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Consolidating Police Crackdowns: findings from an anti-burglary project

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Policing and Reducing Crime Unit: Police Research Series

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Foreword

This report presents the findings and lessons learned from an anti-burglary project in the Boggart Hill area of West Yorkshire. The project involved a concerted crackdown on known prolific burglars and was followed up with a period of consolidation using target hardening measures to protect those most at risk from repeat victimisation. This resulted in a 60% decrease in burglaries in Boggart Hill.

The report looks at the use of such crackdown and consolidation cycles as a means to overcome the usual problem of the rapid decay of the traditional crackdown effect. The indicators are that, done correctly, crackdown and consolidation looks a promising crime reduction strategy. This report is particularly timely in view of the local crime and disorder strategies that are currently being developed.

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Comments and criticisms were received from the entire multi-agency panel at two of the panel meetings where first 'work-in-progress' and then preliminary findings were presented. These were invaluable in directing the evaluation and prompting further focused analysis of specific aspects of the initiative. Finally, we would like to thank Barry Webb and Mike Sutton of PRC for their comments and editing.

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Executive summary

This report presents an evaluation of a problem-oriented multi-agency crime prevention project. Project management, problem identification, offender detection and the prevention of repeat victimisation involved the combined efforts of Leeds Safer Cities, Leeds Department of Housing Services, the local councillor, the local good neighbours scheme, and West Yorkshire Police. The report aims to inform similar operations in the future and looks at the utility of consolidation after crackdown as a means to reduce burglary.

The project involved a police crackdown on known prolific local burglars, following the development of an area offender profile. The innovative part of the project involved the police and other agencies working together to build upon the success of the crackdown. This consolidation phase involved drip-feeding prevention resources to the victims known to be at risk, and the continued targeting of offenders. Additional 'spin-off' benefits were produced in the form of a drop in car crime in the project area (since the same detected offenders commit car crime), and a drop in burglary in neighbouring areas (since the same offenders commit burglaries nearby). The conclusion suggests some of the wider possibilities of developing Area Offender Profiles, and using crackdown and consolidation strategies to reduce crime.

Crackdown method

- **In** Boggart Hill the aim was to reduce burglaries through incapacitation of offenders and also by generating a general deterrent effect upon burglars in the area who learned of the crackdown.

Cost of the crackdown

- The crackdown relied simply upon the re-allocation of existing policing resources by using the local community beat officer and the sergeant.

Impact of the crackdown

- Arresting the prolific burglars in Boggart Hill led to a 60% drop in burglaries. Analysis of the data revealed that this drop could be primarily attributed to the crackdown.

Preventing repeat burglaries

- The crackdown was followed by consolidation work on properties most at risk from burglary. Target hardening involved the use of additional door and window locks and supplying stronger doorframes. Provisional results indicate that repeat victimisation was reduced by 35% in Boggart Hill.

Incapacitation as a crime control method

- Findings from the Boggart Hill data suggest that the number of prolific burglars who are active in the area almost wholly determine the number of burglaries in an area. It is not that there is a pool of burgling opportunities that are taken up and shared among 'available' burglars - it seems instead that most burglars offend at a uniform rate. It is seemingly obvious that this explains why incapacitation *of* local burglars works to reduce local burglary levels.

Displacement

- There is no evidence that burglary, or other acquisitive crimes, were displaced to neighbouring areas.

Diffusion of benefits

- There is strong evidence that neighbouring areas benefited from the anti-burglary project on Boggart Hill, with burglary in these areas reducing by around 50%. Motor vehicle theft was also reduced in the Boggart Hill area. These findings are consistent with the evidence from offender research that prolific but non-specialist offenders commit offences across a range of crime types, and are willing to travel short distances but not too far from home to commit crime.

Developing crackdown and consolidation strategies

- It is important to monitor crime at the local area level to determine how the cycle of crackdown and consolidation should be continued. If the burglary rate begins to creep up following a previous crackdown - when offenders are released from custody or new offenders begin to emerge - then a new crackdown should be initiated for a short but intense period, after which further consolidation work should take place.

- It is possible that, with time, area offender profiles will be used more widely in routine investigation work. Then, perhaps deterrence, rather than incapacitation, would become the principle mechanism by which crime is reduced.

- Finally, it is the extent to which the police cracked down and then consolidated their position that makes this project unusual and innovative.

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1. Introduction

Between 1994 and 1995 Leeds Safer Cities team sought to catalyse local crime prevention initiatives by providing crime prevention expertise, establishing agency communication links, and funding projects to prevent repeat victimisation. At this time, police officers in the Community Policing Team (CPT) of Killingbeck division were experiencing success with an offender detection initiative, and aimed to capitalise upon it by extending it to prevent burglary. The Safer Cities team and CPT came together, with Leeds Housing Service and established a policy of surveying victimised properties - then applied relevant target hardening to prevent repeated burglary. This was done in Boggart Hill, which is the project area covered by this report. The present evaluation was conducted and written by an independent evaluation team. Data were available up to December 1996.

Boggart Hill forms part of the Seacroft Estate in the Killingbeck area of Leeds. It consists primarily of post-war semi-detached houses. A few are owner-occupied, but the estate comprises predominantly council-owned properties. There are a few larger residential blocks at one end of Boggart Hill, and a school on the estate is used as the local community centre. The Seacroft Estate comprises three police beats of which Boggart Hill is one - Beat 6. The names Boggart Hill and Beat 6 are, where necessary, used interchangeably in this report.

The anti-burglary initiative on Boggart Hill is described here in terms of two inter-locking phases. The first phase was a 'crackdown' by police upon known prolific offenders. This began in 1995. Police crackdowns are often understood to mean the 'cleaning up' of neglected problems with a 'crash programme'. Such crash programmes commonly involve a lot of enforcement activity, new investment in investigations and patrols. However, the Boggart Hill crackdown did not involve taking a lot of enforcement actions against a problem that had previously been ignored, rather it involved a more concentrated and narrowly focused initiative to tackle a local burglary problem. The Boggart Hill crackdown was in effect a crackdown on offenders at the small area level that did not involve any additional resources. Burglars in Boggart Hill were cracked down upon as a result of a reorientation on the part of the local beat officer and his sergeant. The second phase was the multi-agency initiative. It started in February 1996 and took advantage of the 'window' created by the crackdown, to consolidate its impact by target hardening to prevent repeated burglaries. Hence, even though the project was not initially conceived in these terms, it seemed appropriate to call the report 'Crackdown and Consolidation in Boggart Hill'.

The crackdown and consolidation

Discussions about a potential multi-agency anti-burglary scheme began in spring 1995. Detailed planning started some six months later. All agencies concerned

formed a steering committee, which also involved local residents, and was chaired by a local councillor. However, increased police activity to detect local burglars had already started as just one component of a policy move towards problem-oriented policing by West Yorkshire Police. The sergeant heading the CPT covering the area had written an outline for a burglary prevention initiative. Leeds Safer Cities gave this a focus upon preventing repeat victimisation, funded the programme in part, and brought in other agencies. The remaining multi-agency work, primarily in the form of activity to prevent repeat victimisation, was implemented in early 1996. Funding for security work came from Leeds City Council's Community Safety and Housing budgets, with work planned to continue until March 1997.

The four stated objectives of the Boggart Hill anti-burglary scheme were:

- To reduce domestic burglaries on one police beat
- To improve the quality of life for residents
- To make effective use of police resources
- To monitor whether savings to Leeds Department of Housing Services repairs bill can be achieved in the long-term by improving security to burgled dwellings.

This evaluation draws positive findings with respect to the first three objectives and scientifically inconclusive but generally positive findings with respect to the fourth. It was assumed that the massive reduction in burglaries brought a commensurate improvement in the quality of life for residents. Since no extra police resources were involved, only a change in strategy, it is also reasonable to infer an efficient use of police resources. Evidence indicates that the target hardening consolidation phase was also cost efficient for the Leeds Department of Housing. However, further research and evaluation is necessary to achieve certainty.

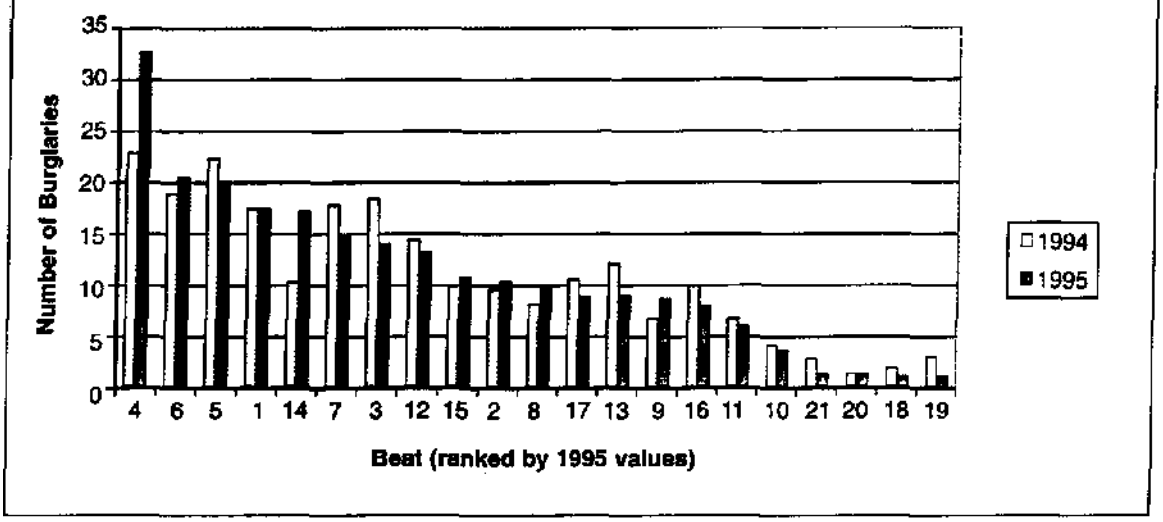
Structure of the report

Section 2 of this report looks at how the strategy of the Boggart Hill project was developed and how it was implemented. Section 3 looks at the results of the project by measuring the impact of the crackdown to see if burglaries were reduced. This section also looks at the impact of the consolidation upon levels of repeat victimisation. Section 4 examines whether the project led to crime being displaced elsewhere. It also considers whether the Boggart Hill project projected benefits to surrounding areas. Finally, Section 5 discusses the results of the evaluation and looks at how such projects might be used in future crime reduction initiatives.

2. Developing and implementing the strategy

Killingbeck Division is evenly split into two geographical areas, with a CPT in each. The CPT that introduced the crackdown initiative selected the beat in its half of the division with the highest burglary rate per household. As Figure 1 shows, Beat 4 had a higher burglary rate in 1995, but as it is in the other half of the division, this beat was not selected. To maximise the data available for the evaluation, burglary data was analysed for the entire division.

Figure 1: Pre-project burglaries per household by beat in Killingbeck Division 1994-5 (Boggart Hill = Beat 6)



The crackdown phase: area offender profiles and detecting prolific burglars

The catalyst for change in the police tactics against burglary in Killingbeck followed the introduction of a problem-oriented approach as part of the move towards community policing. Although officers had not received formal training in the problem-oriented approach, they had local knowledge of who the prolific burglars were in Boggart Hill. Consequently, they decided that a focused detection and incapacitation crackdown would be an appropriate way to tackle the problem, and would not require any additional police resources (the extra Safer Cities funding went to the later consolidation efforts).

There are several reasons why efforts to detect and incapacitate could be expected to have a significant impact upon high crime rates. These include:

- A small proportion of prolific offenders account for a disproportionate amount of all crime (Farrington 1992).
- Frequent offenders are often the most serious offenders (Wolfgang and Collins 1979).

- Frequent offenders are often generalists (committing many different types of crimes) rather than specialists (in one type of crime). This is particularly true for 'common' property crimes such as burglary and car crimes, rather than crimes such as computer fraud that require extensive specialist knowledge (Farrington 1992).
- Rates of recidivism are high and increase with further involvement with the criminal justice system: burglars continue even after imprisonment or other punishment, and those imprisoned the most often are also those most likely to offend again (Oldfield 1997).
- Burglars will generally target houses close to where they live (Rengert and Wasilchick 1985; Wright and Decker 1994).

The crackdown used what may at first appear to be a fairly traditional approach, but as a 'focused' operation it is more intense and systematic than routine policing approaches. West Yorkshire Police have access to records of previous convictions of offenders, and to criminal justice system records of who is currently in prison or young offender institutions. The trawl of records, combined with local knowledge of the community beat constable and sergeant, led to the development of a profile of local burglars. Burglars living in the Boggart Hill area were included in the profile if they had all of four characteristics. They had to be:

- A known burglar (having a prior record).
- A prolific burglar (who would account for a disproportionate amount of burglaries).
- Currently 'at large'.
- Known or suspected to be active in undertaking burglaries.

Offenders and their modus *operandi* were then matched to burglaries as they occurred, and focused investigative efforts were made to see if there was enough evidence that they were guilty. During 1995, the fourteen most prolific 'known' burglars were identified, targeted and arrested.

The detection crackdown that was implemented in Boggart Hill was conceptually simple - catch them at it or find evidence of their burglary or other criminal activity, and anticipate that courts will take them out of circulation via imprisonment. More specific details of the detection and follow-up activity are illustrated in case studies detailed later in this section.

The aim of this method is to reduce burglaries through incapacitation and also by generating a general deterrent effect upon burglars in the area who learned of the crackdown.

One important aspect of this 'crackdown' is that it did not involve the allocation of special resources to the area. Rather, it relied on a re-allocation of existing resources, by using the local community beat officer and the sergeant who oversaw the activities of beats for half the division. Of course, burglary and burglars did receive an unusual allocation of resources because the existing police resources for the area were particularly concentrated upon them.

The community beat officer provided the details from which the following two case studies were taken. Although there was some variation in the detection, arrest, and incarceration sequence, these case studies provide good examples of specific activities, the general orientation of the police work and how it entailed a shift in local policing practice.

The first case study (Box 1) demonstrates specifically how the crackdown worked in cleaning up a neglected situation with a crash programme of traditional

Box 1: Case study of offender detection

The identified burglar was a male, aged twenty, who lived in the project area. He was known to have a heroin habit with an estimated cost of £100 per day. He had been linked to over 100 offences of burglary between 1992 and 1995, of which there was sufficient evidence to pursue about half.

The first stage in the detection process was based on local knowledge of the police officer involved. The aim was to establish a possible connection between the release of this known offender from a custodial sentence and the emergence of a pattern of bogus official-type burglaries by deception (burglary artifice) on Boggart Hill.

Further research by the police officer showed that there were similarities between the type of victims chosen (the elderly), who gave similar descriptions of the perpetrator. These facts, combined with the relative rarity of burglary artifice as a *modus operandi* made it highly likely that the same offender committed these burglaries. The second key step was to investigate the record of previous activities of the suspect. The same offender had previously burgled some of the recently victimised targets. Combined with the fact that the pattern emerged once the known offender had been released, this presented good circumstantial evidence, which warranted further investigation.

The nail in the coffin was to tie the offender irrevocably to the location of at least some of the burglaries. The third step of the process involved taking fingerprints from the houses of recent burglary victims for comparison to the fingerprints of the suspect. These were on police records due to his previous convictions. It resulted in three positive identifications.

The story did not end simply with the irrevocable evidence. The offender was known to use several addresses, at which he was sought and arrested. For the three offences he received a custodial sentence of five years.

This pattern of burglaries on the estate came to an abrupt end. The offender involved subsequently indicated that he might admit to 150 additional offences.

detection methods. A local crime trend was identified. A specific crime-type was targeted, with particular attention to burglary artifice. This was then linked to knowledge of prolific offenders, and changes in their availability (recent releases, and the like). Four steps of specific investigative research were undertaken: the examination of victim interviews; examination of the specific *modus operandi;* identification of a likely local offender from police records; comparison of scenes of crime officer fingerprint evidence to existing fingerprints on police records. Each step narrowed the case down and homed in on the suspect.

The second case study (Box 2) illustrates further aspects of the focused detection approach. The impact upon other crimes can be significant even if they are not susceptible to proof. In this case study, an offender picked up for a bag snatch subsequently asked for 150 offences to be written-off. The case study also demonstrates the importance of emphasising remand on bail where the offender is highly prolific. The fact that the offender also operated in nearby beats and across crime types gives a specific instance of what is later analysed in terms of the diffusion of benefits from an otherwise geographically limited initiative.

Box 2: Case Study 2 of Offender Detection

This known burglar was a local resident. He was known to have a heroin and amphetamine habit estimated to cost £100-£150 per day. Between May 1994 and December 1995 this offender had been arrested 17 times. When he was arrested leaving the scene of a handbag snatch in an area where a series of similar offences had occurred, the beat officer took the opportunity to follow-up on the case after the arrest, as described below.

A key element of this case was that the offender was remanded in custody. This can be a critical element in terms of crime prevention. Many offenders commit crimes while remanded on bail awaiting trial (Morgan 1992; Gamely 1994; Burrows et al 1994). One of the initiatives undertaken by West Yorkshire Police was to place an emphasis upon remand in custody, thereby removing a spell during which offenders are known often to be particularly prolific. An alleged loophole (from one perspective) of the British criminal justice system is that offences committed while on bail are not usually considered at trial, particularly if they are of the same type as the trial offence. The offender can ask for these offences to be 'taken into consideration' upon sentencing, so that they rarely have a significant effect upon sentence. This can make bail criminogenic and act as a reward to offending on bail. In this case, the case presented by the police was sufficiently strong to ensure the offender was remanded in custody.

At trial, this offender was given a three and a half year prison sentence. When interviewed in prison he admitted to 150 additional crimes, primarily in the project area and surrounding beats.

It should be emphasised at this point that the 'crackdown' phase relied upon traditional policing practices and involved some very routine actions. With traditional policing methods, the response to the burglary problem would have ended there. The most important and innovative part of this project was the consolidation phase, which is described in the next chapter

The consolidation phase: preventing repeat burglaries

Other multi-agency work took place during the course of the project aiming to impact upon crime. A local community centre, and the introduction of two outreach youth workers in 1996 were intended to reduce the involvement of young people in crime in the area. The timing of these initiatives means that any associated crime reduction benefit derived from them would have begun during mid-or-late 1996. A local 'good neighbours' scheme worked with the elderly to address the concerns of those aged over 59 on the estate. Although the elderly are known to be among the least victimised sections of the population for many crimes {see e.g. Mayhew et al. 1992), they often have the greatest fear of crime and feel the most vulnerable. One of the case histories of the offenders arrested on the estate demonstrates some potential for feeding crime prevention information to this section of the population. In that particular case, the offender had dressed as an official to make it easier to burgle elderly people.

In early 1996 the multi-agency anti-burglary panel sat for the first time. The panel had been created to deal with issues identified in a number of earlier meetings between a motivated local councillor, Leeds Safer Cities Scheme, Leeds Housing Service and West Yorkshire Police. The panel adopted a crime prevention approach to repeat burglaries.

A key factor influencing the development of this repeat victimisation work was to establish whether security improvements to the homes of victims would, in the longer term, reduce the repair-related costs of the local housing agency. Clearly, preventing repeat burglaries should save money from subsequent repairs after a burglary. The initial intention was to implement and evaluate a project that could then be replicated across the Leeds area. However, this part of the initiative took place in the wake of the offender crackdown, which had reduced burglaries greatly. This report does not aim to evaluate the actual cost-effectiveness of preventing repeat burglaries, as this work is inextricably associated with the offender crackdown part of the initiative.[1]

Several characteristics of burglars and burglary justify the need for the type of consolidation phase used in the Boggart Hill anti-burglary initiative:

1 Reports *of other projects aimed at preventing repeat burglaries now* strong!}' suggest *that such strategies are cost effective (see Pease 1998 for a review of repeat victimisation and policing).*

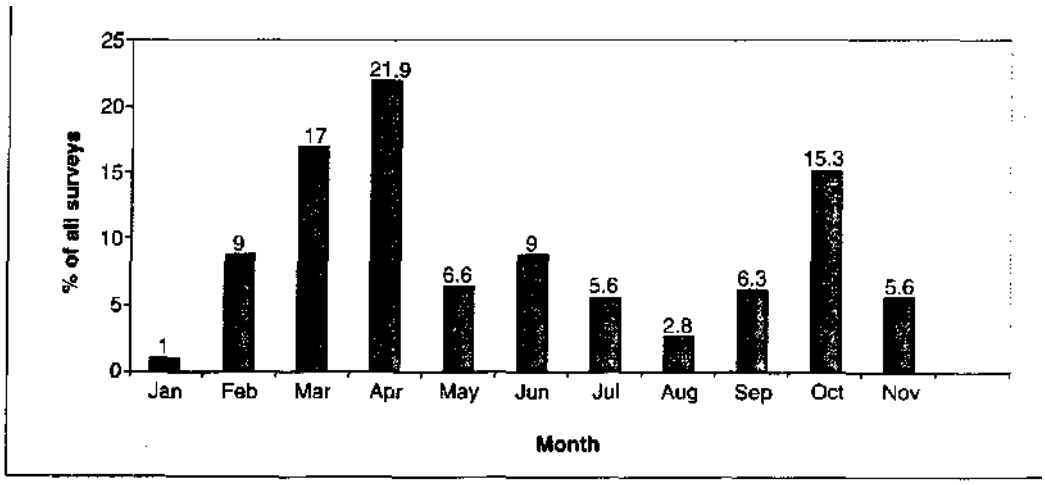
- Burglars are often opportunists - taking opportunities that arise by chance or are seen - rather than extensive planners.
- The same houses that are burgled once are likely to be burgled again (Forrester et al 1988, 1990).
- Repeat burglaries often occur sooner rather than later (Polvi et al. 1991: Burquest et al. 1992).
- Victim interviews suggest repeat burglaries are often part of a series by the same offender (Chenery et al. 1996), and the same offenders often commit repeat burglaries (Everson and Pease, forthcoming).
- Burglars can be deflected away from a potential target by relatively small adjustments to 'cues' that they use to determine whether a target is appropriate. For example: unusual signs of police activity or target hardening measures (Laycockl985).

The target hardening of households, additional to normal repair work, began in earnest in early 1996. Burgled households received a security survey, and then target hardening was undertaken.

Implementing and monitoring consolidation

The best available indicator of the extent of implementation of target hardening was the count of security surveys undertaken. At the start of the target hardening, households that had been burgled at any time over the previous six months were also surveyed and target hardened. This means that of the 288 surveys conducted

Figure 2: Surveys of victimized properties Jan-Nov 1996: percent of surveys conducted in each month (N = .288)



between January and November 1996, a greater number of surveys occurred at the start of the year (Figure 2). In fact, the number of surveys is large in February but climbs steadily through March and April, in line with the nature of more speedy implementation of a practice once its sequencing is routinised and its workings familiar. Once this large 'backlog' of work had been overcome by April, the number of surveys required falls off to match more closely the actual rate of burglaries reported.

The target hardening measures adopted were appropriate to the prevention of a subsequent burglary so long as the burglars relied upon the *modus operandi* used in previous burglaries of that property. Target hardening involved the introduction of additional door and window locks, and the removal of poor and low quality materials (e.g. frames) that had previously made the property vulnerable to burglary. The advantage of this approach, once fully underway, is that the police and the housing department did not have to survey and target harden properties all at one time, which would have been an intensive and costly endeavour. Rather, they could allocate resources where and when they were most needed on a steady but continual basis, as a form of drip-feeding preventive resources.

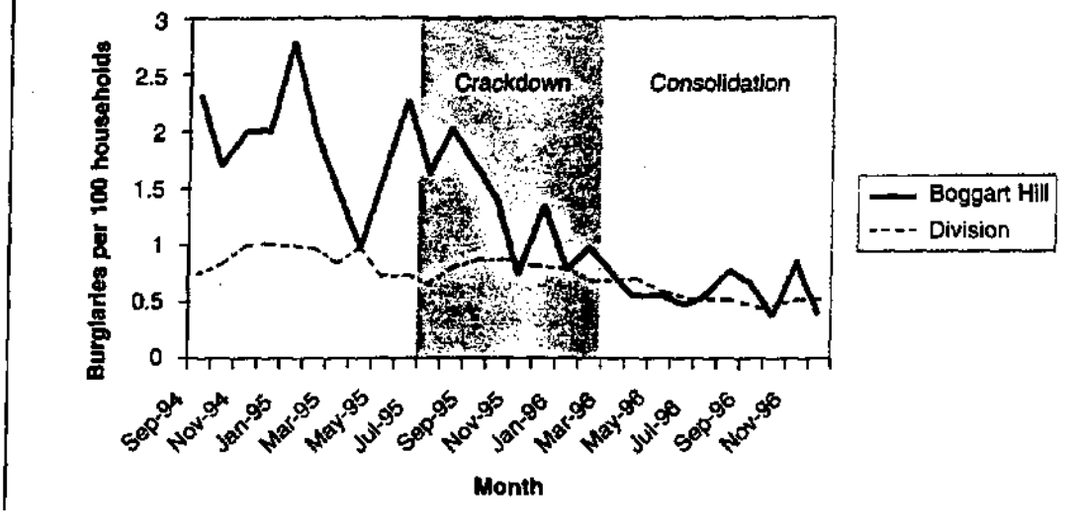
3. Did it work?

Different types of analysis were used to evaluate the impact of the project from different angles. This is a form of triangulation. Triangulation massively increases confidence in the conclusions that can be drawn when different valid measures all support the same finding. When combined with strong evidence relating to the mechanism and logic of the intervention, triangulation is probably the best means by which a retrospective evaluation can achieve statistical surety close to that of an experiment, but typically for a fraction of the cost. This section explains the different means adopted to evaluate the impact of the Boggart Hill project and presents results of the success of the programme.

Impact of **the** crackdown

There was a sudden and dramatic drop in burglaries in Boggart Hill during the second half of 1995. It was continued and maintained in 1996. The previously anomalous high burglary rate in Boggart Hill fell towards that of the divisional mean for the whole of Killingbeck (Figure 3).

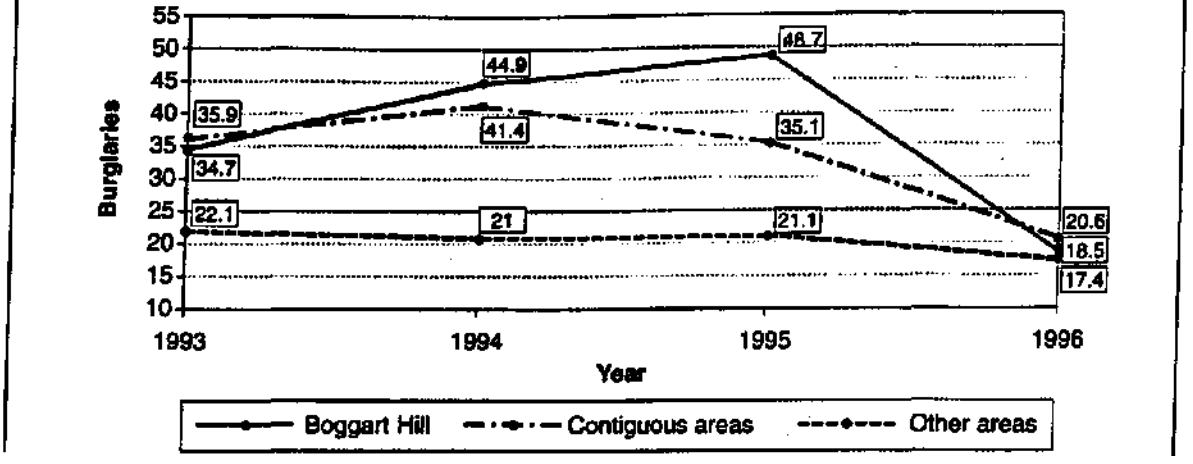
Figure 3: Burglaries in Boggart Hill vs. Rest of Division Sept. 1994-Dec. 1996



Data were examined from 1993 onwards in order *to* see whether the initial high burglary rate in Boggart Hill might have been a temporary blip. Boggart Hill had significantly higher burglary rates than the remainder of the division during 1993, 1994 and 1995, which fell close to the divisional mean in 1996 (Figure 4). Between 1995 and 1996, burglary dwelling in Boggart Hill fell by 62%, in contiguous (neighbouring) areas by 41%, and by 18% in other areas.[2]

[2] *In the next section of* this report *there is supporting analysis which concludes that the drop in burglaries elsewhere may be an additional benefit of the Boggart* Hill *project, in the section titled 'diffusion of benefits'.*

Figure 4: Mean monthly burglaries in Boggart Hill, contiguous and other areas 1993-1996

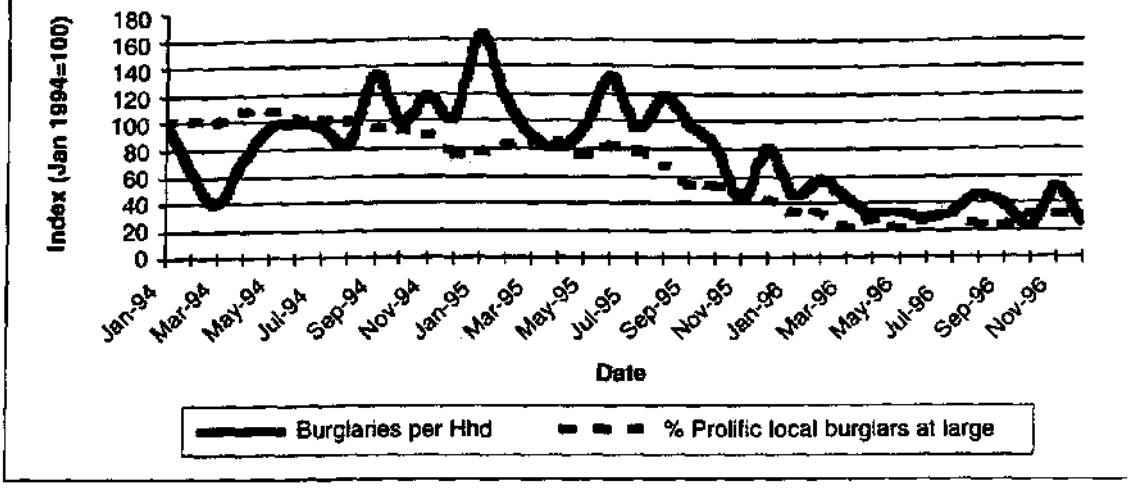


A second key indicator of the crackdown effect was to correlate the rate at which the crackdown was implemented and compare it to the change in burglaries. Offenders were arrested and placed in custody over a period of months, and so any impact might be expected to track this rate of implementation. To examine this, an index of 'burglar availability' was developed. This measures the rate at which the identified burglars, currently at large, were taken out of circulation (i.e. no longer available for 'business'). At the start of the crackdown, all burglars were 'available burglars' and this level of 'availability' should be thought of as an index of 100. By early 1996, a low availability score of 20 was reached when 80 percent of the identified burglars were in custody. This index is useful because it maintains a consistent and readily understandable measure of the number of potentially active burglars in an area.

There was a clear similarity in the trend of available burglars and the burglary rate (Figure 5) and the correlation between the two is highly statistically significant. Furthermore, the level of statistical significance increased when a time-lag was introduced to account for the fact that the impact of a burglar being taken out of circulation would not register in monthly police burglary statistics until the following month.[3]

[3] *When burglar availability goes over 100 for pan of 1994 this is simply because the chart of burglars already at large was indexed at 100 in January 1994, after which time some of the prolific offenders were released from custody.*

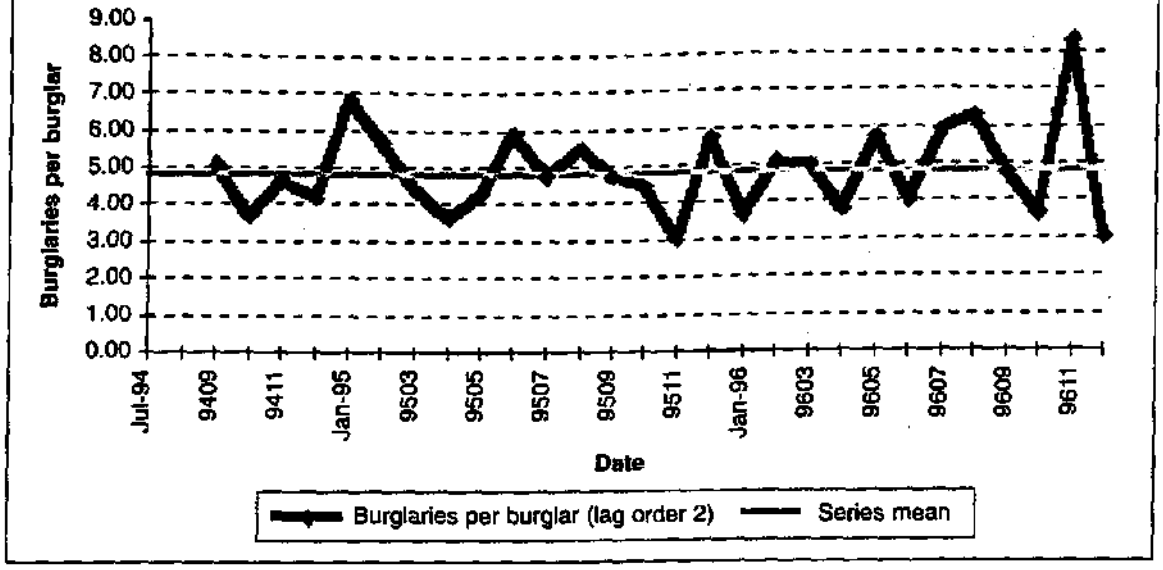
Figure 5: Trends in burglar 'availability' and burglaries per household in Boggart Hill 1994-1996



To provide another indicator of what was occurring in Boggart Hill, the number of burglaries per burglar at large was calculated (Figure 6). This was done by dividing the number of burglaries per month by the number of known prolific burglars available. This means that if there are 10 burglars and *50* burglaries per month, then there are only 5 burglaries per burglar. Using this calculation, if there were only 3 burglars and 15 burglaries, there are also only 5 burglaries per burglar. Consequently, assuming that known prolific burglars offend at the same rate and account for all burglaries, then even with changes in the number of 'available' burglars, the rate of burglaries per burglar would remain constant. At first sight this should appear to be an implausible assumption since we would expect different burglars to offend at different rates. However, for the period July 1994 to December 1996, there is a high consistency in the number of burglaries per burglar at liberty (Figure 6), with some random variation, as would be expected, around the mean level of around 5 burglaries per month per burglar. This suggests, somewhat surprisingly, that the assumptions are correct and that the number of prolific burglars active in the area almost wholly determines variations in burglaries. In other words it appears that, at least in Boggart Hill, it is not that there is a pool of burgling opportunities which are taken up and shared among the available burglars, but that burglars offend at a fairly uniform rate. In this area at least, the amount of burglaries reduced is explained by the reduction in burglars 'at large' in the area.

It is clear that the indicators of impact developed here, particularly when combined with the following analyses of preventing repeat burglaries and the diffusion of benefits later in this report, provide very substantial evidence that the 60% drop in burglaries is attributable primarily to the project.

Figure 6: Burglaries per burglar at large on Boggart Hill, July 1994-Dec 1996



Impact of the consolidation

The effect of the efforts to prevent repeat burglaries on Boggart Hill was less clear cut, due to the time frame under consideration. Basically, a follow-up evaluation one year after the present one would be needed to determine the impact of the consolidation phase with any certainty. However, the concept of a crackdown-consolidation *cycle* is likely to be of strategic importance for future police work, and so it is hoped that this preliminary analysis will begin the process of developing and examining the concept.

There are always problems with examining the precise effects of crime prevention schemes that have more than one component. This was recognised in the Kirkholt Project (Forrester et al. 1988, 1990), where the strong view was taken that the best crime prevention strategy was a combination of elements, which made sense and had previously been successfully used in other programmes. In the same way, Boggart Hill's strength as a crackdown-consolidation cycle paradoxically makes it difficult to evaluate the precise impact of the repeat victimisation component. To break the issue down, it is important to look very carefully at the specific characteristics of the repeat victimisation component.

1. Because it had been in place for only a few months, the time frame over which it can be examined is short, and is also the one in which implementation problems would be experienced.

2. Repeat victimisation has a built-in lag in its effect. On day one of a conventional target hardening against burglary programme, all hardened targets are protected. At the beginning of a repeat victimisation project, nothing happens until after someone is victimised. Only then is their property target hardened. In fact, from this perspective, nothing happens until after someone is victimised. The fact that repeat victimisation directs attention to places at highest risk means that it quickly becomes a cost-efficient approach, as is evidenced in Webb's (1997) work in Burnley - hut there is a lag.

3. After a successful prior crackdown, the rate of burglaries is much lower. It is easiest to demonstrate a preventive effect when the level of crime is high. If repeat victimisation prevention measures had been implemented before the crackdown in Boggart Hill, it would have made the crackdown element difficult to assess because of a lower baseline. The point is even more important since emerging evidence suggests that prolific offenders are more liable to burgle repeatedly the same home, which means that the crackdown will impact most on repeat victims.

All this does not mean that the repeat victimisation approach cannot in time be shown to work in Boggart Hill. A method is outlined below whereby the expected rate of victimisation is calculated and compared with the actual rate, and there is a tentative conclusion of an effect. The difference between the expected and actual rate provides a good indication of the incremental effect *of* the repeat victimisation component of the project.

Preventing repeat burglaries

Three separate analyses were developed to examine the impact of the prevention of repeat burglaries. The first indicator compared burglaries on Boggart Hill in the second half of 1996 to those in the first half, on the assumption that preventing repeat burglaries would take some time to show effect. In fact, no further reduction in burglaries could be distinguished on this basis, almost certainly because the offender detection efforts in the crackdown had been so successful in reducing burglaries. The second indicator examined household level data and compared the proportion of single and repeat burglaries by beat for 1996 for all beats in the Killingbeck division. The rationale was that an effect in Boggart Hill, even if confounded when Boggart Hill alone was examined, might be distinguishable when a comparison was made to other beats. However, no difference between Boggart Hill and other beats was found, which is probably attributable to the fact that repeat burglaries on Boggart Hill were already at a level similar to the rest of the division because of the offender detection work.

The third indicator is the most innovative of the three and will be explained in more detail. The indicator was to compare the observed and expected level of burglaries on Boggart Hill. The expected level of burglaries was estimated from the number of prolific burglars known to be available (since from the previous analysis this relationship is known to be strong). If the actual (observed) number of burglaries is less than that predicted, then it may be attributable to the efforts that were made to prevent repeated burglaries.

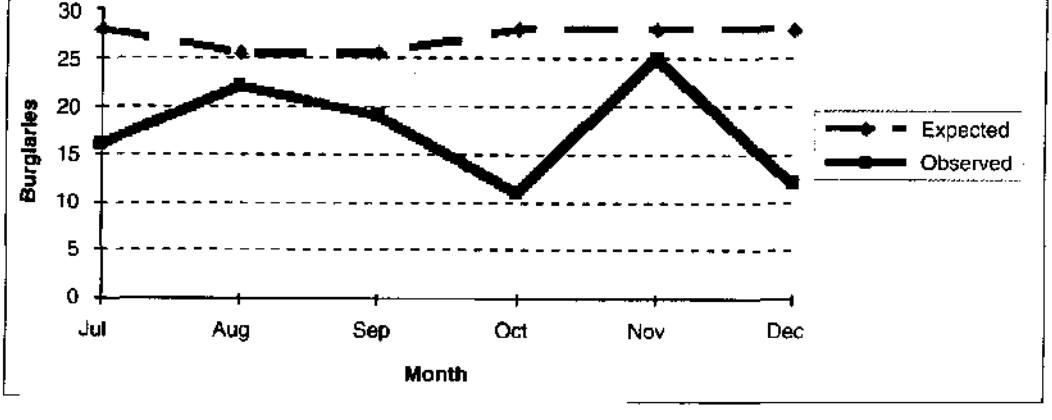
The expected level of burglaries was calculated using OLS regression, with burglaries as the dependent variable and burglars as the independent variable, for the period January 1994 to June 1996. The resulting equation was:

Burglaries = 17.94 + (2.94 x the number of prolific burglars at large)

For the reader who is unfamiliar with ordinary least squares (OLS) regression, the origin and meaning of the equation is not self-evident. In practical terms, what it means is that at any point in time, the number of expected monthly burglaries would be about 18 plus about another 3 for each prolific burglar who is at large. For example, if there were six prolific burglars available, there would be 36 expected burglaries (since 17.94 + (2.94 x 6)= 35.58). The proportion of variation in burglaries accounted for by variation in the number of burglars was 32%, and the relationship was statistically reliable (p = .0011).

Using the number of burglars known to be available in the second half of 1996, the number of expected burglaries was calculated. Figure 7 compares the observed and the expected levels of burglary by month.

Figure 7: Observed and expected burglaries in Boggart Hill, July to December 1996



DID IT WORK?

The actual level of burglaries was consistently below expected levels in the latter half of 1996 (Figure 7). If burglaries had been committed at the rate of the pre-consolidation period then there would have been more offences in Boggart Hill than there actually were. The absence of 57 predicted burglaries could very tentatively be attributed to the repeat victimisation component - since 162 were expected and 105 experienced over the period. This represents a provisional 35 percent reduction.

The results of this analysis are tentative, but they should not be quickly dismissed. It is possible that, after refinement, this approach could prove a useful means of distinguishing the effects of offender-oriented and offence-oriented approaches to crime prevention[4].

4 The authors *would particularly welcome suggestions,* criticisms and examples *of analyses to take this further.*

4. Knock-On effects: displacement or 'diffusion of benefits'

Successful crime prevention projects always have to defend themselves against the criticism that crime was simply displaced to a different location or to a different type of crime. The main possible cause of displacement that could occur in this instance is that the reductions in crime were due to a shift in offending patterns to targets in other areas, when offenders learned of the local anti-burglary initiative. However, there is now a wealth of empirical literature showing that displacement often does not occur and that where it occurs it is typically far less than total (see Hesseling 1994 for a review). In addition, the possibility that the opposite of displacement occurs has been mooted and termed a 'halo' or 'free rider' effect (Miethe 1991). Its most thoroughgoing exposition is to be found in Clarke and Weisburd (1994) who term it the 'diffusion of crime prevention benefits'.

A related phenomenon, has been called 'domino prevention' (Farrell et al. 1993). Domino prevention is where other actors and agencies gain breathing space from successful crime prevention efforts and become empowered to take action that reduces crime further in the same or other locations. It could also be where otherwise distinct and disjointed efforts begin to work together in a mutually reinforcing way. Such benefits are really just knock-on effects of crime prevention efforts.

The arguments for looking for a more widespread effect of this highly localised and crime specific project are relatively simple:

- Prolific burglars were arrested in Boggart Hill, and since these prolific offenders would be expected to commit crimes across a range of types, then some reduction in other types of crimes might be expected. Motivation seems to be primarily acquisition of property, and so they may be more likely to commit other acquisitive crimes - but these offences may, in turn, be reduced if these offenders are 'taken out of circulation'.
- Local prolific offenders might also commit crimes of the same type near to but outside the Boggart Hill area. Offenders will burgle houses in areas within easy walking distance of their home. Consequently, a reduction in crime might be expected in areas neighbouring Boggart Hill, but this effect would be expected to decay as one moves further away.

This section presents analyses to test these hypotheses. The authors are not aware of any previous analysis of this type. Practitioners willing to take the conclusions at the end of this section on trust are invited to skip the necessarily technical content of the next few paragraphs.

What follows divides Killingbeck Division into three areas: the Boggart Hill project area (B = beat 6), neighbouring areas (C = beats 5,7 and 16), and other areas (O = the remaining 17 beats of the division). For each crime type considered (Tables 1 to 4), the average monthly crime incidence for different types of crime are examined in the pre-project period (1994), during the implementation of the crackdown (1995) and during the time when the crackdown has taken effect and consolidation measures were being implemented (1996). Analysis of variance (ANOVA) was conducted for each year to show whether there was a statistically significant difference between the crime rates across areas. The F-ratio is the indicator of statistical significance relating to the ANOVA and is shown in each table. The Newman-Keuls multiple comparison test for significant differences between the means for each year is shown in the last row of each table. This shows which of the areas did not have a statistically significant difference between the number of crimes in a given year. The three areas are shown as either B (Boggart Hill), C (Contiguous. Meaning neighbouring) or O (Other Areas), and those without a significant difference are underscored. For example, in Table 1 in 1995 there is a significant difference in the rate of burglary dwelling between all three areas, with a mean 48.7 monthly burglaries in Boggart Hill, 35.1 in neighbouring (contiguous) beats, and 21.1 in other areas. This is shown as BCO for the Newman-Keuls comparison test. However, in 1996 there is no significant difference in the burglary rates between the three areas. Consequently, this is shown (underlined) as BCO.

Burglary dwelling

Burglary has already been examined to some extent in this report. Figure 4 showed annual burglary data for Boggart Hill, neighbouring beats, and other areas in the Killingbeck division. The data are shown below in Table 1 together with F-ratios and the Newman-Keuls test for significant differences.[5] In 1993, burglary incidence was significantly higher in Boggart Hill and adjoining beats than elsewhere in the division. This remained the case, only with larger differences in 1994- In 1995 the incidence of burglary dwelling peaked in Boggart Hill. It remained high in neighbouring beats, far above the rate for other areas. This was the time in which the crackdown was being implemented, but had only partially begun to have an effect. By 1996 the crackdown effect is evident with the consolidation work underway. In 1996 there was no significant difference in burglary incidence between Boggart Hill, adjoining beats, and the other beats in the division. A further test used the repeated measures analysis of variance approach for burglary dwelling between 1994 and 1996 and yielded an F-ratio of $F= (4,36)\ 6.74$ ($p<.001$). This shows that the yearly difference between areas is statistically significant.

[5] This is *the only table in this section that obtained additional data for 1993 (as a belt-and-braces approach to* reduce *the* likelihood *of the effect being* attributed to regression *to the* mean).

Table 1: Mean monthly burglaries in Boggart Hill, Neighbouring and Other Areas 1993-1996

	1993 Pre-project	1994 Pre-Project	1995: Detection Crackdown Begun July	1996: Continued Detection plus Consolidation	% Change 1994-1996
Boggart Hill	34.7	44.9	48.7	18.5	-59%
Contiguous (neighbouring) Areas	35.9	41.4	35.1	20.6	-50%
Other Areas	22.1	21.0	21.1	17.4	-17%
F-Ratio (Significance)	$F_{2,}$=15.7 (p<.001)	$F_{2,}$=35.7 (p<.001)	$F_{2,}$=24.5 (p<.001)	$F_{2,}$=0.9 (NS)	
Newman-Keuls	BCO	BCO	BCO	BCO	

Notes: NS— No significant difference.

Newman-Keuls Multiple Comparison Test underlines areas between which there is no significant difference in the means.
B= Boggart Hill, C= Contiguous (neighbouring) Area, and O= Other

Comparing the pre-implementation period of 1994 to 1996 when the impact becomes evident in annual data, the drop in burglaries is greatest in Boggart Hill (59%). However, neighbouring areas experience a halving of burglaries (50%). There is a drop in average monthly burglaries of dwellings in the rest of the division, but far less at 17%. This accords with an interpretation that the prolific local burglars also committed burglaries nearby, which were subsequently reduced, but that they committed fewer burglaries further away, which fell by a far smaller amount. Further investigation of burglaries in other beats suggests that the reductions were primarily due to a drop in burglaries in beat 4 (the other management half of the division) where some offender-targeting police work was also undertaken. Comparing Boggart Hill burglaries in 1996 to 1994 the reduction was 59%, and when comparing 1996 to 1995 it was 62%. The reduction is thus estimated at around 60%.

The conclusions in relation to burglary are therefore:

- The drop in burglaries was 60% and can be attributed to the crackdown and consolidation efforts with reasonable certainty.
- There was no displacement of burglary dwelling to neighbouring or other areas.
- There is strong evidence that neighbouring areas benefited from the

anti-burglary project on Boggart **Hill,** with burglary in these areas reducing by around 50%.

The following sections examine the possibility of displacement or diffusion to other types of acquisitive crime.

Theft of motor vehicles

Thefts of motor vehicles (including the taking of a motor vehicle without consent, 'twocking') are a natural first point of call for examining across-crime-type diffusion of benefits. While thefts of motor vehicles were lower in Boggart **Hill** than elsewhere in 1994 they were not statistically significantly different (Table 2). A similar pattern of theft of vehicles held in 1995. In 1996, theft of motor vehicles fell everywhere, but the effect was greater in Boggart Hill (a 51% reduction), than in adjoining areas (36% reduction). The Newman-Keuls multiple comparison test revealed that neighbouring and other areas experienced similar rates after the Boggart **Hill** crackdown.

Table 2: Mean monthly thefts of motor vehicles in Boggart Hill, Neighbouring and Other Areas 1994-1996

	1994: Pre-Project	1995: Crackdown	1996: Consolidation	% Change 1994-1996
Boggart Hill	12.4	12.3	6.1	-51%
Contiguous (neighbouring) Areas	18.7	18.6	11.8	-36%
Other Areas	17.3	16.6	11.9	-31%
F-Ratio (Significance)	$F_{2,33}$=1.59 (NS)	$F_{2,33}$=2.19 (NS)	$F_{2,33}$=3.08 ($p<.05$)	
Newman-Keuls	BCO	BCO	BCO	

Notes: NS= No significant difference.

Newman-Keuls Multiple Comparison Test underlines areas between which there is no significant difference in the means.
B= Boggart Hill, C= Contiguous Area, and 0= Other Areas.

Damage to motor vehicles

Data on thefts from motor vehicles were not available for this analysis.[6] Damage to motor vehicles might serve as a useful indicator of thefts, particularly attempted thefts from motor vehicles, and when combined with theft of motor vehicles helps

6 *The data file of crimes* in *the division had an error* relating to *thefts from motor vehicles that was not* noticed until too *late IN the analysis.*

to strengthen the general picture of the impact of the project on acquisitive motor vehicle crime. Mean monthly incidents of damage to motor vehicles are far lower than for theft of motor vehicles or burglary, but some pattern is evident and consistent with the other findings presented. Although there was no statistically significant difference across areas in each year, motor vehicle damage in Boggart Hill fell by 40% and in neighbouring areas by 20%, while elsewhere the mean number increased slightly. In 1996, the significance level of p=0.08 does not quite reach the traditionally required significance level of 0.05, but gives a strong indication that the drop in Boggart Hill and neighbouring areas was large.

Table 3: Mean monthly damage to motor vehicles in Boggart Hill, Neighbouring and Other Areas 1994-1996

	1994: Pre-Project	1995: Crackdown	1996: Consolidation	% Change 1994-1996
Boggart Hill	5.7	3.4	3.4	-40%
Contiguous (neighbouring) Areas	6.4	4.6	5.1	-20%
Other Areas	5.4	5.0	5.6	+4%
F-Ratio (Significance)	$F_{2,33}$=1.1 (NS)	$F_{2,33}$=1.72 (NS)	$F_{2,33}$=2.56 (p=.08)	
Newman-Keuls	BCO	BCO	BCO	

Notes: NS= No significant difference.

Newman-Keuls Multiple Comparison Test underlines areas between which there is no significant difference in the means.
B= Boggart Hill, C= Contiguous Area, and O= Other Areas.

Street **robbery**

After motor vehicle crimes, street robbery is possibly the next most likely acquisitive crime to be influenced in some way. In fact, robberies remain at such a low level (Table 4), that at least the conclusion can be drawn that there was no displacement to robbery within the project area or elsewhere. This is an important finding, particularly since even a small displacement effect from a high-volume crime of burglary dwelling would quickly become evident in robbery data. If, for example, only 25% of the monthly mean of 16 prevented burglaries (comparing 1996 to 1994) had 'become' robberies in Boggart Hill, the robbery rate would have increased eight-fold to a monthly mean of 4.5.

Table 4: Mean monthly street robberies in Boggart Hill, Neighbouring and Other Areas 1994-1996

	1994: Pre-Project	1995: Crackdown	1996: Consolidation	% Change 1994-1996
Boggart Hill	0.5	0.75	0.5	Numerically so few for % to be meaningless
Contiguous (neighbouring) Areas	1.3	1.8	1.3	
Other Areas	1.2	1.3	1.1	
F-Ratio (Significance)	$F_{2,87}=1.8$ (NS)	$F_{2,87}=2.4$ (NS)	$F_{2,87}=1.97$ (NS)	
Newman-Keuls	BCO	BCO	BCO	

Notes: NS= No significant difference.

Newman-Keuls Multiple Comparison Test underlines areas between which there is no significant difference in the means.
B= Boggart Hill, C= Contiguous Area, and O= Other Areas.

These findings could be taken to suggest that Boggart Hill's prolific burglars also committed car thefts, which were reduced 'as a bonus' when the burglars were in custody. Even if other factors, not considered here, were responsible for a general fall in theft of motor vehicles crimes across the whole division, this would not explain why the fall in car theft was far greater in Boggart Hill. In addition, no other explanations, though invited, were offered by the police officers, local agency partners (including residents) involved with the multi-agency group.

Conclusions

There was no evidence of any spatial displacement of burglaries from Boggart Hill to neighbouring areas or of tactical displacement to other crime types. In fact, there was evidence of a diffusion of benefits - reducing other crimes within Boggart Hill and also reducing burglary and other crime in neighbouring areas. The fact that the crime reduction was not as great in neighbouring areas and even smaller in other areas is consistent with the suggestion of a fairly local diffusion of benefits. Each of these findings is consistent with the evidence from offender research that prolific but non-specialist offenders commit offences across a range of crime types, and are willing to travel short distances, but not too far from home to commit crime.

5. Discussion and possibilities for the future

Two questions were repeatedly asked of the authors during the various stages of preparing this report. The first is whether the first phase of the project was really a crackdown. The second is whether it was really non-traditional policing, or just playing catch-up in a neglected area. There is no perfect answer to either question. With respect to whether or not the project involved a crackdown, the question seems to have arisen because the first phase did not involve the allocation of additional resources to the area. However there was a re-focusing of resources within the area. As a result, both vulnerable dwellings and the small group of known prolific offenders received special attention and resources. Hence the difference seems to be that special resources were reallocated from within rather that obtained from without. Perhaps this may even prove to be a preferable and a more practical form for implementing crackdowns in some instances.

The second question seems to imply that no responsible police force should ever allow any area to achieve a 'high crime' rate without it being noticed as such, and tackled accordingly. In reality, crime rates frequently do reach quite high levels in some areas. The question seems also to imply that the tactics used in the crackdown were merely those used in traditional policing. The answer is that detection and co-operation with other actors in the criminal justice system have for a long time been in the armoury of police work, but it is the extent to which this is done in a focused and systematic programme that makes it unusual and innovative. Perhaps in time, area offender profiles will be used more widely in routine investigation work. Then, perhaps deterrence, rather than incapacitation, would become the principal mechanism by which crime is reduced.

Developing area offender profiles

There has always been a list of the usual suspects, because many police officers already know the local villains and keep abreast of their movements and activities. The current project formalised this system into a specific list of known prolific burglars, their *modus operandi* and their specific whereabouts (in custody or at large). It may be that simply formalising the usual system in this way made a key difference. It certainly seemed to facilitate the proactive detection efforts that ensued.

In many local areas, the list of known prolific offenders will be fairly small. If the modus *operandi* of the usual suspects is known and accessible, such a list can probably be pared-down fairly quickly to a handful of likely offenders. These are the candidates for the crackdown. The prospect of such a conceptually simple tool being developed, probably in a computerised version, may be a good prospect for further examination and research. Such a system seems to make good sense, and would facilitate proactive detection by local area beat officers.

Developing crackdown and consolidation strategies

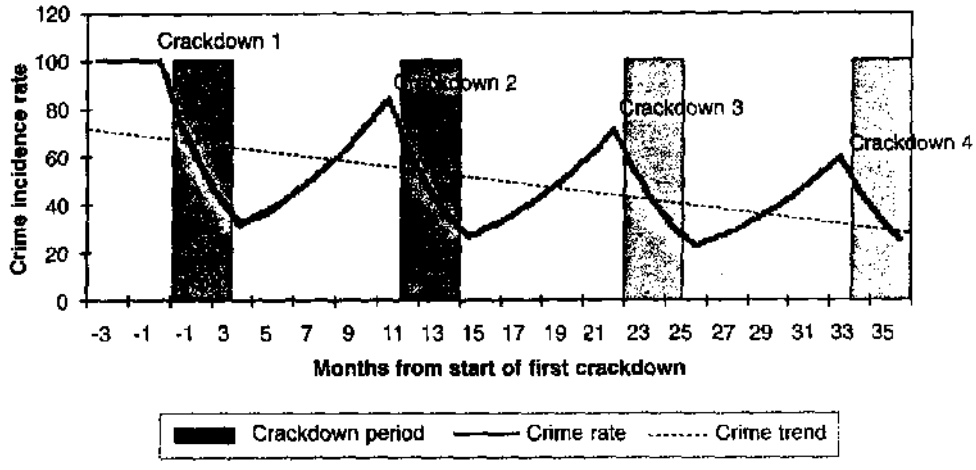
The authors recommended to the multi-agency group that a monitored cycle of crackdown and consolidation be continued in Boggart Hill. If the burglary rate begins to creep up, when offenders are released from custody or new offenders begin to emerge, then a new crackdown should be initiated for a short intense period, after which further consolidation work should take place. Ideally, the police and multi-agency panel in Boggart Hill would also undertake a further stage of evaluation once the repeat victimisation component of the initiative has had additional time to bed-in, and once offenders return after a period of imprisonment. What happens during these subsequent stages could be at least as informative as the analyses presented above.

Crackdowns of various types have almost certainly been around as long as policing itself. A crackdown is typically defined as the concentration of special resources for a limited period, upon an identified crime problem. Larry Sherman (1992) analysed a range of police crackdowns in the US, particularly those focused upon street drug dealing, and noted the frequent existence of a 'residual' crime prevention benefit since the effects could last beyond the term of the crackdown, although they then often rapidly decayed. More recently, Wright and Pease (1997) advocated the use of the crackdown and consolidation cycle as a possible means of overcoming the problem of the rapid decay of the crackdown effect.

The crackdown and consolidation concept and its use, in tandem with computerised crime analysis, is not yet fully established. While this is a neglected area and more research is needed, what follows aims to develop some of the possibilities by building upon the lessons learned from the Boggart Hill evaluation.

A hypothetical crackdown and consolidation cycle is shown in Figure 8. The Boggart Hill initiative contained only one crackdown and one consolidation period at the time of the present evaluation. There are four such cycles shown in Figure 8.

Figure 8: Hypothetical crackdown and consolidation cycle: one crime type in one area



The crime rate in Figure 8 is set or indexed at a hypothetical level of 100 at the top left. It stays at this level for three months. When a three-month crackdown occurs, this greatly reduces the crime rate (the crackdown period is shaded darker). For visual clarity, the crime rate is assumed to drop to 75% of its previous level after each crackdown. This produces a diminishing overall crackdown effect. After the crackdown ends, its effect continues for one month, then the decay sets in as a rise in crime. The decay is here set as an increase of 15% in crime compared with the previous month, and is the period in which the consolidation effort is introduced. Once the crime rate reaches 80% of the level it was at just before the start of the previous crackdown, then the second crackdown begins. The third crackdown begins when the crime rate is 80% of its level at the start of the second crackdown, and so on. There is what could be described as a 'downward ratchet effect' upon crime. The hypothetical cycle assumes there would be uniform time between cycles, but Wright and Pease (1997) envisage lengthening periods (and saved resources) between subsequent waves of the cycle.

There are a range of possible permutations of crackdown and consolidation (Table 5). A crackdown may use special resources or it may, as with Boggart Hill, involve a reallocation of existing resources to different tasks. It may involve an increase in the intensity with which a current crime control tactic is applied, or it may involve the implementation of a different tactic. The consolidation effort may involve a lower intensity application of the same tactic as the crackdown, or a different tactic.

Table 5: Crackdown and consolidation scenarios

Available Resources	Crackdown	Consolidation
Normal resources	1. New tactic	1. Resumption of old tactic 2. Continuation of new tactic that has naturally waned 3. Further new tactic
Special resources (higher cost)	1. Old tactic at higher intensity 2. New tactic	4. Resumption of old tactic 5. Further new tactic

The Boggart Hill initiative involved both, since the crackdown naturally subsided once the prime offenders were in custody, and the lower intensity detection effgrt ran alongside the prevention of repeat burglaries. The notion of the rotating crackdown described by Sherman (1992) is another example where different priority areas are targeted by the crackdown in turn, while the previous area still benefited from the residual beneficial effect of the crackdown. The rotating crackdown would add a further dimension to the crackdown and consolidation scenarios in Table *5,* as would the possibility of using cycles or waves of crackdowns targeting different crime types within the same area. A crackdown-consolidation approach could use varying periods for each phase, applying different tactics, mixed tactics and even, once the cycle is established, a mixture of faked publicity warnings that might produce a deterrence effect for minimal actual prevention and detection costs.

In Boggart Hilt, existing resources were focused upon a new crackdown tactic (detection rather than patrolling) which was then consolidated by continuing the tactic at a lower level along with the new tactic of targeting repeat burglaries. While, in the present context, the multi-agency group was able to muster additional resources for the target hardening, it is possible that, in other circumstances, the drip-feeding of crime prevention that this allows might enable it to be conducted without such additional resources.

It need not be long before routine analysis is used to guide crackdown and consolidation cycles. Police computers could periodically generate a list of those beats where particular crime types are greater than the divisional mean by a certain level, say by two standard deviations. The computer could then automatically identify a shortlist of contending prevention and detection strategies with tactics for implementation. This could be constantly updated from a Home Office database of strategies and tactics. After a crackdown, the program could monitor

automatically the crime level during consolidation, until it reached the step where the next cycle of the crackdown should begin. The possibility of developing such routine computerised crime analysis methods to aid crime prevention looks a promising prospect for policing in the near future.

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