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Briefing Paper

Reducing Crime Hotspots in City Centres

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This Briefing Paper has been produced by the Building Research Establishment (BRE) on behalf of the BRE Trust as part of the Future Cities Research Programme. It aims to help planners, designers, developers and town centre managers understand the aspects of the built environment that contribute to crime and the fear of crime and best practice examples of solutions to the problems.

BRE Trust

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Executive summary

The built environment plays an important role in crime and disorder. The situational crime prevention approach aims to design and manage the built environment to make crime more difficult and less rewarding. It is not only concerned with reducing physical opportunities to commit crime, but also about influencing perceptions about an area and reassuring people that the area is safe.

The focus of this research was the design of the built environment in town and city centres, specifically, the position, orientation, design and appearance of buildings and other features. Areas of particular interest included parks and green spaces, pedestrian underpasses, alleyways, recessed doors and access routes. Some crimes, such as violent offences, anti-social behaviour and criminal damage, were found to be more relevant than others when examining the built environment in town and city centres.

This research was produced for the BRE Trust as part of the Future Cities Programme. The BRE Trust Future Cities research programme was carried out between 2012 and 2015 with over 70 public and private partners. The collective value of these projects is over £30m. The research was carried out with involvement from 16 universities and 14 cities in the UK, European Union and Brazil. The thematic areas included health and wellbeing, infrastructure and energy; with projects often touching on more than one theme.

The overall objectives were to identify environmental cues and features in the built environment that contribute to an increase in certain types of crime in particular areas, and highlight the specific cues and features that should be avoided in future cities. Initial phases reviewed the existing understanding of how the built environment contributes to crime and disorder in towns and cities. It highlighted the theories that underlie current thinking and looked at how existing understanding has

been applied to planning and crime prevention. The findings were used to develop useful indicators of a healthy city. Crime and fear of crime can affect the health of inhabitants of cities in various ways. For example, if people fear being a victim of crime in parks and green spaces, they may be deterred from using them, and this reduction in exercise could have an impact on their health. The indicators should enable an assessment method that will help to measure crime in cities and provide a valid methodology for comparisons between cities.

This briefing paper summarises the methodologies and the key findings from the research. It aims to help planners, designers, developers and town centre managers understand the aspects of the built environment that contribute to crime and the fear of crime and best practice examples of solutions to the problems.

Research programme

This project was set up to identify environmental cues and features in the built environment that contribute to an increase in certain types of crime in particular areas. The eventual goal would be to highlight the specific cues and features that should be avoided in the development of future cities. The results were also intended to enable an assessment method that would measure crime in cities and provide a valid methodology for comparisons between cities. The research was funded by the BRE Trust as part of their Future Cities Programme.

Background

This research is based on situational crime prevention theories. Such theories aim to reduce opportunities for crime by designing and managing the built environment to make crime more difficult and less rewarding. They suggest that behaviour is the product of an interaction between the individual and the situation; crime reduction, therefore, involves the management, design or manipulation of the immediate environment in a systematic way to make crime more difficult, involve more risks, or be less rewarding (Clarke, 1997). Crime Prevention Through Environmental Design (CPTED) is an approach that we used in this project. It is based on situational crime prevention principles, and looks at why a particular crime happens in a particular place at a particular time. The approach utilises many situational crime prevention theories, the two most relevant for this research are 'Rational Choice' and 'Broken Window' theories.

Rational Choice Theory focuses on decision-making by offenders and tries to understand why they make choices within specific situations. It proposes that choices are heavily influenced by three key situational factors, all of which can increase the likelihood of an offence occurring (Felson and Clarke, 1998):

– **Anonymity**: whether offenders feel they can blend into the background and become anonymous; anonymity is nearly always higher in public spaces

– **Freedom from surveillance**: where offenders cannot be seen or are not likely to be noticed. If people can naturally observe areas and recognise outsiders, offenders are more likely to be noticed and reported. Freedom from surveillance is also more likely to occur in public spaces

– **Alternative escape routes**: after committing a crime and wanting to escape, offenders feel safer if there are multiple escape routes and they can leave an area on a different route to the one they came in on.
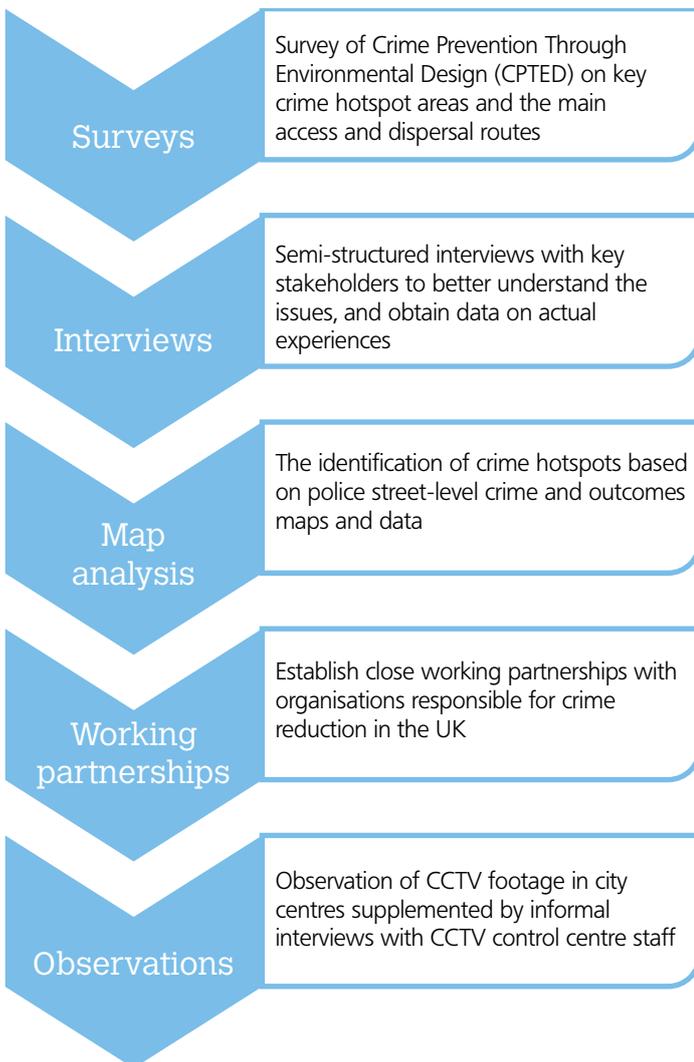
From this we can suggest that an offender's choice over whether to commit crime in a particular place is determined by how easy it is to enter and leave a place, the likelihood of being seen and, if they are seen, whether anyone will act. This means that measures to aid the prevention of crime, could include designing the built environment to increase surveillance and access control and to have a clear definition between public and private space.

Broken Windows Theory (Wilson and Kelling, 1982) focusses on how perceptions can affect levels of crime and fear of crime. For example, if a window in a building is broken, and then left unrepaired, it will not be long before other windows in the building are broken. The unrepaired window is a sign that no one cares and so it leads to more window-breaking behaviours. Broken windows, and other signs of neglect, are often called poor environmental cues and can also include graffiti, litter, rubbish and poorly maintained street furniture. Where an area has a lot of graffiti, it is sending out a message that graffiti is tolerated in this area and, as such, the implied message could be that, if graffiti is tolerated, then so is other anti-social behaviour. This could lead to a perception of danger by law-abiding people who then avoid the area. This could result in a greater influence by criminal elements, which in turn leads to more fear, in a downward cycle of avoidance. Law-abiding people who cannot avoid the area, for example those on their way to work or home, may take less and less interest in what is going on and just try to pass through the area as quickly as possible. This again reduces the level of surveillance and capable guardianship and helps to fuel the downward spiral.

This research also utilizes the Home Office publication 'Safer Places, the Planning System and Crime Prevention' (ODPM/Home Office, 2004), which is based on the situational crime prevention approach. This publication identifies seven attributes of safer places, including access and movement, surveillance, physical protection and management and maintenance.

Methodology

Results

The main methods used for this research were:

Surveys
Survey of Crime Prevention Through Environmental Design (CPTED) on key crime hotspot areas and the main access and dispersal routes

Interviews
Semi-structured interviews with key stakeholders to better understand the issues, and obtain data on actual experiences

Map analysis
The identification of crime hotspots based on police street-level crime and outcomes maps and data

Working partnerships
Establish close working partnerships with organisations responsible for crime reduction in the UK

Observations
Observation of CCTV footage in city centres supplemented by informal interviews with CCTV control centre staff
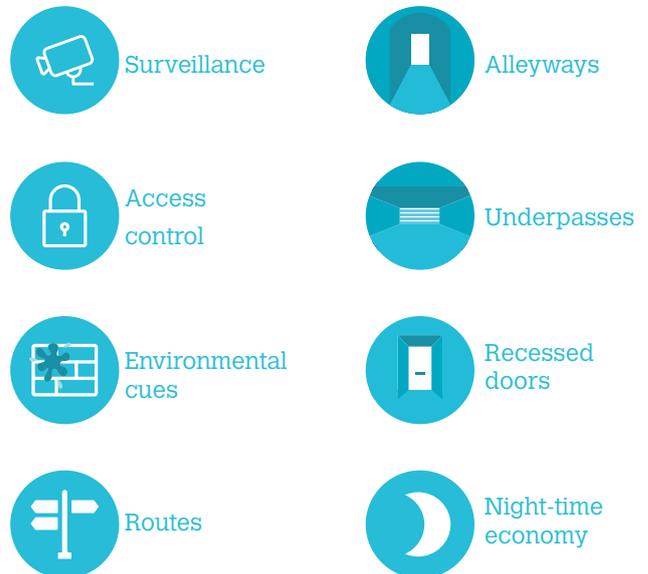
Interviewees included key stakeholders, such as local Police Crime Prevention Design Advisors and members of the local Community Safety Teams within local authorities. The aim of the CPTED survey was to identify features in the built environment that may influence crime and fear of crime. The survey also examined the kinds of improvements that would reduce crime levels and features that could be modified to reduce these problems.

Partners included the Home Office, the Centre for Applied Science and Technology at the Home Office, the Association of Chief Police Officers (ACPO) and the Association of Town Centre Managers (ATCM).

This research found strong evidence that supports the importance of the following features and issues in the built environment in city centres. These are closely aligned to the Government's seven attributes of safer places and are grounded in the situational crime prevention approach.

Surveillance

Alleyways

Access control

Underpasses

Environmental cues

Recessed doors

Routes

Night-time economy

Surveillance is key

Surveillance problems

People can feel less safe in isolated areas where they cannot be seen by other people, particularly if they think that if they need help there will be no one to see or hear them. People may avoid such areas and so the areas are perceived to be even more unsafe. Sight lines (lines of vision) are particularly important. If people cannot see ahead along a route due to blind corners, bushes, pillars, walls, recessed doors, etc., which could shield an attacker, then they are more likely to feel unsafe.

Photographs 1 and 2 illustrate the importance of surveillance and its effect on crime. Photograph 1 shows an area in a park that was located down steps away from the main path. This area had no formal surveillance (CCTV cameras) and little natural surveillance, i.e. it was not overlooked by buildings and there are no people or cars passing by. This was identified as a crime hot spot by local crime reduction experts, and is noted as being a place where robberies and sexual activity occur at night. In contrast, Photograph 2 shows a park with high natural surveillance from the windows of surrounding buildings and roads and parking places that surround the park. The paths are straight and unobstructed so it is easy to see the end of the route and there are no places for potential offenders to be unseen. Local crime reduction experts reported that very few crimes occurred in this area.

Surveillance solutions

The design of spaces should allow for clear sight lines and avoid isolated or hidden spaces (National Crime Prevention Council, 2003). Isolated or concealed routes can be made safer by increasing activities to attract more people. The ability to see and be seen should also deter potential offenders from committing crime and vandalism. Feelings of isolation can be reduced by the provision of natural surveillance from surrounding residential or commercial buildings and increasing activities in the area. Active frontages should be encouraged with windows overlooking public space.

It is important that trees and bushes are kept trimmed so that people can see and be seen on both sides. Photograph 3 shows an example of a low, well-cut hedge that allows natural surveillance into and out of a car park. Photograph 4 shows an example of an area in a city centre that has good natural surveillance – it is possible for people to see who is ahead and be seen by others.

Formal surveillance in public spaces can also reduce levels of anonymity and reduce the opportunity to commit crime. Formal surveillance can take many forms, including police officers, street wardens and CCTV. It is often not practical to have the areas patrolled by the police at all times. CCTV is one form of surveillance that is used extensively in town and city centres. For CCTV to be effective it needs active monitoring, combined with other measures, such as good lighting, and supported by fast response rates (Vigne, Lowry, Markman and Dwyer, 2011).

Photograph 1: An area with little surveillance

Photograph 2: A park with high levels of natural surveillance

Photograph 3: Well-trimmed hedge

Photograph 4: A wide, open, space with good levels of natural surveillance

Controlling access

Controlling access problems

Access control is an important issue for some areas in city centres. Closely aligned to this is that there should be clear differentiation and separation between private, public and semi-public space. Well-designed and clearly defined public space can increase natural surveillance and reduce anonymity. Photograph 5 shows a disused car park that was close to the main route into a city centre. It was difficult to establish who owned the space or who was responsible for it. Potential offenders could use the space as they wished with little fear of censure. The car park had a great deal of rubbish and litter in and around it and appeared to be being used as a drug den.

Service areas were found to be particularly problematic in many city centres. They were often tucked away out of sight, with no access control and no clear distinction between public and private space. This means that people feel they can walk through or loiter in these areas and they can provide a potential hiding place for offenders to lurk unseen. Typical problems in service areas included drug taking, prostitution, street drinking, urination and other anti-social behaviour such as graffiti. Photograph 6 shows a corner of one service area that was used by people drinking alcohol in a public place.

Access solutions

Unnecessary and ambiguous space should be removed, remodelled or re-used. It can be difficult for authorities to find out who is responsible for neglected or abandoned spaces but these are often the areas that can detract from the overall appearance of a city centre. Where appropriate, service areas could have restricted access and a clear delineation between public and private space.

However, when designing out crime in a city centre, it is important to consider that some access control measures can increase fear of crime and are best avoided where possible. Photographs 7 and 8 show two examples of security measures, barred windows and security spikes, that can make city centres look 'fortress-like' and increase fear of crime.

Photograph 7: Barred window

Photograph 5: A drug den seen near the main route into a city centre

Photograph 6: Empty alcohol containers

Photograph 8: Security spikes

The environmental cues blues

Environmental cues problems

Examples of poor environmental cues that are present in town and city centres include graffiti, rubbish and fly-tipping. These cues can lead to fear of crime and lead to a cycle of decline in which people avoid the area and so there are less people to see unlawful behaviour; the area gradually declines as more people avoid it and criminality encroaches more and more. Photographs 9 and 10 are examples of graffiti in city centres. However, it is not only walls that are vulnerable, many solid shutters are defaced with graffiti; photographs 11 and 12 show two examples.

Environmental cue solutions

Policies to remove poor environmental cues need to include a co-ordinated approach to managing city centres. It is important to ensure that there are policies in place to ensure the rapid and regular removal of rubbish, urine and graffiti, and effective maintenance and repair of lighting, street furniture etc. Ideally, all graffiti on shutters should be cleaned off as soon as possible; effective partnership working with owners of premises should ensure that see through shutters are in use wherever possible. In problem areas, formal and informal surveillance should be increased. In addition, derelict and empty buildings should be secured and monitored on a regular basis.

Photograph 9: Examples of graffiti on walls and doors

Photograph 11:Example of shutters defaced with graffiti

Photograph 10: A wall in a city park with high levels of graffiti

Photograph 12: Another example of shutters defaced with graffiti

Routing routine

Routing problems

Routes into and out of a city centre can also be crime hotspots. They are particularly important because they can provide first impressions of a city to visitors. Effective signage can provide feelings of security and confidence.

Photograph 13 shows a route into a city centre from a nearby residential area. It is an over-bridge that is long and narrow. It is not possible to see who is waiting at the other end, and once on the over-bridge it is too late to turn back and avoid a potential offender. The over-bridge is very isolated and suffers from high levels of fear of crime, this discourages people from using it and so leads to more fear of crime and even less use. Local police report that it is used as an escape route for offenders and police cars cannot pursue them over the bridge. Photograph 14 shows a wall located at one end of the over-bridge. The area appeared very quiet and felt isolated. There were many empty alcohol drinks containers in front of the wall and there was a large amount of graffiti. It is obvious that people loiter in this area to drink and engage in anti-social behaviour. This is likely to cause other people to feel uncomfortable and increase fear of crime when passing these groups of people, possible leading to people avoiding the area.

Route solutions

It is important that the main routes into a city centre provide a good first impression of the city. They should be clean and all poor environmental cues such as graffiti, broken windows and damaged street furniture should be removed.

It is preferable to provide primary routes that lead pedestrians in and out of town and city centres; these should have high profile patrols, CCTV and improved lighting to encourage people to use them and to increase feelings of safety. Footpaths should be wide and straight and be overlooked by buildings and activities. Potential hiding places for offenders should be avoided, for example, restricting plant height to a maximum of four feet. The main routes should be well lit to increase surveillance and decrease anonymity and fear of crime. Under-used footpaths, shortcuts and minor access points can be vulnerable to criminal activity and fear of crime and should be avoided wherever possible. It is preferable to reduce permeability; as previously discussed, offenders prefer areas where they feel anonymous and can blend into the background and not be noticed.

People are more likely to have feelings of safety and confidence if well-designed signs and maps are provided at strategic locations. Signs should be easily visible, easy to understand, uniform and give clear and concise messages. If it is difficult to find the way around, additional maps could be provided. It is important that signs are well maintained as, if they are vandalised it gives the impression of a lack of ownership and control and so adds to a sense of fear (National Crime Prevention Council, 2003). Another possibility is the provision of 'way-finding trails'. These walking trails could celebrate the heritage of the city and could include information boards that showcase the city's history.

Photograph 13: A long, narrow over-bridge

Photograph 14: A low wall with many empty alcohol drinks behind it

Avoiding alleyways

Alleyway problems

Alleys and passageways in city centres can often be associated with problems with criminal behaviour and fear of crime. The main problems in these passageways are that they are narrow and dark in places, and can have an excess of graffiti. Some are also used as places for sexual activity, street prostitution and alcohol consumption. Most are not covered by CCTV and are avoided by the general population, particularly at night. They can provide places of concealment and easy escape routes for offenders.

Many of the alleyways seen during the CPTED surveys in this research contained high levels of graffiti and were used as dumping places for rubbish. Street drinkers used them to hide out of sight and a lot of evidence of urination was found. Photographs 15 and 16 show examples of typical problems seen in alleyways. They are narrow and dark and show many signs of neglect such as graffiti and dirt. They contain blind corners and have very low surveillance. They were identified by local crime-reduction practitioners as often being crime hotspots.

Alleyway solutions

It can be difficult to resolve issues in alleyways. They are often public rights of way, so gating them may not be an option. It is not always advisable to improve the lighting because it can encourage people to use these passageways at night. However, the authorities could improve the situation by removing all graffiti and other signs of neglect as soon as possible and the use of CCTV and/or routine patrols by official guardians could also be considered. This will at least send out a message to offenders that there is a chance they will be caught if they commit criminal activities in these areas.

If possible, the use of alley-gates could be considered. Alley-gates are a form of situational crime prevention that can be used to control access to vulnerable properties and so reduce the opportunity to commit crime. In 2004, the Home Office reviewed the evidence on alley-gating and found that early studies suggested it was effective in reducing burglary, reducing fear of crime, reducing arson attempts, increasing community involvement and improving the environment (Johnson and Loxley, 2001).

Photographs 15 and 16: Two examples of alleyways

Overlooking underpasses
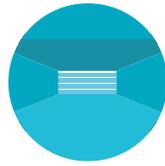
Underpass problems

The majority of underpasses are intended to avoid the need for pedestrians to cross busy roads and so continue their journey in a safe way. However, many underpasses are poorly designed and have inadequate lighting, poor sightlines, poor way-finding and no surveillance. In addition, many show signs of neglect, such as graffiti, dirt and litter.

Many examples of underpasses that were crime hotspots and associated with high levels of fear of crime were found in this research. Photographs 17 and 18 are examples of two underpasses in city centres. Both were dark, had blind corners, were poorly maintained and contained graffiti.

Underpass solutions

Wherever possible, pedestrians and vehicles should be kept on the same level and underpasses removed. But if an underpass is considered to be necessary, it should be as straight, short and as wide as possible. It should also be well lit, with clear lines of sight so that pedestrians can see what is ahead. Ambiguous spaces, such as gaps and corners should be avoided as they can provide hiding places for potential offenders and can increase fear of crime. Underpasses should be maintained in good order and monitored on a regular basis. They should be free from rubbish and any graffiti removed as soon as possible.

Photographs 17 and 18: Two subways in a city centre

Reticent to recessed doors

Recessed door problems

Recessed doors are common means of alternative egress routes from buildings. As escape routes the doors should open in the direction of travel and on opening should not be a potential collision hazard to those walking past. However, they are rarely used, and hence, they are seldom checked by those responsible for them. Recessed doors can allow people to loiter without being seen. The disadvantages of recessed doors were highlighted in this research; many contained high levels of graffiti, rubbish, fly-tipping and evidence of street drinking and urination.

Photographs 19 and 20 show typical problems associated with recessed doors – dumped rubbish, graffiti and evidence of street drinking.

Recessed door solutions

Where possible, recessed doors should be brought forward so they are flush with building lines. If this is not possible (for example, because they are emergency escape doors) then the use of tactile surfaces could be considered. This should help to deter graffiti artists and other potential offenders from using the recessed doors.

A good example of the benefits of blocking access to a recessed door can be seen in Photographs 21 and 22. Photograph 21 shows an un-gated recessed door with high levels of graffiti and Photograph 22 shows an adjacent gated recessed door that has no graffiti.

Photograph 21:Ungated recessed door

Photograph 19: Dumped rubbish and graffiti

Photograph 22: Gated recessed door

Photograph 20: Empty alcohol containers

The night-time economy
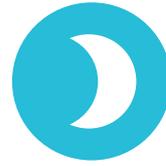
Night-time economy problems

The night-time economy can bring many benefits to city centres, such as economic wealth and higher employment, but it can also result in high costs, such as costs to the police and health services. There are several factors that can increase the likelihood of violent incidents and fear of crime in the night-time economy. A high density of drinking places and other attractions aimed at young people can lead to a prevalence of younger people at night; many older people can feel excluded from such environments. Anything that causes people to be jostled together, such as narrowing of pavements or queuing for transport or food, can increase the potential for violent incidents. Lighting is also an important issue, as fears about crime and safety are exacerbated when it is dark.

Alcohol consumption is regularly linked to incidents of violent crime; crime statistics record that the victim believed the offender was under the influence of alcohol in 917,000 violent incidents in England and Wales in 2011 (Crime Survey of England and Wales, 2011/12). This represents 47% of all violent offences. Alcohol-related violence can be linked to features in the built environment. For example, approximately half of alcohol-related violent incidents occur in or around pubs or clubs (Budd, 2003).

When considering the design of streets, it is important to ensure that the layout does not contain congestion and cluster points. According to Tuck (1989, cited in Tilley, 2005) congestion points are particularly busy points or bottlenecks where people pass each other on their way between different areas in town and city centres. Cluster points are points where people gather while waiting for something, such as taxi ranks and fast food outlets. Both congestion points and cluster points involve people being in close contact and possibly jostling each other or arguing over services or personal space, so they offer the potential for violent incidents to be triggered. Several incidences of congestion and cluster points were seen during this research. For example, Photograph 23 shows a narrow pavement which local police report as being a crime hotspot at night. There are several late-night takeaways in this area and people spill out on to the street, both to avoid the crowds and to try and flag down taxis. Railings were placed on the corner to prevent pedestrians straying onto the road and being hit by cars, but these railings also resulted in people being squashed together. A rubbish bin is situated on the corner, making the pavement even narrower. Photograph 24 illustrates a similar issue – the pavement has been narrowed to enable taxis to park close to the club but people spill out of the club late at night and problems occur when there are too many people crammed together.

Night-time economy solutions

A greater diversity of use in town and city centres is likely to reduce crime and fear of crime. Concentrations of venues that are alcohol-based and appeal to under-25 year olds should be avoided where possible. Ways of increasing diversity in a city centre include residential use above shops, and providing a wider range of attractions, such as cinemas, shops, museums, eating establishments and theatres.

Town and city centres need regular, safe and reliable transport so that people can leave easily and quickly; if crowds congregate the potential for crime and anti-social behaviour to occur is increased. The location of taxi ranks and bus stops should be examined and, if necessary, should be increased to avoid large concentrations of people in one place. A uniformed presence could be provided to improve both safety and perceptions of safety; this could include taxi marshals at taxi ranks and bus stops.

To avoid congestion and cluster points, pavements should be as wide and unobstructed as possible, particularly in busy areas where people congregate, such as at taxi ranks or outside fast food outlets.

Lighting is another critical issue in the night-time economy. Appropriate lighting can have a significant impact on reducing fear of crime. Ideally it should allow the identification of a face from a distance of about 10 metres for a person with normal vision (National Crime Prevention Council, 2003). Farrington and Welsh (2002) carried out a review of the effects of improved street lighting on crime. Their findings suggest that improved lighting is an intervention that benefits the whole of a neighbourhood and leads to an increase in perceived public safety. Lighting should be fit for purpose and conform to the appropriate British Standard; promote feelings of safety for pedestrians; be unobstructed, e.g. by trees, foliage or signage; and vandal resistant if appropriate. It is not advisable to locate lighting in isolated areas or on paths leading to isolated places as it may provide a false sense of confidence and encourage people to use such places (National Crime Prevention Council, 2003).

Photograph 23: A narrow pavement, made even narrower by the litter bin

Photograph 24: Narrowing of a pavement outside a night-club

Conclusion

This research has found evidence that supports the importance of design in the built environment and its effects on crime and fear of crime. Features in the built environment that can be linked to higher levels of crime and fear of crime include alleyways, underpasses, recessed doorways and bottlenecks. In addition, certain issues can be associated with the built environment and increases in crime and fear of crime; these include lack of surveillance, poor access control, the presence of specific environmental cues and a youth-alcohol orientated night-time economy.

For more information on this research,
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