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1999 to 2009: Re-evaluating Secured by Design Ten Years On

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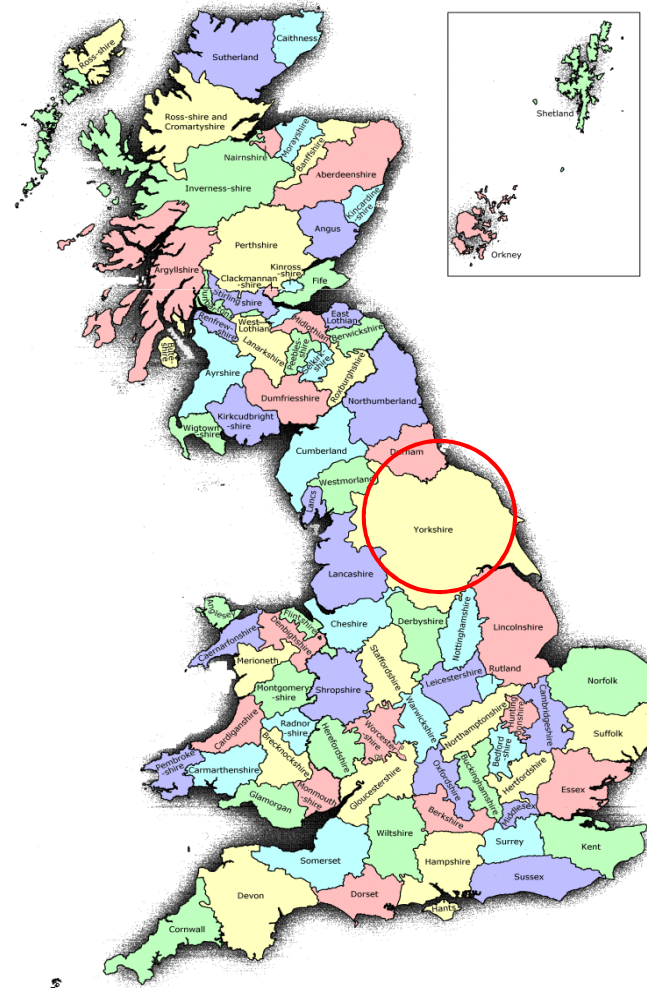
# 1999 to 2009: Re-Evaluating Secured by Design (SBD) in West Yorkshire

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Huddersfield

# First, where is West Yorkshire?

The Counties of Great Britain



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# First, where is West Yorkshire?



Inspiring to



# Firstly, where is West Yorkshire?



Inspiring



# 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

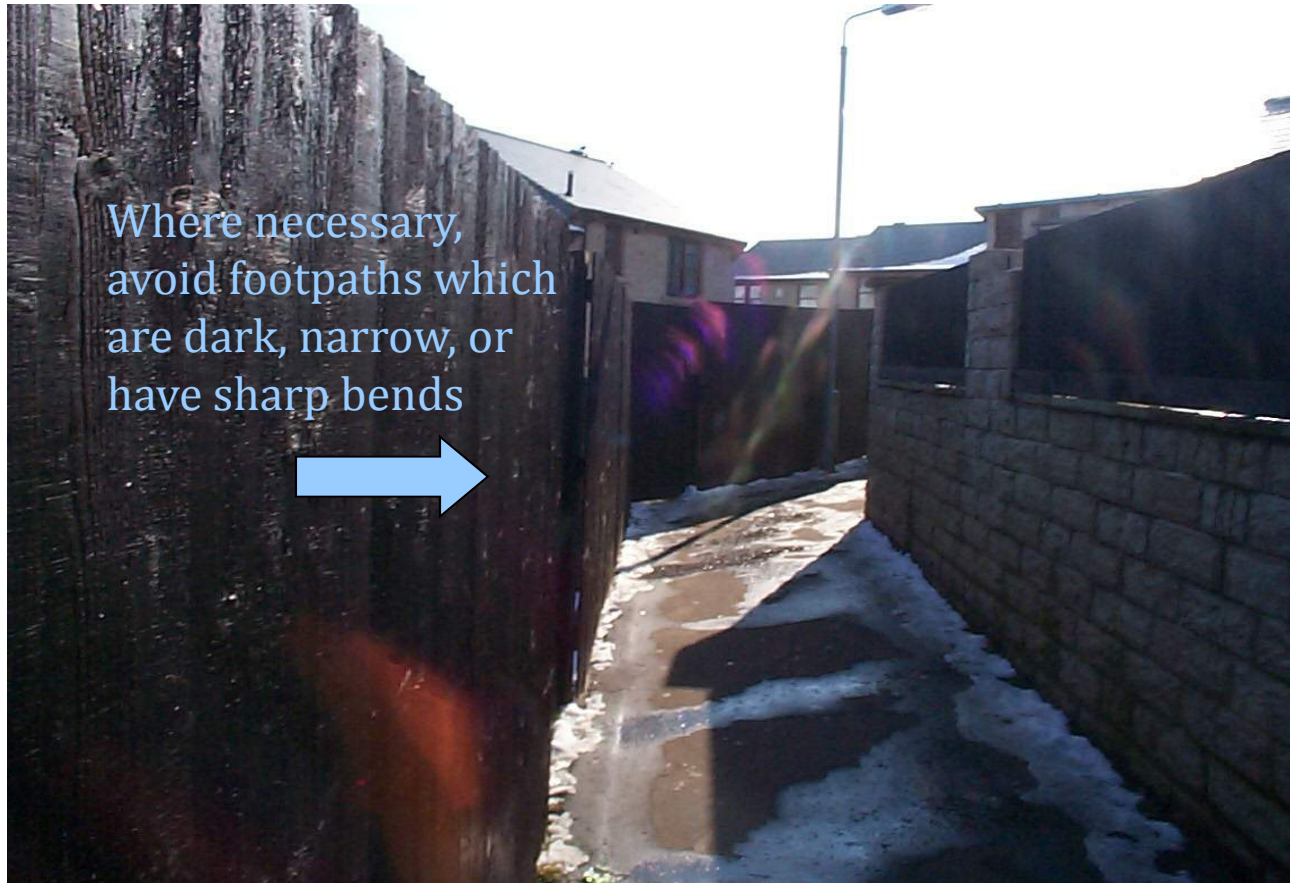
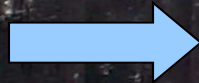
- Estates are designed to include a minimum number of access/egress points.
- Based on principle that highly permeable estates (with lots of through movement).....
  - Provide convenient escape routes for offenders.
  - Give offenders the opportunity to attach the estate to their 'awareness space'. If 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.

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# 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 10,000<sup>th</sup> 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.

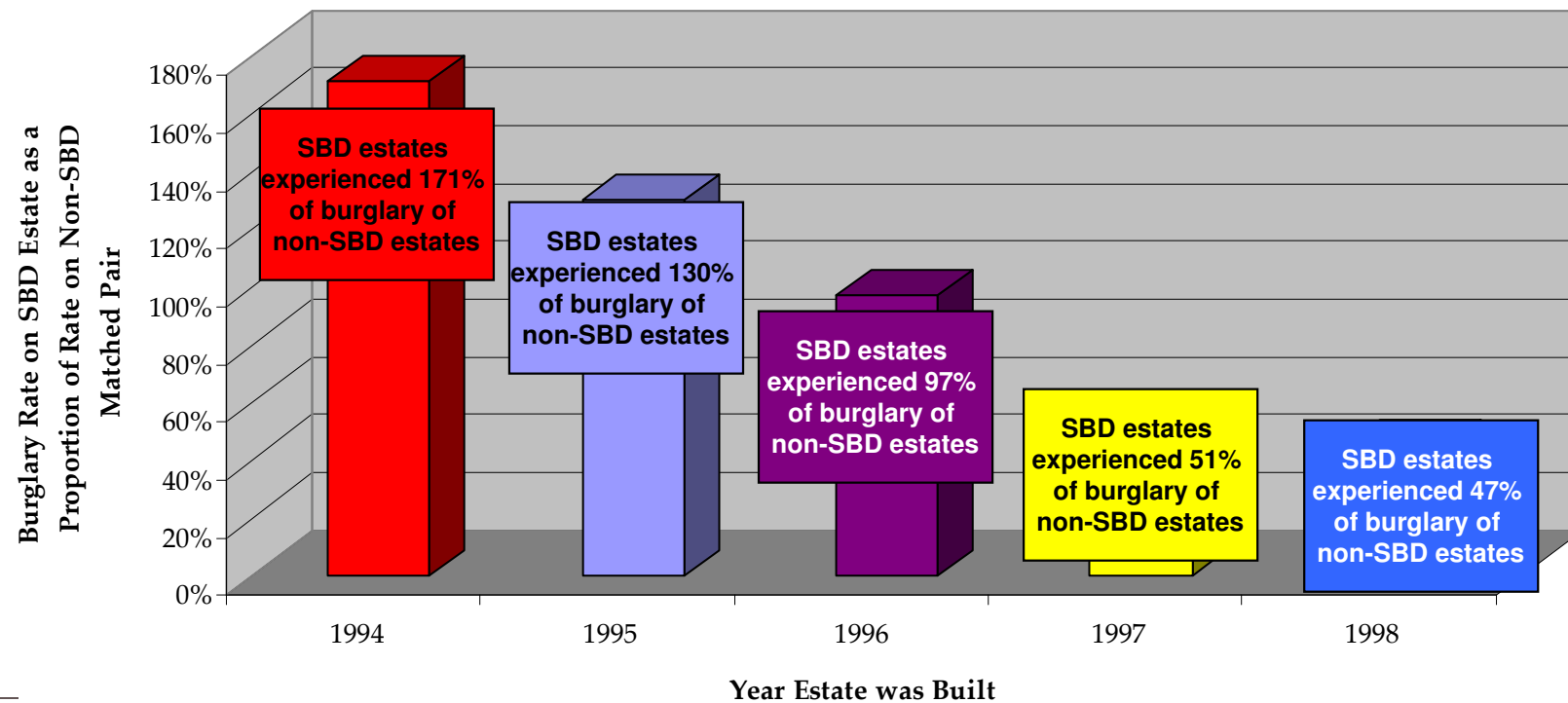
# Updating the Sample

- 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

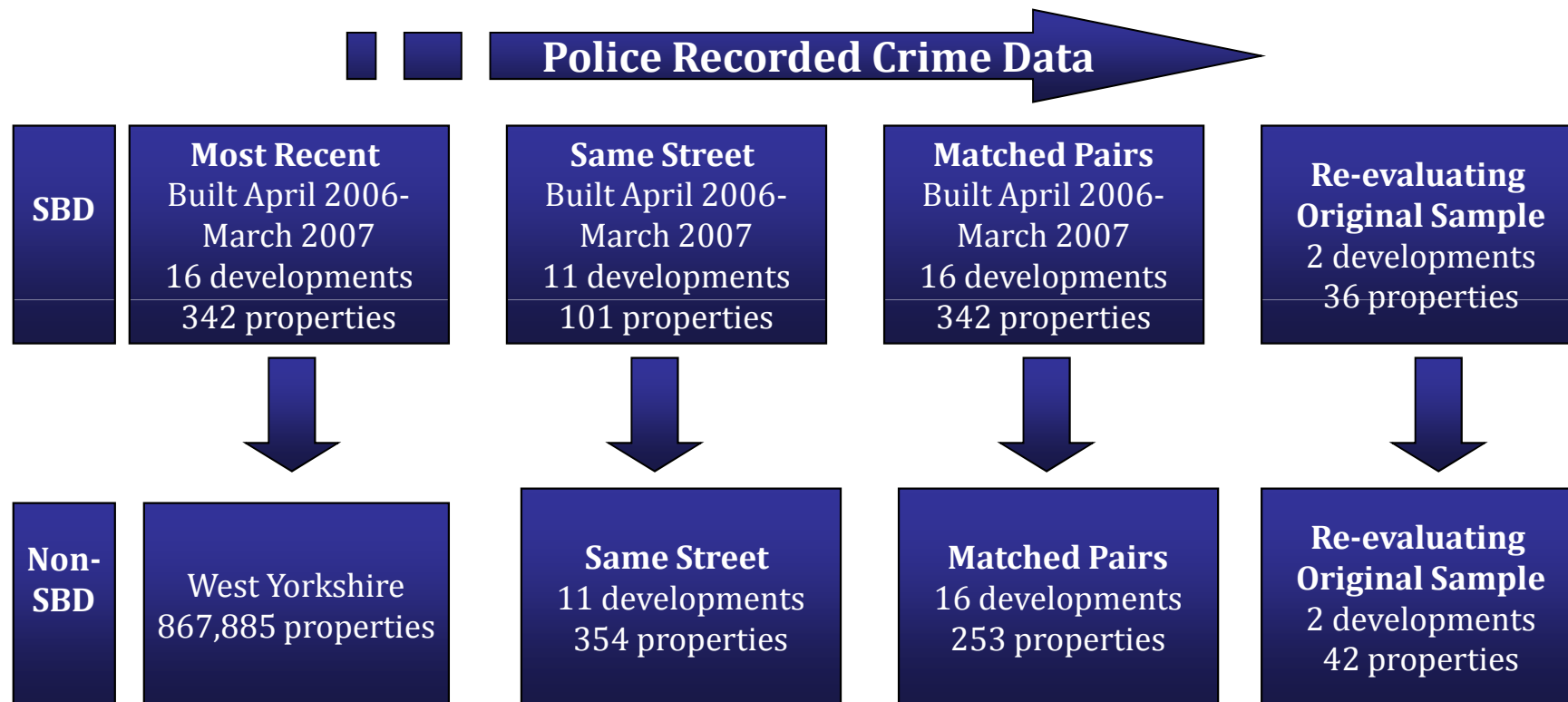
SBD as an Evolving Standard



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

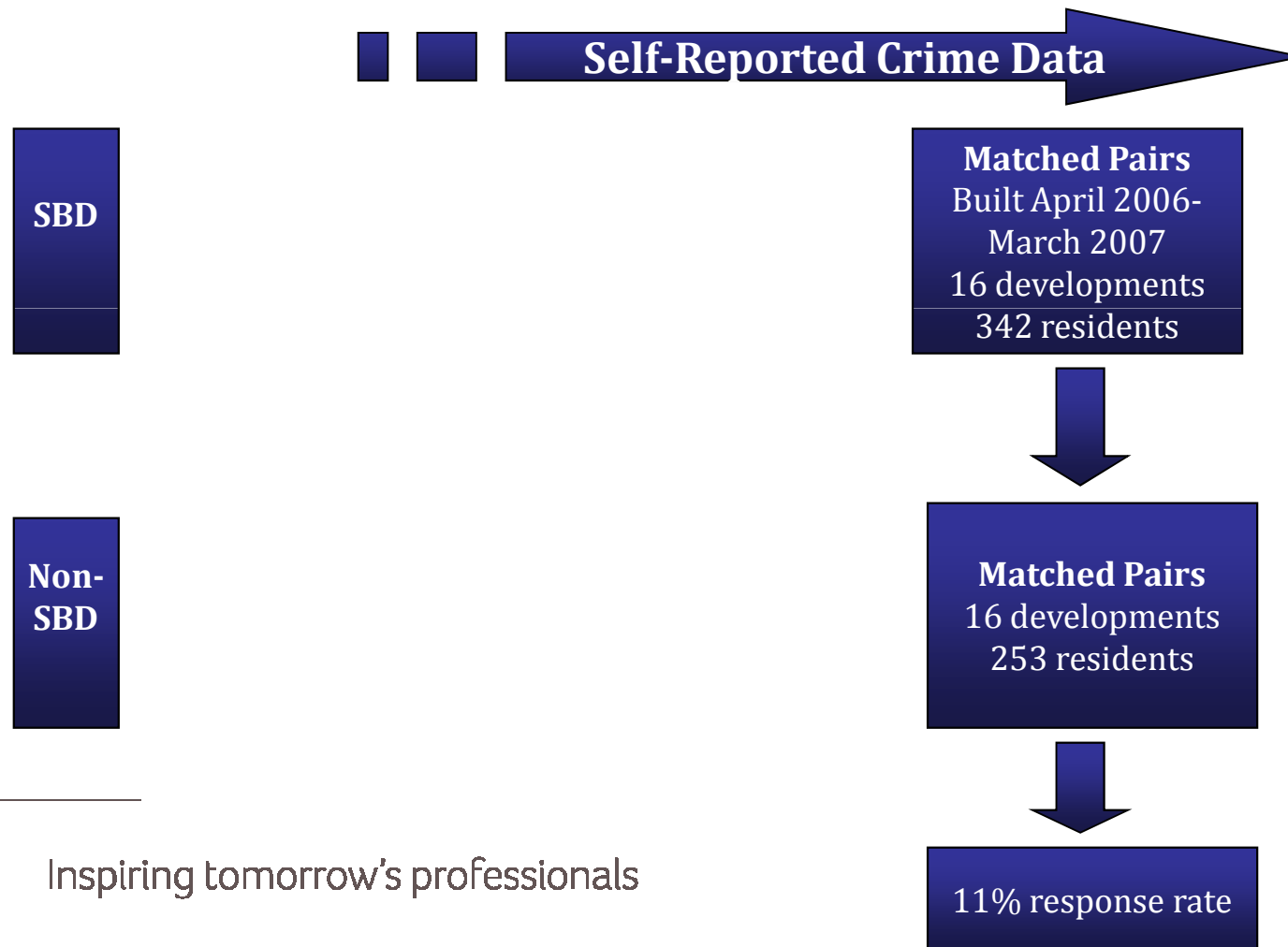
# 2009 Re-evaluation

# Methodology – Police Recorded Crime Data

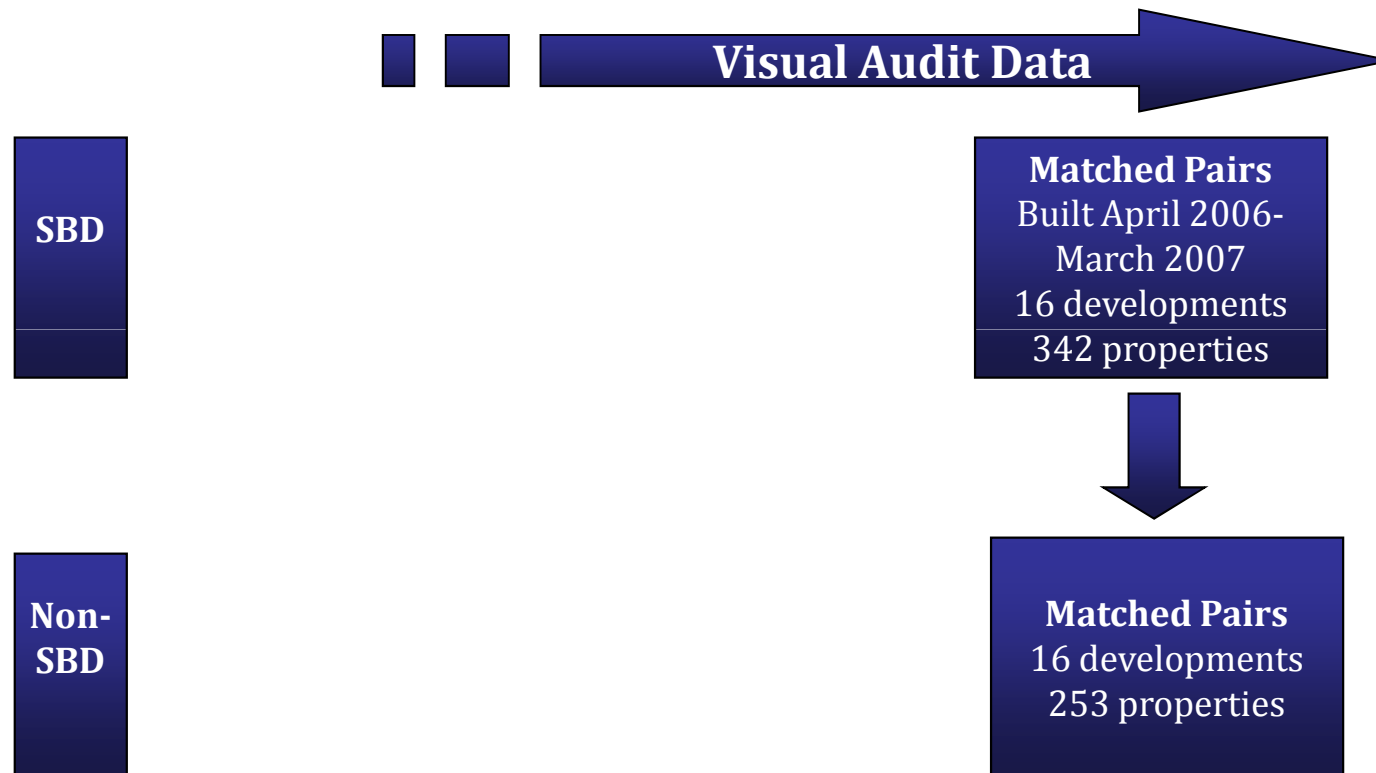




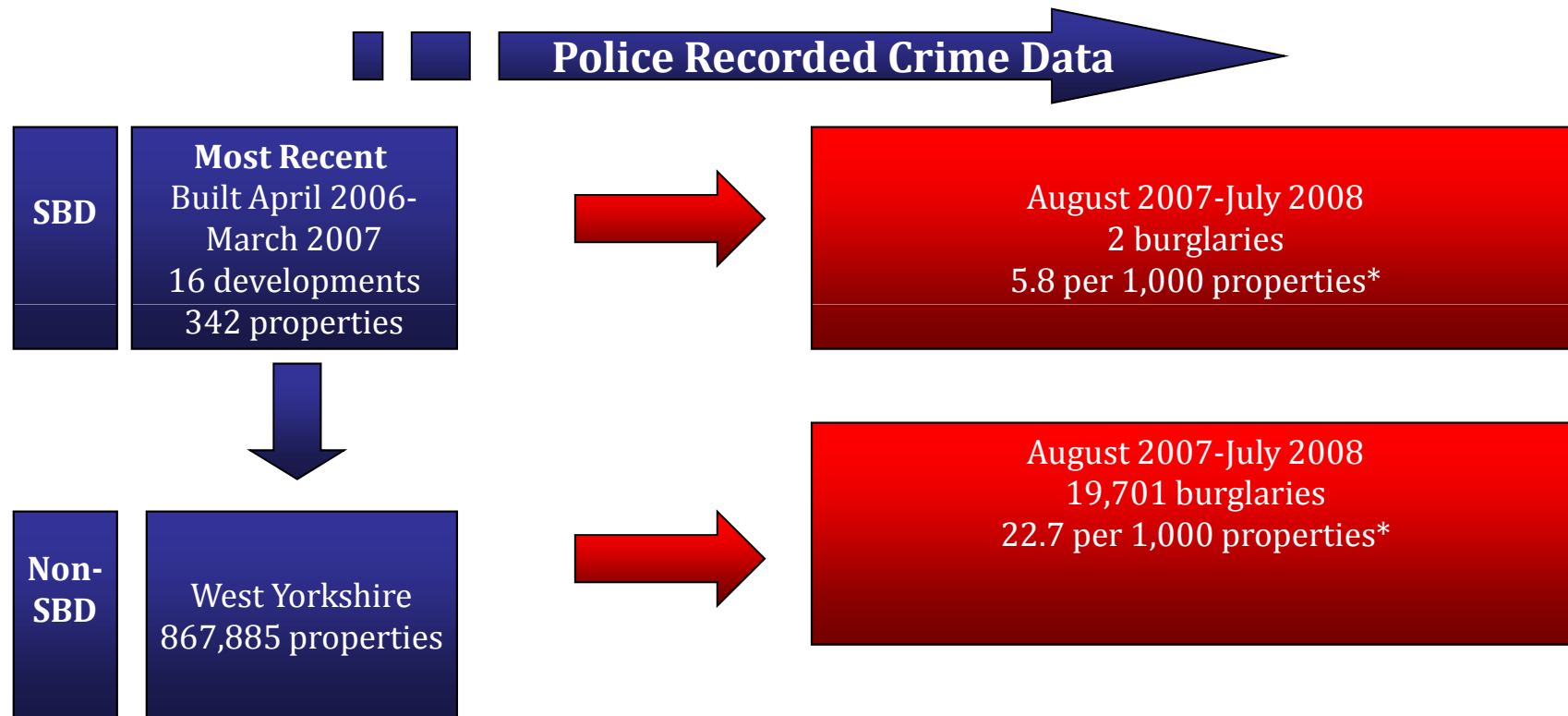
# Methodology – Self-Reported Crime Data



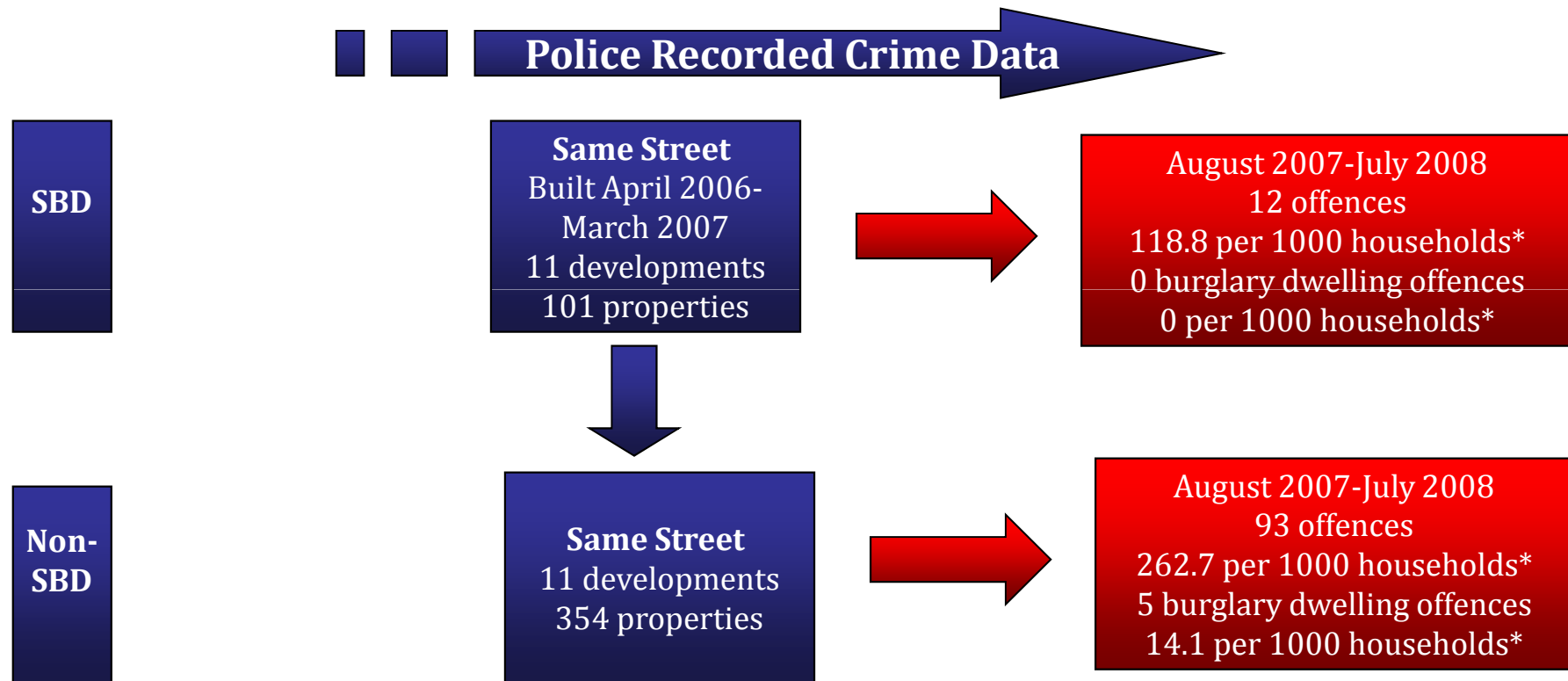
# Methodology – Visual Audits



# Key Findings – SBD against West Yorkshire



# Key Findings – SBD against Same Street

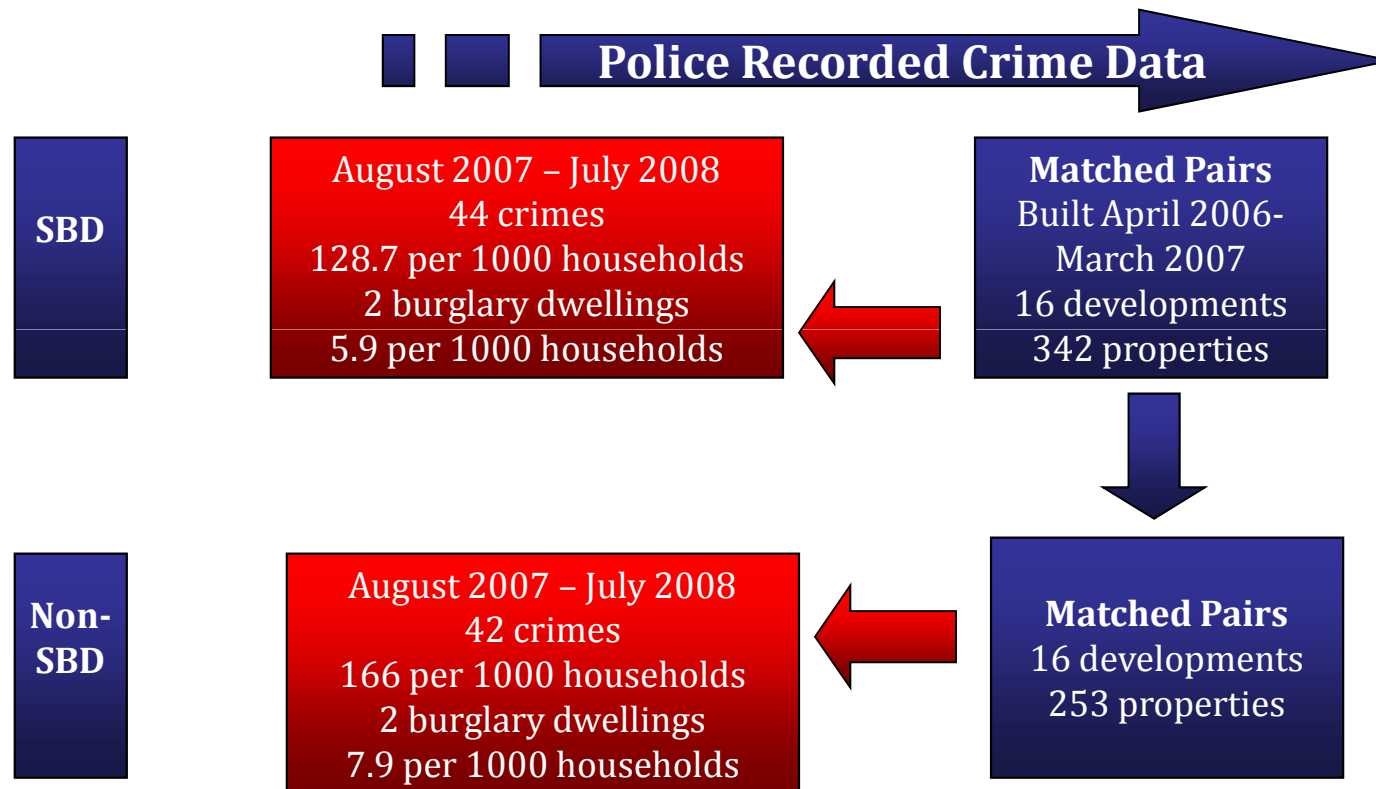


# Crime Categories recorded within the 'Same Street' sample (August 2007-July 2008)

	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	-
<b>Total</b>	<b>93</b>	<b>262.7</b>	<b>12</b>	<b>118.8</b>	<b>p&lt;0.05</b>

# 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
<b>Total</b>	<b>42</b>	<b>166.0</b>	<b>44</b>	<b>128.7</b>	<b>ns</b>

# 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

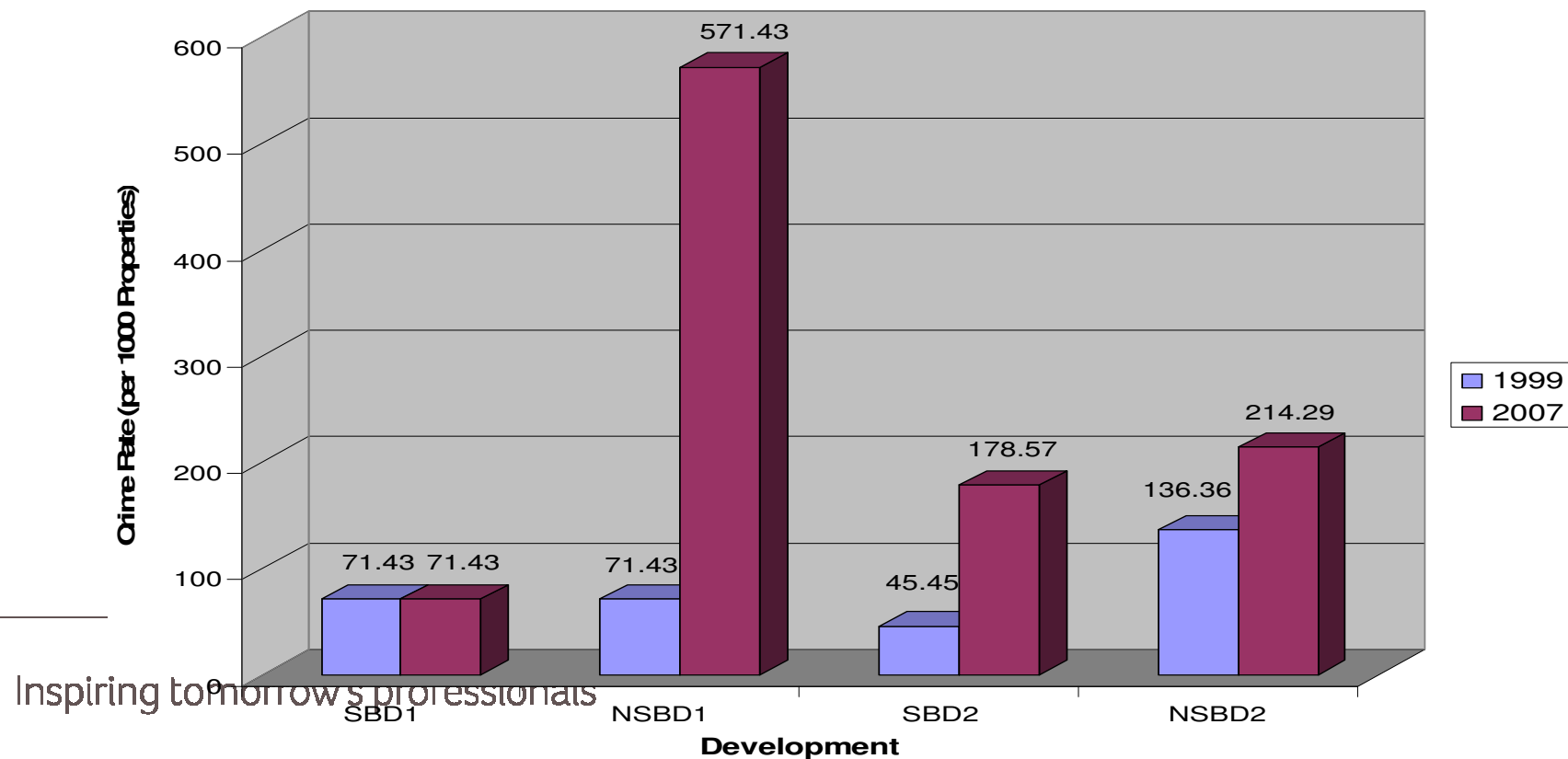
# 1999 – 2009: Matched Pair Two

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

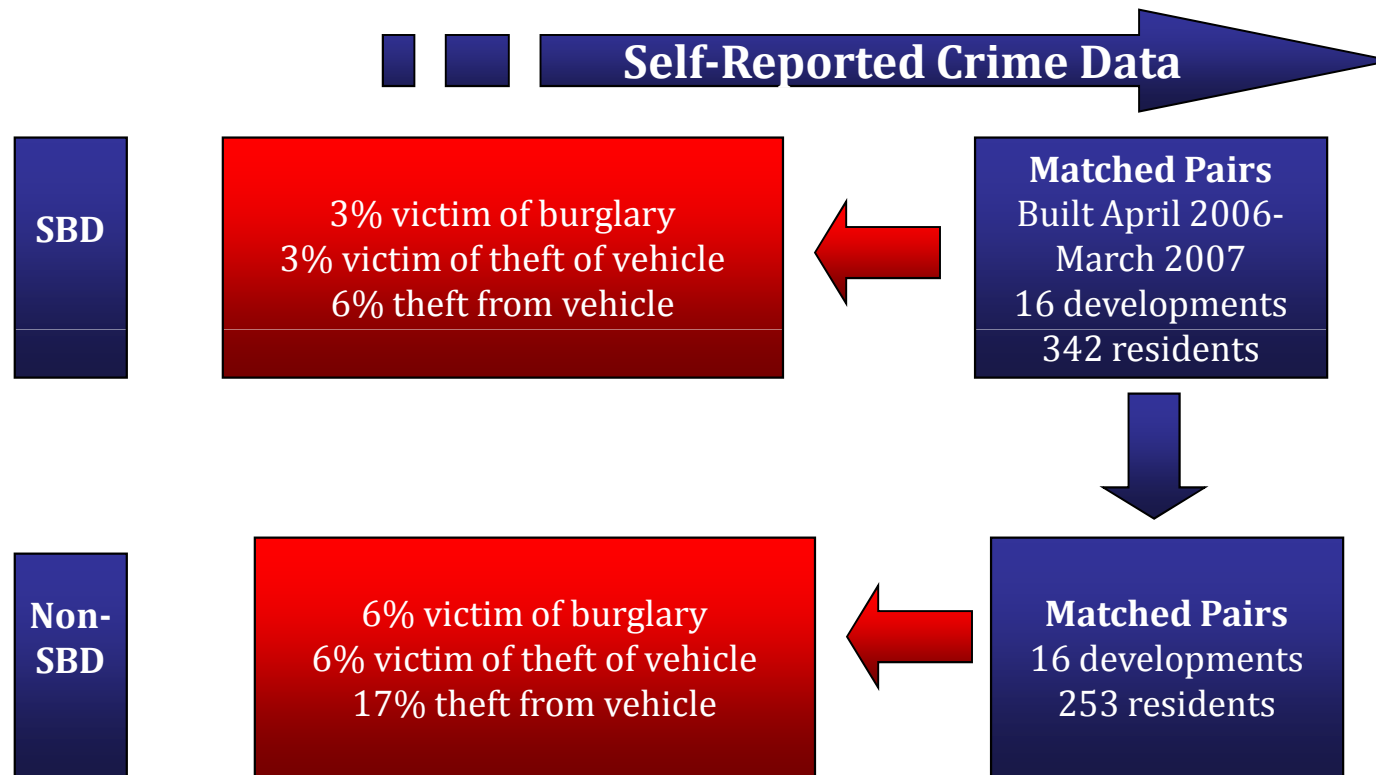
Development	Number of Properties	Number of Crimes 1999/2000	Crime Rate per 1000 in 1999/2000	Number of Crimes 2007/2008	Crime Rate in 2007/2008
SBD Street	22	1	45.45	3	136.36
Non-SBD Street	28	5	178.57	6	214.29

# 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





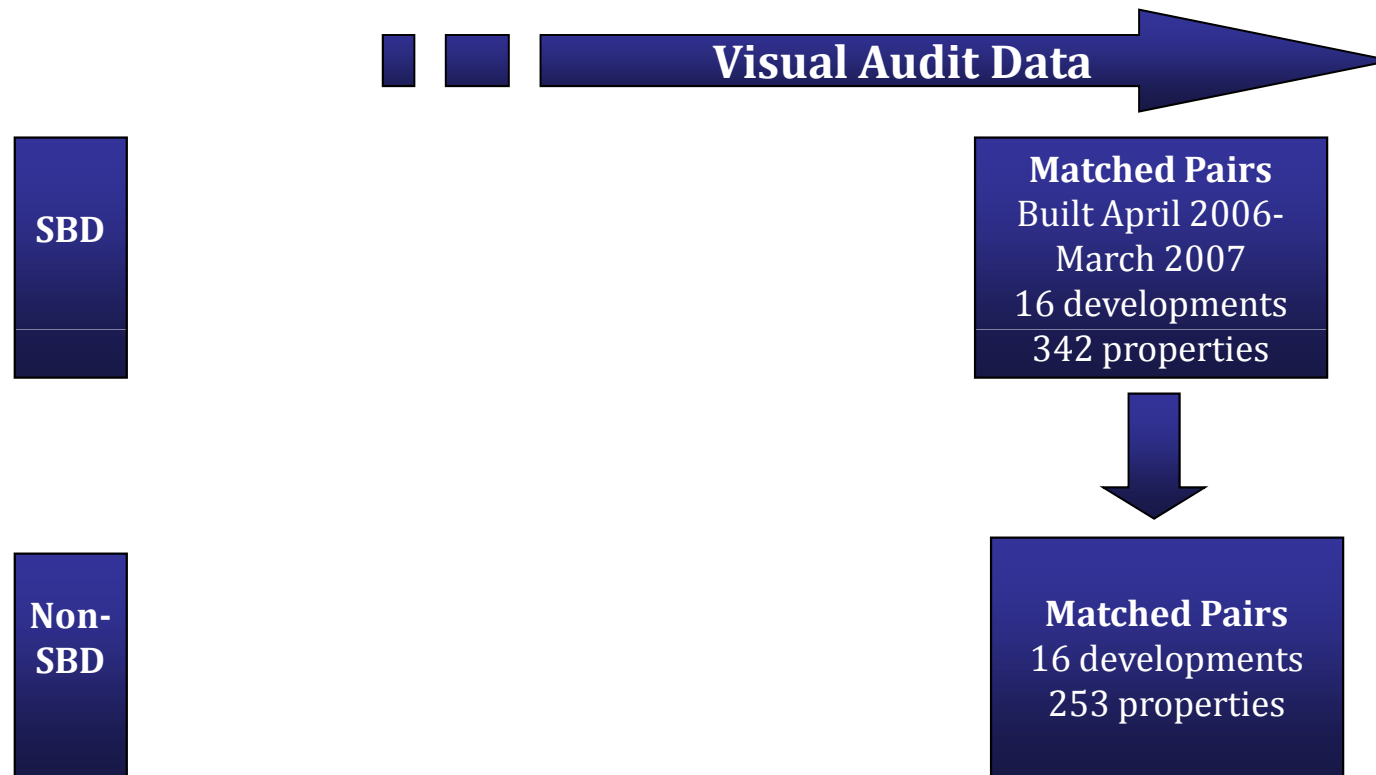
# Key Findings – Self-Reported Crime Data



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)

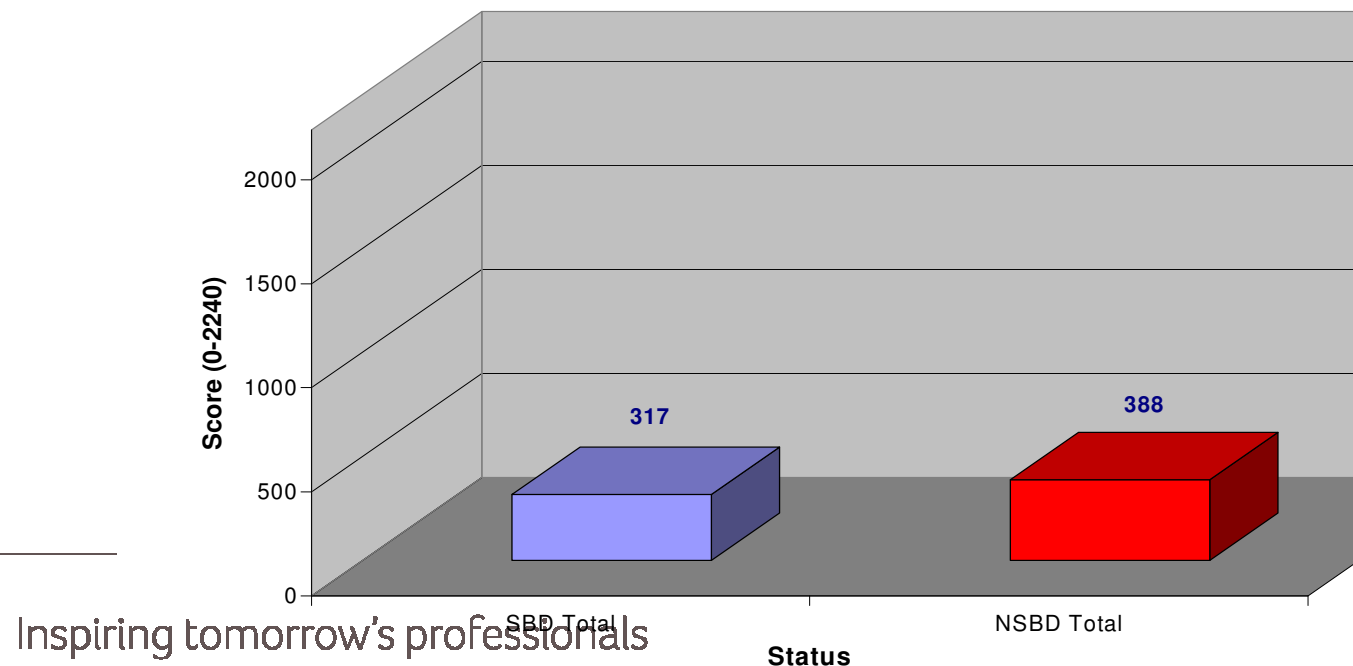
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# Key Findings – Visual Audits



# 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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