

Design  
Council

# Cracking crime through design



This policy paper builds on a programme of Design Council work funded through the Home Office Crime Reduction Programme and developed in partnership with the DTI. This began in 1999 with a research project exploring the use of design best practice to reduce crime, which was carried out for the Design Council by Sheffield Hallam University, the University of Salford and the Judge Institute of Management Studies.

Building on the findings of this research, the Home Office has also funded the Design Council to develop a range of activities and resources to raise awareness of crime issues amongst designers and design educators including a collection of case studies, a national community-based design competition, a range of teaching resources and a professional development programme. More information about these initiatives, which are being developed for us by the Design Policy Partnership, can be found at [www.designagainstcrime.org.uk](http://www.designagainstcrime.org.uk).

In addition to the above programme, the Design Council has also initiated a variety of complementary activities on the design against crime theme. These include a touring exhibition, a retail crime project and a CD-ROM based teaching package exploring design issues related to the theft of personal products, which has been developed by Central Saint Martins College of Art & Design.

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Foreword by  
Sir John Stevens,  
Commissioner  
of the  
Metropolitan  
Police



I have long been an advocate of the need to re-energise the crime reduction debate. The Crime and Disorder Act made reducing crime a matter of priority and local authorities and agencies are now united in their responsibility to deliver safer communities. Our task is to meet the challenge of tackling the whole spectrum of crime and to combine our efforts and energies to get practical results.

Increased levels of crime invariably place greater demands on public services that are already over-stretched. There is now a real demand for resources to be invested in the science of crime reduction and it's vital that we seize the moment and make the right decisions. Investing in reducing crime – rather than simply reacting to it and 'cleaning-up' the consequences – makes common and financial sense as well as being ethically right.

The Design Council has provided us with an accessible and practical framework to build on. Now we must be prepared to look at how we counter creative criminals in a different way. The relationship between innovation and crime lies at the heart of this issue and is therefore one of the crucial areas explored in this paper.

As Commissioner of the Metropolitan Police I am often asked about leadership. Leadership is not only a matter of showing the way. It is also about having the patience to think about what we are doing; about being prepared to allow innovation, focus and wisdom to come together in finding solutions. Although this can often take time there is nevertheless a need to act quickly and decisively. This paper offers us a useful and practical guide and I would like to commend it as both a readable and pragmatic study.

Sir John Stevens

Introduction  
by Andrew  
Summers,  
Chief Executive  
of the  
Design Council



Crime is a problem that affects us all these days – with incidents such as pick-pocketing, car thefts and house burglaries becoming common-place. If you have been lucky enough not to have something like this happen to you personally, then the chances are that you know somebody who has.

In many ways, we have learned to live with this situation, to accept crime as something inevitable. After all, crime rates have been rising year on year at least since 1918.

This is partly because we have not yet found a truly effective way of combating crime. Although many people have called for more police and tougher sentencing, the fact is that the criminal justice system has not proven to be a particularly effective or economic solution. In fact, only 3% of crimes ever get as far as court and each prison place costs over £20,000 per year. This is not in any way to suggest that the police and the courts do not have a fundamental part to play in tackling crime – their role is crucial. The suggestion is rather that we also need to explore other complementary approaches, particularly those that help to prevent crime from happening in the first place.

One such strategy, and the subject of this report, is ‘designing against crime’. The idea behind it is not to develop more sophisticated locks and alarms. It is about understanding the implications for crime created by the design of everyday products and services, from wheelie bins – which at a metre high and with a strong flat top currently provide the perfect ‘leg-up’ to house burglars – to the average handbag, which tends to be quick and easy to unfasten surreptitiously.

As the paper by Professor Ken Pease, one of the UK's leading criminologists, illustrates, designing out crime has already proven effective. Car manufacturers now include security as a key consideration in the design process and arguably as a result, car crime has been cut by around a third. Similarly, in the housing industry, good design has helped to make many blighted estates safer places to live. But these are isolated examples of good practice. The practice of designing out crime now needs to be mainstreamed.

The Design Council is committed to making sure this happens. With funding from the government's innovative Crime Reduction Programme, we are already working with designers and design educators to make sure they are aware both of crime as a design issue and of the role that they can play.

But action is also required from other stakeholders. Businesses need to realise the commercial potential of crime resistant products, you and I must consider security as a factor in our purchasing decisions and government too has a key role in putting this issue on the business and consumer agenda in the first place. The final section of this paper sets out the Design Council's views on what should happen next to inspire and enable this to happen.

This is a complex problem and the response is not simple, but the rewards for society are potentially enormous.



March 2001

Ken Pease,  
Professor of  
Criminology  
at Huddersfield  
University



### **About the author**

Ken Pease is Professor of Criminology at Huddersfield University, and Visiting Professor at the Jill Dando Institute of Crime Science, University College London. He has also held chairs at the Universities of Manchester and Saskatchewan, and acted as Head of the Home Office Police Research Group. He sits on the DTI Foresight Panel on crime, and has advised the UN and the Council of Europe on crime issues. He was awarded an OBE for services to crime prevention in 1998, and has published some 200 relevant books, monographs and articles.

'We must label our barbed wire with a warning, because we have a duty of care to the burglar. In which case, why do we not have a duty of care to the burglar-to-be, in reducing the temptation to offend?'

In crime reduction, there are no quick or easy answers. Do we get tough with offenders or try to change their ways? Do we have an increased police presence or lay low?

There is one approach that lies outside this policy minefield, one that could generate universal support. Its aim is to remove opportunities for crime not by changing people, but by changing the things we buy and use. Can design beat crime?

### **Gateways to sin**

St Paul saw the light on the road to Damascus. I saw it on the westbound carriageway of the M62. The year was 1981, and I was a forensic psychologist returning home from a day working at Wetherby Borstal, as it then was. Two adjacent items on the 6pm news on Radio 4 were linked in a way the newsreader would never have intended. The items were the announcement of record profits for Ford UK, and the opening of two new 'strict regime' detention centres at New Hall and Send.

What was the link? The young offenders who would be deposited at New Hall and Send would include many recidivist 'twockers' – those who take cars without lawful authority. Twenty years ago, their favourite target was the Ford Cortina, which had good performance but cheap and abysmal perimeter security. Crime prevention officers of that time estimated that you had a 50% chance of opening any Cortina with any Cortina key. Homeward bound on the M62, it occurred to me that while the Cortina had helped Ford to generate record profits, its 'twockability' was helping to create record numbers of young offenders, to be detained in places like New Hall and Send, at the taxpayer's expense.





Adolescents are gaining criminal records through their fairly inept forgery of banknotes using copiers and printers attached to home computers.

'By the time they die, some 34% of men in England and Wales will have acquired a conviction for an offence – and that excludes regulatory offences like speeding and illegal parking.'

Soon afterwards, I wrote to the Society of Motor Manufacturers and Traders asking for its policies on crime reduction. The reply was brilliant. Up to that point, I had thought that only Jane Austen could deliver a full-blown sneer in print. The SMMT respondent disabused me: as far as he knew, the SMMT had no such policy. I replied by asking whether I could quote his letter. He asked what, pray tell, should the SMMT have to do with crime reduction?\*

Putting my SMMT correspondent's point more generally, why should one reduce the crime opportunities afforded by the everyday world? The obvious answer is to improve the quality of life of those who would otherwise fall victim to it, or live in fear of it. The less obvious answer is that it is surely immoral, to paraphrase the poet John Donne, to be the gateway to another man's sin. A graphic example of this is reported in the November 2000 issue of *Wired* magazine, with adolescents gaining criminal records through their fairly inept forgery of banknotes using copiers and printers attached to home computers.

We must label our barbed wire with a warning, because we have a duty of care to the burglar. In which case, why do we not have a duty of care to the burglar-to-be, in reducing the temptation to offend? Of course part of such a duty of care would be to ourselves. By the time they die, some 34% of men in England and Wales will have acquired a conviction for an offence – and that excludes regulatory

\*The SMMT has since become one of the leading agencies involved in crime reduction initiatives within the motor industry, not least through its participation in the Home Office's Vehicle Crime Reduction Action Team and its work with the Thatcham Motor Insurance Repair Research Centre to achieve acceptable standards for all car security systems.

## Cracking crime through design



In one experiment, a stamped, addressed, unsealed letter containing a handwritten note and £1 in cash was left near a postbox. The content of the note was varied to make it appear that the possible victim of stealing was male or female, old or

young, rich or poor, an individual or an association. It turns out people were as likely to steal from the old and poor as from the young and rich.

'We have too often failed to make the crime consequences of products and services a salient consideration for designers.'

offences like speeding and illegal parking. Criminologists have contrived fiendishly clever ways of establishing how dishonest we actually are. In one experiment, a stamped, addressed, unsealed, apparently lost letter containing a handwritten note and £1 in cash was left near a postbox. The content of the note was varied to make it appear that the possible victim of stealing was male or female, old or young, rich or poor, an individual or an association. People were observed picking it up. Did they put it in the postbox or pocket it? It turns out that we are more likely to steal from men than women, but stealing was not significantly influenced by the other variables. Thus people were as likely to steal from the old and poor as from the young and rich. If our willingness to buy things 'off the back of a lorry' were not enough, the results of the lost letter test are not good for our amour propre.<sup>1</sup>

So is crime the product of our all-too-flexible consciences, combined with some capitalist plot to tempt the vulnerable young into crime by making it easy? Well, no – although one could at a pinch develop an argument that goods stolen and replaced increase the size of the market, when the thieves would not have bought what they chose to steal instead.<sup>2</sup> Crime can be profitable. Some businesses, notably insurers and the security industry, make money because of crime. The dynamic whereby crime comes to be incorporated in business decision-making is complex indeed. I will discuss it later.



The inquiry into a 1974 DC10 airliner crash focused not on blame for failure to secure the door which blew out, but on prevention through design modification.

'Crime levels are seen as a moral barometer, and the cause of crime as wickedness, whether innate or induced by social conditions.'

### **The problem with blame**

We have too often failed to make the crime consequences of products and services a salient consideration for designers. Why? Part of the reason is that when dealing with crime we start with a mindset of blame rather than of prevention. Contrast serious crimes with serious accidents. In March 1974, a DC10 airliner took off from Paris. During the climb, a rear cargo door, which was improperly closed, blew out. The resulting cabin decompression caused damage to the main cabin floor and to some control cables. The crew was unable to control the aircraft and the plane crashed. All 333 passengers and 12 crew were killed. The crash inquiry concentrated on design modification rather than on the unfortunate man who did not secure the door properly.

A design which serves to facilitate human error is blameworthy in the culture of air safety, and indeed the culture of other systems where the consequence of error is catastrophic. By contrast, crime reduction and blame allocation have always seemed inseparable, and been treated as synonymous. Crime levels are seen as a moral barometer, and the cause of crime as wickedness, whether innate or induced by social conditions. This will never really change, given the depressing willingness of people to turn predator, and the range of ways in which people prey upon each other, some of diabolical ingenuity. However, we must move beyond regarding a crime as 'cleared up' once someone to blame has been found. If things were designed to make crime more difficult, and the detection of its perpetrators easier, we would reduce crime to those behaviours where ingenuity is necessary, where only those

'Over 70% of those under 21 given a prison or community sentence are reconvicted within two years. The average annual operating cost of a prison place is some £23,940.'

committed to searching out crime opportunities succeeded, and where those victimised by, and those dabbling in, preventable crime are spared much agony.

Our failure to prevent would perhaps not be so disastrous were it not for two facts. Firstly, solved, or 'cleared' crime is very much in the minority. About 24% of recorded property crime is cleared.<sup>3</sup> Mostly we simply fail to find anyone to blame. Secondly, if we get lucky and convict someone, we are not very good at persuading them away from a criminal lifestyle. Over 70% of those under 21 given a prison or community (probation or community service) sentence are reconvicted within two years. What's more, we fail in expensive ways. The average annual operating cost of a prison place is some £23,940. You can buy a lot of crime prevention for that.

'If things were designed to make crime more difficult, and the detection of its perpetrators easier, we would reduce crime to those behaviours where ingenuity is necessary.'



# Leading by example



## Birmingham Beacon

Security in urban areas is a growing concern. In Birmingham, a partnership between representatives of law enforcement agencies and local interest groups looked at this problem with a view to using technology to complement conventional policing. The creative leap was to combine new kinds of anti-crime devices with communications technology so that crime can be reported and acted against quickly and effectively. The result is a multipurpose device that can also give its users important information about their location. Developed by Birmingham Citywatch Ltd.



## **Adshel i+**

The Adshel i+ terminal is an electronic information service for outside use in towns and cities. Designed by PSD Associates to resist vandalism and misuse, and facilitate easy repair, overall semiotics convey a message of strength. The internal components are reinforced for greater protection. Glass panels are designed to be removed easily and quickly.



## PersonaS

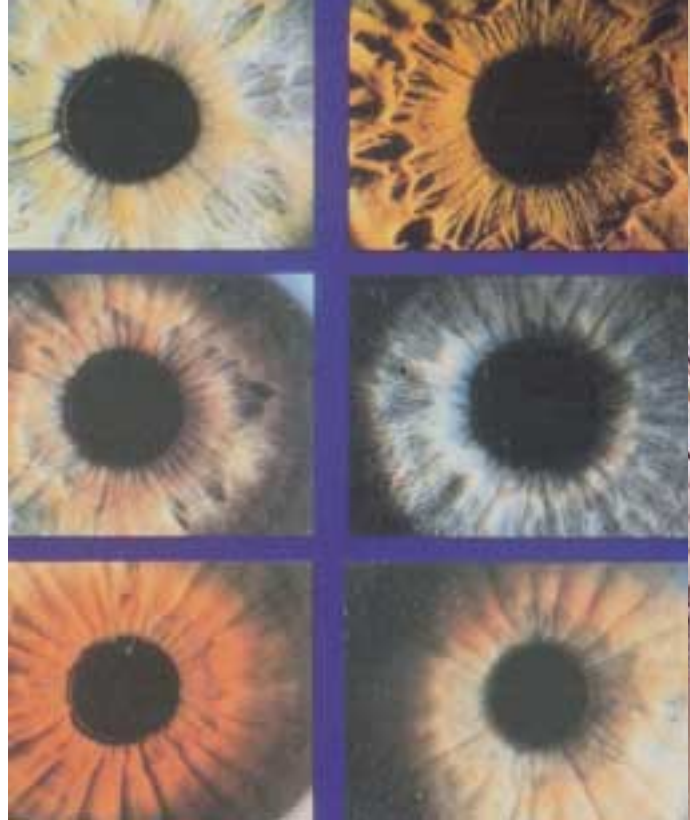
The PersonaS with IrisIdent is a new kind of cash machine which uses the customer's iris as the means of identification rather than PIN numbers or signatures. Developed by NCR Financial Solutions Group Ltd, PersonaS contains three cameras. The first two locate the face and eye while the third scans the iris. According to survey results from the world's first public trial of iris recognition, by the Nationwide Building Society and NCR, 91% of users said they would choose iris identification in future above either PINs or signatures.

## Stop Thief!

Anti-theft chairs are designed to keep bags safe while their owners relax in busy cafes, bars and restaurants. They have been developed as part of a research project by Central Saint Martins College of Art and Design and sponsored by the Design Council. The chairs are being piloted in Pizza Express and Maxwell's restaurants.

## London Underground

Cre'active Design has been responsible for the refurbishment of trains on London Underground. Their research discovered that passengers do not feel in control of their environment – especially at night. The configuration of seating and restricted fields of view inside trains served to reinforce this. The designers radically changed the interior layout, allowing greater fields of view, much improved lighting and better demarcation of personal space.





### **Blazer retail outlet**

This outlet at the Bluewater Shopping Centre was designed by the Tugman Partnership and successfully reconciled the needs of security with the needs of a customer-friendly, inviting environment.





## Cracking crime through design



Electronic article surveillance in shops has been shown to reduce 'shrinkage' as a percentage of sales from 7% to 2%.

'A recent study of the effects of Secured by Design (SBD) housing shows that burglary levels in homes built to the standard are 30% lower than in non-SBD homes.'

### Why design?

Two beliefs must be held before the 'prevention by design' approach outlined above can be regarded as worthwhile. Scepticism about one or other of these is a major factor in our failure to design in crime-resistant ways. These beliefs are:

- that changing how things work and look will reduce crime committed against them
- that there is not some fund of human wickedness which will always find an outlet in one or another form of crime.

The first belief should be easy to instil. Indeed the belief already underpins the way most of us live our lives. If you lock your car and thus activate the immobiliser, you already believe. If you etch its windows or have Tracker installed, you already believe. If you need persuasion, a good example is Secured by Design (SBD)<sup>4</sup> housing, in which the layout and security levels of homes meets agreed design standards. A recent study of the effects of SBD shows that burglary levels in homes built to the standard are 30% lower than in non-SBD homes. The effect of uprating homes to SBD standards is even more dramatic. The best estimate is that the extra cost of building to SBD standards (currently around £440) will be saved in reduced burglaries over six years (a brief span compared to the life of a house), to say nothing of savings in distress and in the cost of police and victim time spent dealing with the offence.



Alcohol-related violence in a Queensland tourist resort was reduced by around 75% by licensee choices in providing transport, food and entertainment which diminished binge drinking.

'Crime can and will be reduced by the intelligent redesign of the way things look and work.'

There are numerous other examples:

1. A Swedish study showed that adding photographs to cheque guarantee cards reduced fraudulent use of these cards to some 15% of its former level.<sup>5</sup>
2. Alcohol-related violence in a tourist resort in Queensland was reduced to around a quarter of its previous level by licensee choices in making transport, food and entertainment available which diminished binge drinking.<sup>6</sup>
3. Electronic article surveillance in shops has been shown to reduce 'shrinkage' as a percentage of sales from 7% to 2%.<sup>7</sup>
4. Well-designed studies in the north Midlands show dramatic and cost-efficient impacts of street lighting on crime.<sup>8</sup>
5. In an ingenious study of a trivial offence (albeit one which cost the city concerned a great deal of money) the design of parking meters was shown to be crucial to whether people inserted coin-like objects rather than coins. A window in the meter displaying the last object inserted had a major impact on the problem.<sup>9</sup>

These examples could be multiplied many times. In essence, they are proof that intelligently conceived and well-executed programmes, designed to change the immediate environments in which crime takes place, are typically successful. Crime can and will be reduced by the intelligent redesign of the way things look and work.

The second belief concerns the notion that there exists a reservoir of wickedness, that bad blood will out. Squeeze crime here, it just goes somewhere else. Why bother with prevention? There exist in the crime control universe those who always look on the bleak side of life. Healthy



Modifying ticket machines in some London Underground stations to beat coin fraud caused massive reduction in the crime - which was not 'displaced' to other stations.

'The process whereby a crime prevented in one place surfaces somewhere else is known as displacement. In no properly researched case does it happen on such a scale as to offset the crime reduction effect completely.'

scepticism is one thing, but these people make Eeyore look like a crazed optimist. In one burglary reduction programme in which I was involved some 15 years ago, a local councillor rubbished our hard work by claiming that the problem had simply been moved to the next estate along the road. All the evidence was against this assertion, but it still made the headlines of the local paper.

The process whereby a crime prevented in one place surfaces somewhere else is known as displacement. All the careful reviews of this have shown that, while some displacement does occur, in no properly researched case does it happen on such a scale as to offset the crime reduction effect completely.

One interesting study concerned crime against ticket machines on the London Underground.<sup>10</sup> Machines deployed at that time were unable to distinguish genuine 50p pieces from 10p pieces wrapped in foil. Worse, inserting a foil-wrapped 10p and then pressing the coin reject button led to the return of a genuine 50p. The design flaw arose from a decision taken on cost grounds that the ticket machines should be supplied without complex coin-verifying technology and without the so-called 'last in, first out' - or 'lifo' - coin chute. In May 1991, 93,466 foil-wrapped 10p coins were retrieved from machines, representing a loss of up to £40,000 in that month alone. The first response was to modify machines so that they no longer accepted 50p coins. This led to an immediate and massive decline in the crime. Furthermore, the problem was not displaced to stations in the system where the machine modifications took place later.



Phone cards make theft of cash from public phones less profitable, and arguably make the use of phones easier.

'Most of those involved with crime are not committed to a criminal career. The more difficult and risky crime becomes, the more of the saveable come to be saved.'

There was, however, still a means of fraud against the machines by using metal disks of a size and thickness equivalent to £1 coins. Because these took time and effort to manufacture, the rate of that type of fraud remained low. There was little apparent displacement from 50p fraud to £1 fraud. By making the fraud more difficult, the problem was controlled. (One wonders, incidentally, how much LU would have saved had it deployed thorough anti-crime thinking and attack-testing in its original design processes.)

The foregoing does not amount to a denial that displacement takes place. Those most committed to a criminal lifestyle will seek out new criminal career options, of which drug dealing is probably the most profitable. However, most of those involved with crime are not committed to a criminal career irrespective of its costs and benefits. Making crime more difficult and more risky does affect the majority of those at the margins of criminality. The more difficult and risky crime becomes, the more of the saveable come to be saved.

With these two necessary beliefs in place, the reader should now acknowledge that simple changes in design and practice can prevent crime, and that this success is not completely offset by crime resurfacing elsewhere. Believing this, designing out crime becomes a socially responsible thing to do. Because we do not wish to live in a fortress, such design must be, as far as possible, unobtrusive at the point of use. Car radios with detachable parts hamper criminal intent but are just as pleasant to the ear. There is no reason why slash-resistant handbags should be less easy on the eye. Phone cards make theft of cash from public phones less profitable, and arguably make the use of phones easier.

'Car radios with detachable parts hamper criminal intent but are just as pleasant to the ear.'



'The most recent and sophisticated analysis puts the total annual cost of crime in England and Wales at £60 billion.'

The design challenge is to incorporate crime reduction without sacrificing aesthetics and ease of use. Economically, the potential rewards are high. The most recent and sophisticated analysis puts the total annual cost of crime in England and Wales at £60 billion, with, on average, burglaries costing £2,300 each, vehicle thefts £4,700, and robberies £5,000.<sup>11</sup>

**WWW**

A recent study of netcrime found that hi-tech devices were susceptible to hacking. Rapid dissemination of new security breaches via the internet makes previously crime-proof systems obsolete.

'Recognising crime and its reduction as an arms race does not diminish the importance of design solutions. Rather, it enhances it. Once one recognises that change is both the friend and the enemy of crime, designers may make change their friend wherever possible.'

**'Thinking thief'**

The costs are high but the prospects of success are good. There remains one problem: time. Nothing is for ever. People are adaptable, the malicious no less than the well-intentioned. Crime and crime prevention represent a process of co-evolution, an arms race between criminals and crime preventers.<sup>12</sup>

This is well illustrated in a recent study of netcrime.<sup>13</sup> Members of two online newsgroups disseminated information and products to those who might wish to commit crimes. One newsgroup focused on hacking encrypted satellite television services, while the other was a locksmithing group whose members were interested in picking locks and understanding more about safes and security devices. High-technology devices, such as smart-cards, were susceptible to ingenious or systematic hacking attempts. Once 'cracked', rapid dissemination of a new security breach via the internet can rapidly render previously crime-proof systems obsolete. The internet is a particularly effective medium for criminal recruitment and dissemination of criminal techniques, although it is too early to determine if it will produce problems for law and order in the future. However, with the expansion of the internet, various netcrimes will become high-volume crimes. As one letter writer to *Wired* magazine put it in December 2000: 'A fool and his money are soon parted. The internet just makes it quicker and easier.'

People now live in both meatspace and cyberspace. Routine activity theory suggests that crime will occur when a motivated offender and suitable victim coincide in the absence of a capable guardian.<sup>14</sup> In meatspace, the number

[Order !\[\]\(42676f8dee3353afedbea52a48c49313\_img.jpg\)](#)

[Contact](#)



Repeat victimisation is a major reason why areas with highest crime rates are as they are. By one estimate, 4% of the population suffers 40% of the crime.

'As one letter writer to *Wired* magazine put it in December 2000, "A fool and his money are soon parted. The internet just makes it quicker and easier.'"

of such coincidences is limited by the speed at which people can traverse their spatial environment. In cyberspace, this is not the case. Very large numbers of people can be defrauded at once by that product of the information age, the empowered small agent. In cyberspace, there is no professional intermediary between us and the offender. This process of disintermediation has major implications. The possibilities for deception are almost limitless, since the e-identities are legion behind which an offender can hide. The internet ends the age of home-as-refuge just as artillery ended the age of the castle-as-fortress. Neither is the image overblown, as the empowered small agent blurs the distinction between crime and terrorism to the point of meaninglessness.

Recognising crime and its reduction as an arms race does not diminish the importance of design solutions. Rather, it enhances it. Once one recognises that change is both the friend and the enemy of crime, designers may make change their friend wherever possible. There is a parallel with the well-known 'broken windows' view of crime.<sup>15</sup> If windows remain broken, further crime will take place against the building concerned. If repaired, repetition becomes less likely. Repeat victimisation against the same target accounts for much crime, and is the major reason why areas with the highest rates of crime are as they are. By one estimate, 4% of the population suffers 40% of the crime.<sup>16</sup> The disproportion for violent crime is even greater. Interviews with offenders suggest that return occurs when nothing has changed. When there are more signs of occupancy, new security devices, and so on, the returning burglar thinks twice – before deciding not to push his luck.<sup>17</sup>



'The introduction of uPVC windows led to changes in burglary, with the external beading being removed and the window unit taken out to gain entry.

This led to window manufacturers either using internal beading or adding Saracen clips so that the window could not be taken out that way.'

So the designer bent on crime reduction must be flexible and fleet of foot in the arms race with the criminal. Why is this being stressed so heavily? It is because the whole official infrastructure of crime and justice conspires to avoid this insight, to hide what they should most reveal. Every year, statistics of offences recorded by the police are published by the Home Office. Every two years the British Crime Survey has published statistics of crimes suffered by individuals and households, whether or not they have been reported to the police. These data in their published form aggregate the particulars, so that a wide range of attacks are shoehorned into the category 'assault', and a wide range of scams into the category 'fraud'. In that process of aggregation, they lose all value except as the raw material of political name-calling. They conceal the facts about who exactly did what exactly to exactly whom. If that kind of information were to the fore, it would be clear how much crime has changed, and how much it mirrors the way of life and artefacts of a particular place and time, and what design might contribute to its prevention.

It seems facile to make the point that crime, considered qualitatively, changes over long periods of time. Everyone who thinks about the matter knows that. Nobody stole cars or VCRs in 1850. But we can also see changes in crime over the shorter term. For instance, the introduction of uPVC windows led to changes in burglary, with the external beading being removed and the window unit taken out to gain entry. This led to window manufacturers either using internal beading or adding Saracen clips so that the window could not be taken out that way.<sup>18</sup> Marketing philosophies for cars and computer peripherals, where the initial purchase is less important than the opening of



Penny Red postage stamps replaced Penny Blacks because the black franking ink used to cancel them was not water-soluble, so ruling out washing and re-use of stamps.

'Sometimes we are defeated by the inability or disinclination to anticipate modes of attack. The French built the Maginot Line, and the Nazis unsportingly went round the end of it.'

a revenue stream of parts and supplies, change the pattern of theft. As a consequence, theft of external vehicle parts grew enormously at a time when other vehicle crime types fell.<sup>19</sup> New crime types are fitted into old crime categories. Computer hacking in the early days was sometimes prosecuted as unlawful abstraction of electricity. It is perhaps ironic that the very stability which crime categories give, and which allow crime counts across time to be meaningful, also creates an illusion of the stability of criminal techniques and targets.

What do we see when we look backwards in time to assess the relationship between innovation and crime? There have invariably been three phases:

1. Innovation takes place with a neglect of crime consequences.
2. Criminals reap the crime harvest.
3. A solution is retro-fitted.

If the military behaved like this, we'd be defeated all the time. Sometimes we are defeated by the inability or disinclination to anticipate modes of attack. The French built the Maginot Line, and the Nazis unsportingly went round the end of it, while also attacking it with exceptionally large guns built for the purpose. The criminal is equally unsporting. The Penny Black postage stamp introduced in 1840 was superseded in 1841 by the Penny Red, because red franking ink (used to cancel the Penny Black) was water soluble, leading to the washing and re-use of the stamp. Black franking ink (usable to cancel the Penny Red) was not water-soluble. Pocket watches were fastened to one's waistcoat by a rigid circular eye around the winder. This was a boon for cutpurses, who could

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Designers are trained to anticipate many things: the needs and desires of users, environmental impacts, ergonomics and so on. It is they who are best placed to anticipate the crime consequences of products and services.

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simply snap the rigid eye and make off with the watch. The design response to this involved making the circular eye rotate, rendering it extremely difficult to steal.<sup>20</sup>

If this cycle of innovation-harvest-retrofit has been for all practical purposes universal, what are the implications? It means that, in terms of an arms race, we wait to lose a lot of battles before we update our armoury. In the language of co-evolution, we adapt without thinking about what our predators will do in response. Clearly, we must start 'thinking thief', anticipating criminals' actions, researching the tools, knowledge and skills available to them now and in the near future and incorporating attack-testing into the design process.<sup>21</sup> This by no means involves designing heavy and ugly objects and places. Indeed, windows which thwart burglars are likely to be less ugly than windows that are insecurely designed and need protection from bars. Designers are trained to anticipate many things: the needs and desires of users, environmental impacts, ergonomics and so on. It is they who are best placed to anticipate the crime consequences of products and services, and to gain the upper hand in the technological race against crime.

A close-up, low-angle shot of the front left side of a silver car. The car's headlight is illuminated, showing three distinct circular light sources. The car's body is highly reflective, showing highlights from the ambient light. A side mirror is visible on the left. The background is dark, making the car stand out.

'The Thatcham  
Centre already  
routinely attack-  
tests new cars  
for the insurance  
industry.'

## Cracking crime through design



There is a process of osmosis whereby people begin to think of the crime consequences of what they design and build. This could be applied to vehicle parts, the layout of pubs and proofs of identity.

'An important change would be for the Home Office to alter police data collection procedures so they concentrated on particular emerging problems, not events within particular legal categories.'

### Creating the culture

Designers cannot work in isolation. Their services are subject to demand from customers – businesses, government, public services – whose behaviour is shaped by market forces, legislation and public pressure. Only by establishing a 'thinking thief' culture can crime-resistant design be given the chance to have an impact.

Paul Ekblom, a Home Office expert, describes the process we need to undergo with the acronym CLAMED – Clarify problem and tasks, Locate institutions, Alert, Motivate, Empower and Direct. Often the stages will not be as clearly defined or as sequential as this, but CLAMED offers a structure for what I suggest needs to be done.

### Clarify problem and tasks

Over the last decade, the problem of crime has been substantially clarified, with recognition that much behaviour is shaped by situation rather than disposition, and that a blame-oriented approach to crime reduction will prove an expensive failure. We now see crime as an arms race, and with that comes recognition of the importance of the design of products and systems in driving down crime. The task of crime reduction therefore lies substantially in manipulating products and systems in a timely way.

### Locate institutions

If our view of crime is soundly based, which institutions can help? Central government is relevant, by its own purchasing power and its control of benefits and taxation systems to shape the purchasing power of citizens in crime-reductive ways. Local government and the police

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'Consumer groups can, in principle, choose to buy goods of which they are less likely to be dispossessed by crime. The insurance industry and the civil courts have power to make the purchase of certain goods and services more or less attractive.'

have statutory responsibility for crime in their areas, imposed by the Crime and Disorder Act 1998. Consumer groups can, in principle, choose to buy goods of which they are less likely to be dispossessed by crime. The insurance industry and the civil courts have power to make the purchase of certain goods and services more or less attractive, by changing premiums, excesses and the willingness to insure. Pubs, bars, clubs and other establishments stand to lose customers and drinks licences when they become prone to crime and disorder. Not least, the design business should deploy its creativity in analysing crime problems sufficiently clearly to draft solutions which may be cheaply applied. Some designers are now actively engaged in crime reductive design, in the vanguard being Dr Lorraine Gamman and her colleagues at Central Saint Martins College of Art and Design in London. Angelika Seeschaarf won a Royal Society of Arts competition to design a theft-resistant bicycle, and a second student competition currently underway concerns mobile phones and doors. Seeschaarf's bicycle incorporates many ingenious features, including a saddle that can rotate backwards and engage with the back wheel, making the bike unrideable until the saddle is released.

### Alert

Perhaps the most pressing challenge is to make the institutions located aware of the range of possibilities. We are fortunate in having a model for this in the recent advance of green issues up the political and business agenda. In just a decade, environmental factors have become part and parcel of the design of products and services. We are now on the threshold of the crime-reductive equivalent of eco-design.

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This process of awareness-raising could soon see environmental impact analyses supplemented by crime impact analyses. Environmental impact analyses set out incidental consequences not generated by malice; crime impact statements add effects of innovation driven by malice. The Thatcham Centre already routinely attack-tests new cars for the insurance industry. Police architectural liaison officers advise on building design before any construction occurs. Individual technology companies carry out attack-testing on products but the results are confidential. One change of great importance would be for the Home Office, through its Crime Reduction College at Easingwold, to re-jig police data collection procedures so that they do not concentrate on events within a particular legal category, but on a particular kind of emerging problem (such as the loss of air-bags from cars).

Perhaps more important than any legislation is the cast of mind which makes crime relevant to design. With government funding, the Design Council and the Royal Society of Arts have both taken steps to sensitise design students to these issues. There is a process of osmosis whereby people begin to think of the crime consequences of what they design and build. This could be applied to vehicle parts, the layout of pubs, weapon design (for example the development of firearms that can only be fired by one designated person), proofs of identity (since identity theft may well become the epidemic crime of the next decade), and the application of Bluetooth technologies to stealability – why steal something that won't work when it ceases to be in talking distance of the rightful owner's fridge?

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One of the recommendations of the Foresight Crime Prevention Panel is the establishment of 'a dedicated funding stream to focus science and technology attention on crime reduction'.<sup>22</sup> To date, the funding of crime research has been substantially ghettoised into grants from the Economic and Social Research Council. It must be taken from that ghetto to feed off all relevant disciplines, not least design and material science.

Acknowledging co-evolution, a horizon-scanning group, perhaps an offshoot of the DTI Foresight Crime Prevention Panel, could inform industry of emerging technologies and the crime opportunities which they will bring with them. Internet crime is clearly an issue to which system design is crucial, and its implications were recognised late. It may well be that the internet becomes a safe commercial environment. It may, on the other hand, evolve into an environment in which certain constraints on mischief will remain relaxed or removed.

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Which items, which do not yet exist, will satisfy those criteria? A recent example of a new product turning into a crime wave has been the mobile phone, which started life as a crime reduction opportunity (for the police to solicit and optimise information from the community via these ubiquitous devices) and has turned into a crime disaster.



The Home Office began raising public awareness of theft-prone makes and models. New models became subject to attack-testing, affecting insurance grouping and creating incentives for security improvements.

'In general, we are left with the level and profile of crime that our physical and social arrangements dictate. To make crime reduction happen, the key is to make people want to make it happen.'

We have managed to snatch defeat from the jaws of victory because of our failure to design in anticipation of a trend.

### Motivate, Empower and Direct

In general, we are left with the level and profile of crime that our physical and social arrangements dictate. To make crime reduction happen, the key is to make people want to make it happen. I opened by remembering the reaction of the SMMT to the idea that they should be involved in crime reduction. Now vehicle theft is reducing year on year, and the target of a 30% reduction by 2004 looks more realistic than it did when it was set. What happened is instructive. The Home Office commissioned a feasibility study on the optimistically labelled 'crime-free car'. Later, it began preparing its Car Theft Index, making the public aware of which makes and models were most likely to be stolen. The then Home Secretary Kenneth Baker called in motor manufacturers and told them to improve security. New models became subject to attack-testing at Thatcham and the results informed insurance grouping for the model. There were thus incentives for security improvements in both brand image and attractiveness to consumers.

Section 17 of the Crime and Disorder Act 1998 provides at least one means by which local authorities are required to anticipate crime consequences, since such anticipation is necessary to protect authorities from legal actions brought by citizens who have suffered from a 'foreseeable crime'. S17 may turn out to be the crucial step in breaking the innovation - crime cycle.

The Foresight Crime Prevention Panel has recommended that the S17 requirement to consider crime consequences

0%

Effective security products could, once effectiveness is validated (for a limited period, given co-evolution), be made liable to less or no VAT.

'Section 17 of the Crime and Disorder Act 1998 requires local authorities to anticipate crime consequences. This may turn out to be the crucial step in breaking the innovation-crime cycle.'

be extended to central government. Some on the relevant committee also thought that the section should be extended to cover transport providers, so that (for example) new rolling stock has seating plans, staffing and surveillance geared to reduce crime on public transport. To Alfred Pigou (1877-1959) is attributed the accolade for being the first to advocate a tax upon industry that produces negative externalities. 'Polluter pays' is the familiar example. A Pigouvian crime tax might encourage manufacturers to reduce the level of thievability of products. It could also be used to encourage crime prevention through environmental design. Effective security products could, once effectiveness is validated (for a limited period, given co-evolution) be made liable to less or no VAT. Crime consequences could be elevated in terms of the corporate liability of companies making crime-vulnerable products and services.



Businesses should recognise the effect of crime-resistant products on their brand image, and their potential in helping them secure competitive advantage in increasingly sophisticated markets.

'Police officers filling in crime report forms could make clear what were the design factors contributing to an offence.

Those in central government could goad and harry the producers of unnecessarily criminogenic products.'

### Turning up the heat

The CLAMED classification is helpful in that it tells one what needs to be advanced, and there is plenty within the last section to apply to our daily lives. As consumers, we can ask about the security of the products and services we purchase. Twenty years ago, a car salesman asked about secondary safety of his wares would not have known what you were talking about. No longer.

What can be done now by those in government and law enforcement? Police officers filling in crime report forms can make clear what were the design factors contributing to an offence. Senior police officers can lean on local authorities to exercise their S17 obligations to design out crime. Those in central government can goad and harry the producers of unnecessarily criminogenic products. Members of local authorities can make regular checks on what needs replacing and ask officials why they are prepared to throw good money after bad in failing to remedy design faults. For example, why is the same bus-stop always trashed, and what redesign is feasible at the vulnerable place?

As citizen-constituents, we can make elected representatives aware of design issues by concrete instances in the areas for which they are responsible. Is an unlit area the focus for disorder? Is there a space in a park or an estate with no function which is appropriated by the unruly, where supplying a function would eliminate the problem? In due course, election manifestos may include how life can be made quieter and less stressful by means other than changing action against offenders. Licensing magistrates can examine whether the layout, serving practices and decor of premises where licences are to be renewed facilitate violence. If they do, licence renewal could be made contingent on

'Today we have a crime discourse with the quality and weight to force change. Probably all we need now is for the words to issue from powerful mouths.'

change. Shareholders can question directors about crime problems facilitated by their products. Those in business should recognise the effect of the crime-resistance of their products to their brand image, and thereby secure a competitive advantage in an increasingly sophisticated marketplace. Designers and design educators, central to this process, can factor in crime consequences to the creative process. Even the Royal Family could do its bit, by instituting awards for crime-resistant products.

### **Deciding on design**

Throughout my long life in crime, I have found that things happen quite quickly once they come within the current universe of discourse. In recent years, it has clearly been ridiculously easy for Home Secretaries to talk the prison population up or down. Talk tough, it goes up quickly. Talk soft, it goes down. Today, though, we have a crime discourse with the quality and weight to force change. Probably all we need now is for the words to issue from powerful mouths. I think they will.

Most importantly, we need to extend the repertoire of design thinking to incorporate crime. Some of the most remarkable social changes of the last decades have occurred by a semi-mysterious process where things take on a momentum of their own once issues are recognised. Progress on environmental initiatives accelerated once the argument about global warming and the hole in the ozone layer was won. With crime, there is not the problem of convincing ourselves that the problem exists. The issues are clear. All we have to recognise are new, more creative solutions. Designing out crime is one solution to which government, business and consumers can subscribe. We don't have to change the world. We just have to change the way we think.



## Recommendations

Ken Pease has made a convincing case for using design to beat crime and has considered how we could best put this thinking into practice. The government, mainly through the Home Office's Crime Reduction Programme, has also recognised the critical role that design can play. In 1999, the Home Office funded a major Design Council research project to explore best practice in this area and has subsequently funded the development of resources and activities to raise awareness of this issue amongst designers and design educators.<sup>23</sup>

In line with the recommendations of that research report, we believe that a strategy which focuses exclusively on changing the behaviour of designers is unlikely to have the sort of significant impact on crime that we would all like to see. As such, we believe that a 'joined-up' approach is needed which includes measures aimed at all relevant stakeholders including companies, consumers and crime prevention professionals as well as designers and educators.

Building on the original research findings, these recommendations focus on the ways in which we believe government can help to engage these key stakeholders and put in place a range of initiatives which will help spur the mainstream design and development of crime-resistant products.

Whilst this is undoubtedly a complex challenge, and one which the government has started to address through the Foresight Crime Prevention Panel, we hope that these recommendations will help to stimulate further government thinking and action in this area.

### **Identifying hot products**

In order to make their products and services more crime-resistant, companies need a relevant and rigorous knowledge base with easily accessible information about the type and extent of criminal opportunities they either create or could help to prevent. We therefore propose that the Home Office should work with the police to:

- 01** Identify the top 50 products/services currently linked to volume crimes.
- 02** Appoint a national coordinator to oversee the collection, updating and communication of this information to companies and consumer groups.
- 03** Develop a design checklist/audit to help companies identify potential crime risks in all of their products/services.
- 04** Consult with the police on the viability of extending the role, training and number of police architectural liaison officers to enable them to provide information and ongoing support and advice to companies on the development of crime-resistant products.

### **Getting businesses on board**

In the vehicle industry, coordination and collaboration between different companies undoubtedly helped the adoption of crime-resistant design practices by allowing companies to share knowledge, best practice and (most importantly) some of the costs associated with developing new security features, systems, technologies and procedures.

The 'trickle-down' effect also played an important part in the mainstreaming of crime-resistant design – with market leading companies such as BMW installing advanced security systems in their cars over a decade ago and providing a strong impetus for other manufacturers to follow suit.

We believe that the same strategies could be adopted to encourage businesses from other sectors to take up the design against crime challenge and urge the DTI to work with the Home Office to:

- 05** Identify five key 'high risk' industry sectors (based on the above list of 'hot products') where the crime-reduction opportunities are greatest.
- 06** Identify and approach the market leaders from each sector and provide financial support to encourage their participation in setting up ten jointly funded public/private sector projects to create exemplars of how design can be used to increase crime resistance.
- 07** Develop case studies of these projects to both inspire other companies to follow suit and provide practical information about how crime resistance can be addressed as part of the design process.

**Educating and empowering consumers**

Where present (for example, in the e-commerce sector) there is strong evidence to suggest that consumer pressure can act as a powerful incentive to companies to address crime issues. It is currently the exception rather than the rule for consumers to actively demand such products but initiatives like the car theft index do suggest that consumer pressure can be effectively stimulated by campaigns to raise awareness supported by publicly available information on security features.

We would therefore like to see the Home Office build a campaign to raise awareness about the crime resistance of products amongst consumers by working in partnership with consumer groups and the insurance industry to develop:

- 08** A system for rating high risk products according to their crime resistance, with the results provided as both detailed information for companies and the insurance industry and a clear and simple 'star' rating for the public.
- 09** Facilities for testing the vulnerability of products to theft or criminal misuse, making use of the research methodology and rating system proposed above.

**Exerting supply chain pressure**

The most powerful consumers of all are retailers. If leading high street chains decided not to stock crime-prone products, or at least insisted that crime reduction information featured in product literature (in the way that energy efficiency facts currently accompany white goods), the impact would quickly be relayed up the supply chain – and the response would be just as fast.

We therefore recommend that:

- 10** The Home Office and the DTI should open discussions with a number of major retailers and relevant trade bodies with a view to a campaign amongst the retailers' suppliers to encourage the supply of crime-resistant goods. This should be pitched in terms of both potential competitive advantage and corporate responsibility.

**Creating corporate responsibility**

Social responsibility is now an important brand value for many companies. We believe that the government should be working with businesses to ensure that crime reduction is considered a mainstream aspect of corporate responsibility alongside other social issues such as education, the environment and community building.

- 11** The DTI should embark upon a campaign to encourage companies to address crime reduction as a corporate governance issue, possibly in partnership with organisations such as Business in the Community.

**Increasing incentives**

Unsurprisingly, industries where crime-resistant design is most advanced are characterised by direct incentives which make the companies involved either legally or financially accountable for any increases in crime relating to their products. In other words, the polluter pays.

In the vehicle industry for example, there are regulations which require security features to be fitted to new vehicles. Conversely, in the financial services sector, security is a high priority because the cost of fraud is almost always met by the company rather than the consumer.

Where positive incentives such as consumer pressure fail, the government has a role to play in introducing other measures such as taxation, regulation, tighter product standards and 'naming and shaming' initiatives to ensure that businesses bear some responsibility for the criminal activity that they help to create.

Although we believe that such mechanisms, in the overwhelming number of situations, are cumbersome and inappropriate ways of addressing a fast-changing process of move and counter-move between the criminal and society, there is no doubt that few things galvanise businesses into cooperation and shared innovation like the possibility of legislation coming into view over the horizon. Despite the current presumption that there are severe limitations on the role legislation could have, we recommend that:

- 12** The Home Office further investigates the potential role of regulation, product standards, tax penalties and incentives, and company reporting requirements, using legislation in other areas of corporate responsibility, such as the environment, as a model.

### **Conclusion**

The Design Council is committed to inspiring and enabling the government, education organisations and businesses to reduce crime through the more effective use of design. The purpose of this report is to develop understanding of the issues involved and to stimulate debate.

Our recommendations, and the impact on crime which is so important to us all, can only be achieved through continued cooperation between all the organisations involved and we look forward to continuing to work with our partners, in particular the Home Office, the Department of Trade and Industry, Sheffield Hallam University, the University of Salford and Central Saint Martins College of Art and Design. Now we need your help as well.

If you would like to become involved in our work on design against crime or have any views on this report, please contact Alison Huxley on 020 7420 5200 or e-mail [alisonh@designcouncil.org.uk](mailto:alisonh@designcouncil.org.uk).

1. Farrington DP and Knight BJ (1980). 'Stealing from a "lost" letter: effects of victim characteristics.' *Criminal Justice and Behaviour*, 7 423-436.
2. Sutton M (1998). *Handling stolen goods and theft: A market reduction approach*. Home Office Research Study 178. London: Home Office.
3. Barclay G (1998). *Digest 4: Information on the Criminal Justice System*. London: Home Office.
4. Armitage R (2000). *An Evaluation of Secured by Design Housing within West Yorkshire*. Home Office Briefing Note 7/00.
5. Knutsson J and Kuhlhorn E (1991). 'Macro Measures Against Crime: The Example of Cheque Forgeries.' In Clarke RV (ed) *Situational Crime Prevention: Successful Case Studies*. NY: Harrow and Heston.
6. Homel R et al. (1997). 'Preventing Drunkenness and Violence around Nightclubs in a Tourist Resort.' In Clarke RV (ed) *Situational Crime Prevention: Successful Case Studies 2nd ed*. NY: Harrow and Heston.
7. DiLonardi RL (1997). 'The Economic Benefit of Electronic Article Surveillance.' In Clarke RV (ed) *Situational Crime Prevention: Successful Case Studies 2nd ed*. NY: Harrow and Heston.
8. Painter K and Farrington DP (1999). 'Street Lighting and Crime: Diffusion of Benefits in the Stoke-on-Trent Project.' In Painter K and Tilley N (eds) *Surveillance of Public Space: CCTV, Street Lighting and Crime Prevention*. Monsey NY; Criminal Justice Press.
9. Decker JF (1972). 'Curbside Deterrence: An Analysis of the Effect of a Slug Rejector Device, Coin View Window and Warning Labels on Slug Usage in New York City Parking Meters.' *Criminology* 127-142.
10. Clarke RV, Cody RP and Natarajan M (1994). 'Subway Slugs: Tracking Displacement on the London Underground.' *British Journal of Criminology*, 34, 122-138.
11. Brand S and Price R (2000). *The Economic and Social Costs of Crime*. Home Office Research Study 217. London: Home Office.

12. This recognition is made and developed in the work of Dr Paul Ekblom of the Home Office, leading theorist of crime reduction. Its most complete exposition was in Ekblom P (1999) 'Can We Make Crime Prevention Adaptive by Learning from other Evolutionary Struggles?' *Studies on Crime and Crime Prevention*, 8/1: 27-51 and Ekblom P (1997) 'Gearing up against crime: A dynamic framework to help designers keep up with the adaptive criminal in a changing world,' *International Journal of Risk, Security and Crime Prevention*, 2/4: 249-265.
13. Mann R and Sutton M (1998). 'Netcrime: more change in the organisation of thieving.' *British Journal of Criminology*, 38, 201-229.
14. Felson M (1997). *Crime and Everyday Life 2nd ed.* London: Pine Forge Press.
15. Kelling G and Coles CM (1996). *Fixing Broken Windows*. New York: Free Press.
16. Pease K (1998). *Repeat Victimisation: Taking Stock*. London: Home Office.
17. The application of design solutions to the prevention of repeats has scarcely been developed at all. For example, what products deployed in the immediate wake of a burglary can make windows and doors secure (and whose surface will take fingerprints well)?
18. I'm grateful for this insight to Steve Bedford of West Yorkshire Police, a long-serving crime prevention officer.
19. Sallybanks J and Thomas N (2000). 'Theft of External Vehicle Parts: An Emerging Problem.' *Crime Prevention and Community Safety: An International Journal*, 2, 17-22.

20. Pease K (1997). 'Predicting the Future: The Roles of Routine Activity and Rational Choice Theory.' In Newman G et al. (eds) *Rational Choice and Situational Crime Prevention*. Aldershot: Dartmouth.
21. Ekblom P and Tilley N (2000). 'Going equipped: criminology, situational crime prevention and the resourceful offender.' *British Journal of Criminology* 40: 376-398.
22. Crime Prevention Panel (2000) *Turning the Corner*. London: DTI.
23. This work is being carried out for the Design Council by Sheffield Hallam University and the University of Salford. Further details of the programme and other Design Council initiatives in this area can be found at [www.designagainstcrime.org.uk](http://www.designagainstcrime.org.uk)

The purpose of the Design Council is to inspire and enable the effective use of design to improve prosperity and well-being. Working with influential partners from across the public and private sectors, particularly in business, education and government, we generate initiatives which raise awareness of design's potential and provide tools to help people to act upon that new-found awareness.

This policy paper is one of a series which aims to show how design can deliver solutions to the mainstream issues of concern to society today. Issues such as crime, transport, education and the challenges faced by our ageing population.

For more information about the Design Council visit:  
[www.designcouncil.org.uk](http://www.designcouncil.org.uk).