European Crime Prevention Award (ECPA)

Annex I

Please answer the following questions in English language.

1. Is this your country's ECPA entry or is it an additional project. (Only one ECPA entry per country plus up two other projects)

UK ECPA entry

2. What is the title of the project?

"Repeat Victimisation – Road to Reduction" 'Predictive Mapping and Super-Cocooning in Trafford'

3. Please give a short general description of the project.

What is described in the following sections illustrates our journey of research, practical application, evaluation, amendment and further application. It demonstrates the value of embracing academic research as a means of producing enhanced operational effectiveness. The design from the initial concept has been altered dramatically throughout the course of implementation and analysis to make it more specific to the needs of the users. The primary aim of the project was to reduce Burglary Dwelling by disrupting the 'Optimal Forager'. The results demonstrated a reduction in this offence type and through analysis of the location a disruption of this type of offender. The approach was adapted from a review article by Ross and Pease 2007, 'Predicting where Lightning will Strike' relating to research conducted by Shane Johnson and Kate Bowers. This has latterly been enhanced by an effective systematic programme of cocooning and target hardening based on the communicability of burglary risk (Johnson and Bowers 2007). The Phase 1 response to that research involved examining the propensity of offenders to return to a familiar area and the placement of a capable guardian in these areas at the right time, attempting to disrupt the offending pattern of the 'optimal forager'.

This approach has now been operational for two years with results being favourable for the reduction of Burglary Dwelling. Trafford Police Basic Command Unit (BCU) saw a substantial reduction in Burglary Dwelling offences, outperforming its most similar groups both within Greater Manchester Police (GMP) and nationally.

Phase 2, built on phase 1 was more focused towards victims and how targeted intervention involving Trafford residents could further reduce Burglary Dwelling offences.

This project has used scientific research in a simple and cost effective manner to produce patrol plans with complimentary cocooning interventions. The established processes based on the scientific research combined with strong management have played a significant part in the 38.2% reduction in Burglary Dwelling offences over 2 years.

4. Please describe the objective(s) of the project?

Completion of the analysis led to the creation of one main objective with associated hypothesis to statistically test and two secondary objectives. Also built into the objectives were ways in which they would be measured.

Main Objective:
Reduce the number of victims of Burglary Dwelling offences within Trafford by disrupting the 'Optimal Forager'.

Statistical hypothesis of main objective to test:

Hypothesis – "There has been a statistically significant reduction in Burglary Dwelling offences."

Null Hypothesis – "There has not been a significant reduction in Burglary Dwelling Offences."

Secondary Objectives:

1) Provide crime prevention advice, distribute any available crime prevention products in key areas and provide reassurance to improve confidence of residents across Trafford.

2) Use this methodology to identify persistent problem locations to lead environmental survey sites.

The expected partnership objectives were to help reduce Burglary Dwelling offences by acting as capable guardians in the hotspot areas, to distribute crime prevention advice in hotspot areas and for Housing Trusts to improve locations by target hardening properties in risk areas.

5. How was the project implemented?

Planned Time Frames

Building on from the objectives of this work, a timeline of events was created (See Appendix 1), including development, implementation, evaluation and distribution of results for Phase 1 to maintain focus of police and partnership resources through the process.

It was decided that to effectively evaluate this approach, there would, if successful at each stage, be 3 stages of evaluation. The stages of evaluation would be at 3, 6 and 12 months. At each of these stages, evaluation would determine the future for the approach, whether there would be alterations made or simply a discontinuation. The project would look prior and post implementation, allowing statistical evaluation to be performed as well as comparisons to control samples locally and nationally.

6. Were partners involved in planning and/or development and/or implementation of the project? If so, who were they, and what were their roles?

A list of potential key partner agencies and additional support was drawn up that would be required for successful implementation of this project. These included:

- GMP - Divisional Officers, Crime Reduction Advisors, Intelligence Officers, Driving School Instructors
- Trafford Council - Community Safety Patrollers
- Greater Manchester Fire Service (provide additional capable guardianship after callouts)
- North West Ambulance Service NHS Trust (consequently deemed unsuitable due to perceived conflict with their primary purpose)
- Youth Offending Service
- Probation Services
- Registered Social Landlords (crime prevention advice and target hardening)
- The AA and RAC (provide additional capable guardianship whilst on downtime – Not successful)
- Victim Support

With the exception of North West Ambulance Service and the AA and RAC all the other agencies listed above have and continue to play a valuable role.

Primary thoughts on partner involvement were driven by a desire to increase the capacity of available capable guardianship outside the immediate police family. Having embraced departments within Greater Manchester Police in order to provide an enhanced patrolling presence in predicted areas, approaches were made to other agencies.

Trafford Council have been significant partners in the use of predictive mapping, with their Community Safety Patrollers, utilising the maps to allow them to patrol more effectively in areas of highlighted risk. They have also contributed financial resources to assist with associated Super Cocooning work.

The Trafford Department of Greater Manchester Fire Service is regularly provided with the predictive risk mapping so that they can drive through areas of risk on the way back to the fire station after attending a fire call. This is specifically to increase capable guardianship in those areas.

Youth Offending Service and Probation Service are active participants within an integrated offender management programme that is alive to members of the offending cohort who are living in or adjacent to highlighted risk areas. This prompts an enhanced level of timely intelligence to address such offending.

Registered Social Landlords – Trafford Housing Trust, which is the largest provider of social housing in Trafford, circulate the predictive risk maps to their grounds maintenance workers in order to raise their awareness to would be offenders frequenting areas of risk at pertinent times. The presence of these workers in such areas also increases the element of capable guardianship.

Trafford Housing Trust have also been energetic collaborators in the completion of site surveys in the location of current chronic burglary hotspots and have pledged considerable resources to address aspects of the built environment that may be judged to contributing to their existence.
Victim Support – accept and deal effectively with referrals concerning victims of burglary.

7. How did you build in plans to measure the performance of the project? Has the project been evaluated? How, and by whom?

Measurement of performance has primarily focused on crime reduction, specific to Burglary Dwelling offences. A significant aspect of this being reductions in repeat victimisation.

As the project was continued and developed for two years and broadened to include a second crime type, and latterly an additional tactical intervention, the assessment has been modified to reflect that and separated into two sections. Phase 1, reviews this first 12 months and Phase 2, detailing another tactical intervention and the review of its application.

Phase 1 - Seasonal Trend Analysis

Appendix 3 shows the 12-month prior and post implementation, accounting for seasonality. Results showed that the mean number of offences post implementation had reduced from 23.6 to 17.3 offences of Burglary Dwelling a week.

Since implementation there were three recalculations of the mean and standard deviation (SD), due to 8 weekly counts below the initial mean that was calculated. This requirement of recalculating the mean was not required in the 12 months prior to implementation. In 12 months post implementation there were 5 occasions where counts have dropped below 2 SD's, a phenomenon only seen once in the 12 month prior.

Peaks can still be seen post implementation, but now there is better understanding of the increases as there is not as much 'noise' from other, easily deterred offenders. Thus allowing "Investigators to Investigate".

Prior and post analysis showed that Trafford BCU had reduced the number of Burglary Dwelling offences from 1229 to 902 (-26.6%). Out of 12 BCU's in Greater Manchester, Trafford ranks 2nd in percentage decrease and 4th in count decrease. The BCU's with larger count reductions had almost double Trafford's count of Burglary Dwellings and during the analysis period had large numbers of force resources to combat the problem, which Trafford did not experience.

Phase 1 - Most Similar Group (MSG)

When compared to the control samples (MSG within GMP and Nationwide) results were impressive. Stockport BCU (which is the most similar to Trafford) showed a 7% increase in the

same time period whilst GMP as a whole showed a reduction of 9.8%, both far less than the reduction seen in Trafford.

Appendix 4 from iQuanta system, measures Domestic Burglaries by 1000 households against most similar groups nationally. The first chart indicates that prior to implementation burglary rates were amongst the worst across the groups and were higher than the mean. Post phase 1 indicates an improvement of four places with the level below the mean and post phase 2 is shown in the final chart with Trafford gaining another 3 position and below the lower mean. When running the graphs for all crime, Trafford only moved one position, which shows the vast improvement specifically within Burglary Dwelling offences.

Phase 1 - Statistical Testing

During the analysis stage, a statistical hypothesis was created to test the main objective of significantly reducing burglary dwelling.

Statistical Hypothesis of Main Objective to test:

Hypothesis – "There has been a statistically significant reduction in Burglary Dwelling offences."
Null Hypothesis – "There has not been a significant reduction in Burglary Dwelling Offences."

A time series analysis producing a T value was used to test this hypothesis on the counts of Burglary Dwelling offences in the 52 weeks prior to implementation against the 52 weeks post. The results showed a significant reduction of Burglary Dwelling offences at a 99% confidence level meaning the hypothesis could be accepted and the null hypothesis rejected

8. What were the results? How far were the objectives of the project achieved?

Phase 1 - Predicted Area Results

One of the most important questions is how does Trafford BCU know they have been successful in areas which they have targeted?. To do this a retrospective examination took place looking at 12 months prior to implementation and established how many offences we should see within each risk area. This allowed an evaluation to take place post implementation to determine if we have altered offending.

Analysis showed that prior to implementation 61% of Burglary Dwelling offences (752 out of 1231) occurred within the predicted areas - post implementation shows this figure is now 47% (433 out of 902) and demonstrates the tactics used impacted upon the count and location of offences.

Particularly of interest is the reduction that has been seen with the target areas of Orange and Red (where available resources were informed to target – hyper risk and high risk areas). Within these areas a 48% reduction (prior - 373 Burglary Dwelling offences, Post - 194 Burglary Dwelling offences) was seen, almost double Trafford BCU's average reduction. Within the Orange area alone, there was a 52.5% reduction (-73) in Burglary Dwelling offences.

As Appendix 5 shows, all areas have seen a reduction in offences but outside the predicted area, offences have decreased at a disproportionately smaller rate compared to predicted areas.
Of note, outside predicted areas it was found that the level of insecure Burglary Dwelling offences increased to 38%, higher than 28% (Trafford average). This percentage suggests the 'Optimal Forager' is moving into unfamiliar areas and committing fewer offences but also being more visible to residents and resources.

Phase 2 – Super Cocooning Development

This concluded the initial Phase 1 of the work. Findings and problems encountered during implementation were written into a journal article (Fielding and Jones, 2012). Following this a review was conducted by Spencer Chainey (Jill Dando Institute, UCL) who made recommendations aimed at galvanising progress to date and increasing aspects of operational effectiveness on a number of levels. The review stated Trafford BCU still showed a repeat victims (RV) and near repeat victim (NRV) pattern of Burglary Dwelling offences, specifically within 7 days of the initial offence, recommending more emphasis could be given to the victim aspect of the triangle.

Similarly to the predictive mapping, research was conducted on the current understanding of this problem (Cohen and Felson 1979, Polvi et al 1991, Farrell and Pease 1993, Johnson and Bowers 2001, Townsley et al 2003, Johnson and Bowers 2007). Building on the academic research of Johnson and Bowers 2007 (Appendix 6), Trafford attempted to develop a tactical response to reflect their findings. This led to the creation of standardised cocooning activity termed 'Super-Cocooning'.

The standardised format is as follows; after a Burglary Dwelling offence a dedicated burglary car visits the targeted address (Appendix 7 - Blue Address) and two addresses either side to provide physical target hardening to the addresses. Then local neighbourhood policing teams are tasked from the central Trafford BCU Intelligence HUB to visit 8 more either side, 20 addresses opposite and 5 addresses behind the burgled address. These numbers were selected following careful consideration and is a reflection of the ongoing risk highlighted in the academic research (Appendix 6) and in discussion with neighbourhood policing teams

regarding the feasibility of the task.

The resources that were tasked with the 'super-cocooning' were instructed to have face-to-face interactions with the residents and not simply leaflet addresses. A feedback sheet was also implemented to ensure compliance and accountability, allowing effective evaluation of the new tactic.

Officers visiting the address were provided with a seasonally adjusted script to highlight the low chance of being a victim but ways in which residents could lessen the chance. This also allowed officers to perform basic surveys of addresses to refer to crime prevention officers where necessary and at the same time provided an opportunity for intelligence elicited from residents to be fed back to the intelligence HUB. Whilst completing the 'super-cocooning' task, officers are present in risk areas, engaging with potential victims that require reassurance and also potential offenders who are looking for another opportunity to commit crime.

Phase 2 – Evaluating Super Cocooning (6 Months)

At the implementation stage it was decided the number of addresses visited, neighbourhood survey results, number of repeat and NRV would determine the success of this tactical response:

Address Visits – Results from the compulsory feedback sheet showed after 6 months of implementation there has been 447 addresses offered physical target hardening and 9,423 addresses visited which equates to 10% of the addresses in Trafford (n~94,000). In terms of type of contact, 38.4% (3,621) had the recommended face-to-face contact from an officer. However this percentage varied across the four neighbourhood areas in Trafford which needs addressing in the future through analysis of time officers are being sent to addresses.

Neighbourhood Survey - In October 2011, 86% of residents had 'Confidence in the Police doing a Good Job'. By April 2012, this figure was at 92.3%, best in force. No other Division in GMP saw an increase on this level however it is not possible to definitively draw conclusions that this increase is solely attributed to the 10% of residents in Trafford being in contact with the police due to the 'super-cocooning' activity.

NRV – Using the Near Repeat Calculator (Ratcliffe 2007) showed that NRV, particularly within 7 days had reduced but there was still a significant trend. It is believed that improvement of the current 38.4% face to face interaction will reduce this trend.

Phase 1 and Phase 2 – Reducing Repeat Victimisation (RV)

The thread through this whole project has been tackling RV.Nationally the rate of RV is approximately 15-20% which demonstrates the significant reduction that can be made if this type of victim is targeted.

Appendix 8 shows the count of BDW RV's in Trafford contributed for the last four years. In the two years prior to implementation of predictive mapping (Red Squares) there were constantly 50-55 RV's contributing over 100 offences.

In the first year (Phase 1) of the predictive mapping being implemented the number of RV's fell to 30 victims contributing 63 offences. During 2011/12 (Phase 2) with the 'super cocooning' activity the number of RV's fell again to 15 contributing 30 offences. Over two years this is a reduction of 35 RV's but more importantly over 70 offences. Trafford's RV's now account for

2% of total BDW victims.

Phase 2 – Going Equipped

One additional aspect of the predictive mapping during this project has been the successful use of stop and search powers, measured by arrests for the offence of Going Equipped for Theft. This rose dramatically by comparison to previous years with a 100% increase (12 in 2009/10 to 24 in 2011/12). This echoes the original aim, which sought to place a resource in the right place at the right time, meaning they would more readily come into contact with would-be offenders, having the opportunity to disrupt or arrest as appropriate.

9. Give a concrete description of the implementation of the project and the references.

The fiscal year of 2009/10 showed 1,302 Burglary Dwelling offences committed across Trafford, a reduction of 5.5% from the year before (ranking Trafford 7th out of the 12 Greater Manchester Police (GMP) divisions) but below the level of 7%, achieved nationally. The new target for 2010/11 was then set at 1,181 BDW offences, requiring a 9.3% reduction, almost twice the previous reduction.

Traditional policing methods around Burglary Dwelling offences tend to focus on costly, resource intensive "re-active" policing, i.e. response, investigation and "cocooning". A fresh approach was deemed necessary to "pro-actively" police areas, utilising modern criminological theory and straightforward operational methodology, requiring little cost and making better use of existing resources within police and partnership agencies.

Trafford Basic Command Unit (BCU) had the lowest weekly mean across GMP indicating that achieving the reduction by traditional methods could prove difficult. However, opportunistic Burglary Dwelling offences were high (28% by insecurity) and Trafford's social-demographic profile (using the vulnerable localities index) appeared to be representative of Greater Manchester (GM), identifying Trafford as an ideal testing ground for a new "pro-active" policing technique.

The criminological theory that pervaded the project from its inception, was firstly a study by Johnson and Bowers, 2004, who commented on the "Optimal Forager", an offender who is unsophisticated in his approach to offending, who looks for the easiest opportunities and minimum amount of risk and therefore continues to return to that area until the opportunities are exhausted or the risk of detection becomes too high.

Due to the nature of these "Optimal Foragers" they argued the possibility of predicting offending patterns. Studies (Johnson and Bowers, 2004; Ross and Pease, 2007) showed that over a period of six weeks, domestic burglaries are most likely to occur within 400 metres of the last Burglary Dwelling offence, with the risk diminishing over that period. This theory provides the basis to predict the areas that offenders are most likely to offend and enable the police and its partners to put in place an effective disruption tactic.

Using this methodology to predict 'Optimal Forager' offences enables existing resources (i.e. police/PCSO patrols) to be efficiently deployed to disrupt and deter. Effective methodology was also provide opportunities for other departments of GMP and partnership agencies to be utilised in a more dynamic manner.

To make the project work, all stakeholders and senior leadership members had to be focused on

driving the production and use of the predictive maps to address the following objectives:

- Reduce BDW in Trafford
- Reduce the numbers of victims and repeat victims
- Reduce the fear of crime
- Give new impetus to sustainable working partnerships at minimum cost

The source of the data has predominantly come from the analysis of crimes figures and surveys but was supported by the opinions of local residents and their fears of certain types of crimes. Open sources were used to gain a nationwide perspective. No issues arose regarding the validity of Burglary Dwelling offence locations. Through reading various academic papers, only distraction burglaries are thought to be under-reported. However, this methodology is not specifically aimed at this type of Modus Operandi (MO). Maintaining positions of offences on the mapping systems was be fundamental to the success.

Problem Analysis Triangle

Offender:

There were 89 offenders charged/cautioned with Burglary Dwelling offences in the last 12 months in Trafford with 88 of these being male (2009-10). Two thirds of the males were between 16 to 25 years old, with 1 in 5 having previous convictions for shoplifting, half being linked to business and personal robberies and over half linked to S.47 assaults/common assaults. This highlights the propensity of burglary offenders to commit numerous types of offences, not solely active in one area of criminality.

Victim:

Trafford has approximately a tenth of the population, ethnicity and area of Greater Manchester (GM) (213,000 residents, 41 sq miles, 89% White, 5.1% S. Asian, 2.3% Black and 2.9% classed as other).

These figures demonstrate that Trafford could be used as a sample area of GM, improving the possibility of rolling this methodology out across GM if successful.

The analysis showed that the victims of Burglary Dwelling offences followed the general trend of homeowners within Trafford, creating the inference that burglars were not targeting an age group, which could have required a more bespoke response.

Location:

Preliminary testing of Pease and Ross (2007) theory of 'Predicting Where Lightening Will Strike' within Trafford revealed that 61% (n~752) of BDW offences would have occurred within a predicted area, with 30% (n~373) being within a "high risk" area. This identified Trafford's susceptibility to near repeats, pointing to the use of directed disruption tactics to deter offenders repeatedly targeting an area.

Previous responses had only focused on one or two sides of the problem analysis triangle. For example, Operation Magadan targets offenders at their home addresses and Operation Spotlight focused on target hardening properties across Trafford. These operations and initiatives had been restricted by a lack of statistical evaluation, thus limiting their transferability and preventing development work.

RESPONSE

The scanning and analysis stages of the SARA problem solving model emphasized the simplicity of the concept and this needed to be maintained in the response and involvement of partnership agencies. For this to happen each side of the PAT triangle was considered in order provide a holistic response.

Burglary Risk Maps

The predictive maps were designed and developed over a number of months and the example shown in Appendix 2, illustrating colour coded risk areas and specific threat times were produced to be coterminous with Neighbourhood Policing areas within Trafford. These were circulated to those Teams to be used as pictorial patrol plans depicting future risk. The maps were also circulated to Response Policing Teams to be used in any down time between incidents. Incremenatlly, and supported by early success, the circulation of the risk maps was expanded to partner agencies to assist with increasing capable guardianship in risk areas.

Location Based Responses:

Through the production of Burglary Risk Mapping, key areas are persistently being targeted for deployment of resources.

- Police and Partner agencies used the Burglary Risk Map documentation produced thrice weekly to focus resources, particularly at key times highlighted.
- Crime Reduction Advisor(s) setup days of action for crime prevention within high-risk areas (identified by the predictive maps) with the aid of partner agencies (Fire Service)
- North and South Safer Groups with Registered Social Landlords conducted environmental surveys within persistent high-risk areas to identify potential crime enhancers. Areas were identified and drawn into an action plan utilising partnership financial resources. This aspect has recently been given significant impetus by the largest social landlord, Trafford Housing Trust, making funds available in chronic hotspot areas to address contributory factors within the built environment.

Victim Based Responses:

To subtlety convey the message to residents that they live in a high-risk area by means of the effective distribution of crime prevention equipment in addition to high visibility patrols providing reassurance.

- PCSO's visited victims of domestic burglary following an offence to assess the need of target hardening, provide crime prevention advice and reassurance by being visible within high-risk areas. This received positive feed back from residents.
- High-risk areas were targeted for distribution of crime prevention advice. Victims and potential victims have been targeted for support. Utilising the maps has ensured the most vulnerable areas and people are selected, reducing the propensity of repeat victimisation.
- With the development of geographical positioning and tracking of resources, both within the Police and external agencies, offers the new possibility of controlling resources and being able to measure visits to an area. A mobile communication system (text message based) called iCan also provides the possibility of targeting potential victims quicker and more efficiently if the at risk area is known**.**
- The iCan system allows potential victims, who are particularly at risk of Burglary

Dwelling offence, to be contacted with advice and a contact number for any information or suspicious activity. The system is supplemented by the GMP Neighbourhood Management System to circulate crime prevention advice to those residents considered at greatest risk.

Offender Based Responses:

Identifying unknown offenders within an area, via increased intelligence submissions has been an added benefit of improved patrolling practice. This has been used as a means to identify potential 'Optimal Forager' type offenders in risk areas prior to an individual committing an offence in order to deter them from offending through either the presence of a 'capable guardian' or interacting with the offender on the street.

- Intelligence Officers (IO) on a daily basis identify, (using stop and search forms and intelligence submissions) individuals within high-risk areas. This is assisted by officers marking the Stop and Search form with a simple cipher denoting a stop in a risk area and always starting intelligence submissions with the word "orange" or "red" etc to illustrate it related to activity in a risk area.
- Offender Management Unit, Youth Offending Services and Probation made aware of individuals stopped within high-risk areas to ascertain current risk those individuals pose and conduct visits to offender's addresses to prevent future offences.

Partnership resources were tasked more effectively and efficiently performing the role of 'capable guardian'. The Burglary Risk maps have allowed the police to influence the allocation of Local Authority and wider partner resources to supplement capable guardianship.

Main Problems Encountered

- Police – "Always done it this way, why change? What can an academic tell me about policing?" Attitude – Necessary to overcome negativity and illicit assistance to cascade rationale. This needed string management and full SLT support.

- Local Council – No control on how they use their resources, maps can be sent but it might not fit their agenda.
  Regular meetings were setup during council briefing sessions to explain the concept to the community safety patrollers and feedback was that it gave them more purpose as they used to just visit areas that they knew.

Project – After 6-month evaluation it was noted that there were two different patterns, weekdays and weekends.
Distribution was altered to bi-weekly, once on Monday morning for the following 4 days and Friday morning to cover the weekend. This ensured the most up-to-date data was used to create maps without significantly adding to the analyst's workload. This production was later increased to and has been maintained at three times a week for the past 12 months. The rationale for this decision being the wish for the maps to illustrate the most up to date predicted risk.

10. Are there reports or documents available on the project? In print or on the Web? Please, give references to the most relevant ones.

Intial Evaluation:

Matthew Fielding, 2010. Burglary Risk Mapping Evaluation. Greater Manchester Police

Evaluation of Phase 1:

Fielding, M., Jones, V. (2011) 'Disrupting the optimal forager': predictive risk mapping and domestic burglary reduction in Trafford, Greater Manchester, *International Journal of Police Science Management* 14(1), pp. 30-41.

Jill Dando Institue of Crime Science Review:

Chainey, S. (2012) JDI Briefs: Predictive mapping (Predictive Policing). Available at: http://discovery.ucl.ac.uk/1344080/3/JDIBriefs_PredictiveMappingSChaineyApril2012.pdf (Last accessed on 6th August 2012)

Evaluation of Phase 2:

Fielding, M., Jones, V. (in press) Road to Reduction, tackling repeat victimisation of domestic burglary through super-cocooning in Trafford, Greater Manchester.

11. How is the project funded? Has a cost-benefit analysis been carried out? If so, how? What were the findings? Please provide supporting information.

This work has had no supporting budget and has been developed alongside other mainstream activity. The mapping system used to produce the predictive risk maps utilised an existing mapping capability within Greater Manchester Police.

There have been no additional labour costs as the two drivers and initiators of this work have done so as part of their normal duties and in fact is simply more effective use of existing police and partnership resources.

Funds that have been used to target harden properties within the Super Cocooning activity were existing funds for that purpose which were then utilised within this coordinated activity. re £25,000

A cost benefit analysis has been conducted in relation to reduction on offences of burglary dwelling over the two year period of the application of this work ie May 2010 – May 2012 compared to the two years previous.

This work produced a reduction in Burglary Dwelling offences of -38.2 % (n 956) = £3.75m *(Home Office Cost of Crime 2010)*

12. Please, write a *one page* description of the project:

Project Summary

This submission relates to a two year process where Trafford Basic Command Unit (BCU) has

sought to address the problem of Burglary Dwelling (BDW) via the operationalisation of academic research.

A journal article (Fielding and Jones, 2012) detailing the findings of Phase 1 of this process have been written to illustrate the cycle of academic research and effective application in a policing environment.

The processes concerned have evolved over time leading to a one year evaluation (Phase 1) followed by a modified application based on recommendations from the Jill Dando Institute (S. Chainey) which formed Phase 2. This second phase was not foreseen at the initial implementation, but is consistent with the problem solving ethos surrounding practical application.

The "golden thread" connecting the methods employed in this study is that of tackling "Repeat Victimisation".

The initial approach was adapted from an original article produced by Ross and Pease 2007, ***'Predicting where Lightening will Strike'.***

Initial scanning within Trafford showed 61% (n-752) of Burglaries in the 12 months prior to implementation would have been within a predicted area. This demonstrated a significant opportunity for coordinated and concentrated action on the part of a number of agencies to successfully address this issue.

A response was developed from the research which involved examining the propensity of offenders to return to a familiar area and the placement of a capable guardian in these areas at the right time in an attempt to disrupt the offending pattern of the 'optimal forager' (Phase 1).

During the first 12 months, Trafford BCU saw a -26.6% (n-327 BDW) reduction in BDW compared to the 12 months prior to implementation, outperforming its most similar groups both within Greater Manchester Police (GMP) and nationally.

This has been further enhanced by an effective systematic programme of cocooning and target hardening based on the communicability of burglary risk, research from Shane Johnson (Phase 2).

Over the two years, this targeted intervention of both Predictive Mapping and Super Cocooning has assisted in the 38.2% (n-956) reduction in Burglary Dwelling offences.

The scientific research around this subject has been used in a simple and cost effective manner to the produce predictive patrol plans and additional complimentary cocooning interventions. This demonstrates an effective and efficient use of available resources.

Appendix 1

1) Feb 2010:Initial Reading and Comprehension of theory in Journal

2) Feb-Mar 2010: Laboratory Testing (Reviewing past data and seeing if the theory worked within Trafford using previous data)

3) Mar-Apr 2010: Design and Improvement (Operationalizing the theory in the most effective output. Setting of assessment dates and criteria)

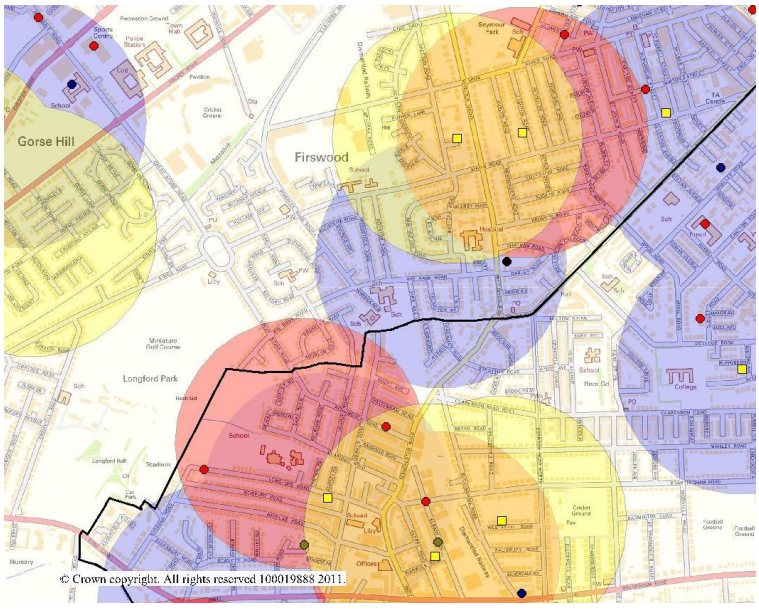
4) May 2010: Implementation (Explanation and Implementation across the Division)

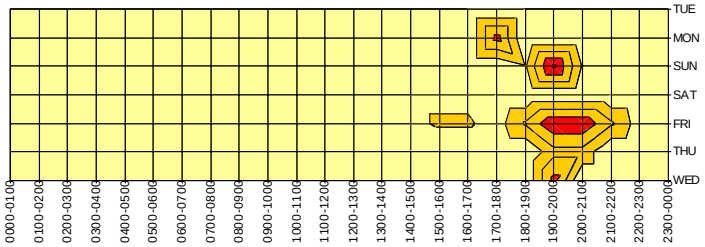
5) Aug 2010: 1st Review Date (3 month evaluation of Risk Maps)

- Successful Evaluation & Recommended Improvements
  - 5) Sept 2010: Distribute theory, concept and weekly risk maps to Partner Agencies
    - 6) Nov 2010: 2nd Review Date (6 month evaluation of Risk Maps)
      - Successful Evaluation & Recommended Improvements
        - 7) May 2011: 3nd Review Date (12 month evaluation of Risk Maps)
      - Under Performing Evaluation
        - Nov 2010: Determine changing factors between 3 and 6-month evaluation
- Under Performing Evaluation
  - 5a) Sept 2010: Assess reasons for unexpected results (what worked/didn't work, Why not?)
    - 6a) Sept 2010: Redesign/New Implementation Method
      - 7a) Dec 2010: 2nd Review Date (6 months)
        - Successful Evaluation & Recommended Improvements
          - 8a) Go to Step 7 Change dates as appropriate
        - Under Performing Evaluation
          - Write up Evaluation stating problems of implementing this theory into a real world example and seize Risk Mapping in Trafford

Alterations/Additions to Schedule during Project:
Aug 2010 – Distributed 1st Evaluation to Original Author Ken Pease who arranged a meeting to come and visit the Division to discuss progress and going forward
Nov 2010 – Following successful 6 month asked to present a powerpoint of findings to Divisional Commanders for force wide knowledge

Appendix 2



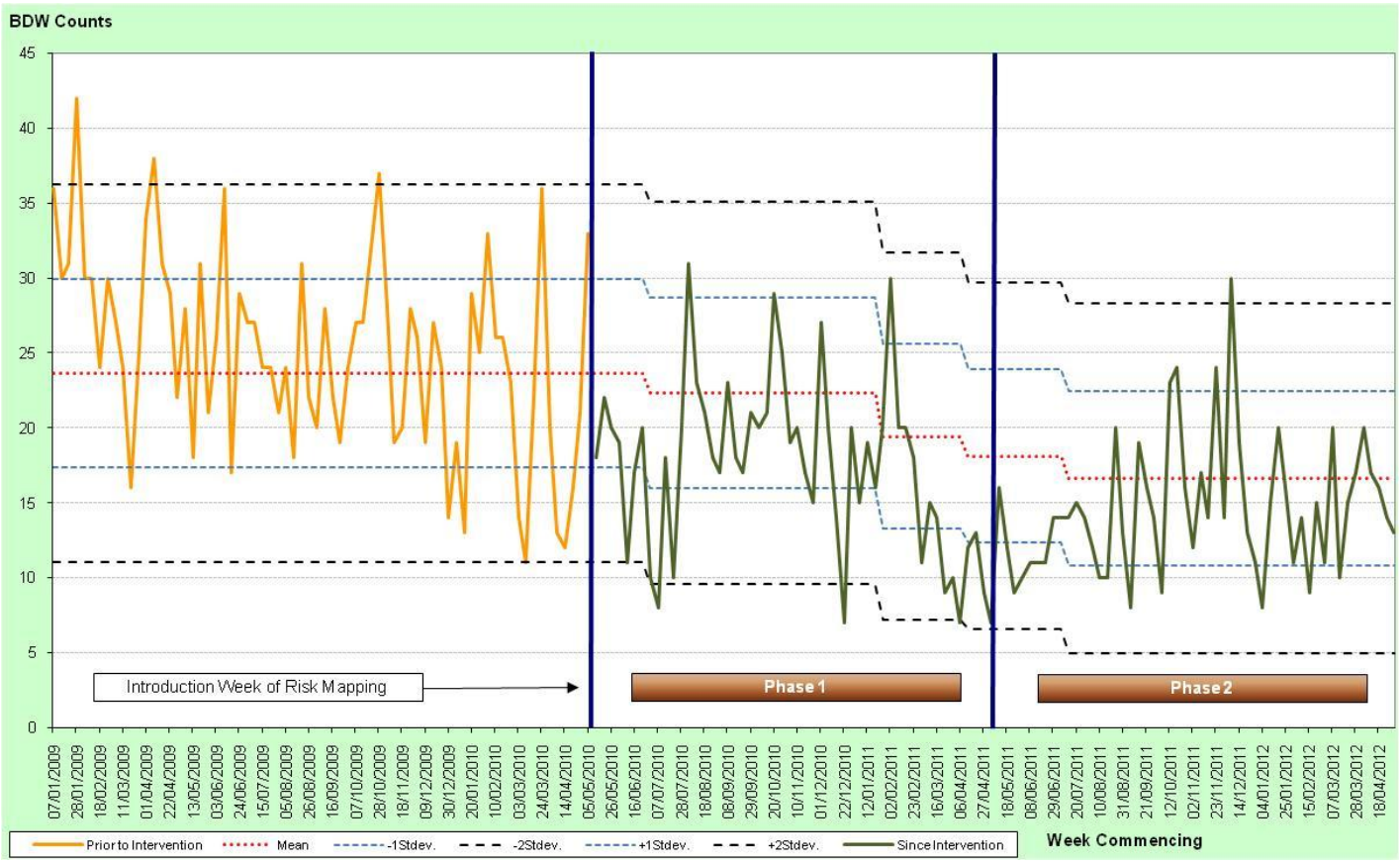


Risk every day: 19:00 –22:00

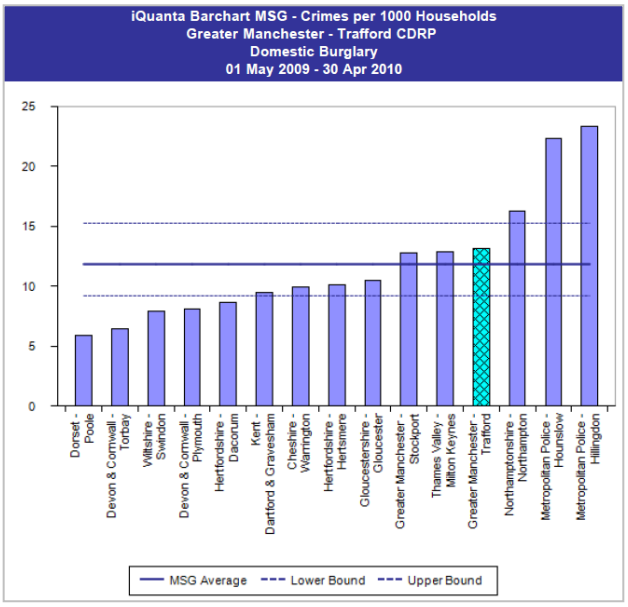
Predictive BDW Risk Mapping
Hyper Risk Areas | Higher Risk | Medium Risk | Lower Risk
Overlapping Areas Carry More Risk

Last 3 Weeks
TOMV Offences | TFMV Offences | Personal Robbery Offences
Trafford Boundary
Burglary Other (Residential) | Weekend Burglary

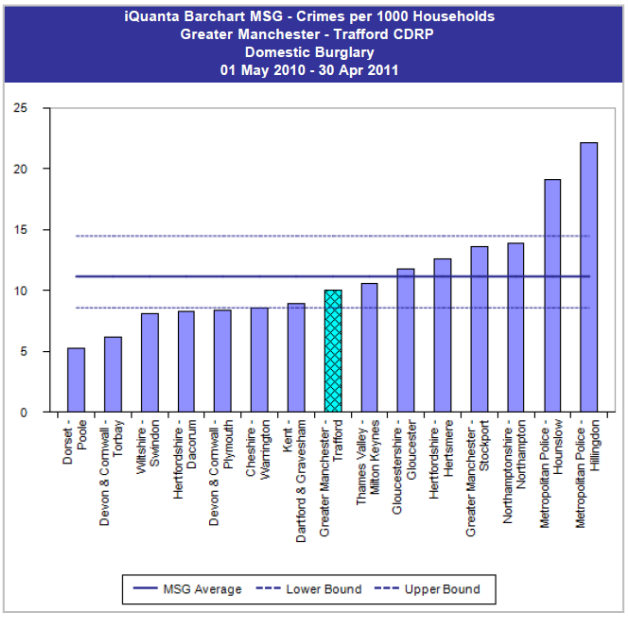
Appendix 3


BDW Counts
45
40
35
30
25
20
15
10
5
0
Introduction Week of Risk Mapping
Phase 1
Phase 2
07/01/2009
28/01/2009
18/02/2009
11/03/2009
01/04/2009
22/04/2009
13/05/2009
03/06/2009
24/06/2009
15/07/2009
05/08/2009
26/08/2009
16/09/2009
07/10/2009
28/10/2009
18/11/2009
09/12/2009
30/12/2009
20/01/2010
10/02/2010
03/03/2010
24/03/2010
14/04/2010
05/05/2010
26/05/2010
16/06/2010
07/07/2010
28/07/2010
18/08/2010
08/09/2010
29/09/2010
20/10/2010
10/11/2010
01/12/2010
22/12/2010
12/01/2011
02/02/2011
23/02/2011
16/03/2011
06/04/2011
27/04/2011
18/05/2011
08/06/2011
29/06/2011
20/07/2011
10/08/2011
31/08/2011
21/09/2011
12/10/2011
02/11/2011
23/11/2011
14/12/2011
04/01/2012
25/01/2012
15/02/2012
07/03/2012
28/03/2012
18/04/2012
Prior to Intervention
Mean
-1Stdev.
-2Stdev.
+1Stdev.
+2Stdev.
Since Intervention
Week Commencing

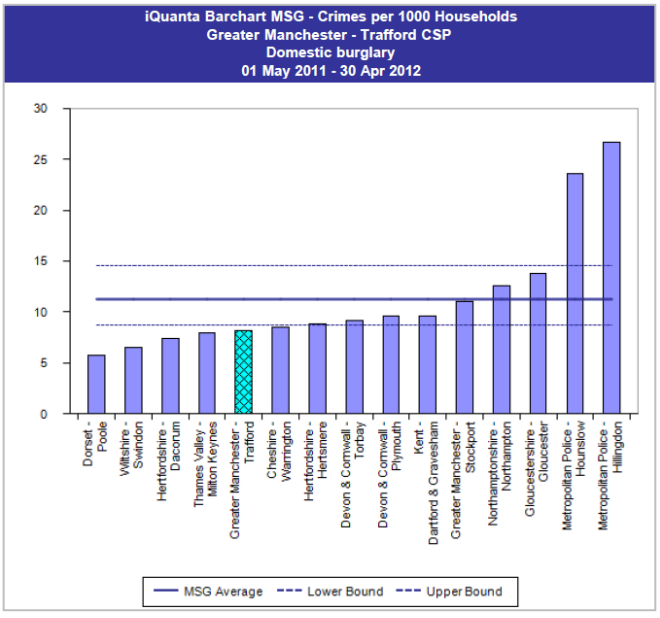
Appendix 4 – National Most Similar Groups



2009/10
Iquanta domestic burglary volume position –



2010/11
Iquanta domestic burglary volume position –



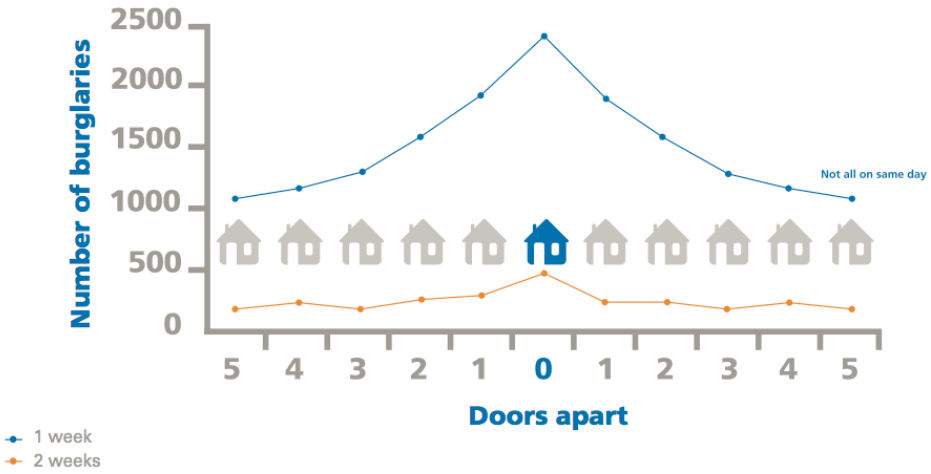
2011/12
Iquanta domestic burglary volume position –

Appendix 5

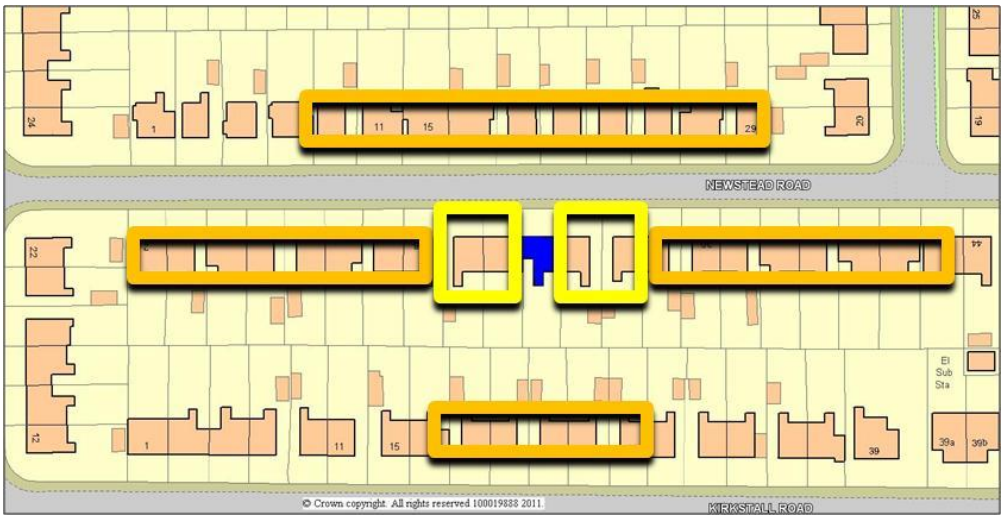
Count of BDW's	Inside Orange Areas	Inside Red Areas	Inside Yellow Areas	Inside Blue Areas	Outside Predicted Areas	Total
12/05/10-10/05/11	139	234	218	159	479	1229
13/05/09-11/05/10	66	128	141	97	470	902
Change	-52.5%	-45.3%	-35.3%	-39.0%	-1.9%	-26.6%

- Orange areas are any overlapping Red and Yellow areas – hyper risk.
- Red areas are a 400m radius around Burglaries in the previous week – high risk.
- Yellow areas are a 400m radius around Burglaries, 2 weeks previous – medium risk.
- Blue areas are a 400m radius around Burglaries, 3 weeks previous – low risk.

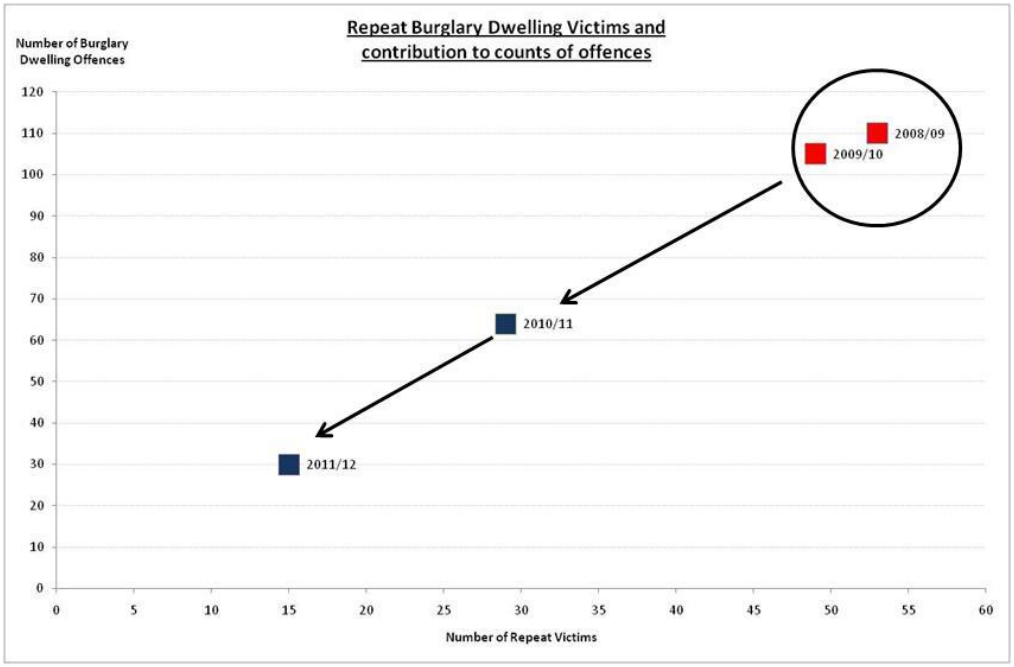
Appendix 6



Appendix 7



Appendix 8


Repeat Burglary Dwelling Victims and contribution to counts of offences
Number of Burglary Dwelling Offences
120
110
100
90
80
70
60
50
40
30
20
10
0
0
5
10
15
20
25
30
35
40
45
50
55
60
Number of Repeat Victims
2008/09
2009/10
2010/11
2011/12