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1999 to 2009: Re-Evaluating Secured by Design (SBD) in West Yorkshire

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First, where is West Yorkshire?



Inspiring to

Firstly, where is West Yorkshire?



Firstly, where is West Yorkshire?



Secondly, what is Secured by Design (SBD)?



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Secondly, what is Secured by Design (SBD)?



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- UK based initiative, managed by Association of Chief Police Officers Crime Prevention Initiatives Ltd.
- Devised in 1989 by police forces based in South of England – aim of countering rise in household burglary.
- Aims to encourage developers, planners, architects to design out crime at the planning stage.
- Day-to-day delivery by local police Architectural Liaison Officers/Crime Prevention Design Advisors (approx 320 across UK).
- Sets standards of compliance based upon....

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Physical Security

- Sets standards of physical security for property and boundaries.
 - Maximise security without creating a hostile environment.
 - Doors BSI PAS 23-1 (fit for purpose) BSI PAS 24-1 (attack test)
 - Windows BS7950
 - Fencing
 - Lighting

- Secured by Design maximises natural surveillance through design and layout without compromising privacy.
- For example...
 - Houses are positioned so that entrances face the street.
 - Foliage, walls and fences must not obstruct sightlines.
 - Estates also include a mix of dwellings designed for a variety of resident types (family, elderly, couples) to maximise round the clock surveillance.



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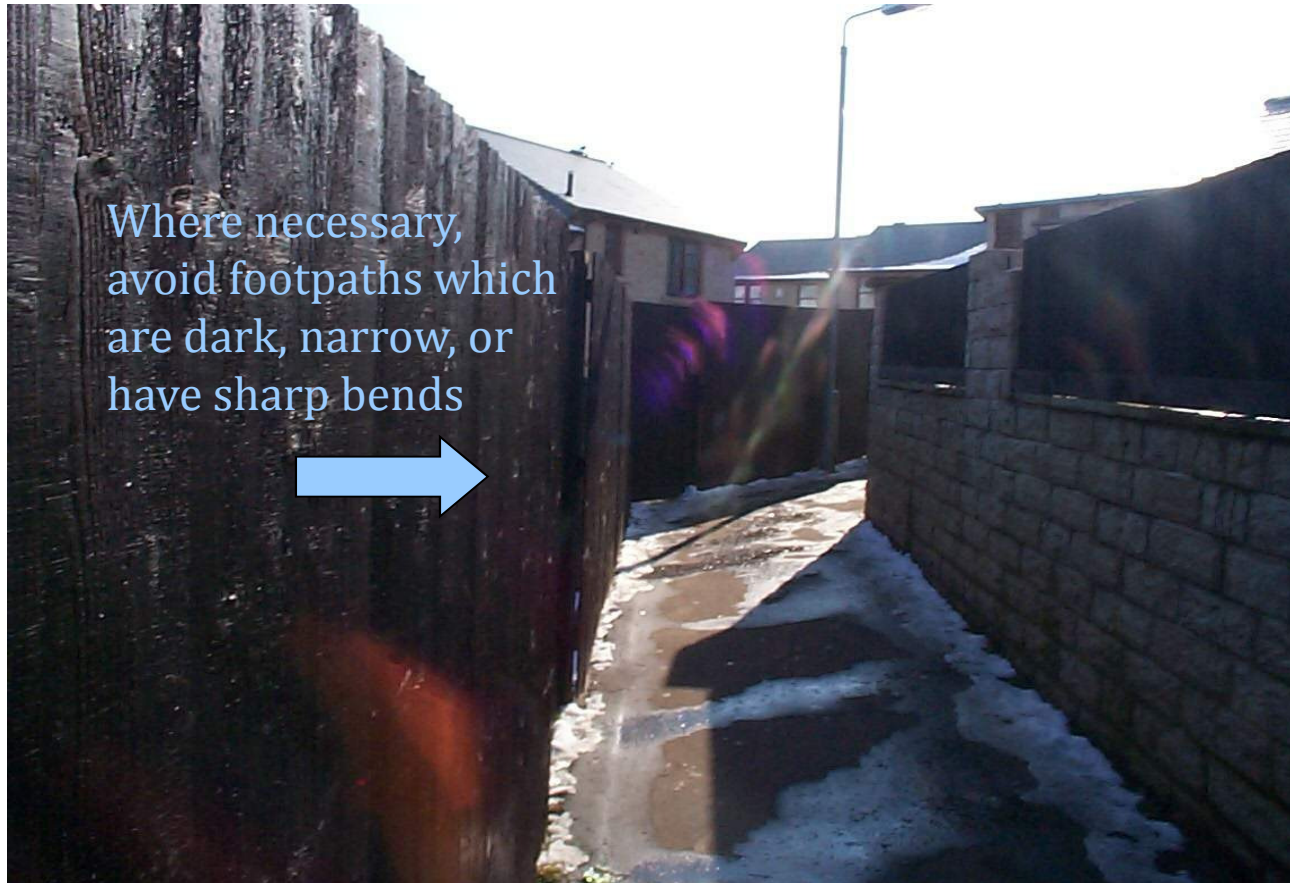
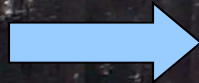
Access/Egress

- Estates are designed to include a minimum number of access/egress points.
- Based on principle that highly permeable estates (with lots of through movement).....
 - Provide convenient escape routes for offenders.
 - Give offenders the opportunity to attach the estate to their ‘awareness space’. If offenders pass through en route to school, friends, leisure activities, they become aware of potential targets.
 - Make it difficult for residents to distinguish between legitimate users of space or potential offenders. If challenged, an offender can say that they are within public space.



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Where necessary,
avoid footpaths which
are dark, narrow, or
have sharp bends



Territoriality

- Territoriality - builds upon Newman's 'Defensible Space'.
- The physical design of a neighbourhood can either increase or inhibit people's sense of control of the spaces in which they live.
- Newman categorised space into public (road in front of property), semi-public (front garden), semi-private (back garden) and private (inside the property) – SBD aims to minimise public and maximise private space.
- Like Newman, SBD advocates the principle that space should have a clearly defined ownership, purpose and role so that it is evident to residents who should and more importantly, who should not be in a given area.



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Management and Maintenance



- SBD estates must have a programmed management system in place to maintain the area i.e. removing litter and graffiti, cutting grass.
- Maintaining cleanliness encourages pride amongst residents and portrays an image to offenders that crime and disorder will not go unnoticed.

This paper



- Presents the findings of a re-evaluation of SBD housing in West Yorkshire, England.
- Conducted early 2009.
- Funded by University of Huddersfield, ACPO CPI Ltd, West Yorkshire Police – entirely independent.
- Builds upon evaluation of SBD conducted in 1999 (Armitage, 2000)

Rationale

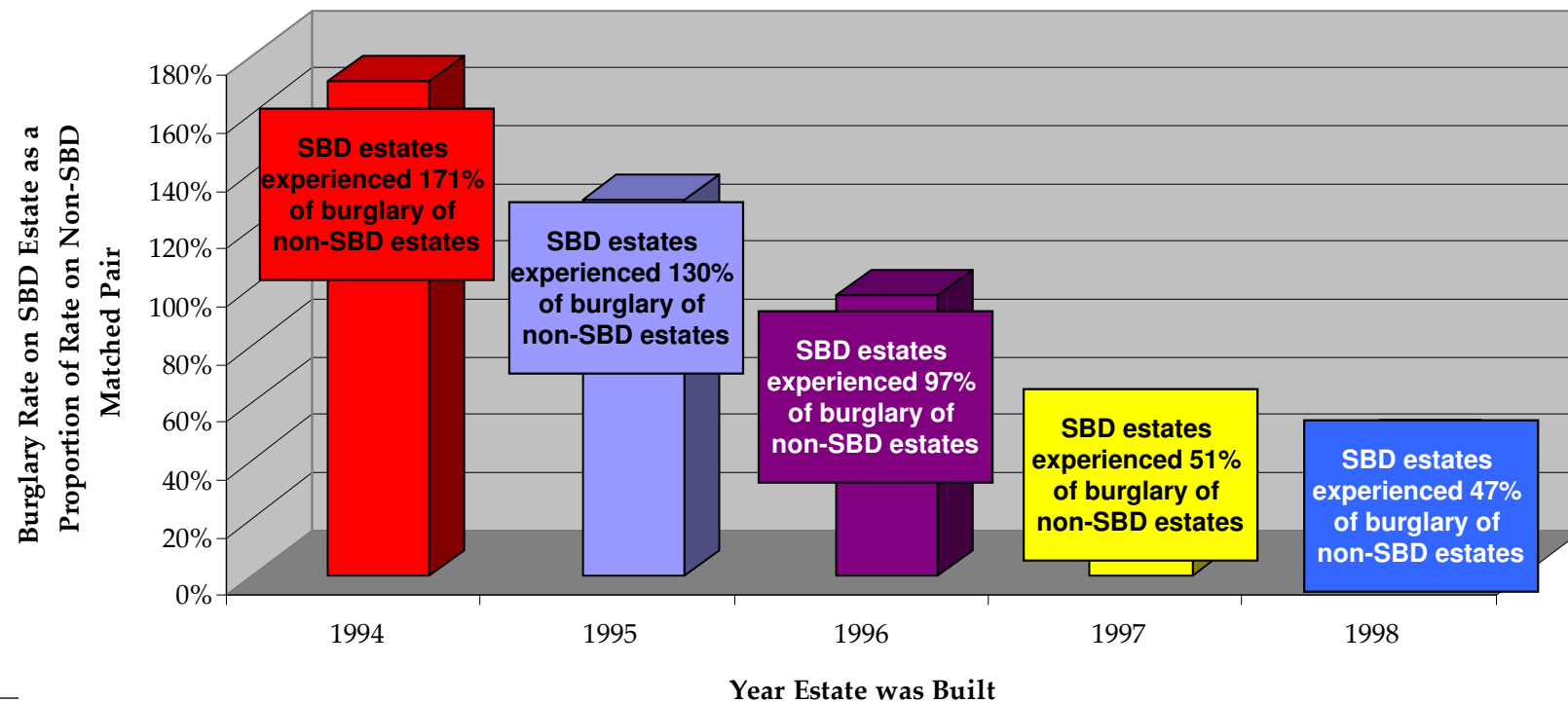
- In June 2008, Quaver Lane in Bradford become 10,000th SBD property to be built in West Yorkshire
 - Publicity and interest in the scheme.
 - West Yorkshire county with most SBD properties (outside London)
- 2009 marked ten year anniversary of original evaluation of SBD in West Yorkshire (Armitage, 2000).
- Need to update sample utilised in 1999 evaluation.

Updating the Sample

- Original evaluation looked at 25 SBD and 25 non-SBD estates spread throughout West Yorkshire and began in 1999.
- To allow at least one year of crime data post-residents moving in, sample included developments built in 1994-1998.
- SBD standard updated regularly, however, 1999 saw major changes:
 - BS7950 (windows)
 - PAS 24 (doors)
 - The sample of SBD properties were did not include these changes.
- Even without the changes introduced in 1999, the original study showed that houses built between 1994 and 1998 were improving dramatically.

SBD as an evolving standard

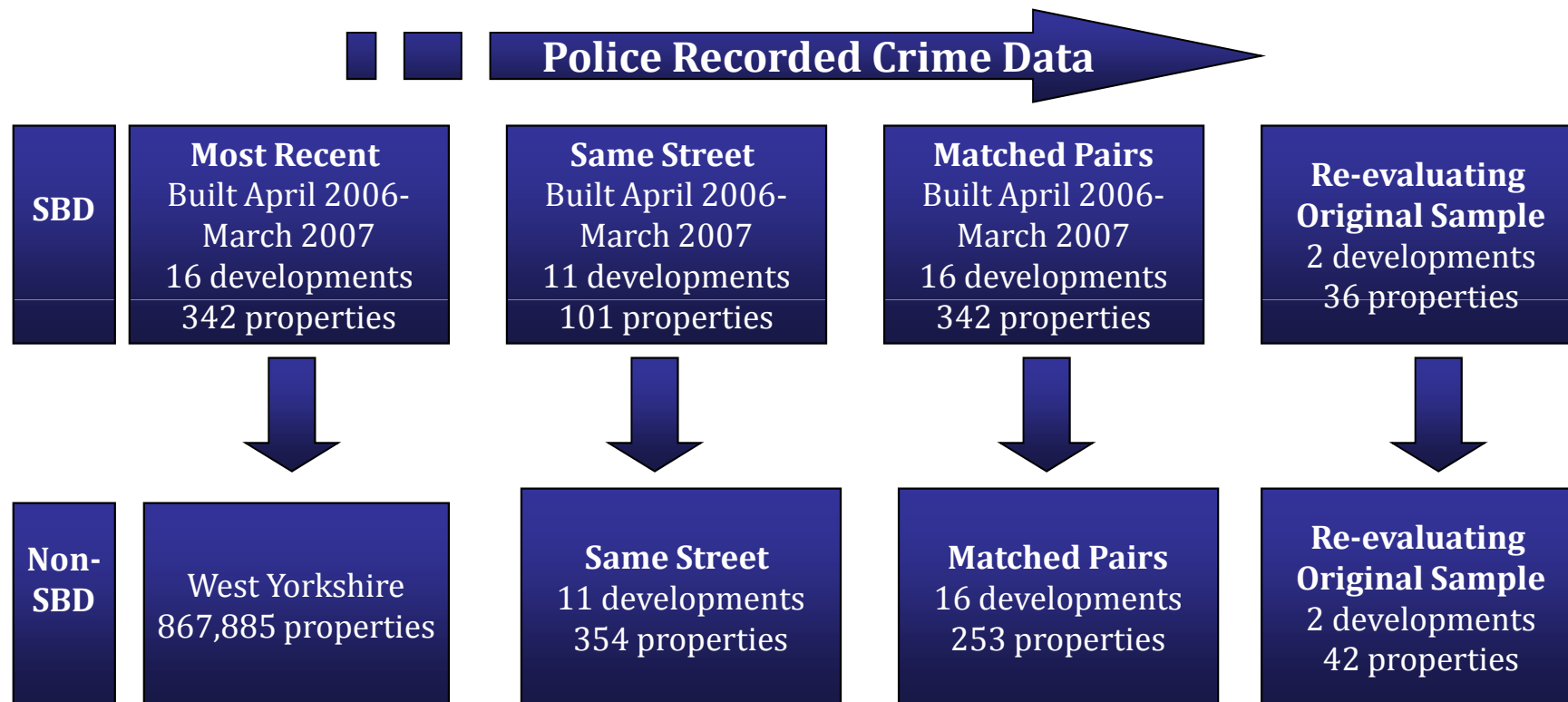
SBD as an Evolving Standard



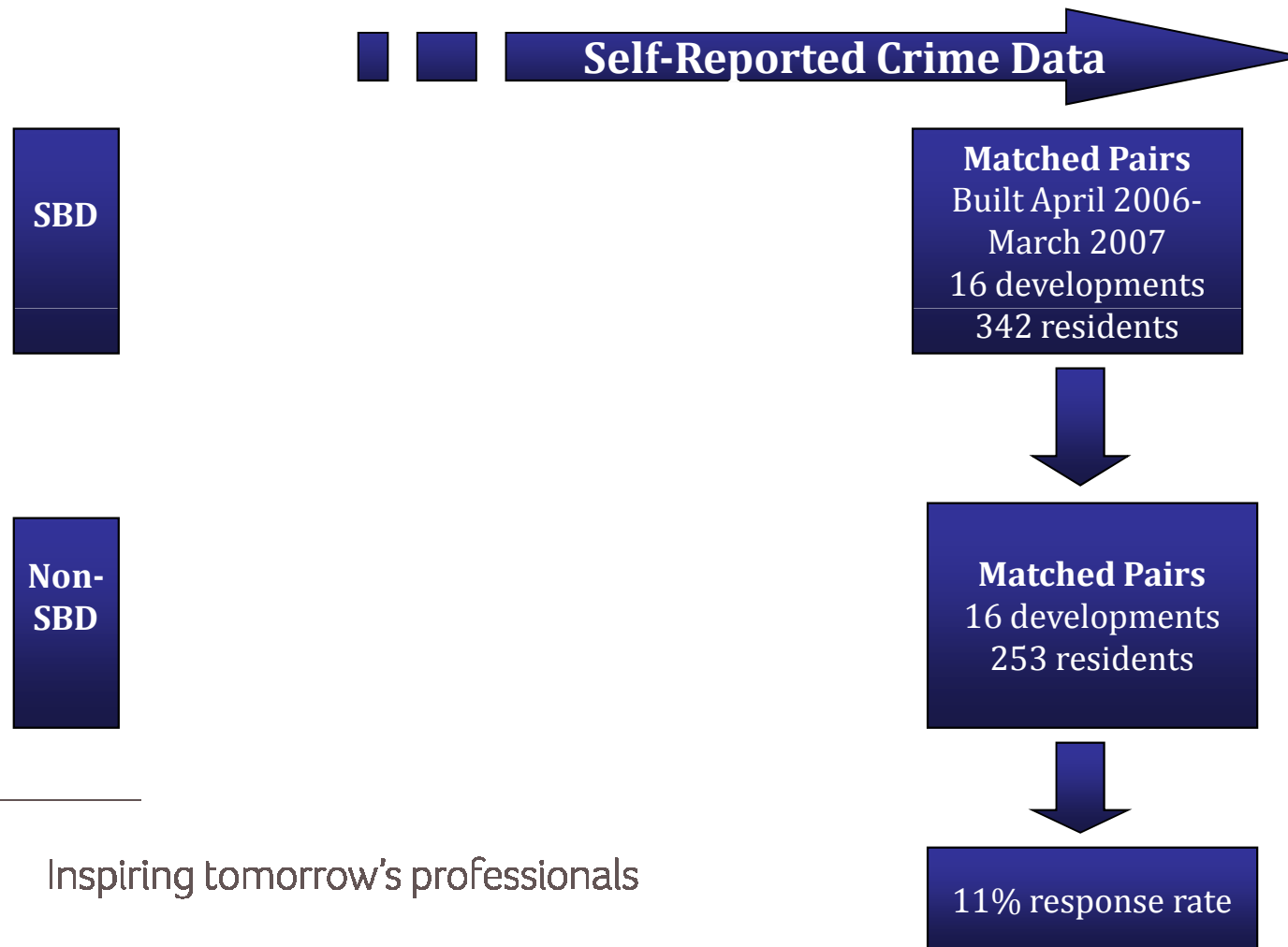
Original sample did not represent
an accurate reflection of SBD in
2009

2009 Re-evaluation

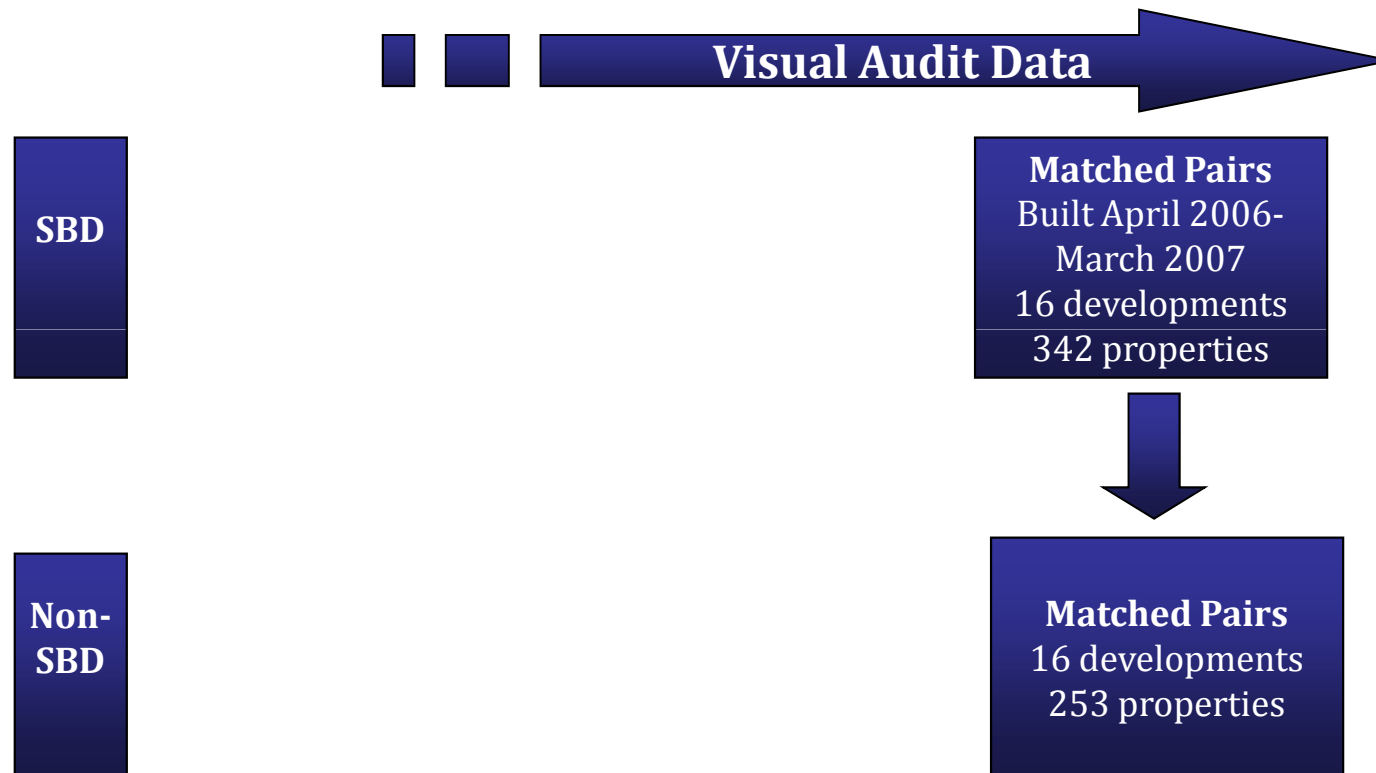
Methodology – Police Recorded Crime Data



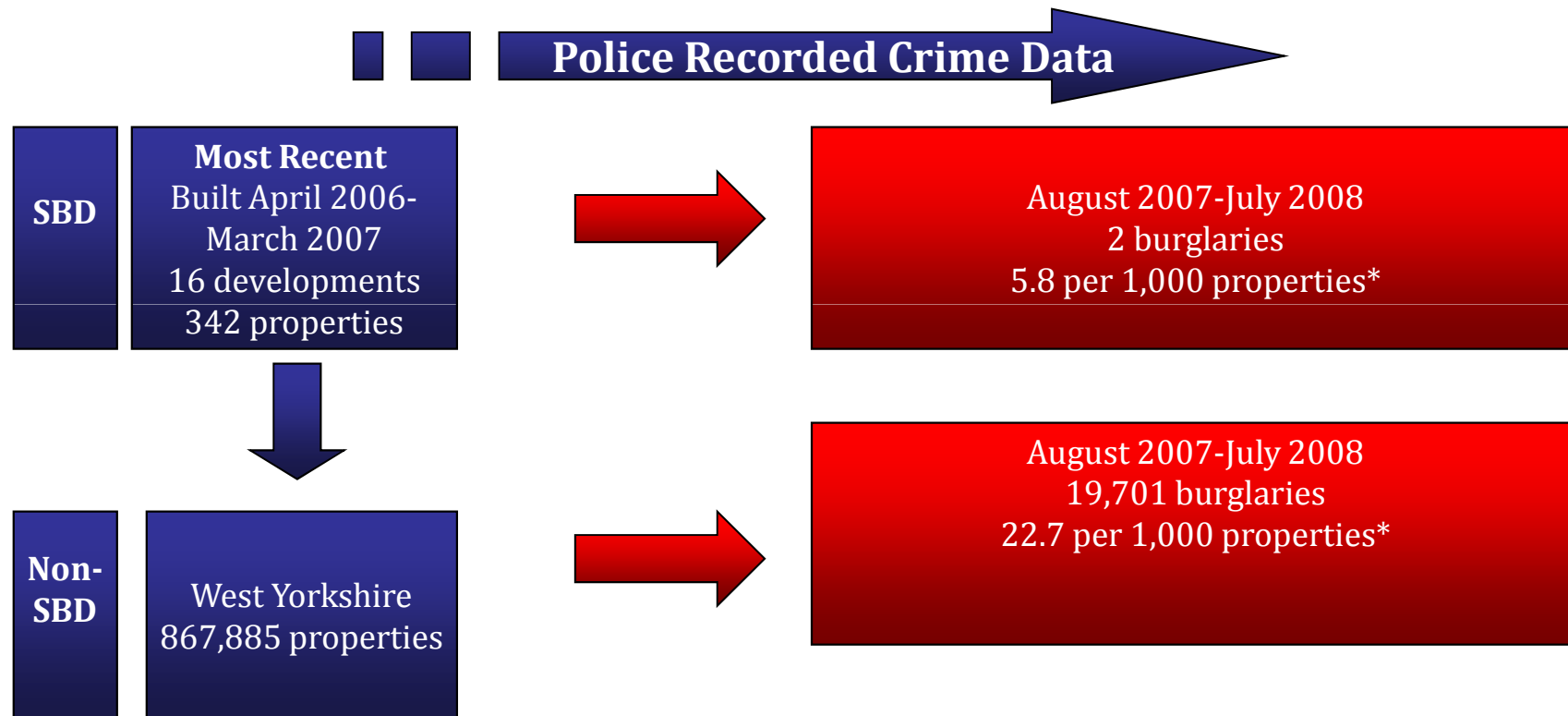
Methodology – Self-Reported Crime Data



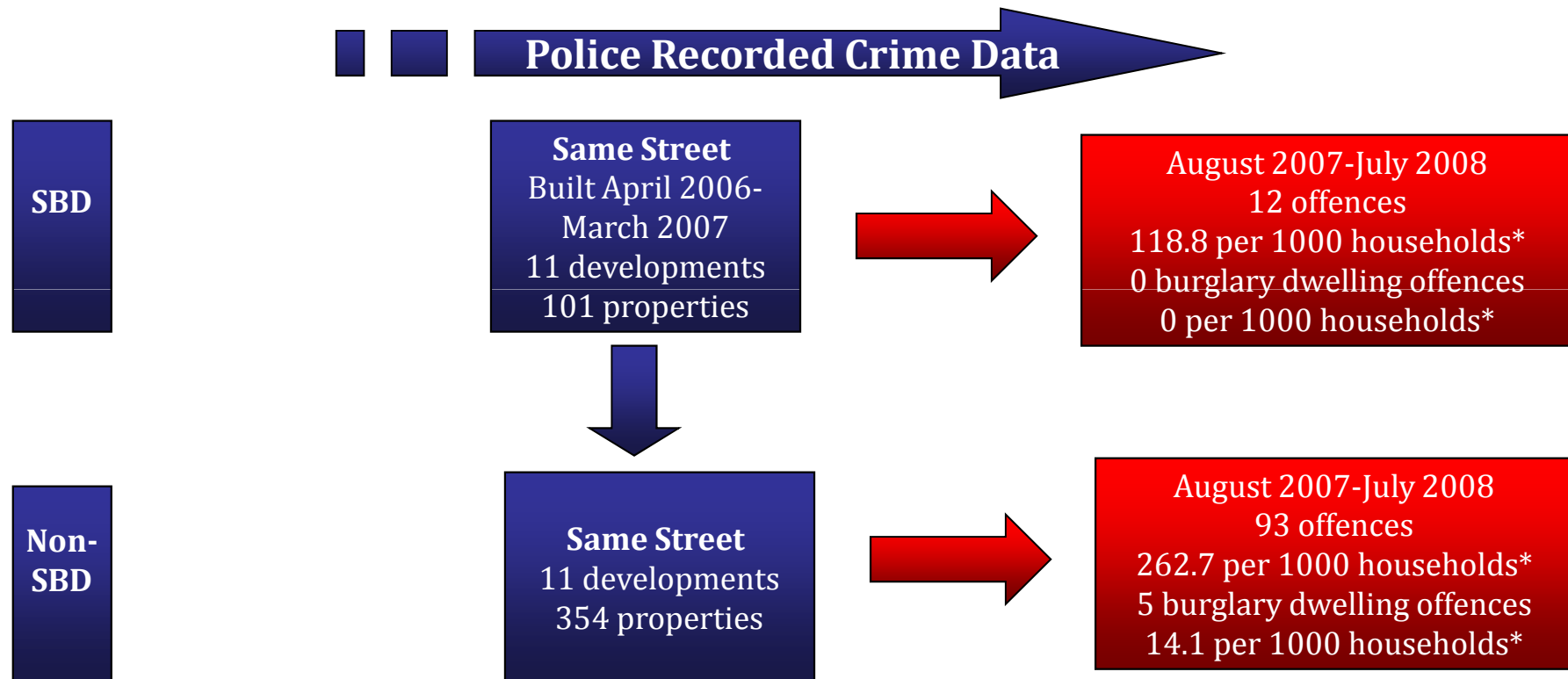
Methodology – Visual Audits



Key Findings – SBD against West Yorkshire



Key Findings – SBD against Same Street

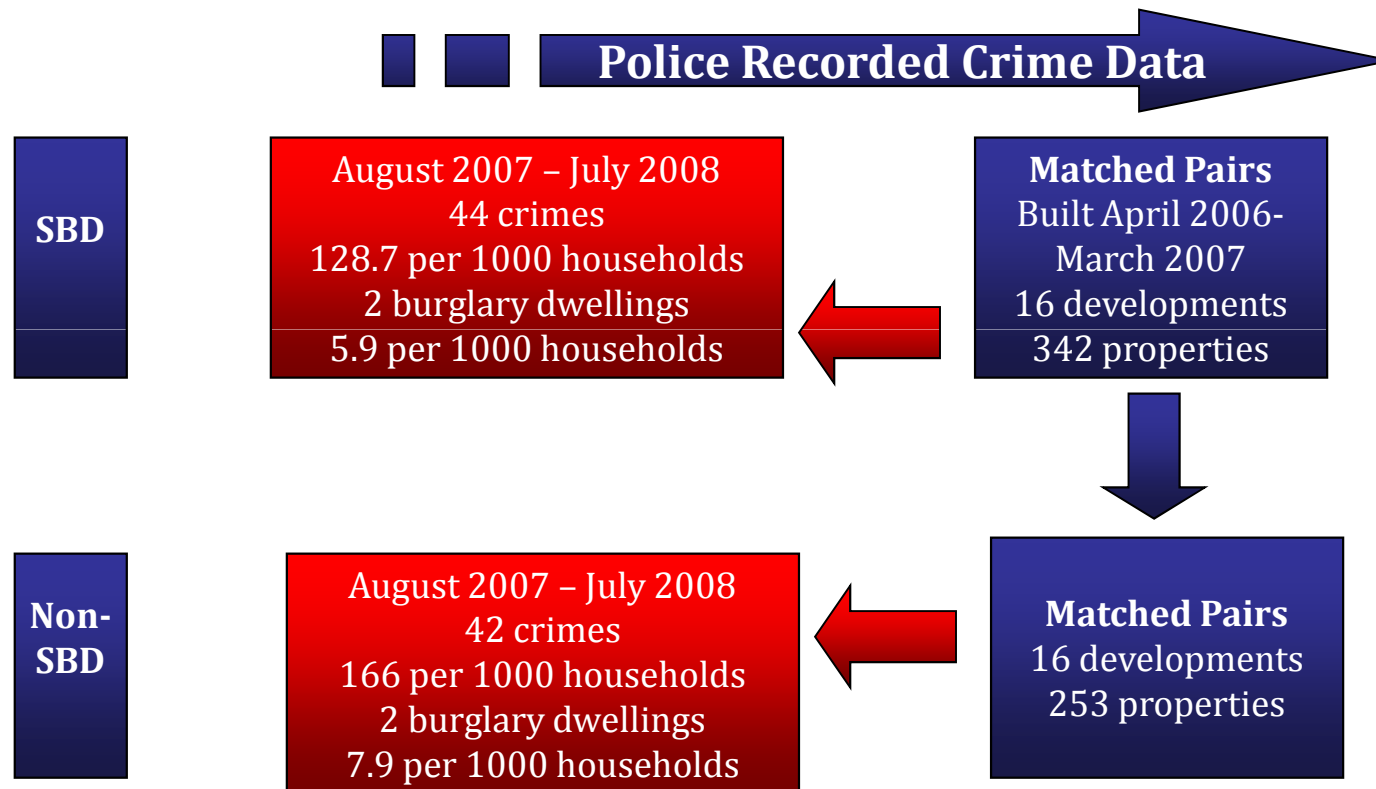


Crime Categories recorded within the 'Same Street' sample (August 2007-July 2008)

	Non SBD		SBD		Significant Difference
Crime Type	No.	Rate	No.	Rate	
Assault	24	67.8	0	0.00	p<0.05
Criminal Damage	12	33.9	4	39.6	ns
Burglary Other	7	19.8	2	19.8	ns
Burglary Dwelling	5	14.1	0	0.00	p<0.05
Theft from vehicle	7	19.8	0	0.00	p<0.05
Theft of vehicle + twoc	3	8.5	0	0.00	ns
Other	35	93.2	6	59.4	-
Total	93	262.7	12	118.8	p<0.05

Key findings – SBD and non-SBD Matched Pairs

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Crime Categories recorded within the 'Matched Pairs' sample (August 2007-July 2008)

	Non SBD		SBD		Significant Difference
Crime Type	No.	Rate	No.	Rate	
Assault	7	27.7	17	49.7	ns
Criminal Damage	12	47.5	8	23.4	ns
Burglary Other	1	4.0	2	5.9	ns
Burglary Dwelling	2	7.9	2	5.9	ns
Theft from vehicle	1	4.0	2	5.9	ns
Theft of vehicle + twoc	0	0	3.0	8.8	ns
Other	19	75.1	9.0	26.3	ns
Total	42	166.0	44	128.7	ns

Re-evaluating Original 1999 Sample



1999 – 2009: Matched Pair One

- SBD performs better than (or same as) non-SBD for both time periods.
- Crime on SBD remained same.
- Crime on non-SBD increased by 700%

Development	Number of Properties	Number of Crimes 1999/2000	Crime Rate per 1000 in 1999/2000	Number of Crimes 2007/2008	Crime Rate in 2007/2008
SBD Street	14	1	71.43	1	71.43
Non-SBD Street	14	1	71.43	8	571.43

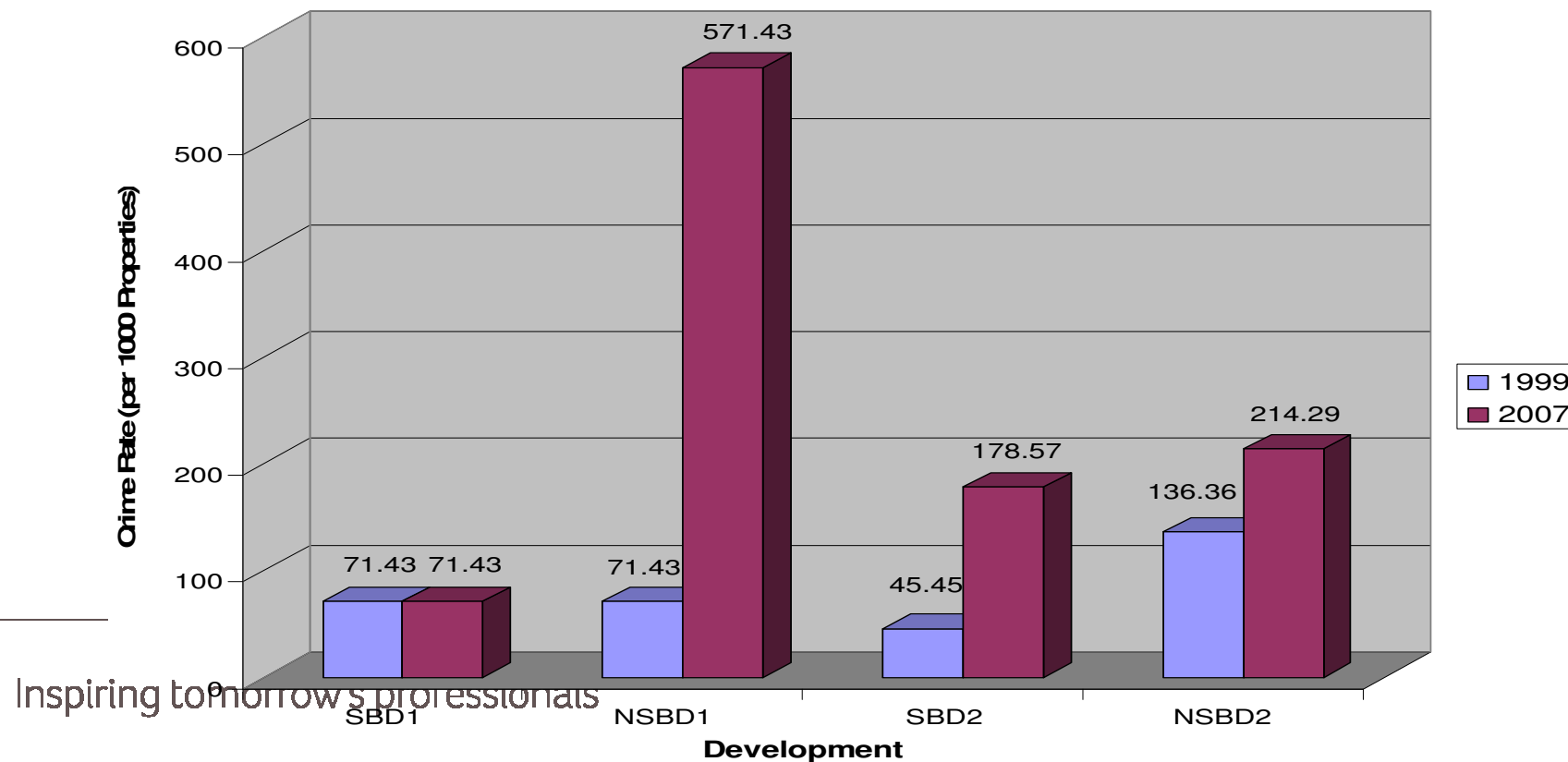
1999 – 2009: Matched Pair Two

- SBD performs better than non-SBD for both time periods.
- Crime on SBD increased by 200%.
- Crime on non-SBD increased by 20%.

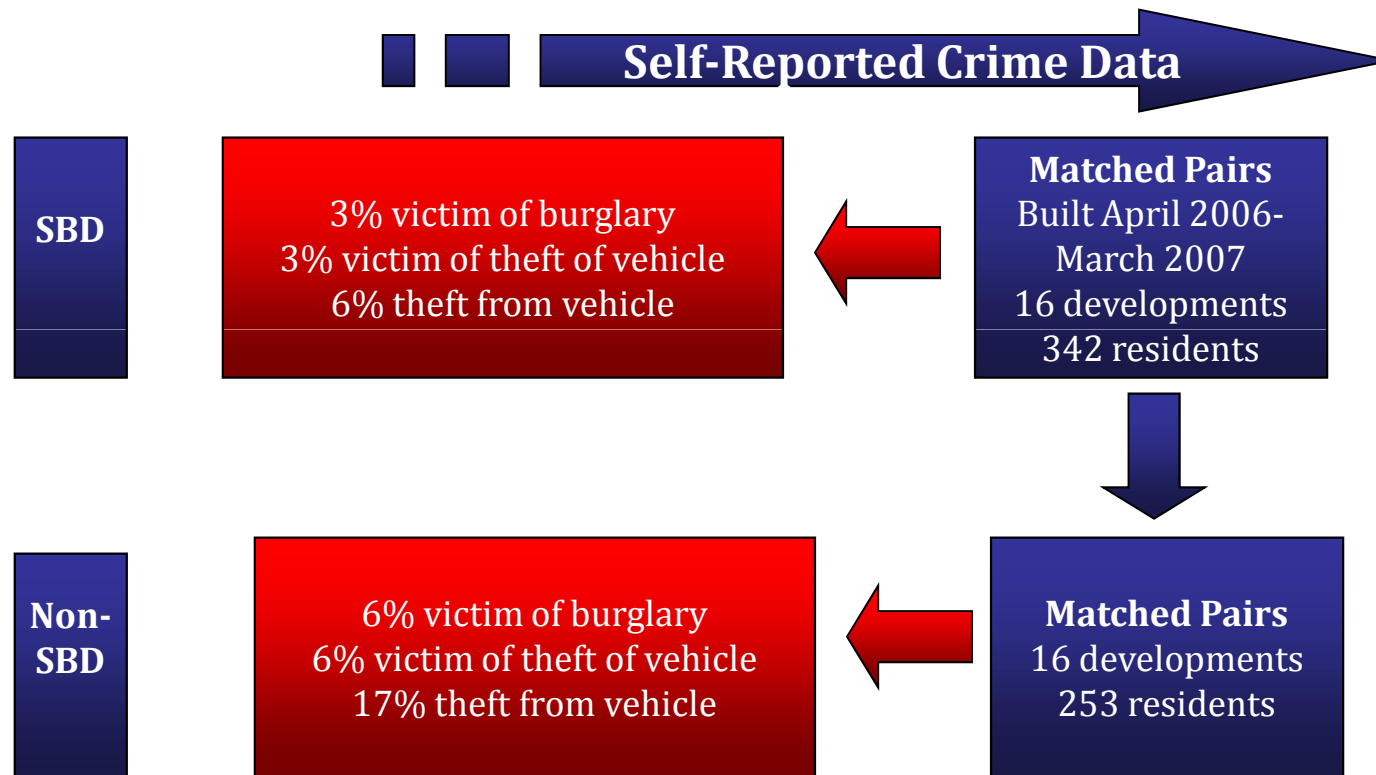
Development	Number of Properties	Number of Crimes 1999/2000	Crime Rate per 1000 in 1999/2000	Number of Crimes 2007/2008	Crime Rate in 2007/2008
SBD Street	22	1	45.45	3	136.36
Non-SBD Street	28	5	178.57	6	214.29

Sustainability of Crime Reductions 1999-2009

- SBD performs better than (or same as) non-SBD on both pairs in both time periods.
- Pair one - SBD sustained crime reduction, non-SBD saw crime increase.
- Pair two - SBD saw crime increase at a greater rate than non-SBD



Key Findings – Self-Reported Crime Data



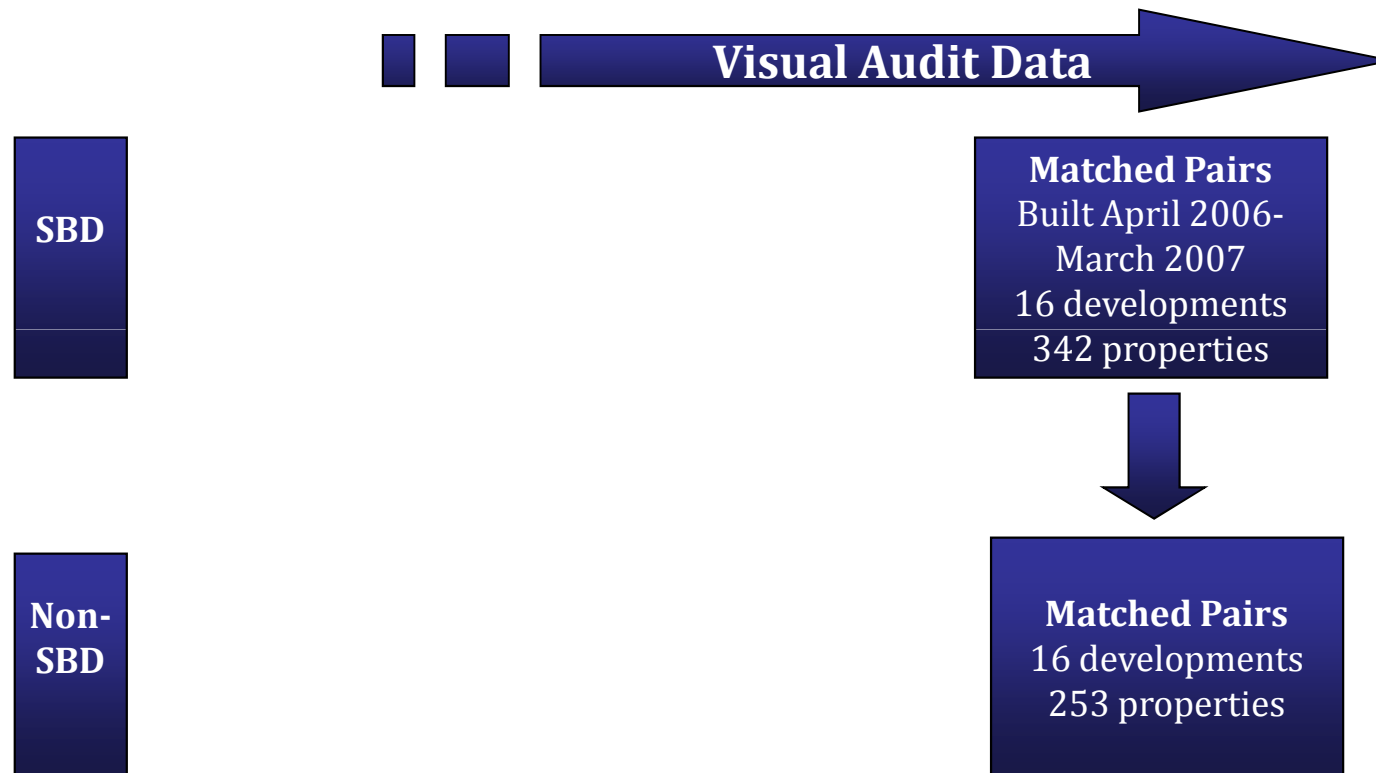
Key Findings – Self-Reported Crime Data



Crime Category	Percentage of SBD respondents - 2009	Percentage of non-SBD respondents – 2009
Theft of Vehicle	3% (1)	6% (2)
Attempt Theft of Vehicle	3% (1)	14% (5)
Theft from Vehicle	6% (2)	17% (6)
Attempt Theft from Vehicle	6% (2)	11% (4)
Theft of Bicycle	3% (1)	6% (2)
Attempt Theft of Bicycle	0% (0)	7% (3)
Burglary Dwelling	3% (1)	6% (2)
Attempt Burglary Dwelling	3% (1)	14% (5)
Theft of Property from Outside Dwelling	9% (3)	17% (6)

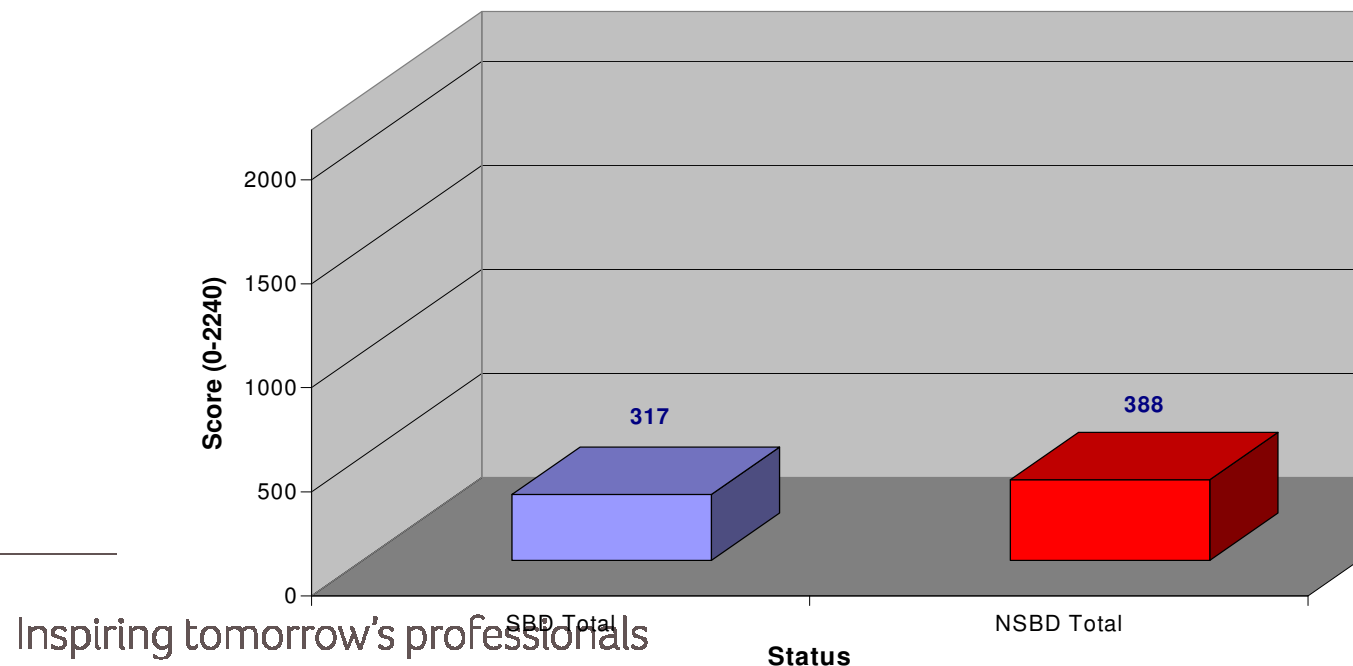
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Key Findings – Visual Audits



Key Findings - Visual Audits

- Visual audit measured 28 factors – graffiti, litter, lighting etc.
- Zero being positive and five negative.
- Maximum score - $28 \times 5 = 2240$, minimum score = 0.



Key Findings - Visual Audits

- Of 16 matched pairs:
 - 3 showed SBD to score higher (negative).
 - 1 showed SBD and non-SBD to score the same.
 - 12 showed SBD to score lower (positive).
- Of the 32 developments, the best five (lowest score) were all SBD.
- Of the 32 developments, the worst five (highest score) contained 4 non-SBD and 1 SBD.

Conclusions



- Variety of methods and datasets to establish:
 - Whether SBD properties experience less crime than non-SBD properties.
 - Whether residents living in SBD properties have lower levels of fear of crime than non-SBD counterparts.
 - Whether SBD developments show less visual signs of disorder than non-SBD developments.
 - Whether SBD has maintained its effectiveness as a crime reduction measure.

Conclusions

- SBD versus 'West Yorkshire'
 - Burglary rates are lower within the SBD sample (5.8 per 1000 households as compared to 22.7).
 - All crime categories lower in SBD sample
- SBD versus non-SBD 'Same Street'
 - Burglary rates are lower within the SBD sample (0 burglaries per 1000 households as compared to 14.1).
 - All crime categories (with exception of criminal damage) lower in SBD sample.
- SBD versus non-SBD 'Matched Pairs'
 - Burglary rates are lower within the SBD sample (5.9 burglaries per 1000 households as compared to 7.9).
 - Assault, vehicle crime and burglary other higher in SBD sample.

Conclusions

- 1999 versus 2009
 - For both matched pairs SBD was performing either the same or better than non-SBD in both time periods of 1999/2000 and 2007/08
 - Pair one sustained crime reduction, non-SBD saw crime increase; pair two - SBD saw crime increase at a greater rate than non-SBD
- Self-Reported Crime
 - Twice as many non-SBD residents had experienced a crime within the previous year.
 - For all crime categories, the proportion of SBD respondents experiencing the crime was lower in the SBD sample.
- Visual Audits
 - SBD sample scored lower than non-SBD sample (317 against 388).
 - Of the 16 matched pairs, 3 revealed SBD to perform worse than non-SBD, 1 showed the same score and 12 showed SBD to perform better.

Conclusions

- Original evaluation positive so why re-assess?
- To be complacent about the merits of any crime prevention measure is to ignore the evolving nature of crime.
- *“Knowledge of what works becomes a wasting asset that needs constant replenishment”* (Ekblom, 2002, p. 38).
- SBD has continued to reduce crime and the fear of crime and SBD estates show less signs of visual disorder.
- The effectiveness of SBD developments built more recently has exceeded that shown in the original evaluation.
- However, the re-evaluation has identified particular SBD schemes which are not performing well - allowing interventions to halt any further decline.

Thank-you for listening
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