A response to the CCA report 'Making companies safe: What works?'

Prepared by **Greenstreet Berman Ltd**
for the Health and Safety Executive 2005

RESEARCH REPORT 332

A response to the CCA report 'Making companies safe: What works?'

Michael Wright and **Sara Marsden**
Greenstreet Berman Ltd
Fulcrum House
5 Southern Court
South Street
Reading
Berkshire RG1 4QS

The HSC issued "A strategy for workplace health and safety in Great Britain to 2010 and beyond" in February 2004, which was informed by a Greenstreet Berman Ltd (GSB) review of the "evidence base". The Centre for Corporate Accountability (CCA) authored a report "Making companies safe: What works?" (Davis, 2004), prompted by the HSC/E strategy document and the decision to continue with the voluntary approach to encouraging corporate responsibility (specifically directors health and safety duties). This short report provides GSB's opinion on the CCA Report.

This report and the work it describes were funded by the Health and Safety Executive. Its contents, including any opinions and/or conclusions expressed, are those of the authors alone and do not necessarily reflect HSE policy.

HSE BOOKS

First published 2005

ISBN 0 7176 0 7176 2983 X

CONTENTS

1 INTRODUCTION

1.1 BACKGROUND

The Health and Safety Commission (HSC) issued "A strategy for workplace health and safety in Great Britain to 2010 and beyond" in February 2004. This built upon the occupational health strategy/ securing health together (aiming to increase level of occupational health support and employers access to occupational health), a small firms strategy (aiming to advice and communicate with Small and Medium Enterprises effectively) and Revitalising Health and Safety (looking for new ways of improving health and safety performance). A discussion paper has followed the strategy on "Regulation and recognition" that explores the best mix of methods.

The Centre for Corporate Accountability (CCA) published a report "Making companies safe: What works?" (Davis, 2004) which explores the case for voluntary versus enforcement approaches to changing the way companies and their senior officers conduct themselves, and undertakes a "comprehensive review of the available published research.." (p7). Their report was prompted by the HSC/E strategy document and the decision to continue with the voluntary approach to encouraging corporate responsibility (specifically directors' health and safety duties). The CCA Report does not address the HSC's wish for a new law on Corporate Killing.

This short report provides an opinion from Greenstreet Berman Ltd (GSB) on the report produced by CCA, henceforth referred to as "The CCA Report".

Also, we have reviewed the CCA Report against the published HSC strategy. It should be noted that the CCA base some of their opinion on the content of published HSC / HSE minutes that preceded the published strategy as well as the final published strategy. In our opinion, some of the points raised in HSC/E minutes are not found in the final strategy. Consequently, some of the points of concern raised by the CCA are not found in the strategy. This may, in part, explain why the CCA Report cites evidence to dispute points that do not, in our opinion, appear in the HSC strategy.

1.2 GREENSTREET BERMAN STATUS

The HSE sought Greenstreet Berman's views as authors of the "Evidence Base" report (Wright et al 2004) drawn on by the HSC to develop its Strategy.

As GSB have previously reviewed work completed by many other researchers (~90 references to other researchers), as part of the "Evidence Base", we have not revisited or re-referenced these studies. On the other hand, as the CCA Report placed a significant emphasis on research completed by GSB, we have inevitably revisited some of our own research and reviews in this report, as well as identifying other independent research. In addition, GSB have completed one new study with two others still in progress, both of which are pertinent to the CCA report. Thus, we have also quoted from three new GSB studies, leading to GSB studies forming about 25% of the references to this report, whilst still forming a fraction of the total studies that contributed to the "Evidence Base".

The new GSB studies are referenced along with a review of a number of other recently published studies by other organisations. In particular, we have drawn on recently completed or

published work completed in the UK, work by the OECD, a review by the Canadian Institute of Work and a review commissioned by the Australian NOHSC.

GSB are an independent research and consultancy company that completed the "Evidence Base' review and other studies for the HSC/E. GSB had no interest, control or role in the interpretation or application of the 'evidence base' by the HSC/E. Also, the "Evidence Base" clearly is and should be just one of many inputs to HSC/E strategy and policy, sitting alongside consultation, other studies and opinion from stakeholders such as the TUC and CBI. Our role and interest is limited to compiling and reporting the evidence as it stands.

Whilst we are independent of the debate and of the HSC/E, as authors of the "Evidence Base" we do not aim to provide an independent opinion of our own interpretation of the "Evidence Base". Similarly, whilst we are not in a position to independently review our own research, as an independent research and consultancy company we do aim to objectively review and appraise existing and new evidence as it becomes available and to provide an independent / impartial review of such evidence. In addition, our review work is clearly informed by the work of other independent researchers, given that our review work explicitly aims to draw together their findings.

1.3 HSE'S QUESTIONS

In asking Greenstreet Berman Ltd to give an opinion HSE posed a series of questions. We have structured this report around these questions. The questions are:

- *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?*
- *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 appropriate body of evidence?*

2 GREENSTREET BERMAN'S RESPONSE

2.1 OVERVIEW

Points of agreement

First, it is possible to highlight a number of areas of agreement between the CCA and the HSC strategy. For example, both the HSC strategy and the CCA Report express a view that:

- Enforcement is important, along with education and the business case;
- Higher fines are needed;
- Directors and safety/employee representatives play an important role in health and safety, and that their involvement in health and safety should be developed;
- There is a need to improve the provision of occupational health services.

Points of agreement lost in the detail

Also, because the CCA Report focuses on the argument for enforcement and therefore highlights the limitations of incentives and education, their view about the importance of education and incentives is "lost" in their report. This is illustrated by the following statements in the CCA Report:

- "This does not mean that campaigns and educational activities are not important…..while it may be important to explore more effective methods for communicating with organisations, and especially SMEs…" (p65).
- "If these arguments (that there is a business case for health and safety) could be shown to be persuasive, then – assuming that you could make them widely known, which as we have seen above is not altogether easy – they could prove to be an effective motivating factor for change without the need for inspectors to enforce the law." (p69)

Care must be taken in interpreting the CCA Report as an argument against education and incentives *per se*. Rather, they argue, in the detail of the report, that education and incentives may "only be effective if they occur in the context of consistent and frequent inspections backed by enforcement activity" (p65). Thus, the summary of main findings in the CCA Report may not fully reflect the more detailed sections of the report.

It is also reasonable to note that much of the evidence cited by CCA was also cited by the GSB "Evidence Base", such as that the activity of regulators is fundamental to the creation of reputational risk, and that the interpretation of this evidence is common to the two reports.

Differences in the representation of the HSC strategy

The CCA Report may not convey the HSC strategy in the same way that the HSC express their strategy in the 2004 strategy document. For example:

- Whilst the HSC suggest that the introduction of NEW regulations should not be the automatic response to a new issue or changing circumstance, there is no mention of revoking regulations or moving away from current regulations and their enforcement;

- Whilst the HSC wish to assure "a goal setting system of regulation", the CCA argue against a "wholly voluntary approach" which is not apparent in the HSC strategy[1];

- The CCA often presents enforcement and education as mutually exclusive alternatives (e.g. part three is titled "Securing compliance without formal enforcement", for example), and suggests that alternative strategies represent a shift, whilst the HSC strategy and supporting evidence is cited in support of a flexible and complementary mix of advice and enforcement that mirrors the principles of Robens Committee in 1972;

- The HSC strategy also argues for a new law on corporate killing and the removal of crown immunity, which is not covered by the CCA Report.

Because of this, the CCA Report does argue against certain positions that it is difficult to identify in the HSC strategy as stated in the 2004 document.

Points not addressed by the CCA

As the CCA Report does not address or consider the same range of aims and issues as the HSC strategy, it does not review or consider the entire evidence base, specifically:

- The need to improve access to occupational health support;

- The need to cater for the special needs and the specific health and safety problems associated with Small and Medium Enterprises (SMEs), and;

- The case for closer working between HSE and LAs.

In addition, the CCA Report:

- Does not accord the same importance to the distinction between SMEs and larger organisations and hence does not consider the relative virtues of interventions (education and enforcement for example) for different sizes of organisations to the same extent as the HSC;

- Takes little account of the SME specific issues and supporting evidence addressed by the HSC strategy, and hence does not clearly review the evidence for (say) working with small firms' intermediaries in the context of the specific needs of SMEs.

[1] It is perhaps worth noting that the CCA rely heavily on internal (but open) debate about inspection and enforcement levels at the HSC/E for its key assumptions about the intentions of the HSC strategy.

Points of debate

The points of debate revolve around:

- The role to be played by enforcement, advice and incentives, and the balance required between these;

- The case for more regulations, versus whether the commonly agreed aim of greater director and worker involvement can be achieved without new regulations.

In response to these points, it is our opinion that the CCA Report:

- Has not fully considered the possibility that the role played by "alternative" strategies has changed over the past 10 or so years, or that the role of these alternative strategies could change. For example, whilst they cite evidence that the promotion of the business case has had a limited effect (a point we might debate), the CCA Report has not mapped out the change in the reported increased importance of insurance since the 1990's. Also, evidence that (say) shareholder pressure has not been a driver for health and safety, can also be interpreted as indicating that (1) there is scope for shareholder pressure to have a greater role and (2) steps should be taken to generate shareholder pressure – instead of citing this as reasons to downgrade this option;

- Makes no mention of the evidence against enforcement or evidence that suggests enforcement has its limits, whilst it does cite evidence against "alternative" interventions and incentives;

- Often equates inspection with enforcement, and does not fully consider the extent to which inspection involves the provision of advice and information to employers;

- Does not consider alternative explanations for why inspections with enforcement are associated with measurable outcomes whilst inspections without enforcement are not;

- Cites evidence about the relative strengths and weaknesses of alternative interventions (but not enforcement), such as reputational risk, tending to present them as binary arguments "for or against" each intervention rather than trying to map out where each intervention may be of value and what mix of interventions may be best in different contexts;

- Does not fully acknowledge the lack of evidence for the effectiveness of mandation specifically of positive legal directors' duties or worker consultation;

- Has not given due weight to the frequency and consistency of employers' request for more advice and support, particularly from SMEs;

- Focuses on how to secure compliance whilst the HSC strategy and supporting evidence was discussed in the wider context of how to improve workplace health and safety.

As regards the question "*Are there any new studies since the end of 2003 that have significant findings*?" there have been a few studies completed since 2003 that have significant findings – these are discussed in the context of the issues discussed below. In our opinion, studies completed since 2003 provide further support for a flexible strategy that adopts a responsive

regulatory approach to organisations according to their *a priori* health and safety performance and commitment. They also provide an explanation for why inspections with enforcement have measurable outcomes, whilst inspections without enforcement may not – namely that inspectors target enforcement on poor performers who have scope for improvement, whilst limiting their action to advice in the case of better workplaces.

We have also checked some of the key references that the CCA gave greater emphasis to compared to the GSB "Evidence Base", specifically the Gunningham review titled CEO and Supervisor Drivers – Review of literature and Current Practice (Gunningham, 1999) and the follow up work by KPMG (*Key Management motivators in Occupational Health and Safety,* KPMG, 2001). The latter studies form part of a series of studies completed for the Australian National Occupational Health and Safety Commission (NOHSC) as part of their Research for CEO and Supervisor Drivers project. The KPMG review notes that the 1999 Gunningham work cited by CCA drew on an earlier (more limited) literature review by the first author of this report (Wright 1998), and hence reaches similar conclusions. The KPMG follow up work concurs to a large extent with the "Evidence Base", whilst contesting Gunningham's assertion that financial incentives are not significant. Finally, we checked the very recent review by the Canadian Institute of Work that has been quoted in the context of a major increase in inspector workforce in one Canadian province.

2.2 THE BUSINESS CASE

Has the evidence regarding employers' acceptance of the business case/motivation provided by insurance changed since the 1990's?

As discussed below, the CCA Report:

- Does not consider the possibility that the role of the business case/incentives has changed and is changing;
- Overlooks the impact that the way in which surveys ask questions may influence the rating assigned to factors such as the business case;
- Overlooks how factors may interact.

Insurance

Surveys of UK employers in the 1990's commonly did not detect any significant evidence that employers were influenced by insurers or the desire to reduce insurance costs to improve health and safety (just 1% of respondents in a 1999 survey). More recent studies present a different picture. This can be attributed to a series of well-publicised events that have altered the nature of insurance in the UK (see ABI, DWP, OFT and FSA reports on employers' liability). In short, in the 1990's insurers accepted a major under-writing loss on employers' liability premiums for reasons such as the high returns on stock market investment of premium income. In the early part of 2000 the cost of claims rose due to claims inflation (such as increases in payments for pain and suffering, longer life spans etc). This coincided with the fall in stock market returns to make underwriting loss unsustainable. Consequently, employers' liability premiums rose significantly and rapidly after 2002.

Coincidentally, a HSE study (Wright et al, 2002) published in 2002 reported that employers' liability premiums in the UK had historically not been high enough in absolute terms to act as an incentive. This was in part because many of the costs of injury and ill-health were, and remain[2], within the state sector. The study concluded that if premiums rose, and a link between premiums and health and safety performance was created, this could act as an incentive for health and safety.

A survey in 2003 (Wright et al) found that employers in many (but not all) sectors were now influenced by employers' liability. For example, and as cited in Wright et al (2004, pages 20-21):

- 50% of respondents report that they have taken action to improve health and safety in response to the cost and availability of employers' liability;
- Many insurers are, for the first time, requesting evidence of health and safety management arrangements.

It must be recognised that the response varies across sectors, with, for example, nearly 80% of utilities reporting taking action due to employers' liability costs compared to about 35% of "Other services". It is reasonable to say, from review of figure 1 on page 24 of Wright et al (2004) that sectors commonly regarded as higher risk (utilities, construction, manufacturing, transport and health and social work) are more likely to report being influenced by employers' liability costs than services and retail etc. This is consistent with the view that the absolute cost of insurance needs to be considered high enough for employers to be incentivised by it.

In addition, mostly in the 1990s, employers' concerns about the cost of workers' compensation in Australia, New Zealand, Canada and America also provided the prompt for incentive-based and regulatory-based improvements in vocational rehabilitation. It should be noted that the CCA statement that there is only evidence from the US that business incentives exist for health and safety is not consistent with the evidence about the role of workers' compensation in Australia, New Zealand, Canada and continental Europe (Wright et al 2002, and Wright et al 2004(2) ABI report) (See later in this section for more detail).

Indeed, there are numerous studies in these countries that map out the role of insurance-based incentives (for workers' compensation) in promoting health and safety improvements. These have been the subject of extensive research and evaluation as reviewed in Wright et al 2002, with the conclusion that insurance based incentives can lead to measurable reduction in injury rates when the system is "correctly" designed. The response of UK employers to recent premium rises mirrors the experience of these countries.

The business case

The CCA notes that the HSE have for a number of years put effort into persuading business of the economic case for improved occupational health and safety (OHS). They then state that

[2] The NHS will shortly be re-charging treatment costs of workers who make a successful employers' liability claim to insurers, thereby transferring further costs back to employers. Also, various initiatives are being developed by the ABI, DWP, Department of Constitutional Affairs and others, to increase the use or rehabilitation as part of the strategy for modernising employers' liability, prompted by the increased cost of employers' liability.

there is “no evidence that UK employers are motivated to improve OHS due to potential business benefits” (p69). They cite the findings of the 1999 evaluation (Wright et al. 2000) of the GHGB campaign in support of this conclusion.

There are at least four points to be made here.

Firstly, more recent studies have reported greater acceptance of the business case amongst employers. For example, a 2004 MORI survey (reported in Safety and Health Practitioner, June 2004) of 500 organisations and 3,000 workers/non-workers found that:

- 73% of employers believe health and safety requirements benefit their business as a whole;
- 64% say they save money in the long term and;
- Only 14% view health and safety as an obstacle to their business.

The CCA quote the evaluation of the Good Health is Good Business (GHGB) campaign as evidence that the business case is not widely accepted. It can be noted that:

- First, the evaluation recommended changes to the way in which the business case is communicated. It was concluded that the business case had not been communicated particularly well. The HSE has enacted further initiatives since the GHGB campaign.
- Secondly, the CCA quote that only 1% of respondents report that they wish to avoid loss of business as a reason for initiating Occupational Health and Safety (OHS) improvements. They do not quote that only 1% of small firms say that more enforcement or prosecution would prompt them to do more (p92 of the evaluation of GHGB).
- Thirdly, the CCA also overlook that evidence of business impacts is ranked second, along with more regulation, advice from HSE and experiencing an incident, as the second reason to do more amongst organisations aware of the GHGB campaign.
- Finally, if you add together bad PR, business impacts and pressure from customers etc, this gives 12% of respondents (who could only cite one factor each), compared to 17% for more regulation, fines and enforcement, as the main reason for making improvements. This may be contrasted with the stark value of 1% quoted by the CCA from the same report for loss of business, for example.

Also, it is argued by some (such as Yeung 2002) that there is an ongoing socio-economic trend that is increasing the sensitivity of organisations to adverse publicity about health and safety. As discussed in Wright et al (2005 – in press), it is argued that reputational risk has grown in importance for a number of reasons, including:

- Growth in information technology and media – leading to rapid transmission of information directly to general public on a low cost and instantaneous basis;
- A professionalisation of communications where society actively engages media;

- A greater public (and company) interest in corporate misconduct due to (1) a recognition of the impact of share value on pension funds as well as the wider share ownership in some countries and (2) growing impact of brand values on commercial performance (due to consumer sensitivity towards brand image and values).

It is suggested that these trends have led to a growth in media attention towards reporting of corporate misconduct and a growth in the impact of "misconduct" on commercial performance. It is argued that, regardless of whether brand values really do impact commercial performance, organisations are increasingly motivated to manage their reputations and image.

Accordingly, this would suggest that the results of surveys into the 'business case', and specifically the role of reputational risk, might vary across time. The surveys of (corporate/ large organisation) directors by Smallman and John (2001) and Wright et al (2003) both indicate that concern about corporate responsibility and reputations are important drivers for managing health and safety.

In addition, a study by Wright et al (2005) of Greenstreet Berman Ltd that has yet to be published found that:

- Employers' perception of the importance of health and safety to the business was a key factor in whether they are "open to persuasion" about health and safety or not;

- 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.

The former finding lends weight to the idea that recognition of the business case for health and safety plays an important role in the employer's approach to health and safety. The latter finding leads into the next point, namely that care must be taken in interpreting survey findings, especially where factors interact. It is possible that if factors such as the perceived business case, fear of reputational risk and enforcement interact, then if you ask about any one factor in isolation or ask about one factor before another, whichever factor is probed will be rated highest.

Secondly, care must be taken in interpreting the findings of surveys about the role of business benefits. For example, the evaluation of GHGB (Wright et al. 2000) asked what was the main prompt for OHS improvement. Whilst the business case may not have been the main initiator of improvements, this does not mean it does not play a role.

The way in which the question is asked and the framing of the question can lead to apparently conflicting results. Surveys that ask employers whether health and safety is important for the business, whether they wish to avoid costs of accidents etc report in the affirmative. Surveys that ask what the main prompt for improvements is, may report that business benefits do not prompt improvements. Indeed, the GHGB study reported that 'more advice' is required to prompt improvements. This was interpreted to reflect the point that employers, especially SMEs, need to be aware of a risk to act on it. In this way increased awareness is the main (or initial) prompt for improvement, as once the employer is aware of the risk they might consider if they should take action. However, once the employer is aware of the risk, the decision on whether to act and what action to take might be influenced by a combination of factors, such as regulatory requirements, costs and benefits.

Thirdly, studies have shown that the affordability and proportionality of health and safety requirements are important influences. There is evidence that even where the business case may not initiate improvements, the lack of a business case may inhibit improvements.

Fourthly, care must be taken in what is defined as the "business case". There is a tendency that where the business case is defined narrowly as the direct tangible benefits of health and safety improvements such as productivity, that employers rate this as a lesser incentive. However, other studies which include less tangible matters such as reputational risk, staff morale and (unmeasured) productivity, within the scope of the business case tend to report more importance is attached to these matters.

One can interpret this as being that many employers have "faith" that health and safety is important to the business in a range of tangible and (more commonly) intangible ways, and that such faith is an important factor in their attitude to health and safety.

The CCA Report also states "there is no evidence outside of the United States that employers are significantly motivated to improve health and safety for financial reasons" (p14). This is not necessarily consistent with:

- The findings that national and multi-national organisations operating in the major hazard sector are motivated by the wish to avoid the consequences of a major accident – including the cost of the accident, reputational damage, reparation costs etc;

- Research from other countries (e.g. Canada, Germany and Australia) which does suggest that firms are motivated by the financial incentive arising from experience rating of workers' compensation to improve health and safety (not just in the USA).

Also, as noted later in this report, recent Australian research cites evidence of the influence of supply chain pressures.

2.3 EVIDENCE FOR A BALANCE OF EDUCATION AND ENFORCEMENT

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?

Before turning to the specific points, it is pertinent to note that the CCA view that inspection frequency and severity of the penalties are important, is consistent with both the GSB "Evidence Base" and the KPMG review for the Australian NOHSC. This point is not contested. Indeed, it is commonly agreed that there is evidence (as cited in the "Evidence Base" and ongoing studies) that novel penalties, such as adverse publicity orders, warrant further consideration.

2.3.1 Citation of evidence for advice

The CCA Report:

- Focuses on research into whether advisory initiatives have succeeded and a small number of studies about the link between advice and performance;

- Makes little reference to the large body of research that describes duty holders' expressed need for advice and support;

- Whilst making a few statements that education is not unimportant, the report does not explore the role of knowledge in health and safety compliance or performance, limiting itself to saying that knowledge alone is not enough;

- As discussed below, in 2.3.6, it presents the argument as if advice alone is supposed by the HSC to achieve compliance.

One of the most consistent and strongly expressed points of feedback from duty holders, especially SMEs, is that improved advice and support is needed to promote higher standards of health and safety. Numerous studies have reported that a lack of knowledge is a major factor in duty holders' performance. The concern about advice is particularly acute amongst SMEs who, lacking in-house health and safety experts, report particular difficulty in interpreting regulations, knowing about the full range of regulations that apply to them, or knowing how best to comply with them.

The CCA Report does not explore the idea that awareness of risks and acceptance of the legitimacy of regulatory requirements is a precursor to compliance. In other words knowledge, when combined with a 'reason to act', facilitates compliance. The reason to act may come in the form of incentives, moral duty, fear of adverse consequences (such as reputational damage) or enforcement.

Such advice is reported to perform a number of roles, including:

- Increasing awareness of risks – and hence providing cause to manage them;

- Increasing awareness of risk controls – and hence enabling management of risk;

- Helping duty holders understand and accept regulations – and hence facilitating compliance.

Indeed, self-compliance requires that duty holders have perfect knowledge of risks, how to manage them and the costs/benefits of compliance. Hence from a theoretical and empirical basis, education is an essential precursor to objective and informed decision making amongst duty holders.

It is also often reported that duty holders need to have a dialogue with regulators to form a common view on the interpretation and application of "goal based" generic regulations to the specific circumstances of particular sectors. It is in this context that the argument for working in partnership with intermediaries comes to the fore, namely as a means to help interpret generic regulations for specific industries and to better communicate regulatory requirements to duty holders.

The CCA suggestion that advice alone does not secure compliance is a spurious argument that is not pursued by the "Evidence Base" or the HSC strategy.

The CCA also argue that knowledge alone does not necessarily prompt action, though they state that "research does show an association between levels of knowledge and understanding and propensity to initiate OHS improvements, this relationship is far from perfect" (p62). First, it is reasonable to say that no relationship between interventions and propensity to initiate OHS improvement is perfect, including the one with enforcement.

Secondly, and as discussed elsewhere in this report, this line of debate is about whether knowledge works in isolation as a prompt for change (i.e. is it a sufficient condition for action). It is equally valid to debate, from the evidence, whether and to what extent awareness of an issue (e.g. the existence of a hazard or regulation), is a pre-requisite to action, as few people act on an issue without being aware of it (i.e. is it a necessary condition for action). Knowledge is also important for understanding how best to control a risk. But knowledge may need to be combined with a reason to act, such as the prospect of business disruption if the hazard is not controlled. There may be many reasons to act such as the prospect of enforcement, customer demands, and a wish to safeguard colleagues (or family members in a family business).

On the other hand, there may be reasons against taking action, such as cost and other demands on management time. Here again knowledge is important in ensuring decision-makers have a valid view of the costs and benefits of taking action, the level of risk posed by the hazard and the consequences (injury, legal or otherwise) of the hazard materialising, so that an appropriate decision can be made. Indeed, there was evidence from the Greenstreet Berman Ltd review of PUWER (Wright et al 2003) that some employers viewed the cost of compliance as high in part because they had over-interpreted the requirements, with the consequence of some employers expressing negative views of the regulations. This again shows that knowledge is important, in this case, in ensuring employers do not over-estimate the cost of compliance and hence feel unjustified reluctance to comply.

It is also reasonable to note that the CCA do not report the proportion of respondents who reported in the evaluation of the Good Health is Good Business Campaign being prompted by "a better understanding of hazards, risk management, regulations", whilst they do report other results from that study. The evaluation found that:

- 25% of respondents reported being prompted to make improvements by a better understanding of hazards, risk management, regulations etc;
- 17% of "aware" (aware of the GHGB campaign) respondents reported being prompted by "more regulations, fines and enforcement";
- 17% of aware respondents also reported being prompted by moral duties.

The GHGB evaluation also reported, "better understanding" as the single largest reason that would prompt them to do more, followed by witnessing an incident.

It is also interesting to note that the latest HSE report on designers' compliance with CDM has improved after an "awareness" raising initiative – combining visits, guidance, seminars and at least one enforcement action (HSE 2004).

2.3.2 Citation of evidence "for and against" enforcement

The CCA Report, whilst citing evidence of the limits of (for example) supply chain pressures, does not cite evidence that enforcement is not always effective. It is difficult to find discussion of the evidence "against" enforcement or evidence about the limits of enforcement within the CCA Report. Similarly, there is no discussion of the feasibility of achieving an exclusively enforcement based strategy for the millions of SMEs in the UK, or evidence about the feasibility and impact of enforcement specifically amongst SMEs.

Examples of such evidence includes

- Braithwaite & Makkai (1991) found almost no correlation between nursing home compliance rates and the perceptions of certainty and severity of punishments, except for a few homes in some contexts;

- The inquiry into the Piper Alpha disaster (Cullen 1990) found that a prescriptive regulatory regime (with enforcement) contributed to the disaster;

- Some studies into the United States' Occupational Safety and Health Authority found that enforcement of specific workplace machinery and environment regulations was not associated with fewer accidents or injuries – particularly during its earlier years of operation – as noted in Wright (1998);

- Dunford and Ridley (1996) suggest that fines are less likely than other forms of punishment to act as a deterrent for other companies, and that they have uneven effects on large and small companies (affecting the latter to a larger degree). Large firms are also more likely to be able to pass costs onto employees or customers due to their market position, and in any case it may be less desirable to force large firms into liquidation because of the more wide-reaching social and economic effects;

- The evaluation of the GHGB campaign found that only 1% of respondents were prompted to make improvements by prosecution or other enforcement actions. (Although about one third were prompted to make improvement by regulations).

The 1998 Australian study into on the spot OHS fines (Gunningham, et al 1998) can be cited as a balanced review of the evidence regarding the impact of one particular form of enforcement, which uses evidence about the positive and negative effects to develop a balanced set of proposals. The negative evidence included:

- That "there was a perception that the positive preventative impact of on-the-spot fines on corporate behaviour was likely to be short term in nature" (p vi);

- That a lack of consistency by the inspectorate in applying fines may mean they do not have a positive impact on prevention;

- That they may substitute for more serious enforcement action and trivialise offences through misuse;

- The introduction of on the spot fines had led inspectors to retreat from the traditional role of providing advice and assistance to industry and that this had undermined prevention (p11).

This report also concluded that whilst there was much positive evidence about the benefits of on the spot fines, there was a need to apply fines as part of embracing tactics such as education and targeted publicity.

Indeed, the CCA Report whilst quoting Gray and Schulz seminal work on the measurable impact of OSHA in the US, do not cite contrary studies. For example:

- One line of work suggests that the impact of OSHA has varied over time, initially being low in the 1970's-1980s, rising in the 1990s and latterly declining;
- As inspectors target poor firms, the positive impact of enforcement may be because of the targeting of poor performers (who could be encouraged to improve by other means);
- It has been suggested that other factors explain the reduction in injuries, such as the increased cost of workers' compensation (Conway and Svenson, 1998), and;
- At least one major study (Klick and Stratmann, 2003) re-examined US data and concluded that more inspection led to more deaths[3].

A number of other recent or ongoing studies are discussed below. These studies have been reviewed in an attempt to provide possible explanations for the mixed findings of research on the impact of enforcement.

UK food safety in SMEs

Yapp and Fairman of the Kings College Centre for Risk Management completed a series of studies into food safety compliance amongst UK micro, small and medium sized enterprises (Yapp and Fairman, in press, Fairman and Yapp 2004). One of their studies examined the impact of alternative enforcement policies. They selected local authorities with 'extreme' levels of either formal enforcement or educative work with:

- 'Educative' local authorities that acted in an advisory role and attempting to change behaviour by providing information and tools to motivate and encourage change;
- 'Formal enforcement' local authorities that attempt to change behaviour by using formal threats (warning letters and threat of notices) to force change.

100 randomly chosen high to medium risk food SMEs were chosen and contacted by letter and follow-up telephone call. In each case the local authority case history was examined, the proprietor was interviewed and a judgement made of the level of compliance.

As regards the impact of deprivation and enforcement they found that:

- Compliance in local authorities using high levels of education were significantly better than those with low education, when the effects of deprivation and enforcement were removed;
- Compliance levels in districts of high and low formal enforcement did not differ, after removing effects of deprivation and education;

[3] This report has been quoted here as an example of research that argues against enforcement to illustrate the point that a balanced review of evidence would cite and consider such work. We have not fully reviewed this study as part of this report, nor have we checked whether the direction of the positive correlation between inspections and fatalities reported by Klick and Stratmann could be in the direction of more deaths lead to more inspections.

- Compliance with on-going requirements such as cleaning was higher in the 'high' education authorities;

- More SMEs in high education districts exceeded requirements for hazard analysis.

They conclude that:

- Their findings confirms other studies (they quote Braithwaite and Makkai, 1991) that show that non-coercive and informal approaches are more likely to be effective than punitive and coercive enforcement in achieving long term compliance;

- The advice giving approach is consistent with the needs of 'organisationally incompetent' businesses (in the case of food SMEs);

- Education is vital to allow SMEs to make sense of what is being required of them and is a more effective approach to ensuring compliance with food law in SMEs.

With regard to the level of visits, the researchers suggested that the frequency of visits, every 18 months might have fostered a sense of reliance on the inspectors. They also suggested that the historically prescriptive nature of food safety regulations and enforcement might have contributed to the latter reliance on inspectors.

These findings are explained, in part, by the point that most SMEs were sceptical about the relevance and importance of certain food safety requirements, and displayed 'active' lack of trust in both the inspectors and in legislative requirements. Hence, an advisory approach that convinced proprietors of the case for food safety, by raising awareness of the hazards etc, was deemed to be more effective in this instance.

Recent and ongoing UK OHS research

An ongoing study by Greenstreet Berman Ltd (Marsden et al) for the HSE has included:

- A short review of the injury rates in Australian states (that have witnessed major changes in rates of enforcement), as well as a short review of UK sector specific injury and enforcement rates;

- A review of research into the impact of enforcement and how enforcement works;

- In depth discussions with inspectors and duty holders;

- A survey of HSE and Local Authority inspectors' view of how enforcement works.

The ongoing work provides a view of how, when and why enforcement works, and when it may not be so effective. For example:

- The in depth discussions with employers found that enforcement can be de-motivating where it is considered to be disproportionate, reactive or a "technical" paper offence. In these cases health and safety requirements may lose their legitimacy and come to be viewed as a punitive or bureaucratic compliance process that is not aimed at improving health and safety. It is suggested that this can reduce respect for the law and with it commitment to proactively improve compliance.

- The literature review found that some critics argue that as enforcement is reactive it does not lead to systemic solutions. It has also been argued that:

    - Prosecutions focus on individual liability and fault and hence do not prompt the "systems" approach to safety management recommended by OHS professionals;

    - Prosecutions generally focus on discrete actions (for the sake of proving fault) and hence do not reveal the wider context of causation needed to guide improvements to prevent re-occurrence.

- The review of injury and enforcement rates in Australia and the UK service sector found no consistent association between the rates of enforcement (which changed greatly) and sector or state injury rates.

- The survey of HSE and LA inspectors found that the extent to which enforcement action leads to improvements beyond the specific activity referred to (by the notice or prosecution) varies due to a variety of factors, including company size and the subject of notice (management versus specific) but is particularly related to the extent that the notice or prosecution raises the interest of senior management.

A key study reviewed by Marsden et al (ongoing) was completed by Thomas et al (2004). Thomas et al (2004) completed an evaluation of a three-year single-issue inspection exercise of over 200 factory sites in 2000/2001. The study was designed to test the impact of two alternative HSE interventions on organisational performance. The two interventions were:

- **Advice only.** One group of organisations were visited twice. On the first visit the HSE inspectors provided advice and rated the standard of risk control. On the second visit the HSE inspectors re-rated the organisations.

- **Enforcement.** The second group of organisations were visited three times. This group were subject to an initial enforcement intervention, such as an Improvement Notice or Instant Visit Report, (and rated) and a further intervention, in some cases as enforcement or advice, at the second visit. They were also re-rated on the third visit.

The third visits were completed in 2002-2003. Thus, it was possible to measure the effect of giving advice versus the serving of notices, using inspector completed Risk Control rating scales.

It was found (quoting from the report) that, for the three visit **'enforced'** organisations:

- The organisations chosen for enforcement action had lower initial levels of rated performance when compared with the two-visits group. Therefore, it can be concluded that HSE inspectors consistently chose organisations with poor performance to be the subject of further intervention.

Enforcement by an HSE inspector raises performance to a level comparable with the two-visits 'advised' group of organisations. Therefore, it can be concluded that interventions delivered by means of inspection visits are effective.

The initial improvement in performance achieved by 'enforced' organisations was not sustained over time.

Therefore, they concluded that:

- "It is possible that the positive effects of an 'enforcement' intervention, in poorly performing organisations, might only be sustained over time by further visits and further interventions." (p4)

- "No difference in the level of improvement has been seen in the effect produced by the provision of a Notice or of advice." (p23)

They found, for the two visit group that only received advice that:

- Their health and safety performance remained consistent over the study period, and;

- It can be concluded that the general level of health and safety performance of organisations (in the better organisations) will remain consistent when HSE interventions do not occur.

These findings are important as they offer a possible explanation for other studies that report measurable outcomes from inspections with enforcement but no outcome from inspections without enforcement, namely that inspectors target enforcement on poorly performing workplaces.

Recent Canadian review

A team led by Dr Emile Tompa of Canada's Institute for Work and Health looked at 44 studies published between 1977 and 2002 in the economics and workplace health literature. The researchers investigated the role of experienced weighted workers' compensation and workplace inspection or enforcement action. The researchers who carried out this review found the following:

- There is "moderate evidence" that the "degree of experience rating" (how closely premiums are linked to an individual firm's claim activity) leads to fewer and/or less severe workplace injuries;

- There is "strong evidence" that actual citations and penalties lead to fewer and/or less severe workplace injuries;

- There is "limited" to "no evidence" that an increase in the probability of citations/penalties is a general deterrent;

- There is "limited" to "no evidence" that increased probability of an occupational health and safety inspection is a "general deterrent" – i.e. an increase in the likelihood of inspection does not improve a firm's health and safety practices;

- There is "limited" to "no evidence" that an occupational health and safety inspection is a "specific deterrent" – i.e. firms who are actually inspected do not improve their health and safety practices.

The study was welcomed by Dr Ed McCloskey, Director of the Occupational Health and Safety Branch at the Ontario Ministry of Labour. In July, the ministry announced it would be recruiting 200 more health and safety inspectors by 2008, increasing total numbers from 230 to 430 who would target workplaces with the highest injury rates.

However, our review of their work indicates that it was not comprehensive in either its scope or in respect of the body of research reviewed. For example:

- The review of incentives was limited to experience rating of workers' compensation insurance – it did not cover other incentives such as supply chain pressures, employers' desire to improve productivity via better health and safety, avoidance of reputation damage, avoidance of the cost of accidents, and so on;

- It excluded the effects of benefit levels and studies of the link between workers compensation and employers' use of rehabilitation;

- It did not consider the extent to which employers are motivated by the "moral case", or the need to demonstrate social responsibility, to manage health and safety (which other studies indicates can be a major consideration);

- The review focused on US and Canadian studies – it did not cover the extensive body of work completed in the UK and Australia for example;

- It did not examine the role of advice or the evidence regarding partnership style initiatives wherein an industry body (trade association), trade unions and regulator develop a joint initiative to improve health and safety.

In addition:

- The review of economic incentives was guided by the application of economic theory. It did not give equal weight to other theories of employer behaviour, such as the "normative" behavioural model elaborated in the OECD report, which the OECD portray as a better explanation of employer behaviour.

- The review finds mixed evidence for all three of: inspections without citations; inspections with citations, and experience rating.

In addition, the study did not consider alternative explanations for the greater impact of inspections with sanctions than inspections without sanctions. In particular, the previously mentioned recent HSE commissioned study (Thomas et al 2004) indicated that inspection only visits may not have a measurable impact because the workplace may be deemed to be 'good enough' (explaining the lack of sanction), and hence the inspection does not give the employer cause to make any significant changes. In contrast, inspectors take enforcement action where they find poor performance, and hence there is scope for improvement, and where the enforcement action gives the employer a cause to make improvements. Thus, the differential impact of inspections with and without enforcement may simply reflect the selective application of sanctions by inspectors to poorer workplaces.

US EPA seminar

In April 2004 the US Environmental Protection Agency sponsored a seminar to explore corporate environmental behaviour and the effectiveness of government interventions. One item of research presented at the seminar indicated that sanctions against corporate offenders might have a general deterrence effect when they are administered to make an example out of the offender and to send a clear message to other corporations (Cohen, 1998). This work paints a richer picture of the research on the general deterrence effect of enforcement, namely that the general deterrence effect is dependent on the purpose of the enforcement (i.e. is it done to set an example for others) and is the action publicised.

This would explain the finding from some studies that enforcement does not have a general deterrence effect, i.e. the enforcement is either not publicised or it was not intended to set an example for other organisations to follow. It is also consistent with the growing interest in adverse publicity orders in Australia for example, based on the idea that there is scope and benefit to be achieved from increasing the level of publicity awarded health and safety offences. In addition, May (2004) found in the context of regulation of water quality in marinas, that there was a general deterrence effect due to widespread awareness of "showcase" actions. Thus, where actions are "showcased" they may generate general deterrence.

Concluding points

In summary, these studies suggest that:

- The common lack of a general deterrence effect of enforcement may be due to both a low level of publicity awarded enforcement and the specific purpose of most enforcement, i.e. enforcement is not typically done to set an example to others (as confirmed in the recent ongoing survey of UK HSE and LA inspectors by Marsden et al of Greenstreet Berman Ltd). Where enforcement is done as an example to others, and the enforcement is made known by others, there is evidence of a 'ripple' effect.

- Enforcement does not work by a simple deterrence effect; neither do organisations apply a simple profit oriented or economic optimisation approach to compliance. Rather, the OECD report argues that organisations' compliance is influenced by behavioural norms, where compliance with societal expectations is a behavioural norm (if not universally accepted). Where the regulations are regarded to be substantive, fair and proportionate, compliance is an accepted norm to be achieved. If the organisation becomes aware that they are non-compliant, or performing poorly, they commonly take steps to improve. They may become aware of their non-compliance through a variety of mechanisms, such as inspections, audits, joint industry initiatives etc.

- The lack of a measurable outcome of inspection only visits (i.e. those that do not involve notices or penalties) might be explained by the point that inspectors may target enforcement on poorly performing organisations. Where the organisation is, in the inspector's judgement, "compliant", the inspection does not give cause for the organisation to make improvements.

- The measurable impact of inspections involving enforcement may reflect the point that inspectors target action on poorly performing organisations, where there is greater scope for improvements in health and safety to lead to measurable outcomes.

It is possible that the lower evidence of the impact of education only inspection/advice is because such advice is targeted on "better firms" that have less scope for showing measurable outcomes, than poor firms that are the subject of enforcement. In this way, there may be a natural confounding of results, whereby advice is found to be less effective because it is limited to "good" firms and enforcement is found to be more effective because it is naturally targeted on poor firms with greater scope for improvement.

The CCA Report concludes that enforcement has a specific affect only, not a general deterrence. This leads on to the view that a high level of inspection and enforcement is required, in order to inspect as many organisations as possible and as frequently as possible. Our own review of the evidence suggests that it is important to secure the interest of senior management and their commitment to make improvements. A range of methods, such as enforcement or partnerships, can achieve these goals. Indeed, Gray and Scholz, whose work is quoted by CCA, are quoted in the OECD review as concluding that the impact of enforcement is explained by its awareness raising effect amongst management and that management awareness can be solicited by other means. Scholz and Gray conclude that interventions that draw senior management attention, such as audits or penalties, can have the same focusing effect. Similarly, Karnon (2001) quotes Paternoster and Simpson (1996) that the limited empirical evidence provides 'no or very weak and conditional support for the deterrence of corporate crime'. The low level of evidence of general deterrence may reflect the commonly low level of publicity awarded most enforcement actions and the specific nature of enforcement. This does not mean that general deterrence cannot be increased and hence become an important factor.

Moreover, if the "normative" model of compliance were accepted, it would suggest that if employers regard a set of regulations to be substantive, proportionate and fair, they will (on the whole) aim to comply. In this context, interventions (such as enforcement, partnerships etc) that are designed to alert employers to non-compliance or relative poor performance can be effective. Incentives operate by reducing the cost of compliance and hence increase the perceived proportionality of requirements as well as providing additional reasons to comply. The OECD suggests that:

..the possibility of fines, sanctions, and inspections acts less as a deterrent threat than as a way to focus management attention on institutional expectations that may affect the legitimacy and operation of their enterprise." (p70).

The OECD suggests that it is the imperative of institutional legitimacy that explains how companies regulate themselves rather than a simple model of deterrence. In this context, the OECD suggest that it is imperative that employers:

"..trust regulators as fair umpires who administer and enforce laws or regulations that have important substantive objectives, then the evidence is that compliance will be higher, resistance and challenges to regulatory action will be low." (p72)

This perspective leads to the ideas that:

- A co-operative, persuasive regulatory enforcement strategy is appropriate for the majority of businesses that are ordinarily inclined to comply (where the law is perceived as legitimate, substantive, proportionate and effective), with punitive sanctions for the others;

- Enforcement acts as a 'wake up call' for managers rather than a deterrent;
- It is the informal ramifications of enforcement, such as negative publicity and internal loss of staff goodwill, that are more important consequences of enforcement than the penalties themselves.

This perspective also leads onto the idea that (1) enforcement should be proportionate and (2) should only enforce after persuasion has failed.

2.3.3 The Gunningham and KPMG reviews

The 1999 Gunningham review is cited by CCA as an example of work that shows "there is no evidence outside of the US that employers are significantly motivated to improve health and safety for financial reasons" (p14). Whilst Gunningham states that there is little evidence that management is motivated to improve OHS performance for financial reasons, the common perception that health and safety improvements are a cost rather than an investment does support the case for demonstrating the commercial benefits of health and safety management.

The Gunningham work concurs to a great extent with the "Evidence Base", noting as it does that regulation and loss of corporate credibility are the two most important CEO drivers, whilst also noting the importance of information-based and leverage (influencing SMEs through other agencies) strategies for SMEs. Gunningham also concluded that supply chain pressure was (at the time) an important but largely unexplored mechanism. This is not surprising as Gunningham drew on the 1998 review (Wright 1998) by the lead author of the "Evidence Base".

NOHSC asked KPMG to report (in 2001) on what motivates Chief Executive Officers (CEOs) and how governments, industry associations, unions and others can encourage CEOs and supervisors to improve health and safety. They interviewed CEOs, reviewed initiatives and produced best practice case studies in prevention. The KPMG executive summary report identified a number of factors motivating CEOs and supervisors, the most important of which were:

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

The KPMG work clearly assigns greater weight to workers' compensation than the Gunningham review, and offers a series of proposals on how to increase the role of workers' compensation in Australia, along with other non-regulatory strategies.

Other motivators such as supply chain pressure and corporate image were less important across the whole economy but were significant in some industries. For example, in New South Wales the Principal Contractors Safety Alliance had adopted a uniform system for all sub-contractors, which was the main motivator for sub-contractors. The principle contractors adopted this scheme due to client pressure, namely the New South Wales government. The KPMG report

advocated a combination of education; sector based prevention programmes, and commercial incentives.

Moreover, the KPMG report concludes that its findings differ from Gunningham in respect of the acceptance of the business case and the perception that health and safety is a cost. They point out that Gunningham's use of the Wright literature review of 1998 (which was a small scale literature review that focused on SMEs attitude to occupational health in the UK) may not apply to Australia, where the financial arrangements differ from the UK. It is our opinion that the KMPG conclusions are consistent with the more recent evidence considered by KPMG and the GSB "Evidence Base".

2.3.4 Evidence regarding measurable outcomes

The CCA Report argues that there is little evidence of advice leading to measurable outcomes, whilst there is evidence of enforcement leading to measurable outcomes.

First it should be noted that many evaluations of advice and campaigns are limited to gaining evidence of their audience penetration, recollection of advice and perception of the quality of the advice. These evaluations are aimed at helping to learn lessons for future campaigns. As these campaigns often rely on mass media and usually target SMEs (who lack statistically reliable OHS records), it is difficult to get before and after performance measures.

Secondly, the Step Change and PABIAC initiatives are cited elsewhere as examples of measurable outcomes. However these are contested by CCA.

Other studies previously reviewed (Wright et al 2002) also reported a measurable fall in accidents. These involved the offer of a financial incentive in the form of reduced workers' compensation premiums to organisations that would participate in health and safety schemes, either meeting certain standards or attending certain health and safety training courses as part of a safety assessment and improvement programme. A key example is the Ontario Safe Communities Incentive Program that was evaluated and reported a fall in injury rates.

At least one study cited by CCA as evidence of the impact of greater penalties can also be cited as an example of the success of more advice and incentives, namely the Gunningham and Johnstone (1999) review of the State of Oregon example. They note that penalties rose threefold from 1987 to 1992, together with other changes to its enforcement, prevention and workers' compensation programmes (*our emphasis*).

More recently, a review of CEO to CEO mentoring project in Australia (Merrit, 2002) reported a measurable decline in workers' compensation claims after launch of the scheme. This scheme (Focus 100) is operated by WorkSafe Victoria. It targets 100 large organisations that have scope to improve and applies a battery of benchmarking, CEO peer groups, CEO mentoring, guidance and briefings, financial incentives along with more visits (with notices served). This is termed the Constructive Compliance Model. They report reductions in workers' compensation claims of up to 26.4% (for construction) compared to the same period in the last year.

Finally, other reviews have identified studies that report a measurable outcome from partnership/ educational initiatives. Specifically:

- Mather (2004) provides a summary of evaluations of the Health and Safety Executive Field Operations Directorate interventions, which ranged from more enforcement to sector specific partnership based initiatives. The report notes successful examples of partnership-based initiatives, specifically RUBIAC (rubber) and CERIAC (ceramics) that work in partnership with organisations in a specific sector to agree and then promote higher standards of health and safety. The report notes that these successful examples concern small industries and that little information exists about larger scale industries.

- Young and Campbell (1989) are quoted by Hopkins (1995) as finding that the partnership approach adopted by the Australian inspectorates to the cotton industry led to an 80% fall in accidents. The partnership approach sought the co-operation of employees and workers, in auditing and agreeing action plans.

- Mayhew et al (1997) found that an advisory intervention strategy (prompting development of H&S plans through face to face visits) was associated with improvements in occupational health and safety knowledge and injury indices, amongst 331 small builders in Australia.

Finally it should be noted that many studies of the impact of new regulations have been unable to demonstrate measurable impact on injury rates. This is for a number of reasons, including coincidental socio-economic changes such as industrial contraction or change in technology "over-riding" the impact of regulations on injury rates, a lack of data on the type of accidents affected by the regulations, long regulatory transition periods and the point that many new UK regulations consolidate previous regulations.

Thus, notwithstanding the point that CCA dispute some studies, we can identify nine examples of partnership/educational schemes that are reported to have measurable outcomes, in addition to the Yapp and Fairman work on food safety. This is similar to the number of studies regarding the impact of enforcement quoted by other reviews, such as by Dr Tompa.

2.3.5 The role of inspection

The evidence about the benefits of inspection is cited in the CCA Report as if inspection is purely enforcement oriented. However, as noted on page 41, HSE and LA inspectors "prompt employers to take remedial action by offering advice, or by imposing enforcement notices....".

It is also pertinent to note that the GHGB campaign involved inspectors providing targeted advice (Wright et al. 2000). Many studies have found that employers desire more direct contact with inspectors in their workplace, especially SMEs, for the sake of getting direct and pragmatic advice.

Thus, care must be taken in interpreting studies that recommend more "inspections" as implying a case for more "enforcement". In addition, as inspections fulfil an advisory and enforcement role, evidence that "inspection works" does not equate to evidence that enforcement (but not advice) works.

Whilst some studies have examined the role of penalties, it is difficult to find many studies that have been able to test the impact of enforcement-only (i.e. no advice) visits.

2.3.6 Education versus enforcement – a false dichotomy

The CCA Report presents enforcement and education as alternatives specifically "It assesses whether compliance is best obtained through, on the one hand inspections and investigations, with the threat of the imposition of formal enforcement notices and prosecutions, or, on the other hand, through education and other forms of contact with duty holders...with little or no threat of actual enforcement" (p7). Indeed, part three of the CCA Report is titled "Securing compliance without formal enforcement".

On page 62, the CCA Report discusses raising awareness in the context of "voluntary compliance" strategies. Many of the studies on the case for education have done so in the context of how to help firms comply with the law before or as part of the inspection process.

This stands in marked contrast to the HSC strategy that presents enforcement and education as parts of a single strategy. The CCA Report, we would say, gives the impression that enforcement and education are mutually exclusive interventions – it has posed a "false dichotomy" of options. As a result, they use the research to argue against a position that is not proposed within the HSC's strategy as stated in the 2004 document.

Similarly they argue that the HSC/E is shifting away from traditional modes of obtaining compliance through inspection, investigation and enforcement towards alternative forms of interventions, such as using the supply chain. This presumes that the "alternative" forms of intervention are new. Whilst it may be that these forms of intervention are gaining more attention in the UK, examples of them can be found dating back to earlier decades in other countries. The conscious use of workers' compensation (and experience rating of organisations) as an incentive for health and safety has been underway since the 1980's in the USA and Australia, whilst the German compensation framework was introduced in the 1950's as were the German trade association (Berufsgenossenschaften) based safety regimes.

Again, the CCA cite evidence as if these interventions are new "alternatives". An alternative interpretation is that there is now a greater body of experience and evidence about the value of these alternative interventions that allows for a more considered review of their role – both where they can help and where they may not help.

In the context of this "false dichotomy" and supposed shift away from enforcement it is useful to refer to the work of Professor Johnstone from the Australian National Research Centre for Occupational Health and Safety Regulation.

First, Prof Johnstone characterises the traditional approach as one of advice and persuasion, combined with preventive enforcement notices. He goes on to say that the traditional model assumed that continuous supervision (by inspectors) was thought to be neither feasible nor appropriate. Rather, the prime objective has been to secure better compliance by advice and persuasion, bringing about management commitment to manage health and safety. Indeed, improvement and prohibition notices are intended as preventive rather than punitive, as they aim to prevent unsafe practices.

Indeed, the 1972 Robens Committee said:

- 'the provision of advice, and the enforcement of sanctions where necessary, should continue to be regarded as two inseparable elements of inspection work'

- 'the main emphasis ... be on self-inspection by employers, in co-operation with employees and their representatives.. the activities of the inspectorates should be supplementary..(directed) towards those problem areas where they are most needed..'

Professor Johnstone goes on to discuss the "deterrence approach" wherein enforcement has a specific (deters individual offenders from re-offending) and general deterrence (deters other potential offenders) effect. Notwithstanding the concern that deterrence is reactive and may not generate systematic solutions or work in all cases or contexts, he cites evidence that deterrence is an effective part of an enforcement strategy that use a judicious mix of advice / persuasion and escalating sanctions.

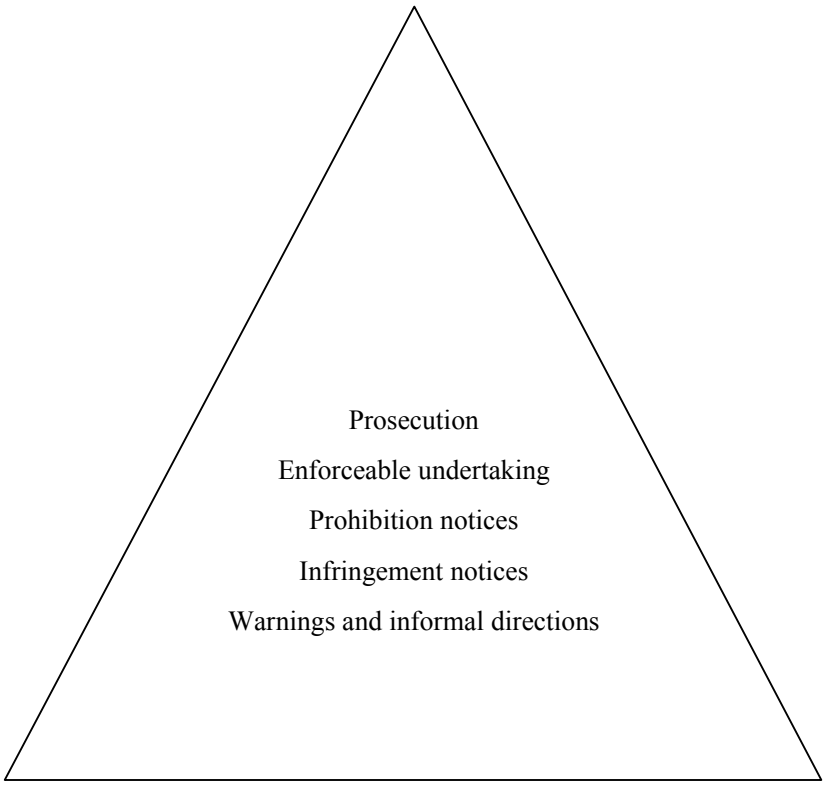
He coins the phrase "responsive enforcement" wherein:

- Sanctions are targeted where persuasive measures have been ineffective;

- The weakness of one approach is covered by the strength of the other;

- Regulators are responsive to the conduct of those they regulate before deciding to escalate interventions.

Professor Johnstone presents an enforcement pyramid as follows:



Whilst the advantages and disadvantages of this model can be debated, such as the problem of the split pyramid where the regulator immediately takes action at the top of the pyramid if a death or serious injury occurs, it serves the purpose of presenting advice and persuasion as part of an integrated advisory-enforcement strategy.

In addition, Professor Johnstone cites a series of examples of where this type of approach is applied by USA regulators, including:

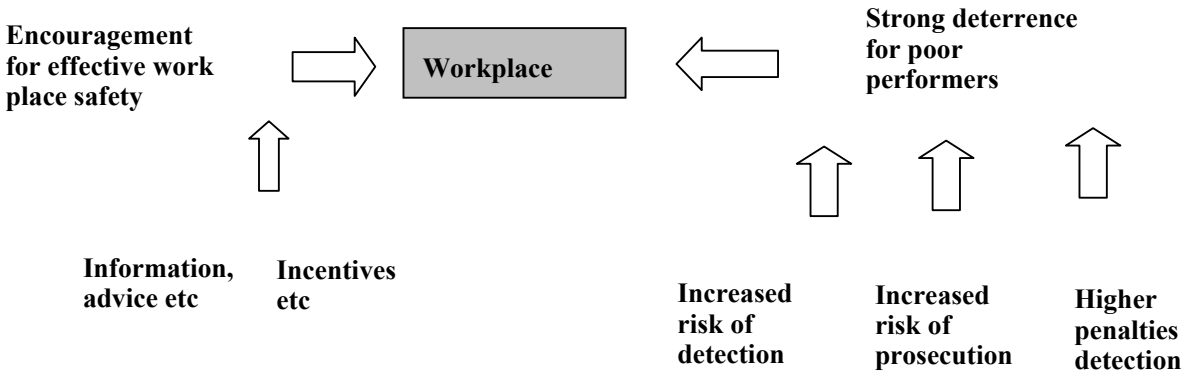
- OSHA's Site Specific Targeting Inspection programme;
- Minnesota Environmental Improvement Act 1995 which provided limited protection from enforcement action with SMEs encouraged to self-audit and report outcomes.

It is perhaps noteworthy that the USA is the same country from which the CCA draw much of their evidence about the effectiveness of enforcement.

Professor Johnstone also cites the Danish "adapted inspection" model and OSHA 'focused inspection' strategy.

It is also useful to mention the Australian (Worksafe Victoria) Constructive Compliance Model (Merrit, 2002) which also presents education, incentives and deterrence as all part of one compliance strategy, as per Figure 1. This model differs from the enforcement pyramid in so much as it sees advice and incentives as occurring alongside enforcement rather than seeing advice as the starting point that may be followed by enforcement (See section 2.3.4).

Figure 1: Worksafe Constructive Compliance Model



These models are presented here in order to elaborate the principles of an integrated educational, enforcement and incentive strategy, and thereby illustrate the role of each. As the CCA Report does not expand on the role that could be played by education or incentives, their report does not enable the reader to see the value of the three elements.

A similar view is taken in the field of environmental protection. For example, May (2004) examined the motivation to comply with marine water quality regulations, noting that deterrence and a sense of civic duty were the main motivators. The challenge they articulate is one of creating a stronger civic duty in forming a social contract to protect the environment. Whilst May concludes that an exclusively voluntary approach is less effective than a traditional

enforcement approach they also conclude that technical and financial assistance is needed to facilitate and direct actions to alleviate harm, whilst showcase actions have an impact in generating civic duty. In their terms, their findings confirm, "what is well known about the importance of building commitment and capacity to take action". Thus, education, persuasion and enforcement are viewed to be part of a single integrated strategy.

2.3.7 Mandating directors duties

The CCA Report challenges the evidence regarding directors' health and safety responsibilities and its application to the HSC strategy.

First, it queries the robustness of the self-assessment based survey (reported in Wright M, Marsden S and Holmes J. (2003) *Health and safety Responsibilities of Company Directors and Management Board Members*).

Whilst the quoted survey used self-reporting primarily, in addition:

- The study involved a number of face to face case studies that probed how health and safety was being directed;
- The questionnaire probed how directors managed health and safety and would require extensive and wholesale fabrication on the part of respondents in order to misrepresent their health and safety actions and arrangements.

Whilst it cannot be claimed that a telephone-based survey avoids respondents mis-representing themselves, there is no evidence that they did so.

It is also pertinent to note that:

- 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 the "corporate risk" posed by getting health and safety wrong to see it as a "corporate" issue that requires directors' attention.

The latter work characterises organisations as:

- Convinced, able and engaged in directing health and safety at board level;
- Convinced, able but unsure about how best to direct health and safety at board level;
- Unconvinced and not yet willing to direct health and safety at board level.

These findings can be interpreted in a number of ways. This is in part a case of "is the glass half full or half empty?" It is possible to argue that the reported level of board level direction shows that there is uptake of responsibilities amongst a large proportion of organisations, with a minority needing further persuasion. It can equally be characterised, as a significant minority are not taking up such responsibilities despite common acceptance of the "corporate risk" case for directors' duties.

The CCA conclude that the 2003 study does not show that companies were prompted by voluntary factors alone. First, it is also pertinent to note that the study does not assert this point. Secondly, the study does conclude that the current body of OHS regulations already provide a prompt for directors to manage health and safety, due to the wish that their organisations do not infringe current regulations.

The CCA argue that the study was not designed to test what works best – voluntary or mandation. However, it does provide a measure of uptake of director's responsibilities in the current regulatory framework, and it was these findings that informed the HSC's conclusions.

Our view is 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. Indeed the CCA already makes the point that the (negative) legal requirements already in place for company directors[4] may not be working and may even be a disincentive in some situations; and so the gap they refer to is in *positive* legal obligations not simply in "regulation" *per se*. Questions have also been raised about the level of enforcement of this legal provision (e.g. CCA/UNISON 2002). These points illustrate that the precise nature of any regulation as well as its implementation are likely to be important, and that direct evidence of effectiveness of specific mandation can only come if is tried out. We are not aware of any such evidence of the effectiveness of specific (positive) health and safety duties on directors.

2.3.8 Mandating increased worker participation

The CCA Report presents evidence of the effectiveness of worker participation, and an argument and some evidence that some of the concerns about such regulation being burdensome may not be well-founded. The evidence supporting increased mandation is limited to the findings of HSE's "fact-finding mission" to investigate worker provisions in Australia. This study presents a range of anecdotal evidence that safety representatives' rights to serve PINs (Provisional Improvement Notices) and to "Stop the job" can have a positive effect on health and safety management.

Aside from this study of effectiveness of safety representatives' rights we are not aware of evidence that mandation on worker participation works. We would not wish to conclude anything from this – we are similarly not aware of evidence that it does not work (apart from some evidence cited by the CCA Report that the current UK 1996[5] regulations have inadequacies).

---

[4] Section 37 Health and Safety at Work etc. Act 1974

[5] Health and Safety (Consultation with Employees) Regulations 1996

The CCA Report's argument is here perhaps less to do with the evidence base and more with the apparent lack of explanation by the HSC of its decision in 2004 not to bring in new regulations on worker involvement (after having consulted on draft regulations).

2.4 ALTERNATIVE INTERPRETATIONS OF THE EVIDENCE

Are there alternative interpretations of research findings and their implications for the strategy?

2.4.1 Lowly rated factors

A number of studies have reported that certain factors, such as shareholder or customer pressure, rarely motivate companies to improve health and safety.

It is pertinent to note that a similar finding was reported for insurance in the 1990s but, as previously mentioned, this is no longer the case. This helps makes the point that there are a number of ways of interpreting such findings. On the one hand, you can interpret the absence of evidence about the role of these factors as evidence that they do not offer any opportunity for leverage.

On the other hand, you can equally reach the conclusion that there is scope to improve the leverage offered by these factors – if the socio-economic-regulatory environment were to change. Indeed, you could argue that those factors with the lowest ratings offered the greatest scope for increased leverage. Indeed, the KPMG review for NOHSC found that NSW construction sub-contractors safety scheme was driven by customer pressure. This can be cited as another clear example (like insurance) of how one driver (supply chain pressure) that is rated low in many studies can become a powerful driver once it is applied with effect.

Moreover, a closer look at the research would suggest that there are real reasons to suppose these factors offer opportunity for more leverage. For example;

- Studies in the construction sector highlight the role played by clients in encouraging or discouraging better health and safety amongst contractors and designers – with the complaint being that clients are not currently providing a lead, but also with the point that contractors and designers are very sensitive to customer demands;

- There is growing evidence of the sensitivity of corporations to the risk posed by reputation damage (as discussed further in 2.2);

- Ethical and socially responsible investment is forming an increasingly significant proportion of institutional investments, whilst there is mounting evidence of the impact of reputation damage on share prices.

The lowly rating assigned these factors may simply reflect the current reality, whilst failing to convey the future potential of these factors if change was to occur.

Similarly, the finding that enforcement, the fear of enforcement and regulatory compliance are the most commonly cited reasons for managing health and safety may simply reflect current reality of an enforcement based approach to health and safety in the UK. As discussed in Wright 1998 and Wright 2004, most of the costs of injury and ill-health have historically been borne by

the state and individuals in the UK. Indeed, one of the justifications for regulation is that where the costs of poor performance are external to the organisation that creates the risk, regulation is required. The imposition of fines and other penalties is one way of "internalising" costs or otherwise forcing organisations to fulfil societal requirements for which they lack self-interest. However, this does not argue against taking steps to "internalise" the costs of poor health and safety by new methods, such as:

- Generating reputation damage through adverse publicity;
- Supply chain pressure – where customers place health and safety on suppliers or exclude suppliers for poor performance;
- Transferring costs via insurance.

Thus, the low ratings assigned to these "alternative" drivers may simply reflect the historical reality in the UK rather than the potential offered by these drivers contingent upon change.

2.4.2 Recognising limits of interventions versus discarding options

The CCA cite examples of where alternative interventions (such as supply chain pressures) may not be effective as evidence that they serve no purpose, rather than recognising that all interventions have their limits. For example, it cites evidence that safety does not pay, that reputation risk may encourage management of the image of compliance, that "monopolistic" suppliers may be insensitive to reputation risk, and so on. Whilst it is reasonable and valid to cite such evidence, it is also valid to say that:

- There is evidence that all intervention strategies, including enforcement, have their limits and can have counterproductive consequences;
- There is evidence that the influence of these 'drivers', including enforcement, varies across organisations.

These points are recognised in the "Evidence Base".

The valid point that all interventions have their limits and are more/ less effective in different areas can be equally interpreted to argue for a flexible, targeted approach to interventions, rather than a simple "for or against" interpretation for any one intervention method.

2.5 LATEST VIEW OF SELF-REGULATION

What is the latest view of the contribution of self-regulation within a regulatory framework?

The "Evidence Base" does indicate that regulation is an integral part of compliance in all sectors, regardless of the risk profile. There is no suggestion in the "Evidence Base" that an exclusively self-regulatory approach reliant solely on incentives without regulatory oversight is supported by the evidence. It is reasonable to say that current thinking on self-regulation has not moved on greatly since the review of the evidence base. Specifically we are unaware of any new work that elaborates how organisations may earn autonomy and how regulators may oversee such "self-regulation" in the field of health and safety. It is reasonable to say, as the CCA

Report does, that the way in which "earned autonomy" may operate and the resources implications for the HSE have yet to be mapped out, trialled or evaluated.

One US study (Stretesky, 2004) has been reported in the field of environmental protection where organisations that self-report certain types of violations (via self-audit) of the clean air act receive lesser penalties than organisations whose violations are discovered by the EPA. This was seen as an example of 'enforced self regulation', where the EPA provides compliance assistance for organisations and encourages self-disclosure of violations. The study compared organisations that were part of the Audit Policy scheme against a random sample of those that were not. They report:

- That organisations that participate in schemes report they have increased disclosure of violations due to the compliance assistance, not due to deterrence issues;

- Organisations that had previously been the subject of actions or operated in areas with higher levels of inspection were more likely to participate in the Audit Policy – thus higher prior levels of inspection and enforcement led to higher levels of participation in self-auditing;

- Larger organisations were more likely to participate in self-audit and to self-disclose violations than smaller one.

Another study (May 2004), presented at the same seminar, concluded from a review of work in the field of environmental protection, that experience with voluntary programs demonstrates that some companies are motivated to act out of a sense of civic duty, good public relations, market differentiation and a fear of greater regulation. However, the gains in pollution control are limited, the programs are difficult to sustain and do not expand beyond a core of committed organisations. Their own comparison of regulated and unregulated marinas found that:

- Whilst regulated marina displayed more compliance, regulated marina received more assistance than unregulated ones, and;

- A high proportion of unregulated marinas displayed high levels of action and an equal proportion report a sense of civic duty to comply.

They conclude that whilst regulation leads to more action, regulated marinas tend to be afforded more assistance.

It is useful to revisit some of the concepts and phrases that have gained prominence. It is useful to explore these terms and concepts as they may better convey the intent of "self-regulation" in a regulatory framework. Scrutiny of these concepts make the point that the process of "self-regulation" is monitored and controlled by the regulator, and that the regulator maintains a close relationship with the duty holder to enable informed "responsive regulation" or "earned autonomy". Similarly "earned autonomy" may exempt firms from routine inspection, but does not exempt them from inspection *per se*.

May 2004 makes the point that mandation and voluntary action are two end points of a spectrum of approaches. In this context, "self-regulation" as conceived in the UK can be perhaps better understood as "enforced self-regulation" against a body of externally (by the regulator) defined

set of standards and performance requirements, rather than as a voluntary approach to taking action.

Secondly, part of the argument for (say) "earned autonomy" is that it helps to motivate firms to go beyond minimum compliance. Hence it is not a replacement for regulation.

Thirdly, the idea of "good performers" who adopt a systems based approach to health and safety in which the duty holder finds solutions to OHS problems enter into partnerships with the regulator, as stated in the CCA Report (p83), is very similar in wording and intent to the principles of health and safety regulation in those industries covered by safety case regulations, such as offshore oil and gas, and hence are not new. The more current suggestion that organisations which (say) operate an accredited health and safety management system "earn autonomy" is actually an extension of the safety case concept to industries not covered by safety case regulations.

As part of the CCA argument against self-regulation, they cite evidence casting doubt on whether the adoption of systematic approaches to safety management leads to better health and safety performance (and hence whether they can be relied on as part of a self-regulation framework).

- They do not appear to recognise that HSG65, the HSE's guide to successful health and safety management, lays out an approach that would enable firms to comply with the management oriented health and safety regulations such as Management of Health and Safety at Work regulations;

- This line of debate implies that the risk assessment and management oriented health and safety regulations, which require duty holders to identify risks, take responsibility for developing suitable risk controls and ensuring their implementation via suitable management arrangements, are invalid.

- It argues against the accepted 'best practice' systems approach to health and safety management promoted by IOSH, ROSPA and the safety profession as a whole.

The CCA cite examples of accidents and management failure within organisations that have SMS as evidence that they cannot be relied on for the purpose of self-regulation. Unfortunately this line of reporting overlooks the body of evidence that demonstrates the case for the systematic approach to health and safety recommended by IOSH, ROSPA, and the safety profession as a whole.

In addition, the CCA Report overlooks the history of systematic health and safety management, whereby a systems approach to health and safety has been recommended for the sake of improving health and safety performance and as being a superior approach to health and safety than compliance with discrete requirements specified by an external regulator. The concept of safety management systems emerged from the analysis of past accidents and was motivated by the need to prevent accidents rather than facilitate self-regulation. Indeed, it was introduced in sectors such as the offshore oil and gas industry as part of new and far more extensive bodies of regulations enforced by a much-enlarged offshore inspectorate.

It has never been argued that implementation of a safety management system will prevent all accidents nor has it been suggested that safety management systems cannot "erode" or degrade

over time. Indeed, a central facet of safety management systems is that they enable continued learning and improvement, learning from accidents as well as from successes. Hence, citing examples of accidents does not invalidate the case for a systematic approach to health and safety management and the principles of continuous improvement.

Responsive regulation

As discussed in 2.3.6, the concept of responsive enforcement draws on:

- Targeting sanctions to circumstances where persuasive measures have been ineffective;
- Being responsive to the conduct of duty holders, specifically how effectively they are regulating themselves before deciding whether to escalate intervention.

This requires the regulator to know about the firm and the context in which the firm operates and for the firm to understand the regulator's approach.

Discussion of this approach (eg see Johnstone, 2003) does suggest that responsive enforcement requires the regulator to understand:

- The firm's response to the regulator's requirements;
- The firm's past OHS record,and;
- The firm's ability to manage OHS effectively.

At the same time, it is argued that the regulator needs to develop enforcement strategies that encourage firms to adopt self-audit approaches, and to be able to decide (on basis of past performance of the duty holder) how fast to escalate enforcement.

Earned autonomy

The performance and standards of a particular duty holder are good enough to earn them autonomy from routine intervention by the regulator.

2.6 CCA USE OF EVIDENCE

Is the CCA Report clear and does it use all relevant research validly and in the correct context, and has it chosen and used appropriate body of evidence?

The CCA cites a narrower range of research than that referenced in the 2004 "Evidence Base" report. This is in part, as elaborated below, because it does not address a number of elements of the HSC strategy and its evidence base. In addition, as the notion of targeting interventions is not taken up in the CCA Report, it does not make use of the research that underpins the case for targeting interventions to (say) SMEs versus large organisations.

2.6.1 Achieving compliance versus improving health and safety

The CCA Report focuses on securing compliance with the law and cites evidence in the context of this issue. This can be contrasted with the HSC's strategy goals of achieving record workplace health and safety standards and ensuring risks are controlled. Whilst compliance is seen as part of the strategy, the strategy also addresses matters such as:

- How to increase the provision of occupational health services?
- How to encourage rehabilitation (which is not prescribed by law)?

We cannot find mention of these issues in the CCA Report. As a result, the CCA Report does not provide a comprehensive review of the issues or evidence used in support of the HSC's strategy.

2.6.2 Recognising the needs of SMEs

We are unable to find any mention or discussion of the specific needs of SMEs in the CCA Report. This is important because:

- Significant parts of the HSC strategy and supporting evidence focus on the specific needs of SMEs;
- The compliance behaviour of SMEs is considered by much research to differ from that of larger organisations;
- Parts of the HSC strategy are premised on the point that there are a growing number of small firms.

Accordingly, the CCA Report does not discuss issues or related evidence such as education or the role of partnerships in the context (i.e. SMEs) where such interventions are frequently cited.

There is evidence that:

- All intervention strategies have a lesser impact on SMEs;

- SMEs are in particular need of advice and education due to lower levels of in-house health and safety expertise – this is particularly true for micro firms (less than 10 employees).

The idea of working with partners has been researched in the context of there being a very large number of SMEs (millions), whose low a priori levels of health and safety awareness mean they may not be aware enough of their hazards to recognise the need to seek advice. These issues that are particularly pronounced amongst SMEs form the context of research into how best to reach out to SMEs and raise their levels of awareness and knowledge. The CCA Report mentions none of these SME specific points or supporting evidence.

2.6.3 HSE and LAs working together

Whilst recognising that LAs enforce health and safety as well as the HSE, the CCA Report has not considered the evidence for greater consistency and co-ordination of enforcement between the HSE and LAs. In addition, the report focuses on the level of HSE enforcement and inspectors (p49), without considering LAs enforcement levels. Indeed, the CCA Report does not mention the HSC aim of HSE and LAs working together for the sake of improving enforcement. The HSC "Evidence Base" reports that employers' compliance is influenced by the perceived consistency of enforcement as well as the perceived likelihood of inspection, which is interpreted as evidence of the virtues of HSE and LAs working together and the application of the EPS/EMM. The CCA Report, whilst arguing the case for more enforcement, overlooks the evidence supporting closer working between HSE and LAs, as well as this part of the HSC's strategy.

3 CONCLUSIONS

Whilst the CCA Report highlights some of the risks and potential limits of alternative interventions and some of the case for improvement of enforcement, it does not address all of the issues and aims within the HSC's strategy. Thus, it cannot be taken as a comprehensive critique of the HSC's strategy. Moreover, as it does not recognise or discuss all of the contexts in which interventions are needed, particularly in the context of SMEs, it is not an entirely balanced review of the evidence about the strengths and weaknesses of alternative interventions in all contexts.

Indeed, whilst it highlights evidence against (or at least highlights the limits of) alternative interventions, it does not cite evidence against enforcement or about the limits of enforcement. Also, it uses examples of the limits of interventions as if they indicate those interventions have minimal value. On this basis, all interventions could be criticised. Finally, a core premise of the CCA Report is that enforcement is required for other interventions to be of value, as if the HSC is considering applying them in isolation of one another. As this is not (in our reading of the strategy) the case, the interpretation of the evidence (and critique of its application to the HSC strategy) has been guided by a 'false argument' of intervention options that cannot be found in the HSC strategy or the supporting evidence. The debate is more one of the relative roles to be played by enforcement, new regulations, education and incentives, rather than a binary choice.

It is reasonable to conclude that there is little new evidence about how "self-regulation" (better termed responsive regulation or earned autonomy) may operate or the resource demands that may arise for the HSE. However, this is inevitable in the absence of any trials or initiatives in this new area.

Finally, it is reasonable to say that it is unlikely that a "hard" and unequivocal evidence base can be developed for interventions because:

- It is not practical to trial an enforcement-only or education-only strategy by (for example) exempting firms from all health and safety regulations;
- Change (such as industrial contraction and new technology) is ongoing in society that cannot be "controlled" for in research;
- The relationships between factors is complex and varies across different types of organisations;
- Trials of new interventions are by their definition limited and are designed to (1) test if there is a case for wider implementation and (2) identify improvements;
- The influence of interventions may vary across time;
- The success of new interventions may only be apparent after trialing.

Hence, it is inevitable that an element of judgement (or "faith" as the CCA express it) is required in interpreting what will always be a limited evidence base. It is for these reasons that an approach that builds on piloting and evaluation of interventions and the constant review and appraisal of interventions is required.

4 GREENSTREET BERMAN'S OPINION

What the evidence is

We believe we have shown in this short report and the "Evidence Base" that there is evidence that all types of intervention work to some degree, varying in different circumstances including the combination of interventions and perceived probability of intervention.

Although (as we have described in the previous section) there are considerable difficulties in coming to firm conclusions, we would agree that there is limited evidence on the most effective mix of measures to be taken in any one circumstance, and there probably is scope for further research to be done in this area. In one important specific area, worker involvement, we agree there is also very limited evidence about the effectiveness, or otherwise of mandation.

The CCA Report

The CCA Report, when examined in detail, also acknowledges much of the evidence for a mix of measures. However, in our view the CCA Report often loses some of its focus – and effectiveness – by characterising a complex argument as one between polar opposites, thus arguing against positions that we do not consider the HSC takes in its published strategy.

The CCA Report certainly contributes additionally to a public debate, as an active advocacy/lobby group, by reviewing and critiquing key parts of the internal HSC/E debate on the strategy and the way forward (including, in particular, its decisions on worker consultation). Although open information, since this is not formally published policy it has not formed part of our own work on the "Evidence Base" or current review. Some of the differences between our opinions, we think, stem from this difference.

Improving compliance

Whilst, as we've said, the evidence regarding the targeting of interventions is inevitably limited, our view is that research to date does point towards:

- A widespread need to provide advice and guidance to duty holders (especially SMEs) to ensure they are convinced that regulations are substantive, proportionate and effective;
- A widespread need to provide advice and guidance to duty holders to ensure they have the skills and knowledge to understand how to effectively manage health and safety;
- A low level of compliance in those cases where duty holders are unconvinced of the fairness or effectiveness of the regulation, or lacks the skills to implement the requirements.

It is also apparent from past research that (1) acceptance of the business case for H&S may be changing and (2) such acceptance may be necessary to facilitate compliance/going beyond the minimum, even if the initial prompt for action is recognition of regulatory duties.

In addition, there is evidence that duty holders are prompted to improve H&S by a number of different means, which may be complementary rather than alternatives, including:

- Initiatives that secure the proactive commitment of workers and senior management to work in partnership when combined with evidence of poor performance, incentives and support and encouragement from regulators - encouragement which may come in the form of persuasion and/or enforcement;

- Enforcement against poorly performing organisations;

- Evidence of positive and negative business incentives such as risk of adverse publicity etc.

It is also apparent that organisational response to enforcement and /or the business case is sensitive to senior management awareness and involvement. Interventions, be they enforcement, audits or partnerships, that persuade and engage senior management are more likely to prompt improvements than interventions lacking senior management engagement. The engagement of senior management may driven by a desire to be seen to be 'legitimate', e.g. legally compliant, rather than by fear of legal penalties alone. Accordingly, interventions (be they enforcement or auditing) that help senior management understand their current standard, convince them of the fairness of requirements and highlight the risks of non-compliance achieve a common outcome.

Finally, it is possible that the measurable outcome apparent from some studies of enforcement may be due to the targeting of enforcement on poor performers who have the scope to improve, whilst advice alone is offered by inspectors where they judge the duty holder's standards do not necessitate enforcement.

5 REFERENCES

Braithwaite, J. Makkai, T. (1991) "Testing an expected utility model of corporate deterrence" *Law and Society Review* 25 (1): 7 – 39

Centre for Corporate Accountability/Unison (2002) "*Safety Last? The Under-Enforcement of Safety Law"*

Cohen, M.A. 1998. "Sentencing the environmental criminal." P 229-249. In Environmental Crime: Enforcement, policy and social responsibility, edited by M. Clifford. Aspen.

Conway, H and Svenson, J. 1998. "Occupational injury and illness rates, 1992-1996: Why they fell". Monthly labor review. 121, (11), 36-58.

Cullen, Hon Lord W. Douglas (1990) *The public inquiry into the Piper Alpha disaster*. London: HMSO

Davis, Dr. C. (2004) *Making companies safe: What works?* Centre for Corporate Accountability.

DWP (2003) *Review of Employers' Liability Compulsory Insurance*, First stage review. Department of Work and Pensions 2003.

Fairman, R and Yapp, C. Compliance with food safety legislation in small and micro-businesses: enforcement as an external motivator. Published in Journal of Environmental Health Research, 2004.

Fairman, R and Yapp, C. Enforced self-regulation, prescription and conceptions of compliance within small business: The impact of enforcement. Report for the Food Standards Agency. (Undated).

Gunningham, N. (1999) CEO and Supervisor Drivers – Review of literature and Current Practice. October 1999. (www.nohsc.gov.au/pdf/OHSSolutions/ceosupervisordrivers/pdf)

Gunningham N. & R. Johnstone (1999) *Regulating Workplace Safety: System and Sanctions* Oxford University Press

Gunningham, N., Sinclair, D and Burrit, P, (1998) On-the-spot-fines and the prevention of injury and disease. The experience in Australian workplaces. May 1998. A report for the National Occupational Health and Safety Commission.

Dunford, L. and Ridley, A. (1996) "No soul to be damned, no body to be kicked": responsibility, blame and corporate punishment. International Journal of the Sociology of Law, 24, 1-19.

Hopkins, A. (1995) Making safety work: Getting management commitment to occupational health and safety. Allen and Unwin. Sydney.

HSC (2004) A strategy for workplace health and safety in Great Britain to 2010 and beyond. Health and Safety Commission 2004

HSE (2004) *Designer Initiative 2004* Report, HSE (Construction Division), Author: Dave Charnock, May 2004 Crown Copyright (C) 2004

Johnstone, R. (2002) *Safety, Courts and Crime*. Australian Institute of Criminology. Paper presented at the Current Issues in Regulation: Enforcement and Compliance Conference.

Johnstone, R. (2003) *From fact to fiction – rethinking OHS enforcement*. In proceedings of 'Australian OHS regulation for the 21st century' . Held at Ana Hotel & Conference Centre, Gold Coast, 21-22 July 2003.

KPMG. (2001) Key management motivators in occupational health and safety. Consulting, February 2001. Research for the CEO and Supervisors Drivers Project for National Occupational Health and Safety Commission (www.nohsc.gov.au/ohsinformation/ohssolutions/00-01/01_natsol_drivers.htm)

Klick J and Stratmann, T. Offsetting behaviour in the workplace. April 14, 2003. George Mason University. Law and Economic Working Papers Series. This paper can be downloaded without charge from the Social Science Research Network Electronic Paper Collection: http://ssrn.com/abstract_id= 397822

Marsden, S. Wright, M, Pennie, D, Cudmore, S and Antonelli, A (2004, Work in Progress). *An evaluation of HSC enforcement policy effectiveness* (working title). Ongoing HSE research.

Mather, J. Evaluation of the impact of Field Operations Directorate interventions. WS Atkins Consultants Ltd and the Health and Safety Executive. HSE Books, 2004. (Research report 270). ISBN 0717628965.

May, P. Regulation and compliance motivations: Marine facilities and water quality. In "Corporate Environmental Behaviour and the effectiveness of government interventions. Proceedings of a workshop sponsored by the US EPA. April 26 –27, 2004.

Mayhew, C, Young, C, Ferris, R and Harnett C. 1997. An evaluation of the impact of targetd interventions on the OHS behaviours of small business building industry. NOHSC AGPS November 1997.

Merrit, J. (2002) *CEO to CEO mentoring*. Research for the CEO and Supervisors Drivers Project for National Occupational Health and Safety Commission. April 2002.

Organisation for Economic Co-operation and Development, 2000. Reducing the risk of policy failure: Challenges for regulatory compliance.

OFT (2003) *Liability insurance: A report on an OFT fact finding study* August 2003 Office of Fair trading, OFT659b, available at www.oft.gov.uk/News/Publications/Leaflet+Ordering.htm

Paternoster, R. and Simpson, S. (1996) Sanction threats and appeals to morality: testing a rational choice model of corporate crime, Law and Society Review, 30, 549-83.

Scholz, J and Gray, W. 1990. OSHA enforcement and workplace injuries: A behavioural approach to risk assessment. Journal of Law and Uncertainty 3:283.

Shaw J, Antonelli, Cudmore, Wright, Cash, Bendig, Marsden & McGurry (In press). *Case studies that identify and exemplify boards of directors who provide leadership and direction on occupational health and safety.*

Smallman, C and John G (2001) *British directors perspectives on the impact of health and safety on corporate performance*. Safety Science, 38, 227-239.

Stretesky, P. Corporate self-policing and the environment: Factors predicting self-disclosure of clean air act violations under the EPA's audit policy. In "Corporate Environmental Behaviour and the effectiveness of government interventions. Proceedings of a workshop sponsored by the US EPA. April 26 –27, 2004.

Thomas, T, Hickling E, Gaskel E, and Burton, M. February 2004. Noise Single Issue Inspection: Analysis Summary - Part II. Report for the Health and Safety Executive.

Emile Tompa, Scott Trevithick and Christopher McLeod. A systematic review of the prevention incentives of insurance and regulatory mechanisms for occupational health and safety. Institute for Work and Health newsletter. Number 213, 2004.

Wright, M. 1998. Factors motivating proactive health and safety management. HSE CRR 170/1998.

Wright, M (2004(1)), *Costing of 3 no fault schemes*. Research report for the Association of British Insurers. 2004 (in press).

Wright, M, Antonelli, A. Norton-Dolye, J and Genna, R. Evidence based approach to securing compliance. HSE research report (2005, in press).

Wright, M, Lancaster, R and Jacobson-Maher, C. (2000) *Evaluation of the Good Health is Good Business Campaign*. HSE CRR 272/2000.

Wright, M and Marsden, S. (2002) Changing business behaviour- would bearing the true cost of poor health and safety performance make a difference? Contract Research Report 436/2002. HSE Books. ISBN 0-7176-2362-9.

Wright, M, Marsden, S and Antonelli, A. *Building an evidence base for the Health and Safrty Commission Strategy to 2010 and beyond: A literature review of interventions to improve health and safety compliance*. Research report 196/2004. HSE Books.

Wright M, Marsden S and Holmes J. (2003) *Health and safety Responsibilities of Company Directors and Management Board Members* Health and Safety Executive Research Report 135, Suffolk: HSE Books

Wright, M, Marsden, S, Turner D and Genna R. Survey of compliance with Employers ' Liability Compulsory Insurance (ELCI) Act 1969 HSE Research Report, RR188, 2003.

Wright, M. Marsden S, Hopkins, C, Collier D and Turner, D. (2003) *Evaluation of the implementation of the use of work equipment directive and the amending directive to the use of work equipment directive in the UK*. HSE Research Report 125.

Wright, M. and Turner, D (2004(2), In press). Costs and benefits of vocational rehabilitation and return to work. Research report for the Association of British Insurers. 2004 (in press).

Yeung K. 2002 *Is Adverse Media Publicity A Legitimate Technique For Promoting Compliance With Regulatory Laws?* Karen Yeung, Oxford University . Paper given at conference Sentencing & Society: Second International Conference 27-29 June 2002, Glasgow, Scotland.

MAIL ORDER
HSE priced and free
publications are
available from:
HSE Books
PO Box 1999
Sudbury
Suffolk CO10 2WA
Tel: 01787 881165
Fax: 01787 313995
Website: www.hsebooks.co.uk

RETAIL
HSE priced publications
are available from booksellers

HEALTH AND SAFETY INFORMATION
HSE Infoline
Tel: 0845 345 0055
Fax: 02920 859260
e-mail: hseinformationservices@natbrit.com
or write to:
HSE Information Services
Caerphilly Business Park
Caerphilly CF83 3GG

HSE website: www.hse.gov.uk

RR 332