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**The effects of workplace design on work-related
violence: a mapping exercise**

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EXECUTIVE SUMMARY

The Health and Safety Executive's (HSE) Better Health at Work Division (BHAW) have considered commissioning case study research into how workplace design can help reduce the incidence of work-related violence. It has been suggested that there has been considerable investigation already carried out in this area, so before HSE proceed with commissioning any case studies, they asked the Health and Safety Laboratory (HSL) to undertake a small scale mapping exercise to ascertain what information is currently available on this topic. The results of this mapping exercise will help inform HSE's decision making.

The mapping exercise was not intended to be an academic review, rather HSL was asked to make contact with relevant UK organisations, either on the telephone, by email or by accessing websites, to discover what information on workplace design and work-related violence management was currently available. The exercise was carried out using a 'snowball' approach, with each contact, website or document leading to other useful contacts, documents or websites. HSL was also able to visit two premises that had been redesigned to help control the risk of violence to staff and had a face-to-face meeting with another contact.

Results

Many sources of information, guidance, and case studies are currently available to employers on how the design of the workplace can help to reduce the incidence of work-related violence. Many of these come from the crime prevention field. If employers know where to look, they will be able to access a number of useful documents. Existing case studies are summarised in section 2.10 of this report.

Most industry sectors which are at a higher risk of work-related violence (according to the most recent British Crime Survey) are represented by this information, with public sector workers such as those who work in hospitals, schools and the transport industry being particularly well represented.

A number of recommendations are made for HSE to consider with regard to commissioning case studies on workplace design and work-related violence:

Recommendations

Recommendation 1: Pull together existing information

Guidance and case studies are already available for a variety of workplaces and industry sectors; however, they originate from a variety of sources, some of which are easier to access than others. For this reason, rather than commissioning a new set of case studies, all of the existing case studies and guidance documents could be combined into one place and in a similar format, for example on a dedicated internet website.

Recommendation 2: Try and ensure all guidance and case studies are good quality

As there is a large body of knowledge on workplace design principles, for example 'Crime Prevention Through Environmental Design' (CPTED), these should be referred to in any guidance and case studies produced. It would also be useful if workplace design measures were evaluated to demonstrate their effectiveness. This is often difficult to find in the 'real world' but would lead to case studies that are of high quality.

Recommendation 3: If there appear to be gaps, fill them

If, after drawing together the information as detailed in recommendations 1 and 2, there appears to be a lack of quality case studies or information in a specific area, commission case studies in these areas.

Recommendation 4: Consider targeting types of workplace rather than sectors

Case studies and information should be grouped in terms of the physical work environment as well as for sectors, as many of the principles of good design are applicable across a variety of industry sectors.

Recommendation 5: Draw on and develop links between H&S and crime prevention

The fields of occupational health and safety and crime prevention have a great deal to offer on this subject. There is a large network of people and organisations working in the field of CPTED, and it would be prudent to maintain a dialogue on how best to work together to address the associated problems of violence to staff and crime more generally.

Recommendation 6: Consider drawing on information from outside the UK

This mapping exercise has only looked at information available from UK sources, and it is likely that much useful information exists outside the UK. This could be incorporated into any general guidance along with any illustrative case studies based on UK experience.

Recommendation 7: Consider the format and location of information

It would be useful to carefully consider where the target audience will look for advice on workplace design. Ensure that relevant organisations are aware of the case studies and that relevant websites are linked up.

1 INTRODUCTION

1.1 BACKGROUND

The Health and Safety Executive's (HSE) Better Health at Work Division (BHAW) have considered commissioning case study research into how workplace design can help reduce the incidence of work-related violence. This is work that originated from the Health and Safety Commission's (HSC) three-year programme on work-related violence (2000-03). However, following consultation on the draft specification for this research, it has been suggested that there may already be a lot of work being done in this area, for example by the Home Office and the NHS and possibly in parts of the Local Authority enforced sector, e.g. banks and retail outlets.

Before proceeding any further with commissioning case study research, HSE wanted to gather information on current workplace design and work-related violence initiatives in the UK. They therefore approached the Health and Safety Laboratory (HSL) to undertake a mapping exercise.

1.2 AIM OF WORK

To carry out a mapping exercise to help inform BHAW's decisions on commissioning case study research into the effects of workplace design on work-related violence.

The brief was to identify other guidance / case studies / initiatives on workplace design that are underway or have been completed by other government departments and organisations, including the public and private sector. The mapping exercise did not include a review of the academic literature.

1.3 METHODOLOGY

An initial trawl was made through existing information (books, academic papers, websites) held by HSL on the topic of work-related violence. This produced a number of leads that were subsequently followed up. It also highlighted existing case studies which referenced workplace design.

BHAW were able to provide a number of contacts with whom HSL spoke.

Although this exercise was not intended to be a review of the academic literature, a cursory search was made of some relevant databases (referencing ergonomics journals and psychology journals for example) to understand some of the background to workplace or 'environmental' design in relation to work-related violence. However, there did not appear to be a great many papers relevant to a UK context.

The exercise continued using a 'snowball' approach, with each contact, website, or document often pointing to other relevant contacts, websites or sources of information. The information was primarily collected via telephone calls made by the author and also information published on the Internet. The author also had a face-to-face meeting with one contact, and made two visits to see how the design of a building had been modified to control work-related violence.

The mapping exercise concentrated on information from the UK. HSE publications were not reviewed.

1.4 WORKPLACE DESIGN

Workplace design was interpreted by the author as the design of the physical environment in which people work. This was also generally what people contacted during the course of this exercise understood by the term too, although there is some debate about whether controls such as the presence of security guards is an aspect of workplace design. However, many sources of information were keen to emphasise that workplace design is only one aspect of effectively controlling the risk of work-related violence, with controls such as training, job design and work equipment being important. Having said that, it can be argued that workplace design is a fundamental control measure as the risk of violence or crime can be 'designed out' at an early stage (primary prevention), precluding the need for other more reactive methods of control. This is the guiding principle of 'crime prevention through environmental design' (CPTED, pronounced 'septed'), which the police and others concerned with crime prevention utilise.

1.5 FORMAT OF REPORT

The findings are reported in the main body of this report. The annex summarises the sources of information on which the findings are based.

1.6 NOTE

Although HSL has endeavoured to follow up most contacts and explore most industry sectors, it is likely that we have not examined all sources of information, particularly as the mapping exercise was time and resource limited.

The majority of this research was conducted in the autumn of 2004. However, the website references/links have all been checked and are current as of July 2006.

2 RESULTS

2.1 GENERAL COMMENTS

The results of this mapping exercise suggest that there are a number of stakeholders who are already offering advice and guidance on how violence can be reduced by workplace design. Some of this information is already in the form of case studies, and these are detailed in section 2.10 of this report. Other information takes the form of more general design guidelines and associated schemes such as the Secure Stations Scheme. Whilst some of the information can be found in the *health and safety field*, much of relevance can be found in the area of *crime prevention*.

The sources of information are summarised in the annex to this report. All of the written information is publicly available and can be found on the Internet. The majority of information was accessed from government departments (e.g., Department of Health, the Home Office and the Department for Transport), with some useful information being provided by trade associations (e.g., the British Retail Consortium) and some consultancies.

2.1.1 Generic processes for new and refurbished buildings

There are a number of formal systems such as the Building Regulations that owners and designers of new and refurbished buildings must comply with. There is a requirement under Section 17 of the Crime and Disorder Act 1998 for authorities to consult with the police on building design, although they do not have to actually act on the advice of the police. However, recent discussions indicate that an Enabling Act (to supplement the Building Regulations) is making its way through parliament which would mean that ‘secured by design’ principles and products (described in the next paragraph) should be incorporated into building design (for example, requiring doors to have 5 bolt mortise locks).

The ‘Secured by Design’ initiative, run by the police, includes design principles that are relevant to the prevention of violence to employees. The Secured by Design initiative encourages “... *the building industry to adopt crime prevention measures in development design to assist in reducing the opportunity for crime and the fear of crime, creating a safer and more secure environment.*” (Secured by Design Principles, www.securedbydesign.com). New, refurbished and modified building planning applications can be submitted to the local Police Architectural Liaison Officer (ALO) or Crime Prevention Design Advisor who will advise on and assess how well the building uses principles of ‘designing out crime’ to meet the Secured by Design criteria. The criteria, developed by the Association of Chief Police Officers, are fairly generic, although other, specific guidance exists for car parks, hospitals, railway stations, schools and licensed premises. Whilst the author was not aware of any specific case studies on the Secured by Design website, it would seem highly likely that buildings that have met the Secured by Design criteria would be a useful source of good practice case studies.

2.1.2 Overarching initiatives

Whilst not necessarily (and perhaps rightly) concentrating solely on workplace design issues, a number of initiatives to reduce crime and work-related violence are relevant across several sections of industry.

For example, The Scottish Executive has published a report (September 2004) entitled ‘*Protecting Public Service Workers: When the customer isn’t always right*’ which contains a number of recommendations that are to be rolled out over a three-year period in Scotland.

The Home Office has also produced a variety of documents regarding crime prevention that includes some design and security advice. For example, ‘Your Business, Keep Crime out of it’, 2005 (<http://www.crimereduction.gov.uk/business40.htm>), ‘Putting Crime out of Business’, 2006 (<http://www.crimereduction.gov.uk/business37.htm>) and ‘Safer Places’ (Home Office/ODPM, 2004).

There are also schemes such as the Crime and Disorder Reduction Partnerships (CDRPs), where the police, local authorities, health authorities, the probation service, the voluntary sector, local residents and businesses all work together to reduce crime in their locality.

2.2 HEALTH SECTOR

Of all the industry sectors examined in this mapping exercise, the health services sector is perhaps best served with information, initiatives and case studies relating to good practice in workplace design. However, ‘health services’ is a broad term, and it is generally health care provided by hospitals, and especially public facing reception areas, where much of the information on workplace design is available. Other information, detailed in section 2.6 below relating to Local Authority Services, will also be relevant as it refers to the design of reception areas and interview rooms in council provided services.

The following initiatives may be of interest:

2.2.1 Safer Hospitals Project

This project was run along with the Safer Schools project (see 2.3.1), and was run by the Police Scientific Development Branch (Home Office). The Safer Schools and Safer Hospitals projects were funded by the Invest to Save Round 4 Budgeting Scheme (www.isb.gov.uk). The overarching aim of the projects was to reduce crime and the fear of crime.

There were three pilot projects within the Safer Hospitals project – two hospitals and one ambulance trust. The Birmingham Heartlands Hospital Accident & Emergency department was the focus of one of the pilots. Detailed baseline data have been collected, and a number of design and security modifications have been put in place in the pilot organisations.

Detailed information about the Birmingham Heartlands hospital pilot, another hospital case study and an ambulance case study was available on the website of the National Audit Office (NAO) conference ‘A Safer Place to Work’. Some of the measures used in the pilots are summarised below:

- Northern Lincolnshire and Goole Hospitals NHS Trust. Information included access control [fencing], lighting, cameras, shuttering, photos, and statistics on violence.
- Royal Berkshire Ambulance NHS Trust. Information included a discussion of windows in vans, CCTV and alarms, and photos.
- Birmingham Heartlands A&E dept (part of Home Office pilot). Information included detail on methodology, redesign of reception, signage, CCTV, as well as photos and pictures.

The Safer Hospitals and Safer Schools projects have resulted in the development of a toolkit. This is described below.

The Intelligent Space Partnership has worked with the Home Office Scientific Development Branch to develop the Toolkit that is aimed at Crime Reduction in Schools, Hospitals and other public buildings. The Toolkit has been based upon the methodology developed within the Safer Hospitals and Schools Programme and contains easy to follow examples and templates to help identify and address crime issues. This Toolkit has been specifically tailored to meet the needs of both specialists and non-specialist groups involved in hospital and school security.

The Toolkit is a practical guide to help stakeholders understand why crimes and incidents occur in their site or building. It provides information on how to tackle these problems through design or management of premises. The guide provides a step-by-step approach on how to:

1. Gather crime data
2. Identify vulnerabilities by walking the site
3. Model surveillance: identify areas that are overseen or well-used and areas that are hidden from view
4. Assess which risks are most immediate
5. Develop long and short term strategies to address the problems
6. Implement the strategies

This guidance is aimed at primary and secondary schools and hospitals, although many of the techniques and principles will be appropriate to other readers, especially those working in other educational, healthcare facilities or public buildings.

This Toolkit can be found on the Home Office Crime Reduction Website (http://www.crimereduction.gov.uk/toolkits/ssh_index.htm). The diagram below can be used to navigate through each step and this and other pages of the Toolkit can be accessed by looking at the 'Related Links' column on the right of the Toolkit webpages. There is also a detailed series of checklists, reference materials and useful links to support the evaluation of the premises.



2.2.2 Secured by Design – Hospitals

The ‘Secured by Design’ initiative has already been outlined, but there are specific guidelines for hospitals. It is the responsibility of the client (e.g., NHS Board) to instruct their architect to liaise with the ALO or crime prevention design advisor as soon as possible in the design process. If the hospital is suitably designed using ‘crime prevention through environmental design’ criteria, it can display the Secured by Design logo. Design principles specific to hospitals are available through the police (each force has an ALO) and the Secured by Design website (<http://www.securedbydesign.com/guides/index.aspx>). The guidelines include advice on perimeter fencing, lighting, climbing aids, reception areas, walls etc. It is likely that suitable hospitals which have achieved Secured by Design would be suitable case studies.

2.2.3 Other NHS information

The Department of Health website (www.dh.gov.uk) contains a number of useful sources of guidance advising on how workplace design can reduce work-related violence. Relevant parts of the National Task Force¹ on Violence section of the Department of Health website are:

- *Self-audit tool. Guidance on Section 4: Action to take in relation to the environment.* These pages contain detail on different aspects of the environment that can be designed or modified to reduce the likelihood of violence to staff. These include aspects such as public access, waiting rooms and reception areas, decoration, noise, notices and information, CCTV, specific guidance on special residential services etc. The site also links to three guidance documents from councils concentrating primarily on reception rooms and interview rooms. These are detailed in section 2.6 of this report.
- *New primary care premises: Design to support workplace health.* This document, produced by the NHS Health Development Agency in 2001 (which included input from HSE) and now available from the National Institute for Health and Clinical Excellence (<http://www.nice.org.uk/>), contains more broad guidelines for general health and safety issues, but also includes specific information on the personal safety and security of staff. These include aspects of the reception area, interview and consulting room design.
- The report ‘*The impact of the built environment on care within A&E departments*’ published by NHS Estates in 2003, and carried out by Intelligent Space Partnership (<http://www.intelligentspace.com/>) provides detailed analysis of eight existing A&E departments. Whilst the focus of this report is on the quality of care, there is some reference made to design measures to reduce violence towards staff, such as surveillance of waiting areas and ensuring the reception is directly visible from the hospital entrance.

From April 2003, the responsibility for security within the NHS, which includes managing violence and aggression, was passed onto the Counter Fraud and Security Management Service. They provide training, and local security management specialists who liaise with the police.

¹ The National Task Force was set up by the then Secretary of State for Health, Frank Dobson, in 1999. Their terms of reference were to reduce the incidence of violence against workers, produce a National Action Plan, training, targets for the reduction of violence, strategies to reduce violence and undertake development work.

2.2.4 Information from outside the UK

Although HSL have not examined information from sources outside the UK for this mapping exercise, it is worth noting that organisations such as the International Labour Organisation (ILO, www.ilo.org), World Health Organisation (WHO, www.who.int/en) and the European Agency for Safety and Health at Work (<http://uk.osha.eu.int/>) have produced information in factsheets and reports that highlight examples of good workplace design. For example, in a document by the ILO and WHO entitled '*Framework guidelines for addressing workplace violence in the health sector*', there is a section describing environmental interventions which includes advice to reduce levels of noise to avoid irritation of workers, patients and visitors, use of relaxing and attractive colours, provision of comfortable seating in waiting areas and use of furniture without sharp edges or corners.

2.3 EDUCATION SECTOR

The information available for the education sector focuses on school security. Most guidance concerns reducing crime in schools (e.g., arson, trespass, anti-social behaviour), but can be relevant to the safety of school staff. Some of the information available is listed below.

2.3.1 Safer Schools Project

This is the 'sister' project to the Safer Hospitals Project summarised above. Two schools were involved, a secondary school and a primary school. As described in section 2.2.1, the outcome of this project has been the development of a Toolkit for evaluating stakeholder premises and tackling crimes and incidents through design or management of premises.

2.3.2 Secured by Design – Schools

The general principles of Secured by Design are described above.

The information on schools is available on the website (<http://www.securedbydesign.com/guides/index.aspx>) and includes a guidance document for school campuses. The assessment guidance includes principles that can be applied to the external environment such as control of access to school perimeter, avoidance of isolated or remote buildings, use of robust defensive planting of outdoor areas, parking, lighting and landscaping, and also the internal environment such as reception area design, office security and toilets. The document also includes an application checklist. As with the Secured by Design – Hospitals initiative, this schools initiative could provide a useful source of case study material.

2.3.3 Other documentation

The DfEE (now called DfES, <http://www.dfes.gov.uk/>) has produced a booklet entitled 'Improving Security in Schools' which provides detailed guidance on school security. Again, although the guidance focuses on security of school premises it is relevant to the personal safety of staff. There is also a dedicated website <http://www.dfes.gov.uk/schoolsecurity/wgsshome.shtml>, which includes various guidance documents on school security. These may be useful sources of case study material for schools.

2.4 RETAIL SECTOR

There is considerable information on workplace design relating to retail premises, with organisations such as the British Retail Consortium and Usdaw (the Union of Shop, Distributive and Allied Workers) Freedom From Fear campaign bringing the issue into the spotlight. In

general, the information does tend to focus on the personal safety of shop workers, but there is also information on general crime prevention for retail outlets (e.g., prevention of shoplifting), often termed 'loss prevention'. There are also a number of relevant case studies that can be found in other publications. These are listed below, along with some of the main sources of information.

2.4.1 Usdaw Freedom From Fear Campaign

The Freedom From Fear campaign pages on the Usdaw website (http://www.usdaw.org.uk/campaigns/freedom_from_fear/) contain information about violence in general. Particularly relevant to the issue of workplace design is the Risk Assessment checklist (http://www.usdaw.org.uk/getactive/resource_library/1060846769_22005.html). This describes the risk assessment process and asks the assessor to check for a number of physical security measures. These include use of high counters for off-licence sales/cigarette kiosks, siting the cash drawer in a checkout away from customer reach, use of plastic covers over the cash drawer, use of CCTV and ensuring that posters and displays do not cover shop front windows.

2.4.2 British Retail Consortium

The British Retail Consortium (BRC, <http://www.brc.org.uk/>) has produced Annual Retail Crime Surveys, e.g. the 10th Annual Retail Crime Survey 2002 and most recently the 12th Retail Crime Survey for 2004-2005. They note that violence to shop staff is often connected with attempting to detain customer thieves, robbery, disputes over goods/queues, and drug use by customers. The Surveys include a number of case studies, although most do not focus on workplace design. Discussions with the BRC suggest that it is the smaller, independent retailers who struggle to implement workplace design crime reduction measures compared to the large multiples. It was also noted that there is more and more partnership working between retailers, local authorities, and local police, working together to tackle crime. Examples of this include The Dover Partnership Against Crime, described in the 10th Annual Survey, and ShopWatch, described in the 12th Annual Survey. The BRC may be able to help identify good practice case studies.

2.4.3 £15 million Home Office Scheme

This scheme focuses on small retailers in deprived areas, and provides grants for physical crime prevention improvements. Again, this could be a potentially useful source of case studies.

2.4.4 The Safer Business Award

The BRC sponsor The Safer Business Award (as reported on the Action Against Business Crime website (<http://www.brc.org.uk/aabc/index.htm>)) which recognises standards of management and operation by retail crime partnerships. In a similar vein to the Secure Stations Award, there are criteria that partnerships need to meet to achieve the award, which can then be displayed in the shopping area. It is likely that workplace design forms part of the criteria for the award.

2.4.5 The Association of Convenience Stores

The Association of Convenience Stores (ACS, <http://www.thelocalshop.com/>) has received a proportion of the £15 million Home Office grant and has run seminars that provide training to local retailers. They have also produced a report, '*Retail Security: Don't Discount it!*', a summary of which is available on the internet, which provides guidance on aspects of security

including workplace design (<http://www.crimereduction.gov.uk/business36.htm>). For example, it details measures to ensure premises security such as making sure walls and bushes outside do not provide cover for assailants, use of CCTV and use of touch pad key locks.

2.4.6 Other sources of case studies

There are also a couple of publications that detail some of the workplace design measures used in supermarkets such as Sainsbury and Tesco. These include measures such as, for example, the use of good lighting, low shelving, and car park security. These are detailed in section 2.10 of this report.

The report entitled '*Off the shelf: Design and Retail Crime*' contains a number of case studies detailing designing out crime. Whilst the focus of these tends to be on 'crime' rather than violence against staff, they provide a number of useful real life examples of retail design. The report also includes useful background about the advice that retailers had received about store design, concluding that little advice is available to store owners, particularly the smaller, independent retailers, about store design of any kind, and rarely about security and crime prevention (although it was noted that some trade associations do provide some). Of particular interest was the fact that none of the 14 retailers interviewed in Sheffield had come across any violence prevention information from HSE.

2.5 TRANSPORT

It appears that in recent years there has been an increase in the amount of information available to the transport sector on measures to prevent and manage violence to staff. Elements of this advice refer to workplace design. Information is available for bus and coach crews, bus stations, and rail staff. The sources of information considered by this mapping exercise are summarised below.

2.5.1 Bus and coach crews and stations

The guidance '*Protecting Bus and Coach Crews: A practical guide for bus and coach operators and staff*' was issued in December 2003 by the Department for Transport. It provides guidance on reducing the risk of violence, anti-social behaviour and criminal damage on buses, coaches, bus stops and bus and coach stations. Amongst other points, the guidance stresses that '*designers and architects should aim to 'design out' the risk of violence and vandalism*'. There is a lot of information on solutions to violence and aggression, including design of bus and coach cabs. There is also a section entitled '*Notes for designers, architects and planners*', which includes tips such as the use of CCTV, help points, lighting and siting of bus stops.

A large document commissioned by the Department for Transport, Environment and the Regions (as it was then known) details how 16 case studies of different organisations have worked to improve personal security in the bus transport industry ('*Get on Board: An agenda for improving personal security – Case studies*'). The most relevant to the mapping exercise were the case studies on the following bus stations:

- Birkenhead bus station in Merseyside
- Park Lane bus station in Sunderland
- Canning Town bus station in East London
- St Paul's bus station in the West Midlands.

Workplace design aspects to improve safety included CCTV, clean and tidy stations, natural sight lines, use of music, and absence of alcoves or ‘nooks and crannies’.

A further guidance note produced by the Department for Transport, and available on their website (www.dft.gov.uk) outlines the key principles for the planning and design of infrastructure and vehicles (*‘Personal security on public transport: guidelines for operators’*), and includes measures to enhance formal surveillance such as mirrors and use of shorter vehicles, open fencing, lighting and use of art in bus stations.

HSE colleagues have been looking at bus companies and their measures to control violence. Workplace design measures include the use of CCTV and deterrent posters and protective screens for drivers. Screens have been found to have ‘pros and cons’. These issues have been discussed in more detail in the lone working case study focusing on bus drivers that HSL produced for HSE (available on the HSE website violence pages, <http://www.hse.gov.uk/violence/experience.htm>). There are also other design related considerations in other job areas within all the case studies on the HSE violence webpages.

2.5.2 Train crews and stations

Guidance for train crews on personal safety is available from the Railway Safety Standards Board (RSSB). The research report *‘Public Behaviour – Reducing assaults on railway staff’* (Railway Safety Research Programme, produced by Risk Solutions, 2002) details the measures used within the railway and other industries. Interestingly, many of the measures do not concern environmental design, however, some mention is made of adequately designed waiting areas, use of CCTV and provision of information to keep passengers informed.

Information from HSE inspections of train companies have also highlighted the use of deterrent/warning posters, CCTV, suitably positioned information screens, automatic ticket gates and the presence of British Transport Police or railway staff.

The author spoke with a representative from the Building Research Establishment, who described some work they had done in looking at the design of a London railway station. Whilst not reported as a publicly available case study, there may be some scope for finding case studies from this source, and other consultancies. The Crime Risk Management Unit at the Building Research Establishment does CPTED surveys of railway, bus and tram stations amongst other things.

2.5.2.1 Secured by design – safe stations scheme

Similar to the ‘Secured by Design – Schools’, and ‘Secured by Design – Hospitals’, is the Secure Stations scheme. This scheme is run by the British Transport Police. It was estimated that around 15% of the 2,000+ stations in the UK are secure, with a large proportion of the London Underground stations meeting the criteria. Owners of stations will liaise with local Architectural Liaison Officers and crime prevention officers on re-designing stations to improve security.

The scheme encompasses the safety and security of both staff and station users. Examples of design modifications include the use of clear glass to increase surveillance and feelings of safety, the use of mirrors, reduction of ‘nooks and crannies’ in building design, and wide desks for ticket sales or customer service areas. It is likely that examples of good practice from the large train operating companies will be available.

2.6 LOCAL AUTHORITY SERVICES

The services that Local Authorities provide are diverse and occur in a number of workplace environments. During this mapping exercise, the author visited one meeting room that had been redesigned to help reduce the risk of violence to staff working within the room and also those using the neighbouring office space. The meeting room is used for child protection conferences – often highly emotional and potentially violent meetings – and originally exited directly into an open plan office. There had been a number of instances where aggressive clients had left the room and ‘stormed’ through the open plan office, being very intimidating and aggressive to staff. Staff in the office also felt uncomfortable as people attending the child protection conferences could see them. As a result of a risk assessment, walls were erected so that aggressive clients could not get access to staff if they were upset and left the room, and the meeting room was redesigned so that staff in the room were able to exit quickly and could be seen by colleagues. Other violence prevention measures were also put in place such as the use of personal alarms.

The Health and Safety representative for the Employers Organisation for Local Government indicated that there were a number of good examples of how local authority workplaces have been designed to reduce the risk of work-related violence, specifically mentioning a visitors’ centre in a country park that he was aware of. He suggested that there were likely to be a number of examples of good practice with regard to workplace design within local authority buildings.

Although found on the Department of Health website (on the National Task Force on Violence, Self Audit Tool webpages), there are three guidance documents available to download from different councils offering advice and guidelines on the safe design of reception areas and interview rooms. One document is anonymous, one is from Cambridgeshire County Council and one from Gateshead Metropolitan Borough Council. Guidance includes aspects such as the use of wide reception desks, and using heavy furniture and décor that cannot be easily used as a weapon.

2.7 LEISURE INDUSTRY - PUBS

The primary source of information about workplace design that was referenced during this mapping exercise was the guide produced by the British Beer and Pub Association (BBPA) and the Metropolitan Police Service (available to download from the BBPA website at www.beerandpub.com). The document, entitled ‘*Licensed Property: Security in Design*’, provides guidance on a range of design factors such as entrances, toilets, lighting, bar and seating areas, outside areas and CCTV.

2.7.1 Secured by Design – Licensed Premises

The general principles of Secured by Design are described above.

The information on licensed premises is available on the website (<http://www.securedbydesign.com/guides/index.aspx>) and includes a guidance document for licensed premises (including public houses, bars, restaurants, clubs and music venues). It is the responsibility of the client to instruct their architect or developer to liaise with the ALO or crime prevention design advisor as soon as possible in the design process. The assessment guidance includes principles that can be applied to the external environment such as using simple building sight lines, secure, clean and tidy external areas, parking, door and window standards, security lighting, etc and also the internal environment such as lighting, number and siting of entrances and exits, bar area and internal layout design, cash office security and toilets.

2.8 BANKS, BUILDING SOCIETIES AND ASSOCIATED SERVICES

As part of this exercise, the author was invited to visit a building society to see a redesigned building society interior. Many of the general principles of CPTED were in evidence, for example, the room was well lit, friendly and welcoming, there was CCTV and signs indicating the security measures present in the building and cash handling procedures, and the cashier desks were designed such that it was difficult to see and reach the money. Discussions indicated that the banks and building societies sector do share good practice with regard to crime prevention, and schemes such as 'Raid-control' are being taken up (<http://www.raid-control.org/>). Raid-control is a partnership initiative between the Police, the trade association for the security industry (British Security Industry Association) and representatives from the insurance and retail sectors, and other trade associations. It requires premises to achieve standards in robbery awareness training, cash minimisation, time delay, image capture and indelible note staining.

The Building Societies Association have produced a circular accompanied by guidelines, checklists and forms, which provides information on how safety and security can be designed into premises. They provide a list of typical risk control options for, amongst other aspects, the physical environment.

Anecdotal evidence suggests that cash handling and security companies are on the receiving end of violence at work in the banking and retail sector. Discussions with stakeholders in this sector highlight that workplace design relevant to this mobile workforce is not straightforward. When a new bank or retail building is designed, provision can be made to ensure that security company vehicles can drive directly up to the building and 'dock', meaning that cash can be transferred out of public sight. There are a number of good practice examples of this kind of workplace design. However, many of the buildings visited by security companies are older, and this kind of workplace design is not possible. The GMB union is concerned with the issue of violence to security staff and has produced information that highlights some environmental design control measures relevant to workplace violence (for example, *GMB Guide to Tackling Violence at Work*).

2.9 OTHER

There are a number of other publications that contain information relevant to workplace design and how it can reduce work-related violence across a number of sectors. Those sources containing case studies are included in the table below. Of particular interest may be publications by The Design Council. For example, the booklet '*Design against crime*' details, in a visually engaging way using photographs and colours, a number of case studies demonstrating how design has tackled crime. Of particular interest to violence against staff are the following case studies:

- Parksafe (a safe car park)
- The office of the Big Issue
- A pub in Manchester
- A school

The booklet also notes general principles such as how visually engaging environments are often less vulnerable to crime.

2.10 EXISTING CASE STUDIES

The following case studies vary with regard to their focus and detail on workplace design.

NB: For a full list of references and sources of information for the following case studies please refer to annex 4.1.

Source	Sector	Description
NAO – A safer place to work (2003)	NHS	Conference presentations available on internet include: <ul style="list-style-type: none"> Northern Lincolnshire and Goole Hospitals NHS Trust. Includes access control [fencing], lighting, cameras, shuttering, photos, statistics on violence. Royal Berkshire Ambulance NHS Trust. Includes discussion of window in van, CCTV and alarms, includes photos. Birmingham Heartlands A&E dept (part of HO pilot). Includes detail on methodology, redesign of reception, signage, CCTV. Includes photos and pictures.
Department of Health taskforce website	Reception, interview rooms and offices	Guidance from three councils on design of reception areas (Anon, Cambridgeshire County Council and Gateshead MBC).
Making Crime Prevention Pay. Home Office.	Supermarket	Old report, details benefits of CCTV in a Tesco supermarket.
British Retail Consortium 10 th and 12 th Annual Retail Crime Survey	Retail	Some detail on initiatives such as The Dover Partnership Against Crime (details a number of measures, not all of which are ‘design’, and how shops, pubs, clubs, rail and bus stations and ferry operators are working together) and ShopWatch.
ILO – Preventing and responding to violence at work	Retail	Brief case study detailing Safeway stores, mentioning improved lighting and installation of cameras.
Design Against Crime, Design Council	Car park, supermarket, office, pub	Some detail on a number of case studies e.g., Tesco, a school, Big Issue office, a pub in Manchester.
Department for Transport ‘Get on Board’ report	Buses and bus stations	Contains a number of detailed case studies. The most relevant being Birkenhead bus station, Park Lane bus station, Canning town bus station, and St Paul’s bus station.
Off the Shelf – Design and retail Crime. The Design Council.	Retail	Contains a number of case studies on various retail premises e.g., prevention of ‘ram raiding’ in an out of town complex, location of tills.

3 CONCLUSIONS AND RECOMMENDATIONS

The results of this mapping exercise suggest that there are already many sources of information, guidance, and case studies available to employers on how the design of the workplace can help to reduce the incidence of work-related violence. If employers know where to look, they should be able to access a number of useful documents, particularly if they direct their search towards crime prevention advice rather than focusing purely on information found in the occupational health and safety arena.

Case studies already exist on workplace violence and workplace design – the table in section 2.10 of this report outlines those identified during this exercise – but they do vary in the amount of detail provided on the design aspects. Also, it is not always clear how well the workplace design measures have been evaluated. Future case studies should endeavour to demonstrate the efficacy of their measures. Although this can be difficult, as HSL’s experience of the lone workers project demonstrated (<http://www.hse.gov.uk/violence/loneworkers.htm>), it is not impossible. In addition, a good understanding of the theoretical background to workplace design and CPTED will ensure case studies have a sound theoretical underpinning.

The results of this exercise suggest there is the potential to identify a number of other good practice examples by approaching specific organisations.

There is a strong argument for directing resources towards those occupations for which there is a higher risk of assaults or threats at work. According to the 2002/2003 British Crime Survey, the sectors most at risk from violence are:

Protective Service Occupations (e.g., police, fire)
Health and social welfare associate professionals (e.g., nurses, paramedics, housing officials)
Transport drivers (e.g., bus, coach and taxi drivers)
Managers and proprietors in agriculture and services (e.g., hotel, restaurant and pub managers)
Health professionals (e.g., doctors, dentists)
Caring personal service occupations (e.g., care and nursing assistants)
Leisure and other personal service occupations (e.g., travel agents, pest control, rail travel assistants)
Teaching and research professionals
Elementary administration and service occupations (e.g., bar staff, porters, postmen/women)
Corporate managers (i.e., managers in specific services)
Sales occupations
Business and public service professionals (e.g., librarians, social workers).

Workplace design measures may be less relevant for some of these occupations as there is no permanent physical environment that can be ‘designed’. For example, fire crews, care assistants who work in other people’s homes, pest control officers, porters, postmen/women, some sales jobs and social workers interact with their clients, customers or service users in either a public or private arena, rather than at an employer’s premises. The lone worker case studies produced by HSL for HSE go some way to addressing the violence risks faced by these occupations.

Of the other high-risk occupations, there is at least some useful information already available that employers can use to help design safer workplaces in most, if not all of these sectors. Public sector organisations, such as health care (particularly hospitals), schools, and transport are well served with information. Employers in the retail sector can also access a good amount of

relevant information, as can those in the hospitality sector (specifically pubs) and banks and building societies, although this is more limited.

Of course, it is not just the *amount* of information available that is important, but also the *quality* of the information. In general, the information available appears to be of a good quality.

If there is not a specific case study currently available addressing a particular occupation e.g., a case study specifically on a library environment, it may be that many of the good practices identified for other occupations may be relevant. For example, the principles of CPTED such as good natural surveillance and avoiding ‘nooks and crannies’ that are applied to train stations, and principles of good A&E reception area design (e.g., wide desks, immovable furniture) could be applicable to libraries. Of course, guidance highlighting these commonalities should also stress the need for risk assessments to be conducted on specific premises to ensure that risks particular to that environment are picked up on.

Bearing this in mind, it may be helpful to categorise case studies not according to sector, but according to the type of work environment. So, instead of specific case studies on building societies, and travel agents, case studies could focus on workplaces with, for example:

- public facing reception areas,
- waiting rooms,
- small interview rooms,
- large buildings where larger numbers of people pass through,
- retail environments,
- workplaces serving alcohol.

It is also worth noting the impact that the Disability Discrimination Act may have on workplace design issues. This is something that has been mentioned on a number of occasions during this mapping exercise. During the visit to a council office, it was noted that there needed to be a compromise between the needs of people with disabilities and the health and safety of staff. All reception desks were wide, but, whereas for safety reasons the desks may have been high, with staff behind on a platform to prevent aggressive clients reaching across to staff, the DDA required the desks to be low enough to be accessed by people using wheelchairs. All desks were therefore wide, but low. It was noted by another contact that train-operating companies are working around this issue in ticket offices by providing one low desk for wheelchair access, with the remaining desks being at a higher level.

It would also be prudent to look wider than the UK to obtain guidance and good practice on this topic. Whilst there may be some cultural differences, it is likely that many of the workplace design good practices would be highly relevant regardless of the country of origin.

3.1 RECOMMENDATIONS

HSE may wish to consider the following recommendations for taking this work forward:

Recommendation 1: Pull together existing information

Guidance and case studies are already available for a variety of workplaces and industry sectors; however, they originate from a variety of sources, some of which are easier to access than others. For this reason, rather than commissioning a new set of case studies, all of the existing case studies and guidance documents could be combined into one place and in a similar format, for example on a dedicated internet website.

Recommendation 2: Try and ensure all guidance and case studies are good quality

As there is a large body of knowledge on workplace design principles, for example on Crime Prevention Through Environmental Design (CPTED), these should be referred to in any guidance and case studies produced. It would also be useful if workplace design measures were evaluated to demonstrate their effectiveness. This is often difficult to find in the 'real world' but would lead to case studies that are of high quality.

Recommendation 3: If there appear to be gaps, fill them

If, after drawing together the information as detailed in recommendations 1 and 2, there appears to be a lack of quality case studies or information in a specific area, commission case studies in these areas.

Recommendation 4: Consider targeting types of workplace rather than sectors

Case studies and information should be grouped in terms of the physical work environment as well as for sectors, as many of the principles of good design are applicable across a variety of industry sectors.

Recommendation 5: Draw on and develop links between H&S and crime prevention

The fields of occupational health and safety and crime prevention have a great deal to offer on this subject. There is a large network of people and organisations working in the field of CPTED, and it would be prudent to maintain a dialogue on how best to work together to address the associated problems of violence to staff and crime more generally.

Recommendation 6: Consider drawing on information from outside the UK

This mapping exercise has only looked at information available from UK sources, and it is likely that much useful information exists outside the UK. This could be incorporated into any general guidance along with any illustrative case studies based on UK experience.

Recommendation 7: Consider the format and location of information

It would be useful to carefully consider where the target audience will look for advice on workplace design. Ensure that relevant organisations are aware of the case studies and that relevant websites are linked up.

4 ANNEX: REFERENCES / SOURCES OF INFORMATION

4.1 REFERENCES / MAIN SOURCES OF INFORMATION

The following table summarises the main references and sources of information used in the mapping exercise.

Sector	Information Source/Reference	Format
Primary care premises	Health Development Agency (2001). New Primary Care Premises: Design to support workplace health. ISBN 1-842 79-026-9. http://www.nice.org.uk/page.aspx?o=502125	NHS Health Development Agency report NICE Website (July 2006)
Health care – A&E departments	NHS Estates (2003). The impact of the built environment on care within A&E departments. Research carried out by Intelligent Space Partnership. http://www.intelligentspace.com/projects/09991.htm	Report Website (July 2006)
Health care	NAO (2003). ‘A safer place to work’. Various presentations from the conference. November 2003. http://www.nao.org.uk/conferences/a_safer_place_to_work/saferprog.htm	Presentations Website (July 2006)
Health care	Self-audit tool from the National Task Force on Violence (e.g., reception areas) http://www.dh.gov.uk/PolicyAndGuidance/HumanResourcesAndTraining/NationalTaskforceOnViolence/SelfAuditTool/fs/en	Report Website (July 2006)
NHS Hospital and ambulance staff	Comptroller and Auditor General (2003). A Safer Place to Work: Protecting NHS hospital and ambulance staff from violence and aggression. HC 527 Session 2002-2003. London: The Stationary Office. http://www.nao.org.uk/publications/nao_reports/02-03/0203527.pdf	Report Website (July 2006)
Social care staff	National Task Force On Violence Against Social Care Staff (2000). http://www.dh.gov.uk/PublicationsAndStatistics/Publications/PublicationsPolicyAndGuidance/PublicationsPolicyAndGuidanceArticle/fs/en?CONTENT_ID=4010625&chk=zb3loB	Department of Health website (July 2006)

Health care	ILO, ICN, WHO, PSI (2002). 'Framework guidelines for addressing workplace violence in the health sector'. Joint Programme. Geneva. http://www.who.int/violence_injury_prevention/injury/work9/en/	ILO and WHO report Website (July 2006)
Schools and Hospitals (inc Ambulance Trust)	Safer Schools and Safer Hospitals Project. http://www.crimereduction.gov.uk/toolkits/ssh_index.htm	Personal communication Information on website (July 2006)
General principles, but specifically car parks, train stations, hospitals, schools and licensed premises.	Secured By Design, UK police http://www.securedbydesign.com/guides/index.aspx Also, Secure Stations Scheme http://www.dft.gov.uk/stellent/groups/dft_mobility/documents/divisionhomepage/036930.hcsp	Websites (July 2006) Personal communication
Various, particularly train station, underground station, hospitals, job centres.	Building Research Establishment http://www.bre.co.uk/	Website (July 2006) Leaflets Personal communication
Various, particularly schools, healthcare and complex buildings	Intelligent Space (a consultancy specialising in pedestrian movement and space use). http://www.intelligentspace.com/index.html	Website (July 2006)
Education	DfEE (1997). School Security – dealing with troublemakers. http://www.teachernet.gov.uk/docbank/index.cfm?id=9232	Resource pack Website (July 2006)
Education	DfEE (1996). Managing School Facilities Guide 4. Improving Security in Schools. ISBN 0 11 270916 8. http://publications.teachernet.gov.uk/default.aspx?PageFunction=productdetails&PageMode=publications&ProductId=0+11+2709168&	Booklet Website (July 2006)
Retail	Freedom from Fear Campaign, USDAW http://www.usdaw.org.uk/campaigns/freedom_from_fear/	Various sources of information Website (July 2006)

Pubs	British Beer and Pub Association and Metropolitan Police Service (2003). Licensed Property: Security in Design. http://www.beerandpub.com/content.asp?id_Content=985&id_ContentType=1	Report Website (July 2006)
Retail	British Retail Consortium. (2005). 12 th Retail Crime Survey 2004-2005. The Stationary Office. ISBN 0-11-703504-1. British Retail Consortium. (2003) 10 th Annual Retail Crime Survey 2002. The Stationary Office. ISBN 0-11-703195-X http://www.brc.org.uk/	Website (July 2006) Report Personal communication
Various, particularly retail and pubs	Burrows J (1991). Making Crime Prevention Pay: Initiatives from Business. Crime Prevention Unit Paper No 27, London: Home Office. http://www.homeoffice.gov.uk/rds/prgpdfs/fcpu27.pdf	Report on Home Office Website (July 2006)
Retail	Association of Convenience Stores. Retail Security: Don't discount it! http://www.crimereduction.gov.uk/business36.htm	crimereduction.gov.uk website (July 2006)
Retail	Design Policy Partnership, Sheffield Hallam University and The University of Salford (2001). Off the Shelf: design and retail crime. The Design Council. http://www.shu.ac.uk/schools/cs/cri/adrc/dac/respub.html	Report from website (July 2006)
Retail	The Design Council (2002). Think Thief: A designer's guide to designing out crime. http://www.designcouncil.org.uk/webdav/harmonise?Page/@id=6016&Session/@id=D_dw6dQnKfTtwOJbl4a6PD&Document/@id=6487	Report from Design Council website (July 2006)
Various. Includes detail on bus drivers.	Chappel D and Di Martino V (2000). Violence at work. Second Edition, Geneva: ILO.	Book
Bus and coach staff	Department for Transport (2003). Protecting Bus and Coach Crews. A practical guide for bus and coach operators and staff. http://www.publications.dft.gov.uk/pubdetails.asp?pubid=622&page=1&sortby=date&keyword=protecting%20bus%20and%20coach%20crews&searchtype=	Report Department for Transport website (July 2006)

Buses and bus stations	Get on Board: An agenda for improving personal security – Case studies. http://www.dft.gov.uk/stellent/groups/dft_mobility/documents/page/dft_mobility_503807.hcsp	Report on Department for Transport website (July 2006)
Buses and bus stations	Personal security on public transport: guidelines for operators http://www.dft.gov.uk/stellent/groups/dft_control/documents/contentservertemplate/dft_index.hcst?n=10586&l=2	Report on Department for Transport website (July 2006)
Railway staff	RSSB, Railway Safety Research Programme (2002). Public Behaviour – Reducing Assaults on Railway Staff. Risk Solutions. Report T039. http://www.rssb.co.uk/pdf/reports/research/reducing_assaults_on_railway_staff.pdf	Research report available on RSSB website (July 2006)
Public service workers	Scottish Executive (2004). Protecting Public Service Workers: When the customer isn't always right. ISBN 0 7559 4162 4. http://www.scotland.gov.uk/library5/justice/ppsw.pdf	Report Scottish Executive website (July 2006)
Public service workers	GMB (2004). GMB Guide to Health and Safety for Security Workers. GMB. http://www.gmb.org.uk/Templates/PublicationItems.asp?NodeID=%2089685&PublicationNodeID=90419 GMB (2004). GMB Guide to Tackling Violence at Work. GMB. http://www.gmb.org.uk/Templates/PublicationItems.asp?NodeID=%2089685&PublicationNodeID=90420	Leaflets from Website (July 2006)
Councils	Guidance from three councils on design of reception areas (Anon, Cambridgeshire County Council and Gateshead MBC) http://www.dh.gov.uk/PolicyAndGuidance/HumanResourcesAndTraining/NationalTaskforceOnViolence/SelfAuditTool/SelfAuditToolArticle/fs/en?CONTENT_ID=4073879&chk=fkW0TW	Reports on the department of health website (July 2006)
Various	Fox, B., Polkey, C and Boatman P (2002). Tolley's Managing Violence in the Workplace. LexisNexis Butterworths Tolley. Reed Elsevier (UK) Ltd.	Book

Various	Design Against Crime. The Design Council http://www.design-council.org.uk/webdav/harmonise?Page/@id=6016&Session/@id=D_budnOFr89PeleBfE45Vg&Document/@id=1250	Design Council report website (July 2006)
Various	Rogers KA and Chappell D (2003). Preventing and responding to violence at work. Geneva: ILO.	Book
Office environments	Employment Service, Occupational Psychology Division (2000). Keeping Job Centres Safe. July.	Resource pack
Banks and building Societies	Building Societies Association. (2003). Workplace violence in banks and building societies – Guidelines, checklists and forms.	Circular, guidelines, checklists and forms, Personal communication

4.2 OTHER RELEVANT WEBSITES

- Designing Out Crime Association (www.doca.org.uk)
- www.designagainstcrime.org
- www.crimereduction.gov.uk