

**Directors' Responsibilities for Health and Safety – A Peer  
Review of Three Key Pieces of Published Research**

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This report details the outcomes of a peer review of three pieces of published research which was commissioned by the Health and Safety Executive as part of its preparation of advice to Ministers on the issue of whether new statutory health and safety duties should be imposed on directors. On the basis of the evidence reviewed, it is concluded that the attitudes and behaviour of directors do exert an important influence over their organisation's health and safety management and performance and that, while directors already consider themselves to face considerable legal, commercial and societal pressure to take responsibility for health and safety and to avoid the occurrence of damaging incidents, their commitment to the issue is often problematic and frequently seen to be so by other managers. It is further concluded that the evidence available provides a strong, but not conclusive, basis for arguing that the imposition of 'positive' health and safety duties on directors would serve to usefully supplement the liability that they currently face under section 37 of the Health and Safety at Work Act.

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## EXECUTIVE SUMMARY

The report details the findings of a peer review of three key pieces of published research which was commissioned by the Health and Safety Executive as part of its preparation of advice to Ministers on the issue of whether new statutory health and safety duties should be imposed on directors. The three pieces of research concerned had been undertaken by the Centre for Corporate Accountability, the consultancy firm Greenstreet Berman and the Executive's Health and Safety Laboratory (HSL).

In summary, the objectives of the commissioned review were to provide assessments of the:

- thoroughness of the three reports in identifying and surveying relevant published research;
- their key findings concerning the factors influencing directors to take responsibility for health and safety; the likely impact of any new legal duties placed on directors; and how directors exercise this responsibility and to what effect; and
- reliability of the evidence base on director responsibility for health and safety and its fit with current HSC/E measures to promote greater director responsibility and leadership on health and safety.

In order to explore these issues it was decided to examine the relevant material in the three reports in relation to four broad, and to some extent, inter-related, themes. First, the degree to which directors' attitudes and behaviour influence organisational health and safety management and performance. Secondly, what prioritisation directors currently appear to accord to the issue of health and safety at work. Thirdly, to what extent the law acts as a motivator of director behaviour in this area. Fourthly, the views expressed in the three reports as to the desirability of imposing explicit statutory health and safety duties on directors and their 'fit' with the research evidence reviewed in relation to those themes previously mentioned.

At a general level, it was found that not all of the three reports addressed the first of the above themes. It was further found that the depth of coverage of particular themes varied to some degree between them and that the sources of relevant evidence they utilised also sometimes differed. Nevertheless, in combination, the three reports were, in general, found to provide, with two notable exceptions, a good overview of the relevant research evidence, when considered alongside the present author's own further analysis, and, on an individual level, to report the research findings they utilised accurately. The exceptions referred to concerned the failure of the three reports, taken together, to provide thorough reviews of the evidence relating to (a) the influence that directors exert over health and safety management and performance and (b) the role of individual personal liabilities in motivating director actions in the area of health and safety at work.

More specifically, the evidence provided in the three reports was found to indicate that directors' do exert an important influence over their organisation's health and safety management and performance. It was also found to suggest that while directors appear to consider that they already face considerable legal, commercial and societal pressures to take responsibility for health and safety and to avoid the occurrence of damaging incidents, in practice, their commitment to the issue is often problematic and frequently seen to be so by other managers.

Statutory health and safety requirements, including those giving rise to individual, personal, legal liabilities, serve, the evidence further suggests, as one of the most important drivers of director actions in respect of health and safety. However, there would seem scope to explore in more detail the evidence that sheds light on the issue of whether the introduction of 'positive' health and safety duties on directors would act to improve their motivation in this

regard. Nevertheless, on balance, the evidence provided in the three reports is seen to provide a strong, but not conclusive, basis for arguing that the imposition of such duties would serve to usefully supplement the liability that directors currently face under section 37 of the Health and Safety at Work Act.

# 1. INTRODUCTION

## 1.1 INTRODUCTION

At present, British health and safety law does not impose any explicit duties on company directors in respect of how they manage health and safety that can give rise to criminal liability. Directors can, however, accrue such liability under section 37(1) of the Health and Safety at Work Act where an offence committed by a corporate body is found to have been committed with their 'consent or connivance' or to have stemmed from their 'neglect'. Furthermore, if so convicted, the potential exists for them to be disqualified from holding such office under the Company Directors Disqualification Act 1986.

An Action Point contained in the 'revitalising health and safety strategy statement' produced jointly by the, then, Department for the Environment, Transport and the Regions (DETR) and the Health and Safety Commission in June 2000, suggested that this lack of explicit directors duties would, in due course, be addressed (DETR/HSC, 2000). Thus, in Action Point 11 of the statement, it was stated that:

*'The Health and Safety Commission will develop a code of practice on Directors' responsibilities for health and safety, in consultation with stakeholders. It is intended that the code will, in particular, stipulate that organisations should appoint an individual Director for health and safety or a responsible person of similar status (for example in organisations where there is no board of Directors). The Health and Safety Commission will also advise Ministers on how the law would need to be changed to make these responsibilities statutory so that Directors and responsible persons of similar status are clear about what is expected of them in their management of health and safety. It is the intention of Ministers, when Parliamentary time allows, to introduce legislation on these responsibilities'*

In the light of this Action Point, in June 2001, the HSC published guidance on the health and safety responsibilities of directors' responsibilities. Later, in October 2003, however, it decided not to go further by drafting legislation to impose statutory duties and, in January 2004, went on to advise the Minister, in accordance with this decision, that legislation was not, in its view, now needed.

This decision to eschew the imposition of such duties was accepted by the government, but generated much criticism in other quarters. In particular, in a report on the work of the HSC and the HSE, the House of Commons Work and Pensions Select Committee recommended that the 'Government reconsiders its decision not to legislate on directors duties and brings forward proposals for pre-legislative scrutiny in the next session of Parliament'. In response to this recommendation, the Government announced that it would ask the HSC to re-consider the issue and provide further advice to Ministers by the end of 2005.

As part of the process of gathering together evidence on which this advice could be based, the HSE commissioned the present author, and another academic, to each conduct individual 'peer reviews' of that provided in three published research reports. This paper is essentially concerned with detailing the conclusions of the review undertaken by the present author.

The remainder of the paper is divided into eight sections. The first two of these briefly outline the study's terms of reference and the nature and scope of the three reports involved. The third, then, details the methodology utilised to undertake the review, while the next four go on to detail the review's main findings through a consideration of four, somewhat inter-related, issues: the impact that director attitudes and behaviour have on organisational health and

safety management and performance; the priority that directors accord health and safety issues; the extent to which the law acts to motivate director actions in respect of health and safety; and the potential role that new legal requirements could play in improving the attitudes and behaviour of directors in respect of health and safety. Finally, the key points emerging from the analysis provided are briefly summarised in a final concluding section.

## **1.2 TERMS OF REFERENCE AND THE REPORTS INVOLVED**

The three reports required to be peer reviewed had been produced by three different organisations and, in two cases, funded by the HSE. Chronologically, the first of these, and the one not funded by the HSE, was produced by the Centre for Corporate Accountability (CCA) in 2004, the second by the consultancy firm Greenstreet Berman in early 2005 and the third by the HSE's Health and Safety Laboratory (HSL), in mid- 2005.

In summary, the objectives of the commissioned reviews were specified by the HSE as being the provision of assessments of the:

- thoroughness of the three reports in identifying and surveying relevant published research;
- their key findings concerning the factors influencing directors to take responsibility for health and safety; the likely impact of any new legal duties placed on directors; and how directors exercise this responsibility and to what effect; and
- reliability of the evidence base on director responsibility for health and safety and its fit with current HSC/E measures to promote greater director responsibility and leadership on health and safety.

## **1.3 NATURE OF THE THREE REPORTS**

All three of the reports take the form of literature reviews. They were found, however, to differ markedly in terms of their overall scope and the particular objectives that had informed their preparation.

The CCA report was intended to provide a comprehensive review of *'what the evidence tells us about the relative effectiveness of (a) the use of the "law" to obtain improvements in health and safety and (b) various regulatory techniques and approaches that exist to ensure companies comply with existing health and safety law'*. As a result, while it does use the evidence obtained to address the question of whether statutory duties on directors should be introduced, its focus is much wider than this. For example, it also pays attention to the question of whether the law should be changed to extend workers' rights to participation and consultation, and explores the utility of various techniques that could, and are, used by the HSE to secure legal 'compliance without enforcement', including 'education and information provision activities', 'strategic partnerships and relationships with key organisations', 'business case' arguments, and 'earned autonomy'.

The Greenstreet Berman report was commissioned by the HSE to provide an 'opinion on that produced by the CCA and, in doing so, to address the following questions:

- are there any new studies since the end of 2003 that have significant findings?
- Has the evidence regarding employers' acceptance of the business case/motivation provided by insurance changed since the 1990's?
- Is there a case for a balanced advisory/enforcement strategy?
- Does the CCA report provide a balanced review of the evidence for and against advisory/enforcement strategy?

- Are there alternative interpretations of research findings and their implications for the strategy [for Workplace Health and Safety in Great Britain to 2010 and Beyond] ?
- What is the latest view of the contribution of self-regulation within a regulatory framework?
- Is the CCA report clear and does it use all relevant research validly and in the correct context and has it chosen and used an appropriate body of evidence?

In large part, therefore, in providing a response to the CCA report, the Greenstreet Berman covers the same range of issues. However, in also reviewing the CCA report against the HSC's Strategy for Workplace Health and Safety to 2010 and Beyond, it addresses a number of additional issues, including the need to improve access to occupational health support, cater for the special needs and the specific health and safety problems of small and medium sized enterprises, and the case for closer working between HSE and local authorities. At the same time, while drawing on new research evidence produced subsequent to the preparation of the CCA report, it does not explicitly reference as many sources of evidence. Instead, it draws heavily on the conclusions of an earlier extensive literature review that Greenstreet Berman undertook for the HSE which was intended to provide an 'evidence base' that HSC could draw on to develop its previously mentioned strategy (Wright *et al*, 2004).

The third report, that produced by the HSL, is far more narrowly focussed than the other two in being only concerned to provide a '*comprehensive review of UK and international literature on director leadership of occupational health and safety, specifically focussing on factors influencing leadership behaviour and the perceived benefits such an approach brings in terms of improvements to occupational health and safety performance*'. Its overall, originating, purpose was also correspondingly narrower in being limited to assisting the HSE in '*in reviewing its position with regard to regulating directors duties for health and safety, specifically, when considering whether to introduce additional legislation for directors' responsibilities*'.

#### **1.4 METHODS**

The review's terms of reference, as detailed above, meant that certain of the issues explored in the CCA and Greenstreet Berman reports fell outside its scope. As to the material in the three reports that did fall within the review's scope, an initial read of them enabled four themes, or lines of analysis, to be identified. These were:

- The relationship between directors' attitudes and behaviour and health and safety management and performance;
- The prioritisation of health and safety issues by directors;
- The extent to which the law acts to motivate director actions in respect of health and safety;
- The potential role that new legal requirements could play in improving the attitudes and behaviour of directors in respect of health and safety.

With regard to each of these issues, four strands of analysis were conducted in order to enable the key objectives of the review, as specified in its Terms of Reference, to be fulfilled. These were:

- An examination of the evidence put forward in each of the reports in respect of them;
- A comparison of this evidence to identify (a) significant differences in the sources used and (b) significant variations in how they had been interpreted;
- Where such differences were identified, the inspection of the original source materials in order to verify the validity of the analyses of them;

- The more general inspection of original source materials on which particular reliance was being placed<sup>1</sup>;
- The checking of databases to identify any other significant sources of evidence that had not been utilised in the three reports under review.

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<sup>1</sup> The source materials so inspected during the review are identified in the references listed at the end of this report by an asterisk.

## 2. REVIEW FINDINGS

### 2.1 INTRODUCTION

In what follows, separate sections are devoted to each of the four lines of analysis identified in the previous chapter, namely the degree to which directors' attitudes and behaviour influence organizational health and safety management and performance, the prioritisation that directors currently accord to the issue of health and safety at work, the extent to which the law acts to motivate director behaviour in this area, and the views expressed in the three reports as to the desirability of imposing explicit statutory health and safety duties on directors and their 'fit' with the research evidence reviewed in relation to those themes previously mentioned. In the case of the first three of them, the evidence provided in the reports is initially examined and a short summary of the key points emerging from these examinations then provided. In the case of the fourth, the conclusions reached in the three reports concerning the potential value of imposing new statutory health and safety duties are initially briefly summarised and these subsequently discussed in relation to the evidence reviewed in the three previous sections.

### 2.2 THE SIGNIFICANCE OF DIRECTORS' ATTITUDES AND BEHAVIOUR

Both the HSL and CCA reports explore research evidence relating to the link between directors' attitudes and behaviour, on the one hand, and standards of health and safety management and performance, on the other.

On the basis of its review of the relevant evidence, the HSL report concludes that directors and senior managers can significantly influence the safety culture of an organisation and suggests that there is some evidence to show that a high level of commitment to safety on their part can have a positive impact on performance. It must, however, be said that little detail is, for the most part, provided on the relevant findings obtained from the studies cited to support these conclusions and it would seem that a number of those referred to relate to the way in which 'commitment by top management to involving the workforce' is a key aspect of an effective health and safety culture. However, it is noted that a study by Cox and Flin (1998) found that the main influence on employees' safety commitment was how workers perceived '*management concern for safety*' and further observed that one of the other quoted studies suggests that senior managers/directors can exert a significant influence over the attitudes and behaviour of line managers, notably in shaping how they deal 'with safety versus productivity' (O'Dea and Flin, 2003) and that this view is supported by another one undertaken by Rundmo and Hale (2003)<sup>2</sup>. In addition, references are made to a study by Sawacha *et al* (1999) which found that the attitude of senior management towards safety was a significant factor in influencing accident records on construction sites, and to a meta-analysis of the organisational and workplace factors which influence injury rates undertaken by Shannon *et al* (1997) which concluded that '*senior management taking an active part in health and safety was consistently linked with lower injury rates*'.

The view that directors' attitudes and behaviour can exert a critical influence over health and safety is managed within organisations receives further support in the limited, and virtually completely different, literature on the issue utilised in the CCA report. For example, in this,

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<sup>2</sup> It should, however, be noted that the empirical research reported in this last cited study does not directly address this issue. It does, though, make reference to a number of other studies, Cohen, (1975), Cohen *et al*, (1975), Smith *et al* (1978) and Simonds and Shafai (1997), which are argued to show '*management commitment and involvement in accident prevention and safety promotion to be important for the safety status as well as risk behaviour and the number of accidents and near misses*' (Rundmo and Hale, 2003: 559).

reference is made to case study evidence from an HSE funded study of noise-induced hearing loss showing that, in most of the organisations visited, company performance on hearing conservation directly matched the attitudes of senior management on the topic (Thompson-MIT, 1993). In addition, attention is drawn to a survey of senior staff in 50 major UK companies in which 60% of respondents mentioned lack of leadership at board level as one of the four top impediments to good risk management (Baldwin and Anderson, 2002), and to a construction industry study in which most interviewees considered that workers adapt their attitudes towards health and safety to those of site managers and felt that these last attitudes were, in turn, shaped by those of senior management (Brazabon *et al*, 2000: 56).

The plausibility of the conclusions reached in the HSL and CCA reports concerning the importance of directors attitudes and behaviour are, it should be noted, further reinforced if attention is paid to a literature review produced by Gunningham (1999) on 'CEO and supervisor drivers' which is referred to in both of them. For in this review not only is reference made to a number of additional studies by Braithwaite (1985), Ferry (1990), Grimaldi and Simonds (1989), Hammer (1985) and Peterson (1975) which, it is argued, suggest that '*continuous and genuine management support is the key to a safe and healthy working environment*', but mention is made to a study by Gallagher (1997) that, it is suggested, more specifically, supports the view that '*leadership by senior management, and by the CEO in particular, is critically important to OHS outcomes*' (Gunningham, 1999:11).

### **2.2.1 Summary**

The CCA and HSL reports both reference studies which are seen to demonstrate that the attitudes and behaviour of directors exert a fundamental influence over either standards of health and safety management or levels of health and safety performance. Both of the reports, however, draw on a limited range of literature. At the same time, on the basis of the preceding analysis, it would seem reasonable to conclude that their overall conclusions regarding the significance of directors' attitudes and behaviour are supportable by reference to the existing evidence<sup>3</sup>. There would, however, seem scope to provide a more in-depth review of this evidence.

## **2.3 DIRECTORS' PRIORITISATION OF HEALTH AND SAFETY**

In combination the reports make reference to and discuss a number of studies that shed light on this issue. However, the foci of these studies vary. Consequently, in the name of coherence and clarity, their relevant findings and the discussions provided on them in the three reports are explored in this section via a consideration of two broad and somewhat inter-related issues: the extent to which directors take responsibility for and get involved in, health and safety; and the degree to which directors demonstrate a commitment to the issue.

### **2.3.1 Director responsibility and involvement**

In exploring this issue, all three of the reports draw on an HSE funded study by Wright *et al* (2003). This study reports the results of two telephone surveys, a 2001/02 baseline survey and a 2003 follow-up one, which were both carried out with the overall aim of assessing the

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<sup>3</sup> The relevance of senior managers and directors attitudes and behaviour to health and safety performance is also indicated in a more narrow way in the Greenstreet Berman report's discussion on page 16 of a survey of HSE and LA inspectors that the same organisation had undertaken for the HSE. Thus, in this, it is noted that whether enforcement action leads to improvements beyond the specific action referred to is '*particularly related to the extent that the notice or prosecution raises the interest of senior management*'.

extent to which there is board level direction of health and safety in large private and public sector organisations.

In its coverage of the Wright *et al* study, the HSL report notes that the findings obtained indicate that in 2003 26 per cent of the surveyed organisations delegated responsibilities for health and safety to below board level and that the percentage doing so had fallen from 38 per cent in 2001/02, a finding which it observes suggests that directors are now increasingly choosing to direct health and safety at board level. The CCA report also acknowledges this apparent rise in board level direction. However, it goes on to question its significance in terms of indicating a growth of director responsibility for health and safety on the grounds that board level involvement appeared to often be superficial and that the reported rise in board level direction had occurred alongside a reduction, sometimes by 10 per cent, in board level engagement with some health and safety tasks. It further and more generally, notes, a little misleadingly, that around a third of the surveyed organisations reported that their boards had assumed no responsibility for health and safety and casts doubt on the validity of the study's findings because of its reliance on non-validated self-report responses<sup>4</sup>.

For their part, the authors of the Greenstreet Berman report do not take issue with the accuracy with which the findings of this study are reported in the CCA report and hence do not challenge the points raised in it concerning the superficial nature of much board level involvement in health and safety<sup>5</sup> and the reduction that had occurred in board engagement with some types of health and safety tasks<sup>6</sup>. On the issue of the validity of the self-report nature of the data obtained, however, the Greenstreet Berman authors argue that the probing nature of the telephone interviews would have required wholesale fabrication on the part of respondents to misrepresent their health and safety actions and also point out that the study did involve a number of face-to-face case studies. The import of this last observation is, though, left unclear, while the validity of the comment concerning 'misrepresentation' must be queried given that the copy of the questionnaire contained in the Wright *et al* report indicates that telephone interviewees were not routinely prompted. That said, insofar as the CCA's methodological concern relates to the potential for the reported rise in board level responsibility for health and safety to be spurious and hence misleading, it should be noted that the authors of the report themselves observe that the '*follow-up survey* *does not report a major improvement or changes in directors'/board level health and safety arrangements*' (Wright *et al*, 2003:17)

### **2.3.2 Directors' commitment to health and safety**

All three of the reports make references to studies which, with varying degrees of directness, shed light on the extent to which directors' are motivated to address the issue of health and safety.

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<sup>4</sup> In a similar vein, the HSL report notes that this study's findings may have been influenced by 'response bias' stemming from the desire of respondents to give the impression that safety is competently managed in order to avoid increased levels of regulation.

<sup>5</sup> The 'tasks' investigated in the study were help formulate health and safety policy, help set health and safety targets, check that board decisions reflect health and safety intentions, report health and safety performance to the board, help board understand how health and safety is managed in the organisation, ensure board considers health and safety problems and takes action, liaise with regulators, engage the board in health and safety decisions, advise board on health and safety matters and ensure board allocates sufficient resources to health and safety. In relation to the point made in the CCA report concerning the superficiality of board involvement, it should be noted that in the case of all these tasks the number of respondents who reported that the extent of involvement was 'A lot' in 2003 was either below or just over 10 per cent.

<sup>6</sup> It should be noted that the Greenstreet Berman authors would be well placed to challenge any inaccurate reportage of the findings given that the study in question was undertaken by their organisation and both of them were co-authors of the final report of the study.

The HSL and CCA reports both draw on the analysis provided by Smallman and John (2001) of a 'Captains of Industry Survey' undertaken by MORI (2000) and eight qualitative interviews that they conducted with directors. The HSL report notes that the findings reported by Smallman and John from these two studies suggest that directors do view '*safety as being an integral part of their management plans and a significant performance determinant*'. It also, in common with the CCA report, observes that the interview findings obtained suggest that although the interviewed directors believed that a poor health and safety record could potentially impact on corporate reputation and profits, they did not, in contrast, believe that an excellent safety record enhances a company's reputation.

The HSL report also draws directly on the MORI survey's findings concerning directors' views of the impact that safety culture has on an organisation. In doing so, it notes that that 90 per cent of respondents believed that a poor safety culture adversely affects employee morale, 80 per cent that it contributed to a loss of corporate reputation, and 80 per cent that it led to increased insurance costs. It also points out that adverse outcomes were also cited in respect of productivity and efficiency, customer satisfaction and sales/profit.

The implication of the above findings that director's do, in the context of the current legal framework for health and safety at work, have incentives to take action in respect of health and safety is, in turn, reinforced by the authors of the Greenstreet Berman report who, in discussing the issue of 'Mandating directors' duties, make the following observations.

- A number of studies report that directors perceive that the 'risk' posed to the organisation by (infringement of) existing regulations and/or another form of serious incident, already provides sufficient reason to direct health and safety;
- They similarly report that the general increase in societal concern for health and safety and the associated increase in reputational risk provide grounds to direct health and safety
- Current HSE commissioned work by Greenstreet Berman Ltd (Shaw et al, in press) reinforces the notion that boards are already motivated by "corporate risk" posed by getting health and safety wrong to see it as a 'corporate' issue that requires directors' attention.

Unfortunately, the lack of references to the studies being drawn on to support the observations made in the first two of the above bulleted statements and the yet to be published nature of that used to support the third, means it was not possible to check the validity of these conclusions. It would, however, seem likely that one of the studies being referred to is that by Wright *et al* (2005) concerned with evaluating how best to secure compliance with the law. Thus, as part of this study, Wright and his colleagues undertook a survey of employers and found that 71 per cent of the 1,746 respondents agreed or strongly agreed that 'The director(s) think that health and safety is a critical business success factor' and that 83 per cent similarly felt that 'The director(s) think that health and safety is a big risk for the business if we get it wrong' (Wright *et al*, 2005: 46).<sup>7</sup>

Insofar as the above studies do suggest that directors have incentives to protect the health and safety of workers, and others, they do not, however, provide any indication of the 'adequacy'

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<sup>7</sup> It should, however, be noted that the response rate to this survey was relatively low, at 12.5 per cent. and that, since around 26 per cent of respondents were from organisation employing 50 or fewer employees, it would seem likely that a reasonably significant minority of them were, in fact, owner/managers who were being asked to comment effectively on their own attitudes, thereby raising the possibility that they had an incentive to show themselves in a positive light. It must also be said that there would seem to be some tension between the above bulleted observations and the finding reported from the earlier mentioned study of directors' responsibility for health and safety that in 2003 around a third of the surveyed (large) organisations boards of directors took no direct responsibility for the issue. This is particularly so given that there must inevitably be doubts as to whether this position could have meaningfully changed in a period of just two years.

of these incentives and the actions that flow from them. A number of other studies cited in the three reports do, though, give some insight into these issues and, in doing so, cast a degree of doubt concerning them.

This is true, for example, of the earlier mentioned study by Wright *et al* which found that where directors do take direct responsibility for health and safety, their involvement is often 'superficial'. It is also true of the earlier mentioned study referred to in the CCA report which found that 60 per cent of respondents mentioned lack of leadership at board level as being one of the four top impediments to good risk management (Baldwin and Anderson, 2002) and another quoted one which found, in the context of an investigation of the links between health and safety management, on the one hand, and total quality management, on the other, '*no evidence of real enthusiasm for H & S management coming from and through executive and senior management*' (Osborne and Zairi, 1997: 14).

Furthermore, the doubts raised by these last studies concerning the commitment of directors to health and safety would seem to be reinforced by the reference made in the HSL report to findings from a study by Pearson (1991), cited in Jeffcote *et al* (2005). Thus, this is noted to have found that almost a third of health and safety managers believed that health and safety was rarely or never a priority of senior management and that just under a quarter were unhappy with the support they received from senior executives. It is further noted to have found evidence of a marked disjunction between how senior executives and safety managers perceived the way in which health and safety was managed, with it being observed, for example, that while the 85% of senior executives claimed that they, or another director, always attended safety meetings, only 59% of the managers agreed<sup>8</sup>.

Some of the findings obtained in an Australian study by KPMG (2002) which is cited in the HSL and Greenstreet Berman reports would, in turn, seem to add some weight to these last findings. Thus, this not only found, somewhat similarly to Wright *et al* (2003) in the case of Britain, that there remained '*a rump of about 20 per cent of CEOs who are not recognising their responsibility for safety*', but that among small firms a '*gap existed between theory and practice*' (KPMG, 2001: 9)<sup>9</sup>. In particular, in relation to this last point, the report observed that over a third of CEOs in small firms in medium to high hazard industries were found to be relying on informal approaches to managing safety, a finding alluded to in the HSL report.

It should also, more generally, be pointed out, in passing, that these finding concerning small companies can be seen to echo the substantial body of evidence drawn from studies concerned with environmental protection, occupational health and safety, and food safety which shows that the proprietors of such firms frequently possess a low knowledge of relevant legal provisions and a lack of motivation to take relevant action (see, e.g. Yapp and Fairman, 2004). Indeed, one recent HSE funded study of legal compliance among 39 hairdressers undertaken by these same researchers found that while legal compliance within them was often poor, reaching a high of 61 per cent in the case of electrical safety and a low of 19.5 per cent in the case of risk assessment, all of those interviewed considered their organisations to be legally compliant (Fairman and Yapp, 2005)<sup>10</sup>.

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<sup>8</sup> In this context, it should be further noted that the Hidden inquiry into the Clapham Junction disaster found that the safety failings it identified as contributing to the accident existed in an organisation, British Rail, whose Board had a policy of 'absolute safety'. See Department of Transport (1989).

<sup>9</sup> The KPMG study included conducting qualitative interviews with a range of stakeholders, a quantitative telephone survey of 1000 CEOs and supervisors and the collection of a number of forms of secondary evidence.

<sup>10</sup> In relation to this point, the HSL report notes that the findings from an audit programme in a UK water utility company found that managers had only a limited understanding of their legal and corporate responsibilities for health and safety and, in doing so, suggests that this problem of limited knowledge may also be a problem in larger organisations. See Fuller (1999)

### **2.3.3 Summary**

In exploring current director/board level responsibility for health and safety in Britain, each of the three reports draw on the same HSE study and no points of tension emerge between them with regard to the actual reporting of this study's findings. The CCA report does, however, question the validity of the study's findings on the grounds that they are based on non-validated self-report responses, while Greenstreet Berman challenges, but not convincingly, this potential methodological problem. There would, however, seem common ground between the authors of the CCA and the Greenstreet Berman reports that the study's findings suggest that a significant minority of large organisations do not direct health and safety at board level and that where they do so, the degree of board level involvement in the area is often rather superficial. It would also seem that the authors of these reports are in broad agreement that the period 2001-2003 did not see any dramatic change in directors'/board level health and safety arrangements in such organisations.

Each of the reports reviewed refer to evidence which suggests that, in the context of the current legal framework for health and safety, organisations face a number of business and societal pressures to protect worker health and safety. However, while the Greenstreet Berman report sees these pressures as being sufficient to motivate boards of directors to 'direct' health and safety, the CCA one argues that they are insufficient to motivate them to adequately provide such protection. On balance, given the evidence reviewed above, the first of these viewpoints would seem open to debate. Meanwhile, the second would seem to be consistent with the research findings discussed in the preceding paragraph and those referred to earlier concerning a frequent lack of director level commitment in the area of health and safety, including among small business proprietors, and the common presence within small firms of a 'theory-practice' gap.

## **2.4 THE LAW AS A MOTIVATOR OF DIRECTOR ACTION**

Significant proportions of the three reports are given over to a consideration of the research evidence available as to the factors that motivate employing organisations to comply with the law. A good deal of discussion is, for example, provided on the relative effectiveness of inspections, enforcement action, financial incentives and educational campaigns in generating such compliance. These discussions are, however, not considered here. Instead, attention is focussed more narrowly on what insights the three reports provide in terms of the role that the law plays in motivating directors. This is for two main reasons. The first is that the policy context within which this review is located is one that is more narrowly concerned with the potential utility of imposing explicit statutory duties on directors. The second, and more general one, is that, given the evidence considered earlier about director/board level responsibility for health and safety, it is unclear how far it is safe to assume that, in the case of larger organisations, the motivational bases for 'organisational' and director actions are the same.

The three reports, in fact, all cite studies that provide an indication of the extent to which the law acts to motivate directors to accord attention to health and safety. These studies effectively consider this motivational role of the law in two ways. First, through the provision of insights on the degree to which health and safety law in general serves as a motivator. Secondly, via the shedding of light on the role that individual personal liabilities on the part of directors serve to influence their behaviour.

#### **2.4.1 Role of general health and safety law**

With regard to this issue, the HSL report makes reference to the work of O’Dea and Flin (2003) which highlights that legislation does motivate director level staff to take action on health and safety issues. It also, in common with the CCA one, refers to a postal survey of risk and finance managers undertaken by Ashby and Diacon (1996) to examine what motivates large UK companies to take measures to reduce risks of occupational injury to their employees. In both cases the reports note that the study’s findings suggest, at least in 1993, when it was conducted, that compliance with the law and the avoidance of legal liabilities constituted the most significant sources of motivation.

The HSL report, along with the Greenstreet Berman one, also makes reference to the already mentioned Australian studies produced by Gunningham (1999) and KPMG. Both note that the Gunningham study concludes that regulation is the most important CEO driver and that the KPMG study found regulation and its enforcement, to be the second most important one, with the Greenstreet Berman additionally detailing the four most important such motivators identified in this second study as being, in order of importance:

- A sense of moral responsibility;
- Regulation and its enforcement;
- Commercial incentives, such as greater productivity and lower workers’ compensation premiums, and
- Measurement and benchmarking of health and safety performance.

In relation to such findings as those of Gunningham and KPMG, the Greenstreet Berman report goes on to observe that there is a *‘close association between the self-rated role of factors such as enforcement, the cost of accidents, reputational risk etc – such that organisations tend to be motivated (or not) by each of these drivers’* (Wright and Marsden, 2005: 9). In a similar vein, the HSL report notes that another recent study involving one of the same authors concluded that reputation risk and regulation compliance may be intertwined (Wright *et al*, 2005) and the CCA one effectively makes the same point in noting that the previously mentioned study by Baldwin and Anderson (2002) found that, among the 50 senior staff from large UK companies interviewed, the main motivators of efforts to manage regulatory risks were concerns for corporate reputation, followed by fear of criminal convictions and fear of the competitive or market effects of criminal convictions.

#### **2.4.2 Role of individual personal liabilities**

As regards the motivational role of individual legal liabilities, the Greenstreet Berman report does not cite studies which provide evidence on this issue, although it does make the observation that it is *‘hard to find evidence of whether (or how well) mandation of Directors’ Duties would work, and exactly what requirements would work best, without actually trying it out or reviewing examples of such regulation overseas’* (Wright and Marsden, 2005)

For its part, the CCA report draws attention to another of Gunningham’s conclusions, namely that that *‘the key to motivating CEOs and senior management to improve safety is to make them liable to personal prosecution and to actually enforce such provisions’*. It would appear, however, that the validity of this statement, which is also alluded to in the HSL report, was not checked through the carrying out of a review of the various studies that Gunningham cites in support of it, namely those by KPMG (1996), Hopkins (1995), Purvis (1996), Braithwaite and Makkai (1991), Reiner and Chatten Brown (1989), Hammit and Reuter (1998), Cohen

(1988) and the Australian Industry Commission (1995). The CCA report does, though, rightly note that Brazabon *et al* (2000: 66), in their study of health and safety in the British construction industry, concluded that *'the majority of interviewees perceived that if the number of prosecutions of Directors and Corporate Manslaughter charges increased this could result in large improvements in health and safety standards as this may enforce the message that directors are responsible for the health and safety of their workforce'*

No direct mention is, however, made in any of the reports to the discussion provided in the KPMG report concerning how the imposition of personal legal liabilities on directors can act to influence them to accord health and safety a higher priority. As a result, attention is not drawn to its finding that *'many CEOs cited their personal legal responsibility as a factor motivating them to attend to safety'*, despite the fact that under, then, current Australian legal frameworks senior officers were rarely prosecuted, in part because of the difficulties of bringing such prosecutions, nor to the fact that CEOs in small firms were found to be slightly more likely to cite such liability as being a motivating factor (KPMG, 2001: 70).

At the same time, it would seem, although this merits checking, that during the period of the KPMG research the personal legal responsibility of CEOs which existed in most, if not all, Australian jurisdictions, consisted of the type of 'negative' liability which currently exists under section 37 of the Health and Safety at Work Act. The above findings do not, then, necessarily point to the value of the imposing of 'positive' duties on directors. This uncertainty, it is suggested, consequently reinforces the point already, indirectly, alluded to concerning the desirability of examining the sources of evidence quoted by Gunningham in relation to the motivational role played by such personal legal liability. It remains the case, of course, that the Brazabon *et al* findings quoted above would, nevertheless, seem to suggest that steps to increase the number of prosecutions of directors and, by implication, make such prosecutions easier could act to encourage directors to accord a greater priority to the issue of health and safety at work. Indeed, this suggestion would seem to receive a good deal of reinforcement from the fact that the study by Wright *et al* concerned with evaluating how best to achieve compliance with the law found that 49 per cent of the 'employer' respondents considered that 'personal fines for directors' constituted the 'best way' of improving the enforcement of health and safety laws and that this option for improving enforcement was favoured by a greater percentage of those responding than a range of alternative ones mentioned in the questionnaire they completed (Wright *et al*, 2005: A106)<sup>11</sup>.

### 2.4.3 Summary

Existing evidence suggests that legal regulations and their enforcement constitute a key, and perhaps the most important, driver of director actions in respect of health and safety at work and that this motivational force is intimately connected to a number of others, such as corporate reputation, competitive damage and a sense of moral responsibility to protect workers from injury and ill health. It also suggests that the creation of individual personal liabilities on the part of directors can particularly serve to motivate them to improve health and safety. This evidence, however, has not been considered in detail in any of the three reports, with the result that they do not consider how far they verify the argument's validity and, as a result, the extent to which the introduction of 'positive' health and safety duties on directors would act to encourage directors to accord a higher priority to worker protection remains unclear. At the same time, it would seem that many managers do believe that making directors more vulnerable to prosecution and financial penalties would yield positive benefits.

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<sup>11</sup> These other options included simpler regulations, more frequent inspections, more advisory visits, bigger fines, a law making it easier to secure Corporate Manslaughter convictions, 'more consistent, pragmatic and fairer enforcement' and giving trade unions the power to serve 'provisional improvement notices'.

## **2.5 The value of imposing statutory duties on directors**

The three reports reach rather different conclusions on this issue in the light of the evidence they have reviewed. These different viewpoints are briefly summarised in this section and then discussed in relation to the preceding analysis of the present author.

### **2.5.2 CCA view**

The author of the CCA report strongly criticises the present legal framework for health and safety on the grounds that it does not impose any positive legal obligations on company directors and consequently renders them largely immune from prosecution. As a result, it is seen to adversely affect the motivation of directors in relation to occupational health and safety issues and to potentially provide them with an incentive to ‘manage’ the (limited) risk of prosecution they face by delegating safety responsibilities down the management chain, thereby insulating themselves from knowledge of safety problems in their companies.

In the CCA’s author’s view the current evidence on board level ‘leadership and direction’ does not indicate that these problems can be resolved by a voluntary approach aimed at increasing such leadership. Given this, and the evidence which strongly suggests that the attitudes and behaviour of directors exert a crucial influence over health and safety performance, and that the current levels of director commitment to the issue is frequently poor, there is consequently a need for the imposition and enforcement of legally binding duties; a proposal which it is argued is congruent with international and domestic research evidence.

### **2.5.3 Greenstreet Berman view**

As to some degree already indicated earlier, the Greenstreet Berman report does not come out clearly in favour or against the imposition of statutory duties on directors. It does, however, argue that the current evidence suggests that directors already have sufficient incentives to direct health and safety. It also make the point that the precise nature of any regulation, as well as its implementation, are likely to be important and that its authors are unaware of any evidence on the effectiveness of specific (positive) health and safety duties on directors.

### **2.5.4 HSL view**

The HSL report also does not come out clearly in support of the imposition of new statutory duties. It does, however, take the view that the introduction of such legislation would raise the profile of health and safety at board level and, in doing so, that it could be expected to ‘*benefit health and safety management in most organisations*’. That said, it further concludes that it is ‘*difficult to draw firm conclusions when there is very limited evidence*’ in the area and that any such legislation could be difficult to enforce, and also argues that there is a ‘*widely held acceptance of the potential effectiveness of Director Leadership schemes for bringing about improvements in OHS*’. Ultimately, the report recommends (a) that the HSE should continue to publicise its current guidance on directors’ responsibilities, case studies on director leadership and other relevant publications, (b) that current weaknesses in the empirical evidence regarding director leadership of health and safety in small and medium sized companies, the public sector and non-unionised workplaces be addressed, (c) that before any legislation to give directors responsibilities for health and safety is introduced, its potential impact on organisations, particularly small and medium sized ones, should be fully

considered, (d) that consideration be given to how any new legislation would be enforced and its success evaluated and (e) that the issue of training for directors be given further attention.

### 2.5.5 Discussion

As the HSL and Greenstreet Berman reports note, and the earlier parts of this one have highlighted, it is difficult to reach a firm, evidence based, conclusion as to whether the introduction of positive statutory duties for directors, as advocated in the CCA one, would yield benefits in terms of improved health and safety management and performance. The evidence reviewed in this report does, however, lend a good deal of weight to the view that directors exert an important influence over health and safety standards, although the evidence on this issue could have been explored in more detail, and suggest that in a significant minority of large organisations directors currently take no direct responsibility for health and safety and that, where they do, the extent of their involvement is often very limited. The reviewed evidence further suggests that while a substantial proportion of directors, in the context of the current legal framework for health and safety at work, perceive themselves as facing a number of pressures requiring them to pay attention to the issue of health and safety at work and to take direct responsibility for the issue, the priority that they in reality accord to the issue, and the degree of commitment they exhibit towards it, would frequently seem to be problematic. Furthermore, it would appear that this is the case among both large organisations and small and medium sized ones<sup>12</sup>.

The current situation regarding director leadership in respect of occupational health and safety would consequently seem to be in need of significant improvement. To date, as noted in the introduction to this report, the HSC has favoured a voluntary approach to addressing this situation. Given what has already been said about the existing evidence base, it cannot be firmly said that this approach is a wrong one. However, the apparently slow progress that has so far been achieved via the adoption of this approach, as highlighted in the report of Wright *et al* (2003), and effectively acknowledge by the authors themselves, indicates that the HSC is right to be re-considering whether it is the correct one, notwithstanding the observations made in the HSL report about its potential value.

Indeed, on the basis of the evidence reviewed earlier in this report, there would seem reasonably good, evidence based, grounds for trying the ‘the legislative route’, as suggested in the CCA report. Thus, this evidence does indicate that statutory requirements are a major, and perhaps the main, driver of director behaviour with regard to the issue of health and safety at work. It also indicates that directors are influenced by potential personal legal liabilities, even when the likelihood of their being penalised is low – a point which further suggests that the presence of such liabilities can have a positive impact notwithstanding the existence of a low probability of their actually being imposed<sup>13</sup>- and suggests that many managers believe that beneficial consequences would flow from making directors more vulnerable to prosecution and the imposition of fines.

The fact, nevertheless, remains that no direct evidence is provided in any of the three reports which sheds light on the likely motivational impact on directors of imposing ‘positive’ health and safety duties on them, as opposed to the type of ‘negative’ liability currently provided under section 37 of the Health and Safety at Work Act. There would consequently seem scope

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<sup>12</sup> The HSL report’s recommendation concerning the need for more research on director leadership in smaller enterprises seems somewhat surprising given, as noted earlier in this report, what is known about the health and safety attitudes and knowledge of their proprietors. In a similar vein, in relation to the same point made in respect of public sector organisations, it should not be forgotten that the baseline and follow-up surveys conducted by Wright *et al* included 108 and 133 large public sector employers respectively.

<sup>13</sup> This is not to say that the authors of the HSL and Greenstreet Berman reports are wrong to observe that, should it be decided to impose ‘positive’ legal duties on directors, careful thought would need to be given to how they are to be enforced.

for looking more closely at the research evidence on this issue and, more generally, exploring, as the HSE is currently doing and the Greenstreet Berman report suggests, the experiences of other countries that have made use of such duties.

While such additional evidence would undoubtedly be helpful, in the present author's view, it may still not prove possible to reach unchallengeable, evidence based, conclusions as to whether the present voluntary approach to encouraging greater director leadership of health and safety should be supplemented by the imposing of 'positive' statutory duties on directors. Consequently, as the Greenstreet Berman report observes, albeit in the context of the evaluation of proposed regulatory interventions more generally, it is likely that an element of judgement will ultimately have to be utilised in order to reach a decision on this issue.

### 3. CONCLUSION

This report was commissioned by the HSE in order to provide a critical review of three pieces of research undertaken respectively by CCA, Greenstreet Berman, and HSL as part of its preparation of advice to ministers on the issue of whether new statutory health and safety duties should be imposed on directors. In broad terms, the review was intended to review the thoroughness of the three reports in identifying and surveying relevant published research; identify their key findings concerning the factors influencing directors to take responsibility for health and safety; the likely impact of any new legal duties placed on directors, and how directors exercise this responsibility and to what effect; and assess the evidence base on director responsibility for health and safety and its fit with current HSC/E measures to promote greater director responsibility and leadership on health and safety.

In order to explore these issues it was decided to examine the relevant material in the three reports in relation to four broad, and to some extent, inter-related, themes. First, the degree to which directors' attitudes and behaviour influence organisational health and safety management and performance. Secondly, the prioritisation that directors currently appear to accord to the issue of health and safety at work. Thirdly, the influence that law exerts over director behaviour in this area. Fourthly, the views expressed in the three reports as to the desirability of imposing explicit statutory health and safety duties on directors and their 'fit' with the research evidence reviewed in relation to those themes previously mentioned.

At a general level, it was found that not all of the three reports addressed the first of these themes. It was further found that the depth of coverage of particular themes varied to some degree between them and that the sources of relevant evidence they utilised also sometimes differed. Nevertheless, in combination, the three reports were, in general, found to provide, with two notable exceptions, a good overview of the relevant research evidence, when considered alongside the present author's own further analysis, and, on an individual level, to report the research findings they utilised accurately. The exceptions referred to concerned the failure of the three reports, taken together, to provide thorough reviews of the evidence relating to (a) the influence that directors exert over health and safety management and performance and (b) the role of individual personal liabilities in motivating director actions in the area of health and safety at work.

As regards the main conclusions that emerged in respect of the four identified themes, these in summary were

- the attitudes and behaviour of directors do appear to exert an important influence over their organisation's health and safety management and performance, although the evidence relating to this could be explored in greater depth;
- in a significant minority of large organisations directors take no direct responsibility for health and safety and, in those where they do, their involvement is often of a very limited nature;
- directors would appear to consider that they already face considerable legal, commercial and societal pressures to take responsibility for health and safety and to avoid the occurrence of damaging incidents;
- it, nevertheless, seems that in practice the commitment of directors to health and safety is often problematic and frequently seen to be so by other managers;
- health and safety regulations and their enforcement constitute one of the most important drivers of director actions in respect of health and safety, if not the most important;
- individual personal liabilities also appear, against this background, to provide an important source of motivation, even when the likelihood of them being imposed is low;

- there is, though, scope to explore in more detail how far the evidence on this last issue sheds light on how far the introduction of ‘positive’ health and safety duties on directors would act to improve their motivation this regard;
- the evidence reviewed in the three reports does not therefore conclusively indicate that duties of this type would act to improve health and safety management and performance, although it does indicate clearly that many managers believe that the making of directors more vulnerable to prosecutions and fines would have beneficial consequences;
- the available evidence, however, also does not demonstrate that the current voluntary approach to encouraging director leadership of health and safety has, so far, had a significant impact;
- on balance, the research evidence consequently provides a strong, but not conclusive, basis for arguing that the imposition of ‘positive’ health and safety duties on directors would serve to usefully supplement the liability that they currently face under section 37 of the Health and Safety Act;
- it is, however, possible that, as with other possible types of regulatory initiative, it will, ultimately, prove impossible on the basis of research evidence to conclusively, as opposed to (very) plausibly, demonstrate that duties of this type will act to significantly improve current health and safety management and performance.

## 4. REFERENCES

- Ashby, S.G. and Diacon, S.R. 1996. 'Motives for Occupational Risk Management in Large UK Companies', *Safety Science*, 22, 229-243.\*
- Australian Industry Commission. 1995. *Work, Health and Safety: Inquiry into Occupational Health and Safety*. Report No. 47. Melbourne: AGPS.
- Bladwin, R. and Anderson, R. 2002. *Rethinking Regulatory Risk*. London: Enterprise LSE\*.
- Braithwaite, J. 1985. *To Punish or Persuade: Enforcement of Coal Mine Safety*. Albany: SUNY Press.
- Braithwaite, J. and Makkai, T. 1991. 'Testing an Unexpected Utility Model of Corporate Deviance', *Law and Policy*, 25, 7.
- Brazabon, P., Tipping, A. and Jones J. 2000. *Construction Health and Safety in the New Millenium*. HSE Contract Research Report 313: Suffolk: HSE Books.  
[www.hse.gov.uk/research/crr\\_pdf/2000/Crr00313.pdf](http://www.hse.gov.uk/research/crr_pdf/2000/Crr00313.pdf).\*
- Cohen, A. 1975. 'Factors in Successful Occupational Safety Programs', *Journal of Safety Research*, 9, 168-172.
- Cohen, A., Smith, M. and Cohen, H.H. 1975. *Safety Programs in High versus Low Rate Companies – An Interim Report*. Washington: National Institute of Occupational Health.
- Cohen, M.A. 1998. *Monitoring and Enforcement of Environmental Management Policy*,  
[www.worldbank.org/nipr/work\\_paper/cohen](http://www.worldbank.org/nipr/work_paper/cohen).
- Cox, S. and Flin, R. 1998. 'Safety Culture: Philosopher's Stone or Man of Straw?' *Work and Stress*, 12(3), 189-201).
- Davis, C. 2004. *Making Companies Safe: What Works?* London: Centre for Corporate Accountability.  
[www.corporateaccountability.org/dl/courtreport04/makingcompaniessafe.pdf](http://www.corporateaccountability.org/dl/courtreport04/makingcompaniessafe.pdf).\*
- Department for the Environment, Transport and the Regions/Health and Safety Commission. 2000. *Revitalising Health and Safety: Strategy Document*. London: Department of Trade and Industry.  
[www.hse.gov.uk/revitalising/strategy.pdf](http://www.hse.gov.uk/revitalising/strategy.pdf).\*
- Department of Transport. 1989. *Investigation into the Clapham Junction Railway Accident*. London: HMSO.
- Fairman, R. and Yapp, C. 2005. *Making an Impact on SME Compliance Behaviour: An Evaluation of the Effect of Interventions Upon Compliance with Health and Safety Legislation in Small and Medium Sized Enterprises*. HSE Research Report 366: Suffolk: HSE Books.  
[www.hse.gov.uk/research/rrhtm/rr366.htm](http://www.hse.gov.uk/research/rrhtm/rr366.htm).\*
- Ferry, T. 1990. *Safety and Health Management Planning*. New York: Van Nostrand Reinhold.
- Fuller, C. 1999. 'Benchmarking Health and Safety Performance through Company Safety Competitions', *Benchmarking: An International Journal*, 6(4), 325-337.
- Gallagher, C. 1997. *Health and Safety Management Systems: An Analysis of Systems Types and Effectiveness*. Sydney: National Occupational Health and Safety Commission.
- Grimaldi, J. and Simmonds, R. 1989. *Safety Management*. 5<sup>th</sup> Edition. Illinois: Homewood.
- Hammer, W. 1985. *Occupational Safety Management and Engineering*. 3<sup>rd</sup> Edition. Inglewood Cliffs, NJ: Prentice Hall.

- Gunningham, N. *CEO and Supervisor Drivers: Review of Current Literature and Current Practice*. Canberra: National Occupational Health and Safety Commission. [www.nohsc.gov.au/Pdf/OHSSolutions/CEOSupervisorDrivers.pdf](http://www.nohsc.gov.au/Pdf/OHSSolutions/CEOSupervisorDrivers.pdf).\*
- Hammit, J.K. and Reuter, P. 1998. *Measuring and Deterring Illegal Disposal of Hazardous Waste: A Preliminary Assessment*. Santa Monica: RAND.
- Health and Safety Laboratory. 2005. *Director Leadership of Health and Safety*. Report No. HSL/2005/21. Buxton: Health & Safety Laboratory. [www.hse.gov.uk/research/hsl\\_pdf/2005/hsl0521.pdf](http://www.hse.gov.uk/research/hsl_pdf/2005/hsl0521.pdf).\*
- Health and Safety Executive. 2002. *Directors' Responsibilities for Health and Safety*. INDG343. Suffolk: HSE Books. [www.hse.gov.uk/pubns/indg343.pdf](http://www.hse.gov.uk/pubns/indg343.pdf).\*
- Hopkin, A. 1995. *Making Safety Work: Getting Management Commitment to Occupational Health and Safety*. Sydney: Allen & Unwin Pty Ltd.
- Jeffcote, S., Weyman, A., Pidgeon, N. and Walls, J. 2005. *A Review of Relevant Concepts and Literature: Organisational Dynamics and Safety Practice in UK Train Operating Companies (TOCs)*. Working Paper. University of East Anglia: Norwich, and Health and Safety Laboratory, Buxton.
- KPMG. 1996. *Canadian Environmental Management Survey*. Toronto: KPMG.
- KPMG Consulting. 2001. *Key Management Motivators in Occupational Health and Safety (Research for the CEO and Supervisors Drivers Project)*. Canberra: National Occupational Health and Safety Commission. [www.nohsc.gov.au/PDF/OHSSolutions/KPMG\\_MAIN\\_V1.pdf](http://www.nohsc.gov.au/PDF/OHSSolutions/KPMG_MAIN_V1.pdf).\*
- MORI. 2000. *Impact of Health and Safety on Corporate Reputation – Captains of Industry Survey, 1999*.\*
- O'Dea, A and Flin, R. 2003. *The Role of Managerial Leadership in Determining Workplace Safety Outcomes*. HSE Research Report 044. Suffolk: HSE Books. [www.hse.gov.uk/research/rrpdf/rr044.pdf](http://www.hse.gov.uk/research/rrpdf/rr044.pdf).\*
- Osborne, J. and Zairi, M. 1997. *Total Quality Management and the Management of Health and Safety*. HSE Contract Research Report 153. Suffolk: HSE Books. [www.hse.gov.uk/research/crr\\_pdf/1997/crr97153.pdf](http://www.hse.gov.uk/research/crr_pdf/1997/crr97153.pdf).\*
- Peterson, D. 1975. *Safety Management: A Human Approach*. New Jersey: Fairview.
- Purvis, M. 1996. 'Safety: Does the Market Know Best?', *Journal of Occupational Health and Safety, Australia and New Zealand*, 12(4), 395-397.
- Reiner, I. And Chatten-Brown, J. 1989. 'When it is Not an Accident, by a Crime: Prosecutors Get Tough with OSHA Violations', *North Kentucky Law Review*, 83-104.
- Rundmo, T and Hale, A.R. 2003. 'Managers' Attitudes towards Safety and Accident Prevention', *Safety Science*, 41, 557-574.\*
- Shannon, H.S., Mayr, J and Haines, T. 1997. 'Overview of the Relationship between Organisational and Workplace Factors and Injury Rates', *Safety Science*, 26(3), 201-217.\*
- Shaw, J., Antonelli, Cudmore, Wright, Cash, Bendig, Marsden and McGurry. *Case Studies that Identify and Exemplify Boards of Directors who Provide Leadership and Direction on Occupational Health and Safety*. In press.
- Simmonds, R.H. and Shafai-Sahrai, Y. 1977. 'Factors Apparently Affecting Injury Frequency in Eleven Matched Pairs of Companies', *Journal of Safety Research*, 9, 120-127.

Smallman, C. and John, G. 2001. 'British Directors Perspectives on the Impact of Health and Safety on Corporate Performance', *Safety Science*, 38, 227-239.\*

Smith, M.J., Cohen, H.H., Cohen, A., and Cleveland, R.J. 1978. 'Characteristics of Successful Safety Programs', *Journal of Safety Research*, 10, 5-15.

Thomson-MTS. 1993. *A Study of Attitudes to Occupational Noise and Deafness. Volumes 1 & 2*. HSE Contract Research Report 54. Suffolk: HSE Books.  
[www.hse.gov.uk/research/crr\\_pdf/1993/CRR93054.pdf](http://www.hse.gov.uk/research/crr_pdf/1993/CRR93054.pdf).\*

Wright, M. 1998. *Factors Motivating Proactive Health and Safety Management*. HSE Contract Research Report 179. Suffolk: HSE Books. [www.hse.gov.uk/research/crr\\_pdf/1998/CRR98179.pdf](http://www.hse.gov.uk/research/crr_pdf/1998/CRR98179.pdf).\*

Wright, M., Marsden, S. and Holmes, J. 2003. *Health and Safety Responsibilities of Company Directors and Management Board Members*. HSE Research Report 135. Suffolk: HSE Books.  
[www.hse.gov.uk/research/rrpdf/rr135.pdf](http://www.hse.gov.uk/research/rrpdf/rr135.pdf).\*

Wright, M., Marsden, S. and Antonelli, A. 2004. *Building an Evidence Base for the Health and Safety Commission Strategy to 2010 and Beyond: A Literature Review of Interventions to Improve Health and Safety Compliance*. HSE Research Report 196. Suffolk: HSE Books.  
[www.hse.gov.uk/research/rrpdf/rr196.pdf](http://www.hse.gov.uk/research/rrpdf/rr196.pdf).\*

Wright, M., Antonello, A., Norton Doyle, J., Genna, R. and Bendiq, M. 2005. *An Evidence Based Evaluation of how Best to Secure Compliance with Health and Safety Law*. HSE Research Report 334. Suffolk: HSE Books. [www.hse.gov.uk/research/rrpdf/rr334.pdf](http://www.hse.gov.uk/research/rrpdf/rr334.pdf).\*

Wright, M and Marsden, S. 2005. *A Response to the CCA Report 'Making Companies Safe: What Works'?*. HSE Research Report 332. [www.hse.gov.uk/research/rrhtm/rr332.htm](http://www.hse.gov.uk/research/rrhtm/rr332.htm).\*

Yapp, C., and Fairman, R. 2004. *The Evaluation of Effective Enforcement Approaches for Food Safety in SMEs*. London: Food Standards Agency.\*

\* Denotes publications examined as part of this review by the present author