summarises the Key Findings from the Project's research tasks, and describes the six proposed measures for a HSE MoC Strategy that have been identified from those findings.

### 2.2 Key Findings

The Project finds that a sufficient legal framework exists through the regulations and Railway Safety Cases for the management of contractors. However, it is clear from the findings and recommendations from inquiries into several recent rail accidents that the management of contractors in practice is not always sufficient. This section summarises the Project's findings and opinions on this apparent gap between regulation and practice.

#### **Summary of findings**

The areas of weakness identified by the research have been collated and are listed below.<sup>2</sup>

- 1 Communication across the contractual interface, including:
  - Provision of safety-related information and instruction *by* the Client *to* the Contractor,
  - Provision of safety-related information *by* the Contractor *to* the Client,
  - Provision or acquisition of assurance of safety relating to the Contractor's work.
- 2 The clarity of roles and responsibilities at the contractual interface.
- 3 The adequacy and competence of the Contractor's and the Duty Holder's employees in respect of undertaking and managing safety-related/critical work in a contractual environment.
- 4 Contractors' awareness of the potential impact of their work.
- 5 The risk of perverse safety incentives being introduced by the contractual arrangements.
- 6 The clarity and usability of guidance offered to Contractors in the standards being applied to their work.

#### **Summary of Possible Implications**

Where the weaknesses summarised above manifest themselves, they give rise to a number of possible implications, including the following:

- The Duty Holder may not be complying fully with his own Railway Safety Case;
- The Contractor may be failing to fully comply with contractual undertakings given to the Duty Holder regarding safety management;

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<sup>2</sup> Details of all weaknesses identified are provided in the Task summaries in Appendix C.

- Although the Duty Holder's Railway Safety Case appears to be compliant with Regulations and good practice, it may contain subtle weaknesses which undermine the effective management of contractors - for example where there is too much flexibility for interpretation.

Measures to address the six key weaknesses and the associated possible implications are detailed sections 2.3 to 2.10. It is proposed that these measures should be implemented as part of the HSE MoC strategy as outlined in section 2.11.

## **Discussion**

Maintaining the required level of safety when employing contractors depends on the following duties and responsibilities:

- Compliance with the appropriate Regulations and client requirements;
- This in turn depends on the client correctly interpreting that subset of their safety responsibilities which is applicable to the contractor and including it within the contract scope;
- Identification, assessment and arrangement for control of safety risks (by both client and contractor);
- Ensuring good communications between the client and the contractor, particularly in respect of safety risks and the measures to control them;
- Co-operation between the client and the contractor, and with other relevant parties;
- Ensuring that sufficient and competent resources are assigned to the work and to the management of the work;
- Effective management and application of contractual requirements that have a bearing on safety.

Many of the clients' and contractors' responsibilities and duties are in fact regulatory requirements, in particular of the CDM regulations. Appendix C provides details of the relevant Regulations.

Many of the Duty Holder's requirements with which a contractor can expect to be asked to comply are detailed in the Railway Safety Case. For example, Network Rail's Railway Safety Case (NRRSC) requires its contractors to produce and comply with a Contractor's Assurance Case (CAC). CAC audits are defined in the NRRSC, while the requirements for a CAC are detailed in NR's procedure RT/LS/P/052, "Accreditation and Development of Suppliers". The NRRSC also defines the arrangements for fulfilling the requirements of the CDM regulations as part of contract-specific planning and delivery.

Similarly, LUL requires the InfraCos to produce and comply with Contractual Safety Cases (CSC). The detailed requirements for the CSCs and CACs cover many of the regulations applicable to contractors. The summary in Appendix C provides more details of both Network Rail's and LUL's arrangements.

### **2.3 Proposed Measures**

The proposed measures for the basis of a MoC Strategy have been identified and developed within the context of current legislation and regulations. However, where possible, a measure has been framed to be applicable under both current and the forthcoming regulations (a discussion of some of the implications of the new

regulations so far as the management of contractors is concerned can be found in Appendix F).

A total of nine possible measures were identified and considered by the Project, and of these, six are considered appropriate to implement in a MoC strategy. The six that are proposed for adoption by the HSE are listed in Table 1 below.<sup>3</sup>

<b>Table 1 - Proposed Measures</b>	
<b>No.</b>	<b>Description</b>
<b>1</b>	Develop a MoC inspection strategy that the HSE/HMRI can employ in the Rail industry
<b>2</b>	Enhance the guidance for the individuals who review Railway Safety Cases prior to approval.
<b>3</b>	Encourage the rail industry to improve their MoC and develop measures to ensure this is as effective as possible in respect of safety.
<b>4</b>	Encourage the rail industry to establish a single contractor / supplier accreditation scheme for the whole industry.
<b>5</b>	Encourage contractual arrangements that provide more effective framework for safe performance.
<b>6</b>	Provide further railway-specific guidance on good practice in ensuring safety in a contractual environment.

Although all of the areas of research contributed in some way to the identification of the six measures, the most influential ones were:

- review of current legislation and regulations (including a brief review of the draft safety regulations);
- review of current Railway Safety Cases;
- review of MoC practice in other (than rail) industries;
- reviews of recent accident reports; and
- identification of generic risks affecting the use of contractors in the railway environment.

Findings from these areas of research lend strong support for the six proposed measures listed in Table 1. It is considered that most, if not all, of these measures should be adopted and that the HSE MoC Strategy itself should focus on the implementation of the proposed measures.

The remainder of this section details these six measures. Proposals for monitoring the effectiveness of the measures after implementation is dealt with in section 2.10.

An outline of how the measures could be implemented in a MoC strategy is provided in section 2.11. The measures that are chosen for implementation will be fully developed together with the MoC strategy in the next stage of the Project.

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<sup>3</sup> All nine measures are detailed in Appendix D together with the rationale for rejecting three of the measures.

## **2.4 Measure 1: Develop a MoC Inspection Strategy**

The HSE inspection<sup>4</sup> strategy for the Management of Contractors should take a two-part approach as follows:

- a. Qualitative, i.e. what to do,
- b. Quantitative, i.e. how often and how much of it to do.

The details of such an inspection strategy would be developed in the next stage of the Project if the HSE choose to proceed with this measure. However, an indication of the type of qualitative and quantitative aspects that the strategy could employ is provided below.

The qualitative aspects would cover what and which organisations to inspect, for example:

- (a) What work activities or contributions to safety duties delivered under contractual arrangements should be inspected, e.g.
  - Infrastructure maintenance including upgrades;
  - Rolling stock maintenance;
  - Facilities management;
  - Training of safety critical staff, etc.
- (b) What inspection techniques to apply, e.g.:
  - Review of contractors' safety cases, standards, risk assessments, hazard logs, method statements, etc;
  - Audit of management systems, competence records, communications, etc;
  - Analysis of accident and incident reports;
  - Physical inspection of work activities and premises.
- (c) Who to inspect, e.g.:
  - Railway Safety Case Duty Holders;
  - Contractors;
  - Subcontractors.
- (d) How to review and evaluate the results of inspections.

The quantitative aspects would address the volume, frequency and coverage of inspection activities, and the resource to be applied to the activities, for example:

- (i) Periodic inspections or audits?
- (ii) Random visits?
- (iii) Risk based inspections?
- (iv) Response to evidence of poor performance (e.g. through on KPIs or benchmarks)?
- (v) How much resource is needed for a required effect.
- (vi) How to optimise regulatory effectiveness and efficiency.

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<sup>4</sup> See Appendix A for the definition of 'inspection' for the purposes of this report.

## **2.5 Measure 2: Enhance the Guidance for the individuals who review Railway Safety Cases.<sup>5</sup>**

The purpose of this measure is to provide individuals who review Railway Safety Cases (prior to approval) with more guidance relating to the management of contractors. By so doing it will be possible to ensure that Railway Safety Cases explicitly address specific concerns relating to contractor safety and with less likelihood of misinterpretation later on.

A specific example of guidance would be to check how a Railway Safety Case addresses the potential for conflict between safety and commercial pressures during the execution of a contract.

A second example might be to check the Duty Holder's arrangements for ensuring that Invitations to Tender give sufficient attention to safety, and for evaluating tenders from the point of view of their impact on safety.

## **2.6 Measure 3: Encourage the Rail Industry to Improve Their MoC and Develop Measures to Ensure this is Effective.**

This measure addresses the safety management of contractors in a broader sense than most of the other measures, because it is focussed on how the HSE can encourage the rail industry to improve its performance in this area.

The objectives of this measure have been developed from the definition of the HSE's scope of responsibility for the management of contractors in the rail industry contained in Appendix A, the findings of the research tasks, and the recommendations from recent accident inquiries with respect to the management of contractors detailed in Appendix C. These objectives are listed below and are expanded upon in the subsequent sections:

- (i) Improvement in communications both within an organisation and across the contractual interface.
- (ii) Implementation of an effective education programme covering work where contractors are involved.
- (iii) Ensuring the competence and adequacy of contractor's employees for the specific work being undertaken.

### **Improvement in communications**

The specific areas of improvement across the contractual interface detailed in recent inquiry reports (listed and summarised in Appendix C) are:

- Provision of safety-related information and instruction *by* the Duty holder *to* the Contractor,
- Provision of safety-related information *by* the Contractor *to* the Duty holder,
- Provision or acquisition of assurance relating to the Contractor's work,
- The clarity of roles and responsibilities at the contractual interface.

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<sup>5</sup> The HSE have also expressed their wish that those compiling Railway Safety Cases (or other Approval documentation) should be provided with enhanced guidance.

Communication within the client and contractor organisations, in relation to contractor safety, is also of vital importance. This is closely linked with the need for employees to understand their responsibilities in relation to contractor safety, whether they are engaged in activities that have a direct bearing on contractor activity, or whether their influence on contractor safety is less direct and obvious.

### **Implementation of an effective education programme**

The provision of effective education programmes for employees of Duty Holders and contractors should provide them with an awareness of the potential impact of their activities on safety in a contractual environment, and should emphasise their responsibility for managing that impact in the interests of safety.

The education should provide all relevant personnel, of both contractors and Duty Holders, with an appropriate understanding of risk management and their role in the management of risk in a contractual environment. This should include the risk of 'perverse safety incentives' being introduced by the contractual arrangements, particularly where commercial pressures may adversely affect safety.

HSE might usefully sponsor forums and promote or lead other interactive means of spreading good practice in contractor safety management in the rail industry.

### **Provision of evidence for the adequacy and the competence of the contractor's employees for the specific work they undertake.**

The contractors should be required to provide evidence to the Duty Holder that the personnel who they actually provide (i.e. that actually perform the work – not always the same as the names of the people who were proposed for the work) are competent to undertake the specific tasks covered by the overall work. This evidence should be required for all personnel whether they are the contractor's own employees or sub-contractors supplied through that contractor.

The contractors should be required to demonstrate that the resources they propose using for a work task are adequate and available to complete the work, under all reasonably foreseeable circumstances, as agreed with the Duty Holder. For example, for long duration contracts (and work), e.g. several months or years, the contractor's organisation would be expected to have a reasonable depth of appropriate resources to cover leave of absence, normal movement of personnel etc. For short duration contracts (and work), e.g. a few days or weeks, a contractor might be expected to have sufficient resources to complete the work to the agreed timescale with no or very limited contingency resources.

Such requirements are normal in contracts but do not always work well in practice. The measure is about encouraging contractors, and Duty Holders, to take a more realistic approach to the resourcing of work. This may be assisted by other measures such as establishing meaningful safety performance benchmarks and KPIs.

## **2.7 Measure 4: Encourage the Rail Industry to Establish a Single Contractor / Supplier Accreditation Scheme for the Whole Industry**

In proposing this measure, it is recognised that progress is being made on a supplier accreditation scheme as indicated in chapter 5 of the HSE's Consultative Document [ref.: 3] on the draft safety regulation.

That document indicates that discussions have been taking place within the mainline section of the rail industry over the last 12 months and that progress is being made

towards establishing a non-regulatory accreditation scheme. However, it is considered that any supplier accreditation scheme should cover the whole of the rail industry in Great Britain, and not be limited to the mainline sector, especially given the changes that have taken place within London's underground rail system (i.e. the PPP arrangements).

A single accreditation scheme covering the whole rail industry would help promote consistently high standards of safety performance, and promote continuous improvement. It could be less expensive than having a different scheme for each sector, particularly in view of the fact that many suppliers work across more than one sector - mainline, underground, metro and other light rail and tramway systems.

The scheme should cover both the supply of goods and services.

#### **2.8 Measure 5: Encourage Contractual Arrangements that Provide a More Effective Framework for Safe Performance.**

This Measure is proposed in view of the potential to improve the current contractual environment so as to positively enhance safety. This would include addressing factors which might act as "perverse safety incentives" – i.e. incentives which would lead people to make decisions or behave in ways that reduce safety because the pressures to meet other contractual or commercial obligations – such as cost, time constraints, resource limitations, etc.

There would be understandable reluctance to involve the safety regulator in the commercially sensitive field of contractual arrangements, but there may be opportunity to promulgate good practice by other industry bodies, for example the Railway Industry Association. Such a body could offer guidance as to the sorts of pitfalls to be aware of, provide suitable model terms and clauses which address the potential for conflict between safety and other goals. It could also include the provision of guidance on evaluating tenders, for example, with respect to assessing their implications for safety.

The advantage of this being undertaken by an appropriate industry body is that it would include representatives from both client and contractor organisations.

#### **2.9 Measure 6: Provide Railway-Specific Further Guidance on Good Practice in Ensuring Safety in a Contractual Environment**

The purpose of this measure is to expand on HSE's current practice of publishing guidance and good practice documentation with the provision of railway-specific guidance. Examples of topics areas that railway-specific guidance might usefully address include:

- 1 The CDM regulations which are important regulations for the rail industry are often perceived, within the industry, as mainly applying to the construction industry. This could be addressed and the understanding of the regulations improved if there was an ACOP or guidance specifically for the rail industry. Such ACOP / guidance would cover the provision of evidence for adequacy and competence of contractor's resources.
- 2 The guidance on the Railway Safety Case regulations (or their successor Regulations) should explicitly cover contractor management including clarity of roles and responsibilities across the contractual interface, the need for good communications and co-operation across the contractual interface, and the need for risk assessments to cover the impact of

perverse incentives that might otherwise be introduced by the contractual arrangements.

Alternatively, it may be more appropriate to provide all guidance for the MoC in a single guidance package.

### **2.10 Monitoring the effectiveness of MoC improvement measures**

Once the measures proposed above have been implemented it will be important to monitor their effectiveness. This will provide feedback to all interested parties, an indication of where change may be required. It may also provide an early indication of a failing in a MoC system. Monitoring of effectiveness could be by a number of means including inspections, general audits and targeted audits.

General audits, in particular those undertaken for the annual independent audit required under the RSCR (or the annual safety report required under the new safety regulations) would be expected to cover management of contractors.

For targeted audits it would be appropriate to establish a range of metrics that indicate the effectiveness of the MoC Strategy overall, rather than being limited to one or more of the measures. The metric could include benchmarks and KPIs.

### **2.11 Implementation**

This section outlines how the measures proposed in sections 2.4 to 2.10 above could be implemented under the HSE MoC strategy. The next stage of the Project will develop the measures selected by the HSE for implementation, together with a detailed plan for implementing the measures.

In addition to implementing and monitoring the measures the plan will need to address transitional arrangements to cover, for example, contracts already in place (some of which may be of a long duration), lead time to implement some elements of the measures, etc.

The co-operation of industry is seen as vital to the effective implementation of those measures for which industry will be responsible. Whilst the HSE could use its powers under the RSCR to require specific changes to a Railway Safety Case in order to implement some of the measures, it is considered that encouragement by the HSE would be more effective.

The HSE already has a range of mechanisms for encouraging and educating industry, some of which have already been mentioned. Others include:

- (a) One to one discussion in the course of Inspectors' routine visits to managers
- (b) HSE papers presented at industry conferences
- (c) HSE contributions to professional journals

As regards the supplier accreditation scheme specifically, the HSE is already represented on the cross industry steering group and it is considered that this is an ideal platform from which to encourage industry to embrace such a scheme.

There are resource implications for the HSE in implementing a MoC strategy. This may necessitate an increase in people resources, or it may require a change in the way the existing resources are deployed, or that the focus of attention of people in their current roles will have to be more specifically targeted at MoC issues.

### 3 CONCLUSIONS

The research and investigations have led to three key findings:

- 1 Firstly, the investigations confirm that, on the one hand, GB Regulations appear to provide a sufficient framework for the effective management of contractors in the industry. On the other hand, there are deficiencies in aspects of the management of contractors as currently implemented within the railway industry. This is clearly indicated by the recommendations from the inquiries into recent accidents.
- 2 Secondly, the investigations indicate that HSE's powers under the existing permissioning and monitoring arrangements for the rail industry appear to be sufficient for the effective management of contractors. These arrangements include responsibilities under the Railways (Safety Case) Regulations which require the HSE to assess and approve the safety cases and to assess the annual independent audit reports submitted by the Duty Holders. In addition HMRI has powers to undertake HMRI inspections, providing the opportunity to focus effort on areas of weakness as revealed by the findings from the annual audit reports.
- 3 Thirdly, the Duty Holders' Railway Safety Cases generally appear to establish suitable a framework for the effective and safe use of contractors. This framework also includes audits and feedback arrangements, and is supported by industry-specific standards and procedures.

It is recognised that ensuring safety where contractors are involved is not restricted to clients' and regulators' responsibilities. The way that contractor organisations manage themselves, and how they interact with clients, also make a vital contribution towards the safety of the railway. If the required level of safety is to be maintained and enhanced, the effective employment of contractors depends on the following duties and responsibilities being discharged throughout the supply chain:

- Compliance with the appropriate regulations and client requirements;
- Good communications and willing co-operation between clients and contractors;
- Ensuring the adequacy of competent resources; and
- Effective risk management, with particular attention to the controlling safety risk that can be inadvertently introduced as a result of commercial and contractual pressures.

The measures by which the HSE could implement an effective MoC strategy, set out in this report, have been developed within the context of current legislation and regulations to address the gap between the expectation and reality for safe contractor management on the one hand. They also endeavour to address the recommendations relating to the use of contractors from recent accident inquiries. In summary, the measures are.

- 1 Develop a MoC inspection strategy that the HSE/HMRI can employ in the Rail industry.
- 2 Enhance the guidance for the individuals who review Railway Safety Cases prior to approval.
- 3 Encourage the rail industry to improve their MoC and develop measures to ensure this is as effective as possible in respect of safety.

- 4 Encourage the rail industry to establish a single contractor / supplier accreditation scheme for the whole industry.
- 5 Encourage contractual arrangements that provide more effective incentives for safe performance.
- 6 Provide further railway-specific guidance on good practice in ensuring safety in a contractual environment.

The weight of opinion of the experts consulted in this work was that to leave unchanged the arrangements for ensuring safety where contractors are involved is not a viable option.

Those consulted were also of the view that positive action should be taken by the HSE to improve the management of contractors, and thus the safety of the railway, through the measures identified by the Project and in recent accident inquiry recommendations, as summarised in Section 2.

It is therefore concluded that the HSE strategy for the Management of Contractors to be developed in the next stage of the Project should address the implementation of these measures.

Finally, a note of caution is added regarding the likely effectiveness of the forthcoming Safety Regulations in ensuring contractor safety in the rail industry. Appendix F explores some of these issues in greater detail.

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## 5 ABBREVIATIONS

<b>Abbreviation</b>	<b>Term</b>
ACOP	Approved Code of Practice
BBC	British Broadcasting Corporation
BR	British Rail
CAC	Contractor's Assurance Case
CDM	Construction Design and Management
COSHH	Care Of Substances Hazardous to Health
CSC	Contractual Safety Cases
EU	European Union
GB	Great Britain / Great British
HASAWA	Health and Safety at Work Act
HMRI	Her Majesty's Railway Inspectorate
HMSO	Her Majesty's Stationery Office
HSC	Health and Safety Commission
HSE	Health and Safety Executive
HQ	Headquarters
IEE	Institution of Electrical Engineers
INCA	Incident Capture and Analysis System
IOSH	Institution of Occupational Safety and Health
KPI	Key Performance Indicator
LCSP	London & Continental Stations & Property Limited
LUL	London Underground Limited
MoC	Management of Contractors
NR	Network Rail
NRRSC	Network Rail's Railway Safety Case
OJEU	Official Journal of the European Union
PFI	Private Finance Initiative
PPE	Personal Protective Equipment
PPP	Public – Private Partnership
QUENSH	Quality, Environmental, Safety and Health
RDP	Rail Delivery Programme
RGS	Railway Group Standards
ROTS	Railway and Other Transport Systems
ROTSR	Railways and Other Transport Systems (Approval

<b>Abbreviation</b>	<b>Term</b>
	of Works, Plant and Equipment) Regulations
RSC	Railway Safety Case
RSCR	Railway Safety Case Regulations
RSCWR	Railway Safety Critical Work Regulations
RSD	Railway Safety Directive
SMIS	Safety Management Information System
SRS	Suppliers Registration System
SSOW	Safe Systems Of Work
TOC	Train Operating Company
TPWS	Train Protection Warning System
UK	United Kingdom
WSARL	W.S. Atkins Rail Limited

## APPENDIX A Definitions and Constraints

In order to prepare this Report, it has been necessary to agree on the definition of specific terms and recognise the constraints applying to the scope of the work. These are set out below.

### Definitions

For the purpose of the MoC strategy and this Project a **contractor** is defined as follows:

*A Contractor is an organisation providing service(s) for a Duty Holder under a commercial agreement, whether directly or through another commercial agreement with another organisation, therefore the Duty Holder will be paying for the service(s).*

To set the measures proposed in this document for the MoC strategy in context, the Project has defined the **scope and limits of HSE's responsibility for the management of contractors** as follows. An explanation is provided in the following paragraphs.

*'The HSE is responsible for proposing and establishing regulations and for providing guidance on the requirements under GB legislation and regulations for the management of contractors in the rail industry. It is also responsible for monitoring and, if necessary, enforcing compliance with GB legislation and regulations for the management of contractors within the terms and limits of their normal monitoring of the rail industry.'*

The role of the HSE in the effective management of contractors in the rail industry has regulatory, monitoring, and enforcement elements.

The responsibility under GB law for the management of risk rests with those who create the risk. The safety of the railway, including the effective management of contractors, is dependent upon effective risk management and is primarily the responsibility of the Railway Safety Case Duty Holders. The contractors also have responsibilities under current regulations (notably CDM).

Under current regulations the HSE (as the rail safety regulator) has the duty to assess and accept Railway Safety Cases, and the powers to define particular conditions that must be achieved. The HSE also has a duty to monitor safety performance through assessment of annual reports of the independent audits of the Duty Holders' operations. The HSE has the powers to make inspections and to take enforcement action where necessary. However, it is the Duty Holder who has the responsibility for complying with the law and its own Railway Safety Case, and for meeting any specific conditions that have been set by the HSE.

When the Rail Safety Directive is implemented through the draft safety regulations [ref.: 4 & 2], the role of the rail safety regulator (at present the HSE) will be modified. The requirements for monitoring are weakened through the removal of the requirement for an annual independent audit as in paragraph (ii) on page 46. It is assumed that, as at present (see RSCR guidance [ref.: 5] paragraph 103), the safety regulator will assess the Duty Holder's annual safety report and raise any shortcomings with the Duty Holder.

For the purpose of the MoC strategy and this Project the term '**Inspection**' means:

*'All activities which HMRI Inspectors might undertake to obtain information, including assessment of safety cases, review and audit of documentation, for example hazard logs, risk assessments, proposals*

*for new works, submissions under ROTS etc, and physical on site inspections of operations, plant, equipment, systems and work.'*

For the purpose of the MoC strategy and this Project the term '**Duty Holder**' means an organisation or person who is:

- An Infrastructure owner, or
- An Infrastructure controller, or
- A Station operator, or
- A Train operator.

For the purpose of the MoC strategy and this Project the term '**Client**' is used to describe the person/organisation employing the services of the 'Contractor'.

### **Constraints**

The following constraints were placed upon the work:

- (i) The review is limited to GB mainline infrastructure controller and operator (Network Rail), GB mainline train operators (TOCs which have an accepted RSC) and the infrastructure owner and operator of London's underground system (LUL).
- (ii) Railways in mines and heritage railways are excluded from this review.
- (iii) Suppliers of goods and products under normal processing arrangements are not regarded as contractors for the purposes of this review.
- (iv) The work takes as the legal baseline those Acts and Regulations currently in force – although some observations have been made in the Report regarding the impact of forthcoming changes to Regulations affecting the rail industry in Great Britain.
- (v) Railway maintenance activities on the national rail network have not been considered in view of the recent changes whereby Network Rail has taken maintenance activities back in-house.

## APPENDIX B HSE RDP MoC Project Overview

This section describes the activities which are the subject of this report. It details each of the 5 research tasks and outlines the methods used to complete these tasks. It also describes the method used to identify the measures for a HSE MoC Strategy that are detailed in the report. A summary of the findings of each of the 5 tasks is provided in Appendix C. The rationale for the rejection of some of the measures identified is provided in Appendix D.

### Research Tasks

The research comprised the following 5 tasks (Task 1 to Task 5) some of which have been divided into a number of sub-tasks. Their relationship is illustrated in Figure 1 and the task objectives are described below:

**Task 1** The review of existing arrangements for GB's rail structure. This task has been divided into 3 sub-tasks:

- 1a** Desk top review of the current legislation and regulations to identify specific regulations relevant to the management of contractors. This task has been extended to include some consideration of the draft 'The Railways and Other Guided Transport Systems (Safety) Regulations 2005' which are included in a HSE Consultative Document [ref.: 2 & 3]. The task has also been extended to review offshore installation regulations relevant to the management of contractors.
- 1b** Desktop review of current Rail industry Railway Safety Cases, Contractual Safety Case and Contractor Assurance Case.
- 1c** Investigation, through interviews and desk top review, of current arrangements for the management of contractors in the rail industry and the HSE.

**Task 2** Investigate, through questionnaires and interviews, the arrangements in other UK industries for the effective management of contractors. These industries should be subject to a similar permissioning regime to that used for the rail industry, e.g. Offshore, Aerospace, Chemical and Nuclear. Although not subject to a permissioning regime the Construction industry should also be considered because of its predominant use of contractors.

**Task 3** Analyse experience from accidents. This task was divided into 3 sub-tasks:

- 3a** Investigate, through desk top review and analysis, historic accident and incident data to determine where contractual arrangements have had a significant impact.
- 3b** Investigate, through desk top review, recent accident and incident inquiry reports to determine where contractual arrangements are cited and recommendations made.
- 3c** Investigate, through desk top review and analysis, the cost of accidents where contractual arrangements have had a significant effect on the cost of an accident.

**Task 4** Identify, through a workshop, generic factors affecting safety and suggest potential control measures.

**Task 5** Research, through library and internet searches and desk top review, further sources of information relevant to the management of contractors.

### **Methodology**

In order to identify the issues that a MoC Strategy would need to address for ensuring safety where Contract(or)s is/are involved, the basic methodology included information gathering, assessment, and analysis of that information.

The specific methods used for the 5 tasks performed are outlined in Appendix C.

The integrity of this work is predicated on the expertise and experience in the GB rail industry of the personnel involved in the project. Regular peer reviews of the emerging work have been undertaken by the Project's Core Team.

The proposed measures have been identified from analysis of the information. The selection of the measures proposed to the HSE and the development of these measures has been carried out and guided by 'Strategy Options Meetings', three of which have been held. The participants of these meetings were the Core Team members, with additional expertise as necessary.

It should be noted that a series of measures, around which a MoC Strategy could be developed, has been proposed rather than several separate options for a strategy as suggested at the outset of the Project. This change in approach has resulted from the findings of the research phase of the Project, and was agreed as the most appropriate way forward at the first of the three Strategy Options Meetings. This revised approach was also supported by HSE.

Independent peer reviews, by Atkins personnel not involved in the Project or not involved in the task that has been reviewed, have also been undertaken.

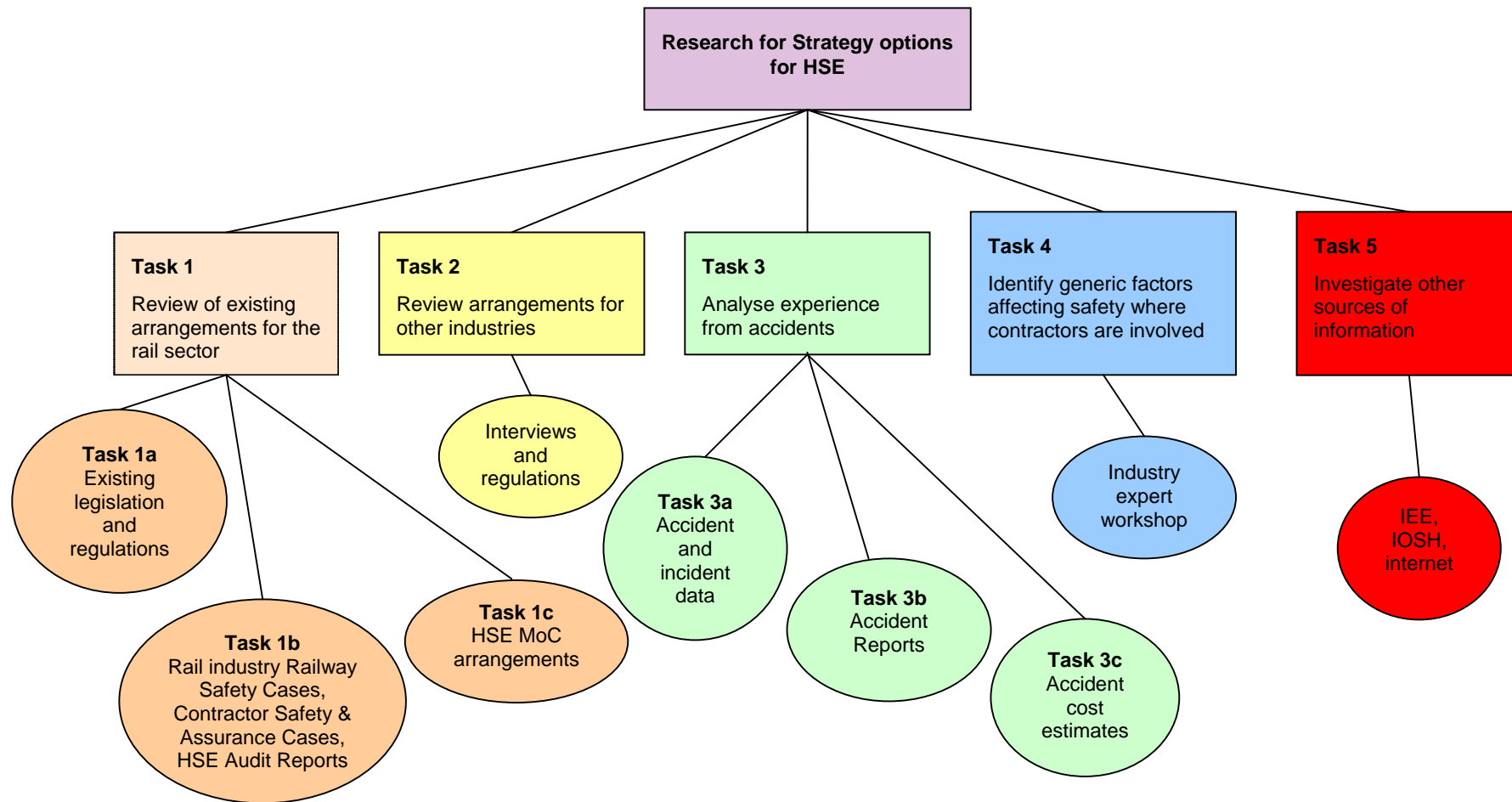


Figure 1 Research Tasks

## APPENDIX C Task Summaries

This appendix provides a summary of the key findings of each of the five research tasks.

### **Task 1 : Review of existing arrangements for the rail sector.**

This task has been sub-divided into three sub-tasks:

- 1a** Review of the existing legislation and regulations,
- 1b** Review of current Railway Safety Cases and related safety cases (e.g. Contractors Assurance Case) and
- 1c** investigation of current arrangements for the management of contractors in the rail industry and the HSE.

The findings of these sub-tasks are summarised in the following sub-sections:

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#### **Sub-Task 1a: Investigation into Existing Legislation and Regulations**

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##### **Introduction**

This sub-task reviewed current legislation and regulations and identified the requirements and responsibilities for the management of contractors placed on the Duty Holders and on the HSE. A summary of the task is provided below.

The UK Government and rail industry are required to implement much of the EU Railway Safety Directive (RSD) [ref.: 4] by April 2006 and the Government has proposed significant changes to rail safety regulation in the White Paper 'Future of Rail'. The HSC has published a consultative document which includes a set of draft rail safety regulations 2005 [ref.: 2 & 3] and provides discussion on the proposed changes in rail safety and safety regulation. These draft regulations will replace the following three sets of existing regulations:

- 1 Health and Safety, The Railways (Safety Case) Regulations (RSCR) [ref.: 7],
- 2 Railway (Safety Critical Work) Regulations (RSCWR) [ref.: 9],
- 3 Railways and Other Transport Systems (Approval of Works, Plant and Equipment) Regulations (ROTSR) [ref.: 10].

These changes are likely to take place within the next 18 months and will have a significant impact on the rail industry not least in the area of management of contractors. Consequently the draft regulations have also been reviewed under this task.

In order to focus the review of legislation and regulations so that a manageable amount of information was considered in the timescales available, the duties of employers with regard to their direct employees was not separately considered during this work. However, it is recognised that contractors' health and safety duties with regard to their employees is an important part of contract(or) management. This was taken into account whilst developing the measures proposed in this report.

The following legislation and regulations have been reviewed:

- i) Health and Safety at Work Act 1974 [ref.: 6]
- ii) Railway Safety Case Regulations 2000 (RSCR) [ref.: 7 & 8], and The Railways (Safety Case) Regulations 2000, including 2001 and 2003 amendments, Guidance on Regulation [ref.: 5].
- iii) Management of Health and Safety at Work Regulations 1999 and ACOP and Guidance [ref.: 11 & 12].
- iv) Construction (Design and Management) Regulations (CDM) and ACOP and Guidance [ref.: 13 & 14].

- v) The Railway (Safety Critical Work) Regulations (RSCWR) [ref.: 9] and ACOP and Guidance [ref 15].
- vi) Railways and Other Transport Systems (Approval of Works, Plant and Equipment) Regulations (ROTS) [ref.: 10] and Guide to the regulations [ref.: 16].
- vii) Draft Railways and Other Guided Transport Systems (Safety) Regulations 2005 [ref.: 2].

### **Summary of Findings of Task 1a**

On the basis of the review of the current regulations the reviewer has drawn the following conclusions regarding their requirements:

1. The primary legislation covering safety on the railways is the Health and Safety Act Work Act and the main safety regulations are the Railway Safety Case Regulations which are made under provisions of the HASAWA.  
The regulations place requirements and duties on the Duty Holders and on the HSE.
2. The Duty Holders have ultimate responsibility for safety of the infrastructure and operations they control and for any contractors they employ.  
The Duty Holder is required to prepare a Railway Safety Case covering his operations which must include details of his arrangements for controlling risks and details of his arrangements for the management of contractors.  
The Duty Holder is required to undertake a thorough review of his safety case at least every three years, or when directed by the HSE.  
The Duty Holder is also required to procure annually an independent audit report covering his operations and to submit the audit report to the HSE.
3. A contractor has health and safety responsibilities, arising from the primary legislation (HASAWA [ref.: 6]), under regulations for his work and operations. These duties include undertaking risk assessment and co-operating with other relevant parties.  
Contractors are also required to comply with standards and arrangements described in the Railway Safety Case of the Duty Holder for which his service and/or work is being provided and which are specified in the contract.
4. The HSE has a duty and responsibility to assess and, when satisfied, approve Railway Safety Cases.  
The HSE also has a duty and responsibility to assess the Duty Holders annual audit reports.  
The HSE has the power to require revision of a Railway Safety Case.  
The HSE also has the powers, and it is assumed a duty, under the Safety Critical Work Regulations to approve assessment schemes which determine the fitness and competence to carry out safety critical work.
5. The HSE (HMRI) has a responsibility to carry out inspections of the railway. The scope and frequency of these inspections is not covered in the regulations reviewed. However, the annual audit reports are used to target and focus inspections.

As part of this task the interpretation of, and compliance with, the regulations has been considered through a *brief* review of two Railway Safety Cases that were available to the reviewer at the time - one from Railtrack (Network Rail's predecessor) and the other from LUL [ref.: 17& 18]. A more extensive review of *current* Railway Safety Cases, a Contractor's Assurance Case and a Contractual Safety Case has been carried out in sub-Task 1b, a summary of which is provided below.

It is apparent, from the brief review of these railway safety cases, that the Duty Holders understand and express an intent to be compliant with the law and regulations in general. The review found that, in particular, they provide comprehensive coverage of the arrangements for the selection, employment, monitoring and management of contractors.

The forthcoming Safety Regulations, which are likely to become effective before a MoC strategy can be implemented, make significant changes in the duties and responsibilities of the Duty Holders and of the HSE. The basic thrust of the draft regulations is for the HSE (and new rail

safety regulator) to have a more hands-off approach to the policing of the rail industry than at present and to place more responsibility on the Duty Holder for self policing.

It is of some concern that under the draft regulations the requirement for an annual independent audit is replaced by an internal audit. It is considered that this change will exacerbate the perceived or actual conflicts between commercial and safety issues that arise when employing contractors.

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## **Sub-Task 1b: Investigation into Rail Industry Existing Arrangements**

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### **Introduction**

This sub-task reviewed current Railway Safety Cases, Contractor's Assurance Case and Contractual Safety Case. The task has also reviewed recent HSE enforcement arrangements relating to the MoC within the rail industry. A summary of the task is provided below.

The approach taken to this task was to:

1. Obtain and review the Railway Safety Cases of:

- Infrastructure controllers (Network Rail [ref.: 19] and LUL [ref.: 18]),
- Train operators (West Coast Trains Ltd [ref.: 20], South West Trains Limited [ref.: 21], Atkins Rail Limited [ref.: 22] and Tube Lines TransPlant [ref.: 23]), and
- A Station Operator (St Pancras [ref.: 24]);

and obtain and review the documents required of principal contractors on the Network Rail Controlled Infrastructure and the LUL Network, namely:

- A Contractor Assurance Case (Atkins Rail Limited [ref.: 25]), and
- A Contractual Safety Case (Tube Lines [ref.: 26]).

Given that these railways are functioning it has been assumed in all cases that the Duty Holders have the appropriate licence / authority to operate from the HSE. A further assumption follows from this, namely that the Railway Safety Cases have been assessed as being fully compliant with the law and regulations and are considered, by the HSE, to be sufficient for their purpose.

2. Obtain and review:

- The results of the annual statutory audits of Railway Safety Cases, to establish whether controls for the management of contractors are in place and effective.
- The results of the annual statutory audits of Railway Safety Cases, to establish whether proactive controls on the management of contractors are in place and effective (Railway Safety Case compliance audits of Virgin Trains and South West Trains by Railway Safety);
- The Enforcement Notices raised by the HSE since 1st January 2003, to establish whether reactive controls on the management of contractors are in place and effective

3. Review the safety case documentation listed in point (1) above against the findings of Task 3b.

### **Summary of Findings of Task 1b**

It is apparent, from these reviews, that the Duty Holders understand and express an intent to be compliant with the law and regulations in general. The review found that, in particular, they provide comprehensive coverage of the arrangements for the selection, employment, monitoring and management of contractors.

The review found that, within the regime set by Network Rail's Railway Safety Case:

- 1 Contractors responsible for delivering physical work (other than low-level risk), isolations and/or possessions are required to prepare a Contractor Assurance Case.
- 2 Contracts involving direct management and supervision by Network Rail, or low-level risk, non-physical work, are required to demonstrate competence via the Link-up and Proof accreditation schemes.

These principles are flowed-down to the management of sub-contractors via the WSARL Contractor Assurance Case, which states:

- 1 Contractors selected to work on WSARL sites on Network Rail infrastructure will be Link-Up approved in the relevant product group.
- 2 WSARL will supervise contractors, unless they are a holder of an approved Contractors Assurance Case, in which case the WSARL Contracts Agent shall request a safety plan or method statement as appropriate. The WSARL Project Manager may decide to directly supervise a holder of a Contractors Assurance Case depending on the criticality of the product quality.

Similar arrangements were found within the other Railway Safety Cases applicable to the national rail network which were the subject of review:

- 1 Within the WSARL RSC, suppliers are primarily 'Link-up' approved or WSARL approved via audit to ensure that they have a robust competence management system. The WSARL approved suppliers list identifies suppliers who carry out safety critical work.
- 2 At St Pancras, LCSP will only use contractors who have demonstrated their ability to safeguard their employees and other persons who may be affected by their undertakings. This is administered in the form of an approved list of contractors, which describes the contractor's capabilities and limitations.

For the LUL network, the LUL Railway Safety Case addresses three distinct contract management regimes that apply between LUL and its contractors:

- PPP Contracts governing the three InfraCos
- Contracts with four PFI suppliers contracted to install or improve certain assets across the LUL Network; for example, Seeboard Powerlink is contracted to operate, maintain and renew the LUL power distribution system.
- Other (i.e non-PPP and non-PFI) contracts required by LUL to conduct its day-to-day-operation; for example, contracts with consultants to LUL.

The PPP safety agreement places a number of obligations on the Infracos, the principal obligation on each Infraco being to produce and comply with a Contractual Safety Case, which must be accepted by LUL.

The safe operation of each PFI contract is governed by the contractual requirement for each contractor to implement an approved safety management system. These systems will include details relating to risk assessment and control, the provision of assurance, safety reviews and change control processes.

Other suppliers are sought by advertising in the 'Official Journal of the European Union' (OJEU). In this case, the supplier selection criteria set by LUL include the QUENSH conditions that apply to the contract, including what evidences of health and safety capability are required, for example COSHH assessments, safety plans and licences. Acceptable responses form the basis of LUL's registered listing of suppliers, referred to as the Suppliers Registration System (SRS).

The Tube Lines Contractual Safety Case states that the selection criteria for suppliers are established and supplies are sourced by the use of:

- Pre-qualified lists,
- Framework agreements,
- OJEU Notices,
- Link-up qualification.

TransPlant is a business division of Tube Lines. The procurement and management of suppliers detailed within its Railway Safety Case are very similar to those detailed in the Tube Lines Contractual Safety Case. The principal difference relates to the procurement of goods or services by TransPlant from other Train Operating Companies (TOCs), in which case TransPlant conducts a review of the TOC's last independent Railway Safety Case compliance audit report.

Generally, it was concluded that failures in the Management of Contractors is more likely to arise from weaknesses in the implementation of these policies and procedures than from the absence of such policies and procedures.

However, it was also concluded that the following weaknesses, previously identified by Task 3b, are least likely to be well addressed by Railway Safety Cases, Contractor's Assurance Cases and Contractual Safety Cases, which underlines the need for guidance to be provided to HSE Inspectors to allow them to monitor effectively:

- The provision of safety-related information by the Contractor to the Duty Holder,
- The risk of Perverse Safety Incentives being introduced by the contractual arrangements, whereby safety would be compromised in the face of time and financial pressures,
- The clarity and usability of guidance offered to Contractors in the standards being applied to their work.

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## **Sub-Task 1c: Investigation into HSE's Existing Arrangements**

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### **Introduction**

This task reviewed the HSE's existing arrangements for the Management of Contractors (MoC) in GB's railways and the processes adopted for monitoring these arrangements. It is based on general reference documents, material provided by the HSE, discussions with experts within Atkins and interviews with HMRI inspectors.

### **Summary of Findings of Task 1c**

#### **Current Arrangements for the MoC.**

Duty Holders are mandated to produce a Railway Safety Case through the RSC Regulations [ref.: 5] which flow down from the HASAWA [ref.: 6], and each RSC must be assessed and accepted by the HSE.

An RSC covers not only the installation and commissioning of equipment but also the operating and maintenance regime under which its initial capability will be maintained. Thus, an RSC must address how safety-critical work will be undertaken by either in-house staff or contractors; for example, with the production of a separate contractor safety case.

Whilst it is perceived that great strides in railway safety have been made by the HSE through the clarification of the roles and responsibilities of the key Duty Holders and the need to specify realistic processes by which these arrangements will be maintained, it is recognised that the overall safety on the railway depends on the Duty Holders implementing these processes at working level.

In the rail industry at present, there is a large and diverse number of Duty Holders covering infrastructure and train operations. Whilst there is a flow down process whereby the key Duty Holders generally have a list of approved Contractors, there are no established industry-wide norms for the approval and management of Contractors. Thus, it is left to each Duty Holder to determine the financial and competence criteria for a Contractor to become and remain approved (e.g. by meeting recognised accreditations such as ISO 9001). Some Duty Holders use Link-Up, a commercial organisation, to establish the suitability of Contractors, although on occasion doubts have been expressed about the effectiveness of Link-Up as a mechanism for ensuring contractor safety.

## **Monitoring of the Arrangements for the MoC**

The HMRI has approximately 45 Inspectors in the Technical Division in its London HQ and approximately 80 regional inspectors in 7 geographical teams to assess compliance with GB Railway Regulations & Standards (e.g. Railway Group Standards (RGS) and the Duty Holder's own standards, monitor these arrangements (e.g. compliance with the Duty Holder's RSC) and to undertake Investigations after incidents.

One of the Technical Division's key role is to check the Duty Holder's RSC, approve works and equipment under the ROTS Regulations, and monitor overall safety performance. Regional Inspectors monitor the operations and maintenance activities of the Duty Holders and the risks to the Duty Holders' trackside workers.

In the near-term, it is understood that HMRI intends to re-organise the Technical Division staff and regional Inspection teams into 'Integrated Teams'. The latter will be directed by Key Account holders. This re-organisation presents an opportunity for HSE to address issues such as the management of contractors in a more satisfactory manner.

### **Key findings of Task 1c**

Several key issues have been raised at the beginning of the project and one of these has been considered here; namely, "What is the best balance for HSE between monitoring and intervention given the limited resources within the HSE?"

It is estimated that the regional Inspection teams spend approximately 55% of their effort on proactive work (e.g. a structured intervention plan and unstructured visits to the key Duty Holders) and approximately 35% effort on reactive activities (e.g. investigations of incidents); the remaining approximately 10% being used for other duties and for training.

Within the proactive activities, less than 10% is spent on the unstructured visits. Assuming that 10% of the intervention plans and the unstructured visits focus on monitoring the Duty Holder's MoC, this means that only approximately 5% of the inspection team's effort is deployed on the MoC. Since the number of injuries/fatalities sustained by Contractors is greater than that sustained by NR workers, it would suggest that the MoC is inadequately represented in the current risk-based approach used by regional Inspectors to set priorities.

There appears to be a case, therefore, for considering afresh how the resources available at regional level should be deployed. Specifically, it may be worth reviewing the balance between pro-active and reactive work, and whether attention to the activities of contractors and how they are managed is sufficient.

## **Task 2: Review of Arrangements for Other Industries**

### **Introduction**

This task investigated the arrangements in other UK industries for the effective management of contractors.

Task 2 covered the investigation into the Management of Contractors (MoC) in UK Non-Rail Industries. The industries investigated were Aerospace, Chemical, Construction, Nuclear and Offshore (Oil and Gas).

The overall aim of Task 2 was to investigate the approach to contractor management in non-rail industries in the UK. In particular this task looked at compliance with the relevant legislation and regulations, for example the Health and Safety at Work Act.

In addition, Task 2 aimed to:

- Identify the scope and limits of responsibilities of the HSE in other industries and determine if these are clear and sufficient.

- Identify the balance adopted by the HSE in other industries between monitoring and intervention (with regard to the MoC) and determine if this is the optimum balance.

These aims were met primarily by performing structured interviews with representatives from both contractor and client organisations within each industry. In addition a web-based questionnaire was distributed to a wider selection of individuals from the identified industries to give a sense check and to help validate the findings of the face-to-face interviews. In order to support the development and implementation of the questionnaires and interviews some preliminary research was performed into the legislation that applied to each of the industries.

## **Summary of Findings of Task 2**

The hierarchy of legislation dealing with the MoC across all industries was generally the same with the HASAWA [ref.: 6] forming the primary legislation. In some cases the HASAWA is applied in conjunction with other industry specific Acts of Parliament which also impact on the MoC. The HASAWA and industry specific Acts are supported by a range of Regulations, with different Regulations having prominence in different industries.

All of the industries investigated tend to have an 'intelligent client' who takes full responsibility for the MoC and are accountable to HSE (or other regulatory bodies/agencies). Although the HSE (or other regulatory bodies/agencies) have the power to look further down the contractor/sub-contractor chain they rarely do so unless there is an incident and even then they are likely to hold the client responsible.

Interaction with HSE in the non-rail industries tends to be consistent (and predictable) from one project to the next with pre-determined levels of detail required to demonstrate compliance with the legislation for each project depending on level of project risk. In some industries (e.g. nuclear and chemical) the level of risk of the work is graded consistently across the industry, so projects in the same category will always have the same level of HSE assessment.

In non-rail industries the Client (or their consultant) and the HSE agree detailed documentation deliverables 'hold points' during the early stages of a project and these are rarely passed without HSE approval. There is a clear understanding from the start of what is expected from all parties in order to satisfy the generic and industry specific legislation. Deliverables are generally in one standard format which is accepted by all review bodies (internal and external) including HSE.

In general clients and contractors believe that the HSE should be less bureaucratic and adopt a more hands-on approach to the monitoring of the management of contractors with more regular involvement in projects on site. Client and contractors generally view the HSE as being reactive i.e. HSE are hands-off unless there is a problem. However, clients and consultants found that the HSE can make valuable contributions to the safety of a project when they do get involved, as they have wide experience in the respective industries.

One client interviewee suggested that HSE could be involved in the selection of contractors to reduce the chances of cost being the over-riding selection factor. This could reduce long term risks associated with poor contractor performance.

Clients and contractors also believed that the HSE should actively support industry initiatives to define good practice with regard to the management of contractors.

The results from the web-based questionnaire generally supported the views presented by the individual interviewees, thus providing confidence that the individual interviewees accurately represented their industries.

## **Conclusions from Task 2**

From the feedback received from those in non-rail industries it appears that the compliance with legislation and good practice is consistent between rail and non-rail industries. Although the methods of managing contractors varies between industries, the interest taken by the HSE in the contracting process generally stops at the Client. The emphasis is on the Client to manage their contractors effectively, with the HSE only stepping-down to contractor level after an incident or when undertaking site spot-checks.

The reviewers believe that the HSE should seek to shift the balance of HSE activities towards greater involvement with advising and educating organisations within the rail industry and so influence and improve the way that organisations appoint and manage contractors. Specifically, there is scope for promoting a greater awareness of responsibilities for contractor safety, and for encouraging client organisations to monitor the performance of contractors against defined and agreed good practice. The HSE could use the records of this monitoring (internal and external audit reports etc.) as an indicator of how well contractors are being managed and as a basis for inspections of contractors' activities.

### **Task 3: Analyse Experience from Accidents**

#### **Introduction**

This task was divided into three sub-tasks

- 3a** Investigate accident and incident data to determine where contractual arrangements have had a significant effect,
- 3b** Review recent accident and incident inquiry reports to determine where contractual arrangements are cited and recommendations, and
- 3c** Investigate the cost of accidents.

The findings of these sub-tasks are summarised below:

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#### **Sub-Task 3a: Review of Accident and Incident Data**

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#### **Introduction**

An assessment of the recorded incidents for Network Rail (the SMIS database of over 1 million incidents) and London Underground (the INCA database of over ½ million incidents) has been performed. In both cases, the project timescale has required this assessment to be performed on a subset of the above data.

In both cases the data for the most recent full year period has been assessed, and subsets extracted that refer to contractor involvement.

In the case of Network Rail, only incidents with certain causes (determined as relevant to the study) have been assessed.

In the case of London Underground, incidents were inspected to determine a subset of relevance to the study. Characteristics and, where possible, causes were then determined.

#### **NR Incident Data**

For the incidents recorded in the NR database determined as relevant to the study, of the listed causes the most numerous were:

- Inadequately performed maintenance task,
- Failure to follow rules/instructions/SSOW,
- (Other) inadequate performance of duties,
- (Other) sub standard act: (Other) lack of attention,
- Ignoring/disregarding warning/hazard,
- Miscommunication,
- Misjudgement,
- Inappropriate placement/positioning, including person or equipment too near track.

The vast majority of these involve 'cutting corners'.

Of these incidents involving failure to follow rules, instructions or SSOW, two thirds involve acts 'performed knowingly'.

A minority of the events involved injury, mostly due to slips trips and falls.

### **LUL Incident Data**

For the incidents determined as relevant to the study, the most frequent incident characteristics in the LUL database were:

- Lack of knowledge or care / mistake / not following rules,
- In Depot,
- No risk - Error caught prior to action,
- Incorrect documentation / not following procedure,
- Slip trip fall,
- Manual handling accident.

As for Network Rail, for the period used in this assessment, the vast majority of incidents involve 'cutting corners':

- Lack of knowledge or care / mistake / not following rules,
- Incorrect documentation / procedure,
- Equipment incorrectly used,
- Lack of PPE / suitable tools / training,
- Access without authority,
- Unsafe working,
- Fail to clear protection,
- Equipment not removed / stored correctly, litter / rubbish left,
- False documentation / false information given,
- Other sub-standard work,
- Information not passed on,
- Lack of warnings / protection.

Nearly a quarter of the incidents involved the protection master asking for protection incompatible with other permissions or, in many cases, applying 'to protect' an area with which he was unfamiliar.

As there is no formal verification that a protection master is competent for the section in question, the cases of a protection master being insufficiently experienced are found to some extent, by chance. So the incidents described above will only be a proportion, possibly small, of the total occurring.

### **Conclusions From Both NR and LUL Incident Data**

The following basic conclusions which apply to the majority of cases have been drawn from the analysis of both the NR and LUL incident data:

- Rules are not followed, often knowingly.
- Standards are not met.
- Personnel are not adequately trained for the tasks carried out.

### **Recommendation arising from analysis of data**

It is evident from the analysis of data that there needs to be a greater awareness of the potential danger in cutting corners. Measures that might improve the situation include:

- Improved initial or refresher training. This should emphasise the consequences of breaching rules/regulations/procedures,
- An increased HSE or other regulatory/enforcement presence in the field in the areas where the corners are being cut,
- A review of the rules/regulations/procedures, and incidents, where they have been broken, to determine the whether they could be revised to aid compliance.

### **Further data sources**

There are further databases, with details on a reduced set of key incidents, held by Network Rail, London Underground or their contractors. These can be interrogated and are likely to hold further information relevant to further phases of this study. However, the time constraints of this phase of the Project have not permitted these sources to be studied yet.

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## **Sub-Task 3b: Analysis of Recent Accident Inquiry Reports**

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### **Introduction**

This task reviewed recent accident inquiry reports to determine the effect, if any, of contractual arrangements on the accident. Only recent inquiry reports have been considered because these are the only major accidents to occur under the current permissioning regime (specifically, the Railway Safety Case Regulations). A summary of the task is provided below.

The following inquiry reports were reviewed:

- 1 The Ladbroke Grove Rail Inquiry: Part 2<sup>6</sup> Report, 2001 [ref.: 1].
- 2 Hatfield Derailment Investigation: Interim Recommendations of the Investigation Board, August 2002, [ref.: 27].
- 3 Train Derailment at Potters Bar 10 May 2002: A Progress Report by the HSE Investigation Board, May 2003 [ref.: 28].
- 4 Investigation into Incident at Chancery Lane on 25th January 2003, report [ref.: 29].
- 5 Formal Investigation Report: Hammersmith Derailment 17th October 2003, issued 28th November 2003, report [ref.: 30].
- 6 Final Report of Joint London Underground and Tube Lines Formal Investigation Into a Derailment at Camden Town on 19th October 2003, issued 30 January 2004, [ref.: 31].
- 7 Final Report: Formal Investigation into the derailment of a Central line train at White City on 11th May 2004, issued August 2004, [ref.: 32].

No report is currently available into the accident at Tebay, on Sunday 15 February 2004, in which a runaway engineering trailer struck a group of railway workers killing four men and injuring three others.

The approach taken to the review was to start by considering the conclusions and recommendations to identify the key issues arising from each inquiry relevant to the Management of Contractors, and then to seek further details from the body of the report to better understand the issues raised. This approach was adopted on the assumption that any significant issues raised in the body of a report would have been captured and encapsulated in its final conclusions and recommendations.

The conclusions to this review are couched in terms of the overall weaknesses relating to the Management of Contractors that are identified in the inquiry reports.

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<sup>6</sup> The Part 1 Report was not considered appropriate for review as part of this MoC Project.

### **Summary of Findings of Task 3b**

All seven reports include issues relating to the Management of Contractors amongst the underlying causes of the accidents. The following table presents the total number of recommendations in each report, along with the number of recommendations relevant to the Management of Contractors.

<b>Inquiry Report</b>	<b>Total recommendations</b>	<b>Recommendations relevant to MoC</b>
Ladbroke Grove (Part 2 report)	74	7
Hatfield	12	3
Potters Bar	26	3
Chancery Lane	24	3
Hammersmith	22	3
Camden Town	16	2
White City	9	2

**Table 2: Number of relevant recommendations in accident reports**

The recommendations relevant to the Management of Contractors are taken from the individual inquiry reports. The overall weaknesses identified from these recommendations are provided in the 'Conclusions' section below, but it is not thought necessary to include the recommendations themselves in this report.

While the inquiries into the incidents on the mainline railway (i.e. Ladbroke Grove, Hatfield and Potters Bar) concentrate on Infrastructure Maintenance Contractors, whose work is now to be undertaken internally by Network Rail, it is thought that these recommendations can be considered as relevant to all types of contractor - whether they are providing maintenance, construction, renewal or design services.

### **Conclusions from Task 3b**

This review of inquiries into recent railway incidents has contributed towards the identification of the weaknesses relating to the Management of Contractors that are explored in the main body of this Report. Guidance should therefore be provided to HSE Inspectors to allow them to monitor effectively:

- 1 Communication across the contractual interface, including:
- 2 The clarity of roles and responsibilities at the contractual interface.
- 3 The adequacy and competence of the Contractor's resources.
- 4 Contractors' awareness of the potential safety impact of their work.
- 5 The risk of Perverse Safety Incentives being introduced by the contractual arrangements.
- 6 The clarity and usability of guidance offered to Contractors in the standards being applied to their work.

A 'watching brief' on proceedings relating to the Tebay accident should be maintained. Conclusions or recommendations arising from the accident should be reviewed for relevance to the Management of Contractors, if time allows.

The review found no contradictions between inquiry reports relating to the Management of Contractors.

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### **Sub-Task 3c: Analysis of Cost of Accidents**

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#### **Introduction**

The aim of the task was to investigate cost of accidents where contractual arrangements have been the most significant cause of the accident. For most accidents, this is a challenging task, for two reasons:

- i) It is not generally clear whether contractual arrangements have been the most significant cause of an accident.
- ii) All the direct and indirect costs are not usually identifiable. In the unlikely event that the cost is fully calculated and itemised, the information would normally be confidential.

Even when information is available, especially when it has been presented by contractors or a Duty Holder, it has to be treated carefully, taking into account the reasons for its publication.

The study considered a wide range of costs associated with accidents including repair and renewal of damaged equipment, introduction of new equipment and infrastructure and compensation payments. Less direct costs such as legal and administrative costs and increased use of road travel with higher risks were also considered. Other costs considered included loss of public confidence and business. Although the study produces some figures much of the work is, by necessity, of qualitative rather than quantitative nature.

#### **Summary Of Findings of Task 3c**

The main finding of the study is that although the overall costs of accidents have risen, safety has not declined as a result of contractual arrangements. The following paragraphs discuss this in more detail, considering each of:

- a) Fragmentation of the rail industry and its effect on safety;
- b) Direct costs of accidents;
- c) Indirect costs of accidents;
- d) Other costs not associated with accidents.

The available evidence suggests that, despite widespread perception to the contrary, fragmentation of British Rail (and subsequent increase in use of contractors) has not had a detrimental effect on the safety of the railway. However, the evidence should be viewed in the context of safety enhancing initiatives<sup>7</sup> during the last 15 years.

Contracting out, by itself, is not counter-productive or unsafe, as is shown by the airline industry. For example, airlines do not maintain aircraft; they may even lease rather than own them; air traffic control and airports are separate organisations. However, the air transport industry is considered safe and air travel continues to grow in popularity.

The Hatfield disaster (2000) was selected as an example. According to conservative estimates, the Hatfield disaster cost Railtrack around £600m, with £400m paid as compensation contractually due to Train Operating Companies (including freight companies) and £180m spent on the ensuing Rail Replacement Program.

Overall, the study suggests that compensation payments as a result of accidents dwarf all other costs. For example, delays to a train in the London morning rush hour could cost the infrastructure

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<sup>7</sup> Such as the introduction of TPWS.

controller £200 a minute at Waterloo Station. One delayed train can cause delays to other trains for hundreds of miles down the track, with compensating payments to their operators for each.

Regarding indirect costs of accidents, the study found that claims about a significant rise in transport safety risks due to increases in road transport following the Hatfield accident were not well founded. Similarly, there is no evidence to suggest that legal costs have risen significantly as a result of greater contractual involvement in accidents.

## **Task 4: Identification of Generic Risk Factors**

### **Introduction**

The aim of the task was to identify the generic risks affecting safety which is one of the tasks in the Management of Contractors Project that Atkins Rail has undertaken for the Health and Safety Executive (HSE).

The aim of the task was to identify the generic risks affecting the use of contractors in the railway environment, in order to highlight the areas where the attention of HSE is likely to show the greatest safety benefit.

Central to the execution of this task was a one day workshop, involving the a group of people with very extensive experience covering all the principal railway operating and engineering disciplines, both from the point of view of a railway organisation and from the point of view of contractors. At the workshop a structured analysis of each stage of the project lifecycle (see Figure 2) was performed, identifying the positive and negative risk influencing factors present when work is performed under contract.

### **Summary of Findings of Task 4**

Almost all railway work can be performed either by the railway undertaking's own direct labour or by contracting it to an outside party. It follows that the safety risks are likely to be largely generic to the industry, and the effect of letting work out to contract will for the most part be to alter the magnitude of those risks rather than to introduce completely different risks. The safe management of contract work depends heavily on both client and contractor having robust systems in place that are adequately resourced and which are applied in practice.

The key conclusion arising from an analysis of the factors identified in the workshop was that many of the elements for success or failure are determined at the contract specification, bid preparation and tender review stages and are firmly set in place by the time the contract is let. Where accidents or incidents arise subsequently, these elements can be regarded as the pre-cursors, which create the conditions in which a chain of events occurs that ultimately results in an accident.

It is therefore of vital importance that any HSE strategy for the management of contractors recognises the significance of these pre-cursors. The strategy must embrace all the contract life-cycle phases, including those prior to the award of contracts.

It is suggested that benefit would accrue from HSE issuing good practice guidance on the management of contractors and contracts, for the benefit of both client organisations and contractor organisations. This good practice guidance need not be linked to specific safety regulations, and indeed by not doing so it may be possible for the HSE to issue more wide-ranging guidance. This guidance should address the full life-cycle of contracts, from accreditation and pre-qualification through to contract completion.

## **Task 5: Investigation of Other Sources of Information**

### **Introduction**

The primary aim of this task was to determine background information on health and safety issues within GB's rail industry and those from other UK and non UK industries, specifically for Management of Contractor issues.

The review made extensive use of information available within the public domain, in books, newspaper articles and information on the internet. The review was systematic, using some documentation to identify further documentation.

### **Summary of Findings**

The main sources of information used were various guidance documents and publications from the IEE and IOSH, along with extensive HSE guidance and other documentation, and BBC news articles.

HSE research from other industries has found a requirement for clear and simple guidance in formats which are suitable for the specific industry sector.

The House of Commons Select Committee has recommended that the HSE should increase the numbers of inspectors for the whole of the HSE. In addition they recommended that there should be greater fines for breaches of health and safety rules and a new offence of corporate killing in order to send a strong message to corporations' managers to take health and safety seriously.

The UK light rail systems are owned and operated in many different ways, with the local Passenger Transport Executives taking varying amounts of responsibility.

The reviewer considered it interesting to note that it is clearly stipulated in the legislation and guidance for the Canadian rail industry that the professional engineers undertaking works on the railway are obliged to protect the public's health, safety and welfare. In addition fines and sentences are stipulated within the legislation for contravention of the legislation. It is also worth noting that the Transport Safety Board of Canada investigate accidents and incidents solely for the purpose of advancing transportation safety, not to assign fault or determine civil or criminal liability. This is similar to the Rail Accident Investigation Branch, the new railway accident investigation body in Great Britain.

### **Conclusions**

There are a number of documents, in particular HSE reports and guidance notes which are considered appropriate to the HSE MoC work and are recommended for further reading particularly for the next stage of the Project.

## APPENDIX D Identification of the Proposed Measures

### Discussion of Potential Strategy Measures

This section lists the range of potential measures that have been considered for the HSE MoC strategy and details the reason(s) for rejecting the final three measures listed below. The rationale for taking a measure forward for the strategy it is detailed within the main body of the report.

The measures have been derived from a range of sources as follows: research and investigation tasks; the recommendations from accident inquiries; three meetings to determine potential measures and to consider whether or not a measure should be taken forward.

The list of measures indicates whether a measure is taken forward or rejected and the sections following the list provide the rationale for the final three measures explaining why that measure should not be considered for the strategy.

The measures to be taken forward as a proposal for the MoC strategy are developed in section 2.3.

The following measures have been considered:

Table 3 - Potential Measures		Take Forward
No	Description	Y= yes N=no
1	Develop a MoC inspection strategy.	Y
2	Enhance the guidance for the individuals reviewing Railway Safety Case.	Y
3	Encourage the rail industry to improve their MoC and develop measures to ensure this is effective.	Y
4	Encourage the rail industry to establish a single contractor / supplier accreditation scheme for the whole industry.	Y
5	Encourage contractual arrangements that provide more effective incentives for safe performance.	Y
6	Provide further railway-specific guidance on good practice in ensuring safety in a contractual environment.	Y
7	Make no changes, leave the arrangement for MoC as they are at present.	N
8	Develop changes to existing regulations and/or develop new regulations to cover the MoC.	N
9	Make changes to the draft regulations.	N

No further comment is made here on the measures which have been recommended for adoption since they are adequately addressed in the main body of the Report. However, the three options (7, 8, 9) that were not taken forward are briefly described below, in terms of the reason for their rejection.

#### **Measure 7: Make no changes, leave the arrangement for MoC as they are at present**

It is clear from the findings of the research task undertaken by the Project that improvements can and should be made in safety where Contract(or)s is/are involved. Some of these findings relate to

implementing the recommendations related to the use of contractors made in the recent accident inquiries while others suggest encouragement of better practice and a specific inspection strategy. Consequently, it is not possible to recommend leaving the present arrangements unchanged.

**Measure 8: Develop changes to existing regulations and/or develop new regulations to cover the MoC**

On the basis of the research undertaken by the Project, the existing regulations and their interpretation, in the construction and acceptance of railway safety cases, are considered to be sufficient. As indicated above it is important to ensure effective compliance with the railway safety cases at all levels.

It is also considered that regulations themselves inevitably cannot address the level of detail applicable to the measures considered appropriate for a MoC strategy and that improvements can more effectively be implemented through changes to the guidance for the RSC and other regulations as proposed in measures 3, 5 and 6.

On a pragmatic level it is unlikely that changes to current regulations could be implemented before the new safety regulations come into force.

**Measure 9: Make changes to the draft (forthcoming) safety regulations**

The draft safety regulations have been considered, although they are outside the scope of the Project, because it is likely they will be implemented within a relatively short timescale. Before changes to the draft regulations, as relevant to the MoC, can be considered an in depth review would be necessary. However, in general, it is considered that regulations inevitably cannot address the level of detail applicable to the measures considered appropriate for a MoC strategy.

The draft regulations appear to introduce a move to more self monitoring in the rail industry. This places even more emphasis on the need for effective compliance with the railway safety cases (or their replacement) at all levels.

This view that a change to the draft safety regulations is not appropriate relates specifically to the management of contractors. However, in Appendix F, issues are discussed relating to the disclosure of the details of the risk assessments for both Part A and Part B certificates and the independence of annual audits, which is considered to be a general safety issue.

APPENDIX E

Flow-chart of the generic process of contracting out and performing work

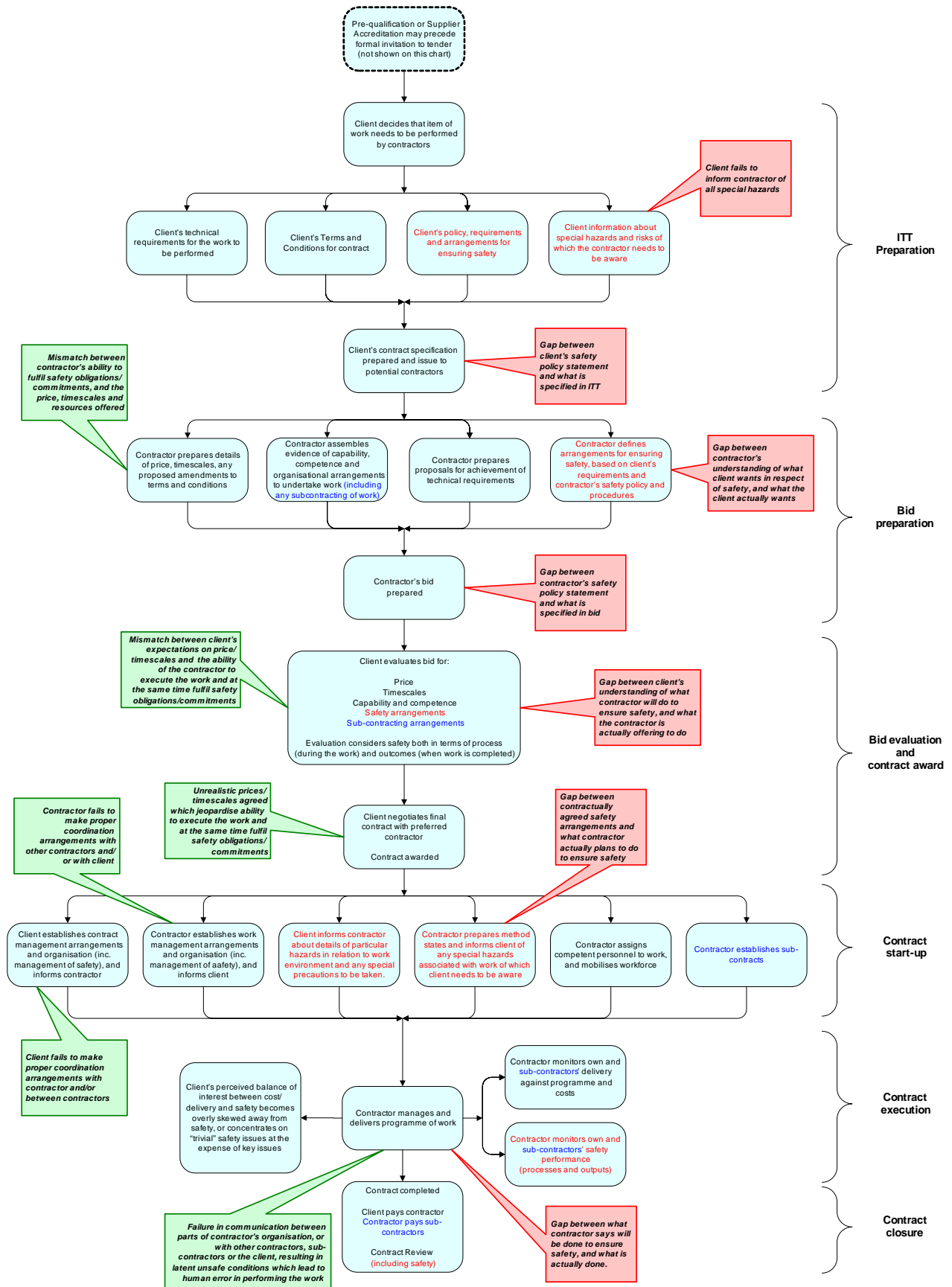


Figure 2 Contract Flow Chart

## **APPENDIX F      The forthcoming Safety Regulations**

Under the forthcoming Railways and Other Guided Transport Systems (Safety) Regulations, similar permissioning arrangements to those under the present Railway Safety Case regime will be applied. The safety regulator will issue safety certificates (in two parts A & B<sup>8</sup>) and safety authorisations to permit railway undertakings (train operators) and infrastructure managers respectively to operate. The safety regulator will assess applications for safety certificates and safety authorisations, and subsequently monitor safety performance through review of the Duty Holder's annual safety reports. The safety regulator will also have powers of enforcement, for example through regulations 14 (direction for amendment), 15 and 16 (revocation of certificates and authorisations).

The enforcement powers mentioned above (amendment, revocation of certificates and authorisations) might be regarded as more draconian than necessary for offences which would only merit a fine for non-compliance with Railway Safety Case arrangements under the current Regulations. This feature of the new Regulations could make it more difficult for the safety regulator to take effective regulatory action in some circumstances, i.e. the new enforcement powers are less subtle, adopting an all or nothing approach.

Although in general the documented safety management arrangements of the Duty Holders provide an effective route for the HSE to monitor and influence safety where contractors are involved, the introduction of European railway legislation may lead to circumstances where direct interaction between the safety regulator and contractors is perceived as the most effective and efficient form of influencing the safety management of contractors. For example, if a railway operator based outside GB has its GB trains maintained by a contractor in GB it might be more effective and efficient for the safety regulator to inspect the activities of the contractor rather than to audit the safety management arrangements of a company based outside GB.

The new European legislation facilitates permissioning, in part at least (by means of the Part A certificate) by a safety regulator in one country for a railway undertaking to operate trains in another country. It is not clear how this new regime will take account of the different cultural and commercial pressures that may have a bearing on the effectiveness of the railway undertakings safety management system. This may prompt a need to re-think the HSE/HMRI's inspection regime, to ensure that monitoring is appropriately directed to address such issues.

The new Regulations, when implemented, will make significant changes in the duties and responsibilities of the Duty Holders and of the HSE. The basic thrust of the draft regulations is for the HSE (and new rail safety regulator) to have less involvement in the monitoring of the rail industry than at present and to place more responsibility on the Duty Holder for self monitoring. Two specific concerns have been raised in relation to this and the management of contractors during the course of the Project:

- (i) The first relates to the sufficiency and transparency of the completeness of risk assessments. It is noted that regulation 5 (l) (d) covers the management of risk related to the supply of maintenance and materials and to the use of contractors. However, it is not clear from schedule 1, clause 2 (d) whether this applies only to Safety Certificates Part A (i.e. the generic part) or to Safety Certificates Part A and Part B (Part B covering a specific operation). If it applies only to Part A then the application for the Safety Certificate can only indicate in general terms the types of risk identification methods that may be used, and if details of the risk identification methods used for a specific operation are not defined it would be difficult to have confidence in the completeness of the risk identification. Clearly, only risks that are identified can be assessed and managed.

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<sup>8</sup> Safety Certificates are in two Parts: Part A generic applies to a Duty Holder's general arrangements; Part B specific operation, applies to the Duty Holder's specific arrangements for an operation, a separate Part B is required for each operation.

- (ii) The second concern relates to annual audits of a Duty Holder's operations and the replacement of the requirement for an independent audit (RSCR regulation 9) by an internal safety audit (draft regulation 29 (1) (d)). The concern relates to the objectiveness and rigour of internal audits compared with an independent audit. Each organisation develops its own culture and it is difficult for a person from that culture to objectively review his own organisation's activities. This may present a particular difficulty with the identification of possible conflict between commercial and safety issues where judgement is often required to strike the appropriate balance.

On the basis of the current weaknesses in the effective management of contractors it might be advisable to reconsider the proposal under the draft regulations for the requirement for an annual independent audit to be replaced by an internal audit. However, in doing so, account will need to be taken of whether the Safety Directive would permit such an arrangement.

<b>Please provide some background information about yourself and your organisation.</b>		
<b>Title:</b>	<b>Forename:</b>	<b>Surname:</b>
<b>Organisation:</b> <b>Address 1:</b> <b>Address 2:</b> <b>Address 3:</b> <b>Town / City:</b> <b>County:</b> <b>Post code:</b>		
<b>Email address:</b>	<b>Telephone Number:</b>	<b>Size of organisation:</b>
<p><b>Confidentiality:</b></p> <p>Please indicate below if you do not wish details of your comments to be available to the public. (NB if you do not put a cross in the box they will be made public. This takes precedence over any automatic notes on e-mails that indicate that the contents are confidential.)</p> <p>Please treat my response as confidential. <input type="checkbox"/> (cross means confidential)</p> <p>Alternatively, to treat your comments on a particular section as confidential, please insert bracketed text '(Treat as confidential)' within that section response.</p>		

Question	
1	Looking at the findings listed in section 2.2 of the W S Atkins report, do you agree with the areas of weakness that have been identified?
1a	Could you add anything from your own experience?

2	W S Atkins propose six measures (page 10, Table 1). Do you think they are the right ones?
2a	If yes, please rank them in the order of priority.

2b	If no, please set out what measures you think would be more effective.
3	Who should be inspected? Please give the reasons for your choice. a. Clients b. Contractors c. Sub-contractors

4	If you agree that existing contractual arrangements introduce 'perverse safety incentives' what would be the single best measure to counteract this?
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5	Do you support the concept of a single contractor/supplier accreditation scheme?
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5a	If yes, who should run the scheme?
6	HMRI will need to monitor the effectiveness of the strategy which is put in place. Taking into account any weaknesses already identified can you suggest the Key Performance Indicators that should be measured and how this should be carried out?