



University of **HUDDERSFIELD**

University of Huddersfield Repository

Armitage, Rachel

Crime Prevention through Environmental Design (CPTED) and Housing in the UK.

Original Citation

Armitage, Rachel (2017) Crime Prevention through Environmental Design (CPTED) and Housing in the UK. In: Safety in the Making: Lessons from and for Urban Planners., 16th February 2017, Stockholm, Sweden. (Unpublished)

This version is available at <http://eprints.hud.ac.uk/id/eprint/31240/>

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

- The authors, title and full bibliographic details is credited in any copy;
- A hyperlink and/or URL is included for the original metadata page; and
- The content is not changed in any way.

For more information, including our policy and submission procedure, please contact the Repository Team at: E.mailbox@hud.ac.uk.

<http://eprints.hud.ac.uk/>

Crime Prevention through Environmental Design (CPTED) and Housing in the UK

Professor Rachel Armitage
Director: Secure Societies Institute

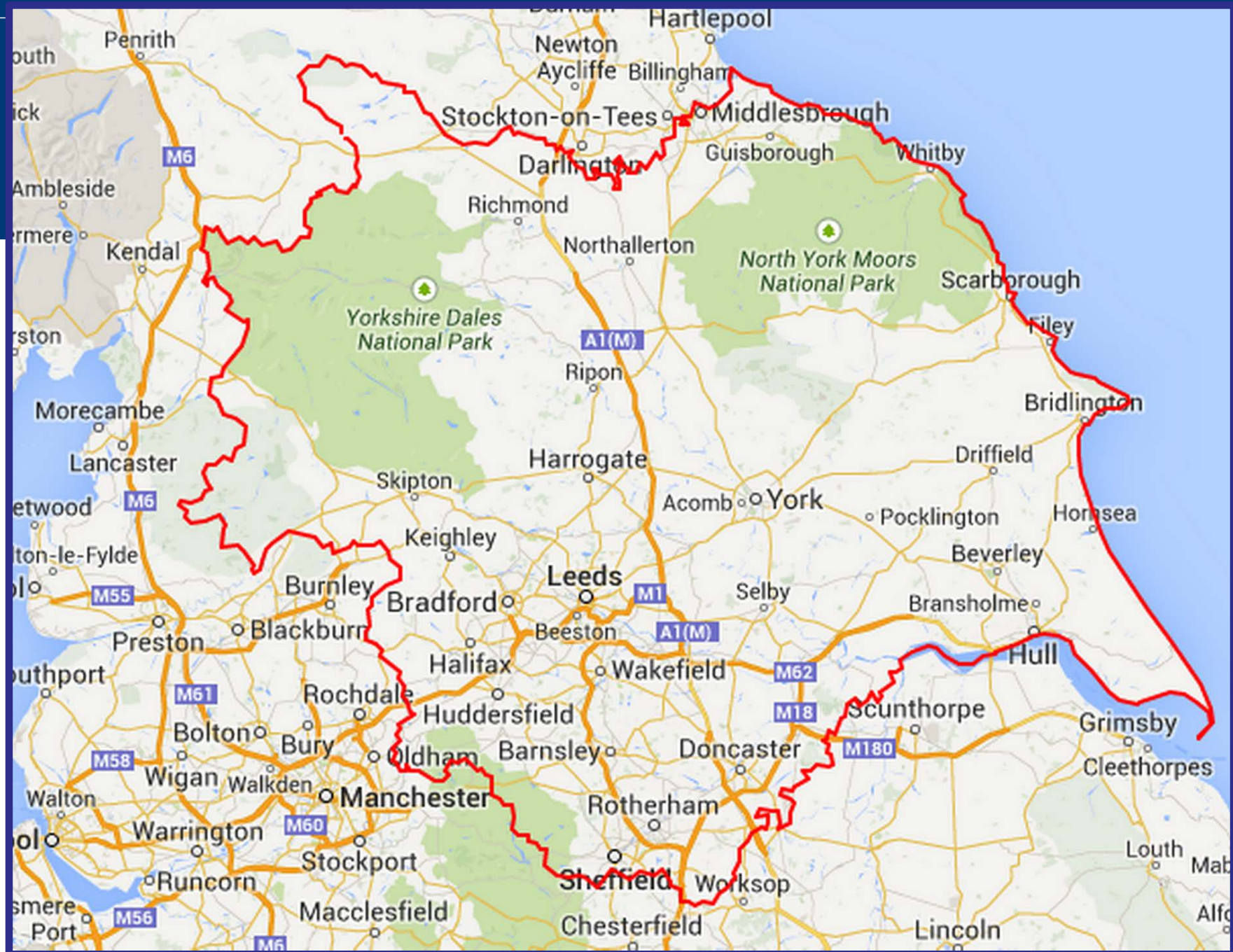
Inspiring tomorrow's professionals



Introduction

Inspiring tomorrow's professionals







Lecture content

- Introduction to Crime Prevention through Environmental Design (CPTED).
- Introduction to Secured by Design (SBD).
- Implementation of CPTED and SBD in UK.
- Does CPTED reduce police recorded crime?
- Does CPTED impact upon offender decision making?
- Does SBD reduce crime?
- Can the principles of CPTED be transferred to other countries, cultures, climates?

Crime Prevention through Environmental Design (CPTED)

What is it?

Inspiring tomorrow's professionals



*A method of reducing crime through the
design and manipulation of the built
environment (planning stage)*

Houses

Schools

Hospitals

Commercial

Railway stations

Creating Defensible Space

University of
HUDDERSFIELD

Use of design to create **symbolic barriers** that portray the message that an area is private.



Limiting through movement

Less opportunities to **notice** the house.

Less **access/escape** routes.



Maximising surveillance

University of
HUDDERSFIELD

Offenders are more likely to be **observed** (or feel like that are being observed) by neighbours and/or passers by.



Management and maintenance

University of
HUDDERSFIELD

The area is well maintained giving the impression that **people care** and would challenge the offender if observed.





Standards of physical security

University of
HUDDERSFIELD

The house is **difficult to get into**. Doing so would take time and would be

Lock Snapping/Mole Gripping



The principles of CPTED

Poyner (1983)	Cozens et al (2005)	Armitage (2013)	Ekblom et al (2013)	Montoya et al (2016)
Surveillance	Surveillance	Surveillance	Surveillance	Surveillance
Movement control	Access control	Movement control	Access and connectivity	Access control
Activity support	Activity support		Activity	Activity support
Motivational reinforcement				
	Target hardening	Physical security		Target hardening
	Image	Management and maintenance	Public image	Image maintenance
	Defensible space	Defensible space	Ownership	
	Territoriality			Territoriality
			Structure and spatial layout	

What CPTED is not

University of
HUDDERSFIELD



New Opportunity Theories

University of
HUDDERSFIELD

“Crime becomes a risk to be calculated (by the offender and the potential victim) or as an accident to be avoided, rather than a moral aberration which needs to be specially explained”
(Garland, 1996 p.450-451).

Inspiring tomorrow's professionals

THE AWARDS
AWARD WINNER
UNIVERSITY OF THE YEAR

the guardian
UNIVERSITY
AWARDS
Winner
2013

2012
THE AWARDS
WINNER
Entrepreneurial University of the Year


THE QUEEN'S AWARDS
FOR ENTERPRISE

New Opportunity Theories

University of
HUDDERSFIELD

Rational Choice Theory

(Cornish and Clarke,
1986)

Make calculations
based upon **risk**
versus rewards or
costs versus
benefits...to maximise
benefits of offending.

Prevention:
Influence offender
thinking/decision –
increase risks and
reduce rewards.

Inspiring tomorrow's professionals

THE AWARDS
AWARD WINNER
UNIVERSITY OF THE YEAR

the guardian
UNIVERSITY
AWARDS
Winner
2013

2012
THE AWARDS
WINNER
Entrepreneurial University of the Year

THE QUEEN'S AWARDS
FOR ENTERPRISE

New Opportunity Theories

University of
HUDDERSFIELD

Routine Activity Theory (Cohen and Felson, 1979)

Crime requires: a
Suitable Target, a
Motivated Offender
and absence of a
Capable Guardian

Prevention: Make
target less suitable;
ensure *presence of*
capable guardian,
demotivate offender.

Inspiring tomorrow's professionals

THE AWARDS
AWARD WINNER
UNIVERSITY OF THE YEAR

the guardian
UNIVERSITY
AWARDS
Winner
2013

2012
THE AWARDS
WINNER
Entrepreneurial University of the Year

THE QUEEN'S AWARDS
FOR ENTERPRISE

New Opportunity Theories

University of
HUDDERSFIELD

Crime Pattern Theory (Brantingham and Brantingham, 1981)

Offenders go to jobs, visit friends, shop like the rest of us (**Activity Space**). These locations plus spaces between form **Awareness Space**.

Alter design so offender less likely to pass by/become aware of targets.

Inspiring tomorrow's professionals

THE AWARDS
AWARD WINNER
UNIVERSITY OF THE YEAR

the guardian
UNIVERSITY
AWARDS
Winner
2013

2012
THE AWARDS
WINNER
Entrepreneurial University of the Year

THE QUEEN'S AWARDS
FOR ENTERPRISE

CPTED aims to block opportunities

University of
HUDDERSFIELD

- Offenders are **less likely to 'pass by'** your house as part of their day-to-day activities.
- If they do, the design and layout of your house and surrounding properties will influence their **'perceptions' of risk.**
- If they are not deterred by the perceptions of the risk of being noticed/challenged, they will find **physically overcoming the security** too difficult.

Inspiring tomorrow's professionals

THE AWARDS
AWARD WINNER
UNIVERSITY OF THE YEAR

the guardian
UNIVERSITY
AWARDS
Winner
2013

2012
THE AWARDS
WINNER
Entrepreneurial University of the Year

THE QUEEN'S AWARDS
FOR ENTERPRISE



Secured by Design (SBD)

What is it?

Inspiring tomorrow's professionals



Secured by Design



Police Preferred Specification

Secured by Design: Standards based on principles of CPTED

University of
HUDDERSFIELD

Secured by Design – Gold

Movement control

SECTION 1:
THE DEVELOPMENT
– LAYOUT & DESIGN
(PLANNING ISSUES)

Secured by
Design – Silver

SECTION 2:
SECURITY OF
DWELLING

Secured by Design



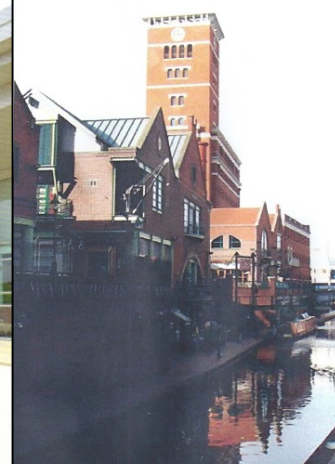
Official Police Security Initiative



S
HOM



NEW SCHOOLS
2014



COMMERCIAL DEVELOPMENTS
2015

Secured by Design: Interactive toolkit

University of
HUDDERSFIELD

<http://www.securedbydesign.com/industry-advice-and-guides/interactive-design-guide/>

Inspiring tomorrow's professionals

THE AWARDS
AWARD WINNER
UNIVERSITY OF THE YEAR

the guardian
UNIVERSITY
AWARDS
Winner
2013

2012
THE AWARDS
WINNER
Entrepreneurial University of the Year


THE QUEEN'S AWARDS
FOR ENTERPRISE

Implementing CPTED/SBD in the UK

Inspiring tomorrow's professionals



How are CPTED & SBD delivered in England and Wales

University of
HUDDERSFIELD

Crime Prevention Design Advisors & Police Architectural Liaison Officers

To find your nearest crime prevention design advisor, click on the map below or chose from the drop-down menu.



- Each police force has ALO/CPDA/DOCOs.
- Review planning applications, advice on crime risk, deliver SBD, influence planning policy/strategy.
- Predominantly warranted police or retired police.
- Police station/local authority planning dept.
- Jan 2009 – 347
- Nov 2014 - 125

Difference in delivery West Yorkshire Police

University of
HUDDERSFIELD



- 5 police districts/local authorities
- 5 ALOs – one per police district
- Located in local authority planning departments.
- Retired/warranted police
- Formal meetings once every two months.

Difference in delivery Greater Manchester Police

University of
HUDDERSFIELD



- 10 local authorities/police

Only Police Force in England and Wales to recruit from built environment background!

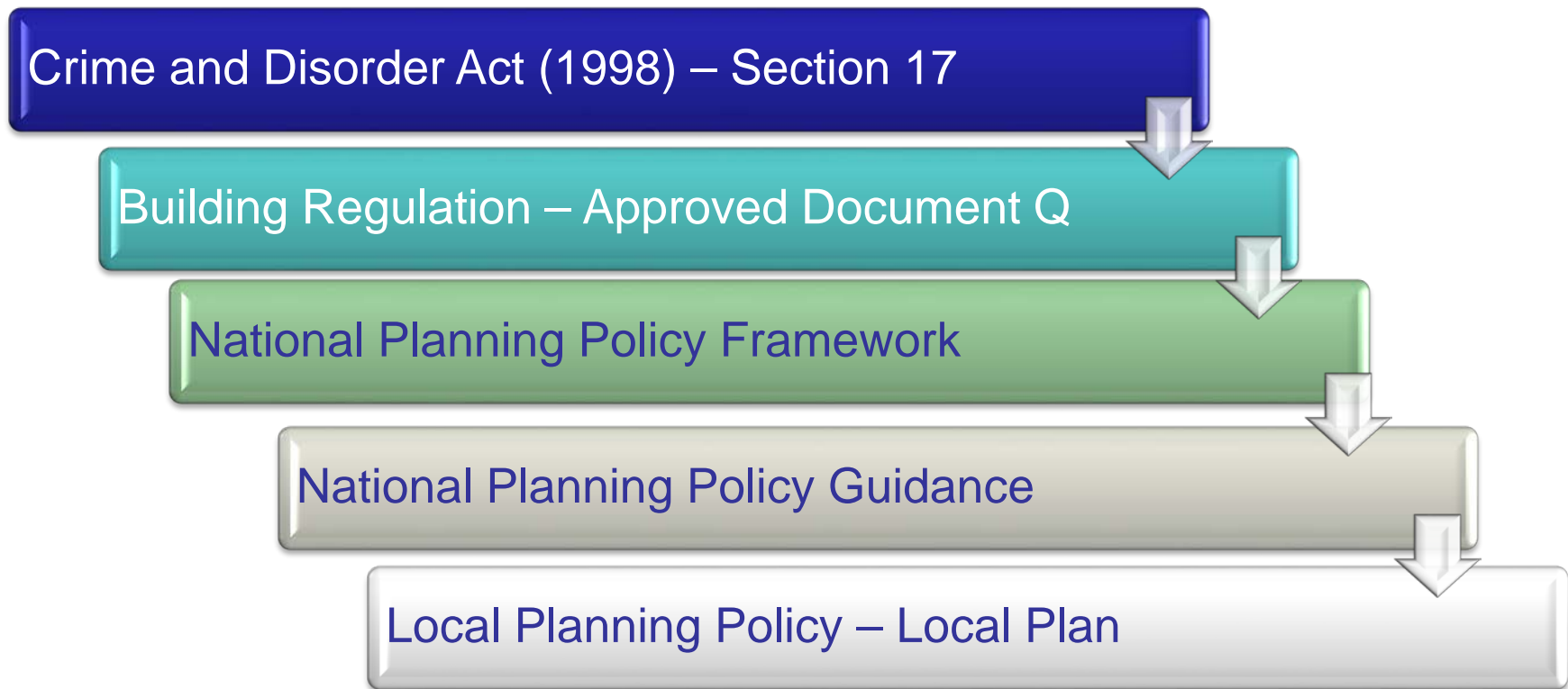
Only Police Force in England and Wales to ‘require’ Crime Impact Statement with each planning application and to charge for this service!



- Local authorities require a Crime Impact Statement – chargeable service

Legislation, regulation, policy & guidance to support CPTED in planning system

University of
HUDDERSFIELD



Inspiring tomorrow's professionals


THE AWARDS
AWARD WINNER
UNIVERSITY OF THE YEAR

the guardian
UNIVERSITY
AWARDS
Winner
2013

2012
THE AWARDS
WINNER
Entrepreneurial University of the Year



THE QUEEN'S AWARDS
FOR ENTERPRISE

Crime and Disorder Act (1998) – Section 17




“Responsible authorities
*must....without prejudice to any
other obligation imposed upon
it...exercise its functions with due
regard to...the need to do all it
reasonably can to prevent crime
and disorder in its area”*

Building Regulation – Approved Document Q




*The building must be designed and constructed in such a way that it **adequately resists unauthorised access** from outside the building and unauthorised access from within the building to flats within the building.*

National Planning Policy Framework

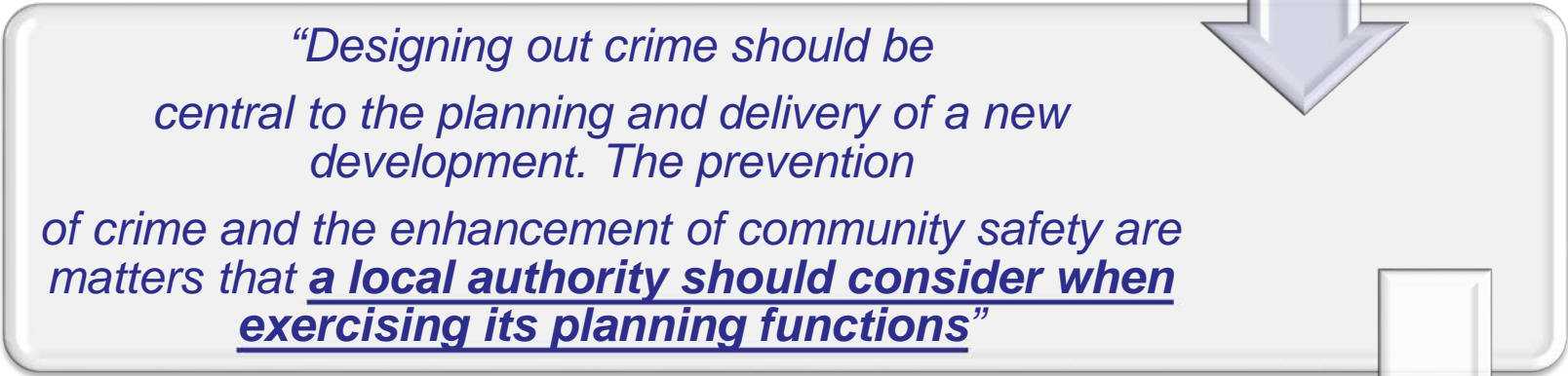


Planning policies and decisions should aim to ensure that developments: create safe and accessible environments where crime and disorder, and the fear of crime, do not undermine quality of life or community cohesion.

National Planning Policy Guidance - Design

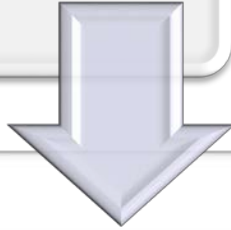


*“Designing out crime should be central to the planning and delivery of a new development. The prevention of crime and the enhancement of community safety are matters that **a local authority should consider when exercising its planning functions**”*



*“**Pre-application discussions between police Crime Prevention Design Advisors** will ensure that applicants are aware right at the beginning of the design process of the level of risk and the sorts of measures available to mitigate this risk in a proportionate and well-designed manner”*

Local Planning Policy – Local Plan



*Must be in line with national policy.....ALO/CPDA/DOCO
can shape this policy at local level!*



CPTED/SBD – Individual elements of Design Impact on crime

Police recorded crime

Inspiring tomorrow's professionals



Which design features influence crime?

University of
HUDDERSFIELD

Design Features Checklist

Development:	31 design features specific to the property	
Date:		
Time:		
19 design features specific to the wider development		
1. Does the development have a youth centre?	No	
2. Does the street layout make it easy to find your way around?	2193 houses	
Layout		
3. Are there gates to the development?	12 developments	
4. If there are footpaths within the development, do the footpaths lead to:	Open land	
	Across 3 police forces	
	area	
	Maze or Footpaths	
5. If there are footpaths, are they adequately lit?	Police recorded crime data for 3 years	
	equates	

Through movement


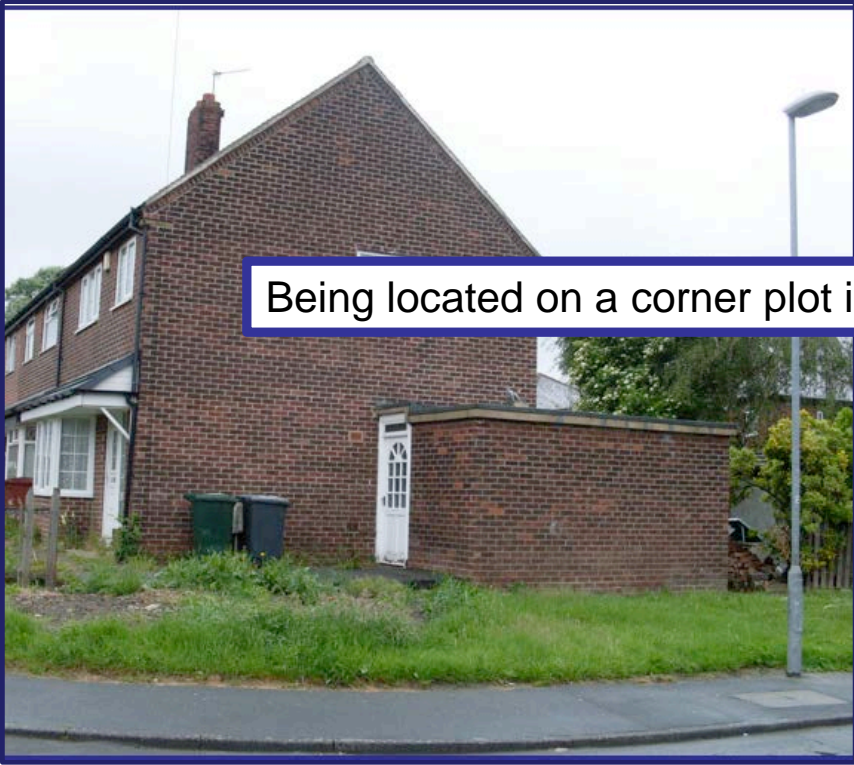


Compared to a true cul-de-sac, through roads experienced 93% more crime.

Compared to a true cul-de-sac, leaky culs-de-sac experienced 110% more crime.

Road layout

University of
HUDDERSFIELD



Being located on a corner plot increased risk of crime by 18%.

Surveillance

University of
HUDDERSFIELD



Properties overlooked by 3 or more other properties experienced 38% less crime





[European Journal on Criminal Policy and Research](#)

..... March 2011, Volume 17, [Issue 1](#), pp 29–54

It Looks Good, but What is it Like to Live There? Exploring the Impact of Innovative Housing Design on Crime

Authors

[Authors and affiliations](#)

Rachel Armitage , Leanne Monchuk, Michelle Rogerson

Inspiring tomorrow's professionals

THE AWARDS
AWARD WINNER
UNIVERSITY OF THE YEAR



THE AWARDS
2012
WINNER
Entrepreneurial University of the Year



Evaluating the effectiveness of SBD

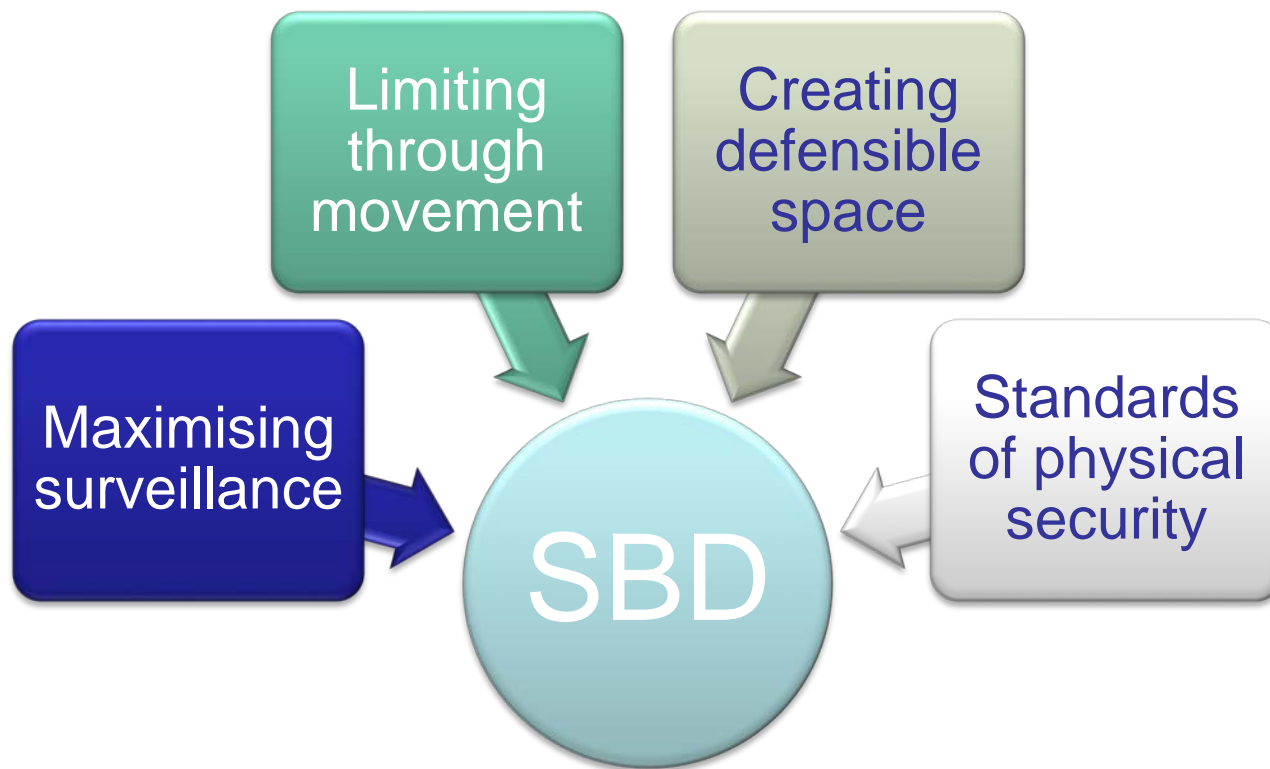
Does it work?

Inspiring tomorrow's professionals



SBD is based on CPTED but... CPTED is not SBD

University of
HUDDERSFIELD



Evaluation of Secured by Design in West Yorkshire

Armitage and Monchuk (2009)

Secured by Design in West Yorkshire (2009)

University of
HUDDERSFIELD



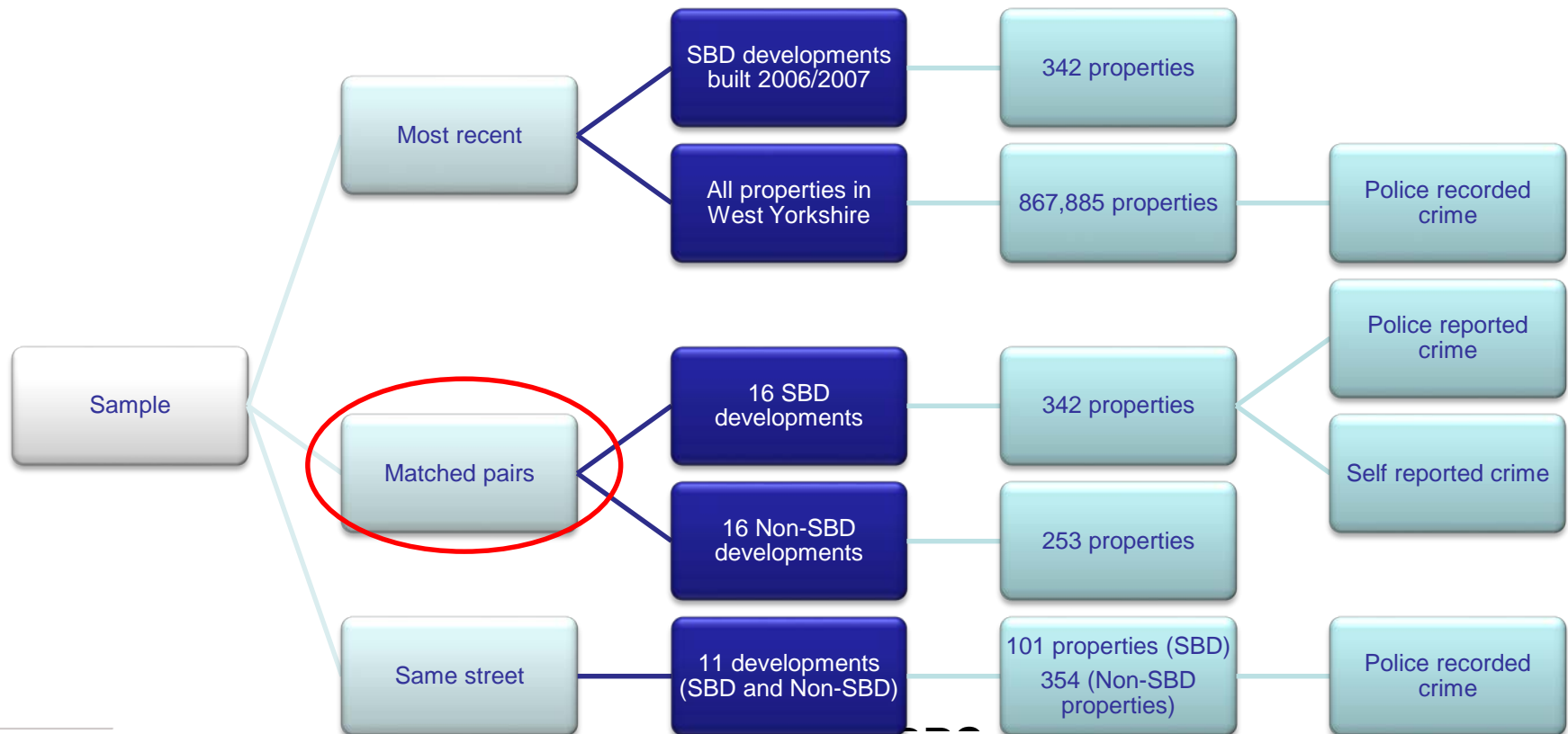
Secured by Design in West Yorkshire (2009)

University of
HUDDERSFIELD



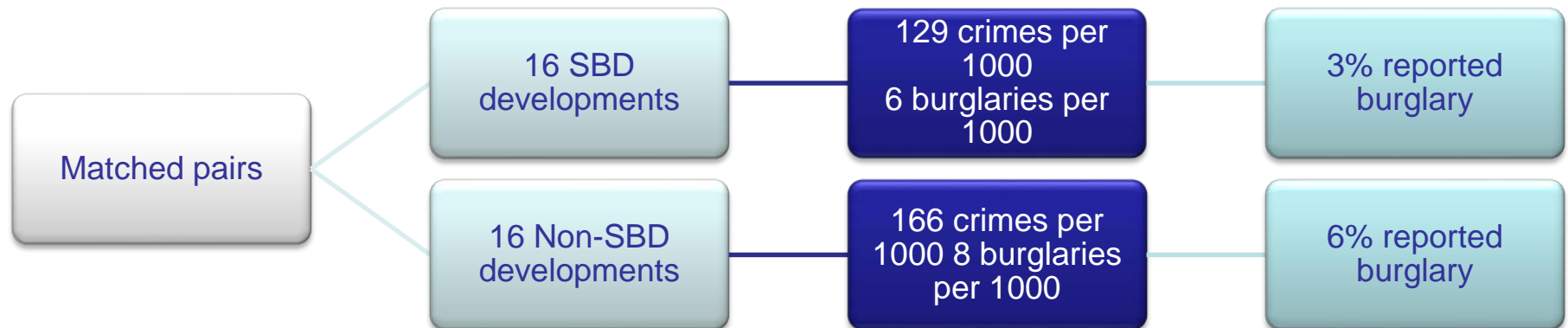
Secured by Design in West Yorkshire (2009)

University of
HUDDERSFIELD



Secured by Design in West Yorkshire (2009)

University of
HUDDERSFIELD



Secured by Design in West Yorkshire (2009)

University of
HUDDERSFIELD



Secured by Design in West Yorkshire (2009)

University of
HUDDERSFIELD



Tell us about your experience on SpringerLink and you could win a MacBook Pro. [Take survey.](#)



[Security Journal](#)

October 2011, Volume 24, [Issue 4](#), pp 320–343

Sustaining the crime reduction impact of designing out crime: Re-evaluating the Secured by Design scheme 10 years on

Authors

[Authors and affiliations](#)

Rachel Armitage , Leanne Monchuk



Restricted to Repository staff only
[Download \(6MB\)](#)

Inspiring tomorrow's professionals

THE AWARDS
AWARD WINNER
UNIVERSITY OF THE YEAR

the guardian
UNIVERSITY
AWARDS
Winner
2013

2012
THE AWARDS
WINNER
Entrepreneurial University of the Year


THE QUEEN'S AWARDS
FOR ENTERPRISE

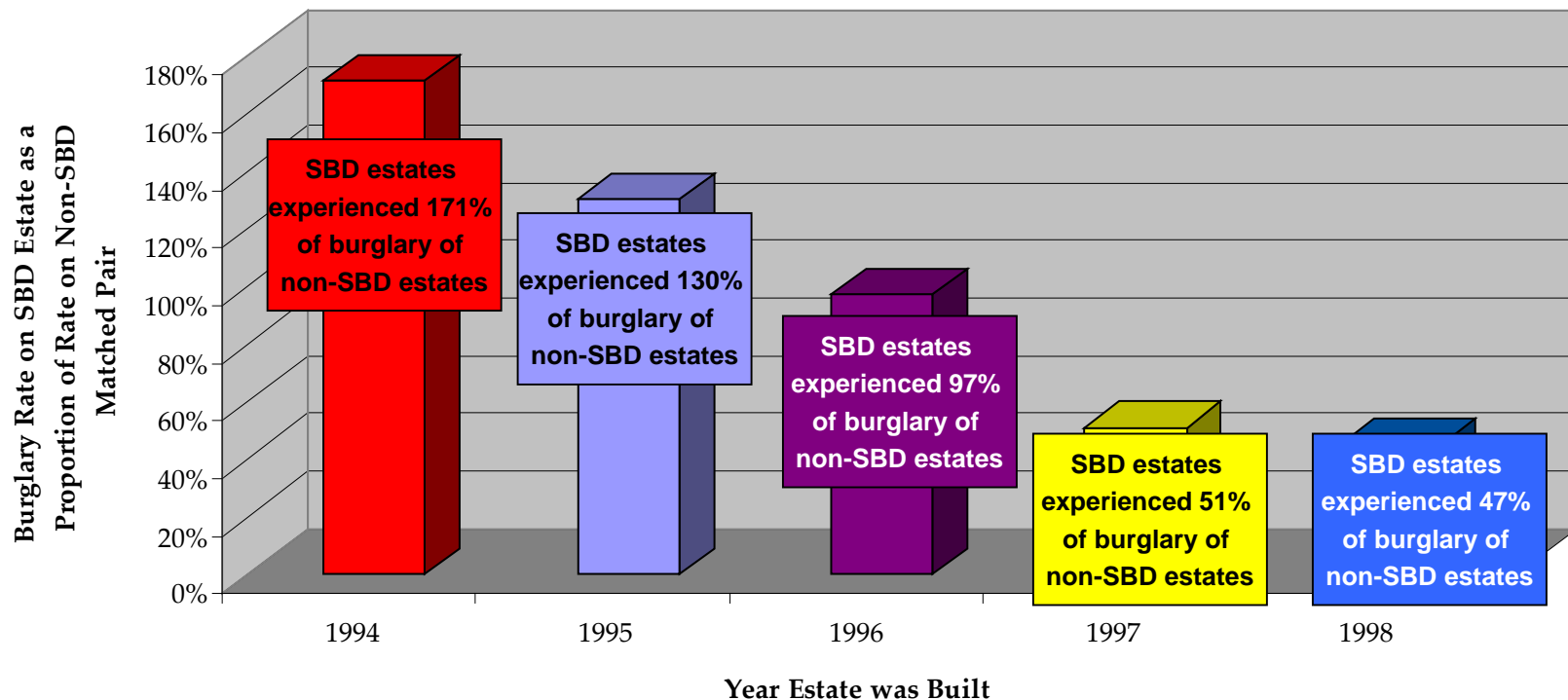
Evaluating Secured by Design (as a scheme)

University of
HUDDERSFIELD

Evaluation	Key findings	Issue/problem
Armitage 2000	-55% reduction in crime (refurbs) -Burglary 71% higher NSBD -Total crime 34% higher NSBD -Self reported burglary 8.4% (NSBD), 2.9% (SBD)	Sample built 1994-1998
Pascoe 1999	Burglary 31% higher NSBD	Sample built pre-1999
Brown 1999	SBD 40% fewer burglaries/vehicle crime	Sample built pre-1999
Teedon and Reid 2009	SBD total housebreaking fell 61% NSBD fell 21%	Just Part 2 (windows and doors)

What's the problem?

SBD as an Evolving Standard



What does it cost?

University of
HUDDERSFIELD

Upper
floor
apartment

Ground
floor
apartment

2/3 bedroom
detached
house

4 bedroom
detached
house

780 SEK

2679 SEK

1897 SEK

2232 SEK

**Residential burglary
costs 28,455 SEK**





Let's recap....

University of
HUDDERSFIELD



CPTED/SBD – Individual elements of Design Impact on crime

Offender decision making

Inspiring tomorrow's professionals



CPTED...in the words of the offender?

- 22 adult prolific burglars currently serving a prison sentence across 3 prisons in Yorkshire.
- 16 photographs:

*“From what you can see from the photo,
can you describe what would **attract** you to this property when selecting a
target for burglary”*

*“From what you can see from the photo,
can you describe what would **deter** you (put you off) from selecting this
property as a target for burglary”*

Quick test!
Did they say 'yes' or 'no'?

Inspiring tomorrow's professionals









The principles of CPTED

University of
HUDDERSFIELD

Surveillance

Inspiring tomorrow's professionals



Secured by Design Homes

University of
HUDDERSFIELD

“For the majority of housing developments, it will be desirable for dwelling frontages to be open to view, so walls, fences and hedges will need to be kept low”

“Planting should not impede the opportunity for natural surveillance”.

“Dwellings should be positioned facing each other to allow neighbours to easily view their surroundings”.

Inspiring tomorrow's professionals





Surveillance – don't like clear visibility

*This is a burglar's dream house!
The hedge is high and blocks the
view from the road. The gate is so
high, no-one can see you and the
busy road masks any noise that I
make.*

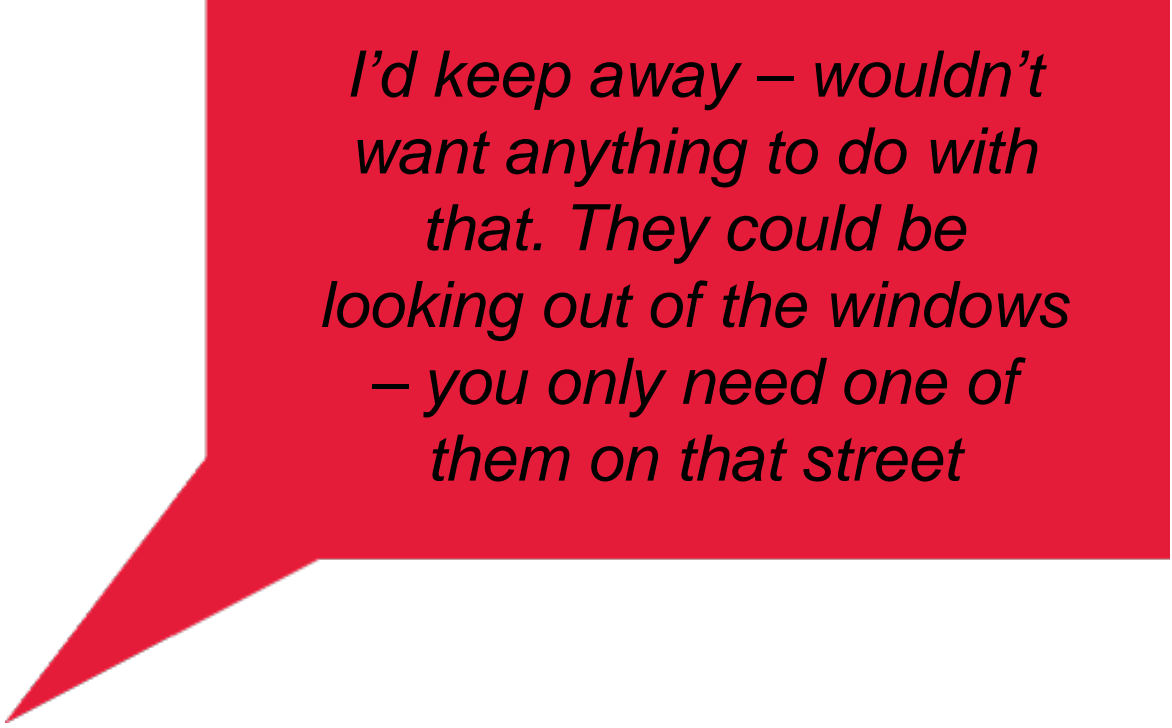
*Open fences
would put me off.*

*This would be a perfect target.
Passers by can't see in so
they wouldn't notice you
breaking in. The high gate and
hedges block the view so no-
one can see what is going on
inside.*

*I'd feel more
exposed
if the walls and
fences
were lower.*

Surveillance – don't like houses facing the street

University of
HUDDERSFIELD



*I'd keep away – wouldn't
want anything to do with
that. They could be
looking out of the windows
– you only need one of
them on that street*

Surveillance – don't like the true cul-de-sac

I wouldn't target houses on a cul-de-sac because you feel trapped and it's difficult if someone challenges you. They might say 'what are you doing?' and you say you are lost and then you have to walk back out the way you came in and they are looking at you.

The principles of CPTED

University of
HUDDERSFIELD

Physical security

Inspiring tomorrow's professionals



Physical security – Part 2 of SBD



Physical security – don't like good quality locks

University of
HUDDERSFIELD

Yes, I can tell by looking at the lock that it would be easy to snap.

Having mole grips is like having the key to the door!

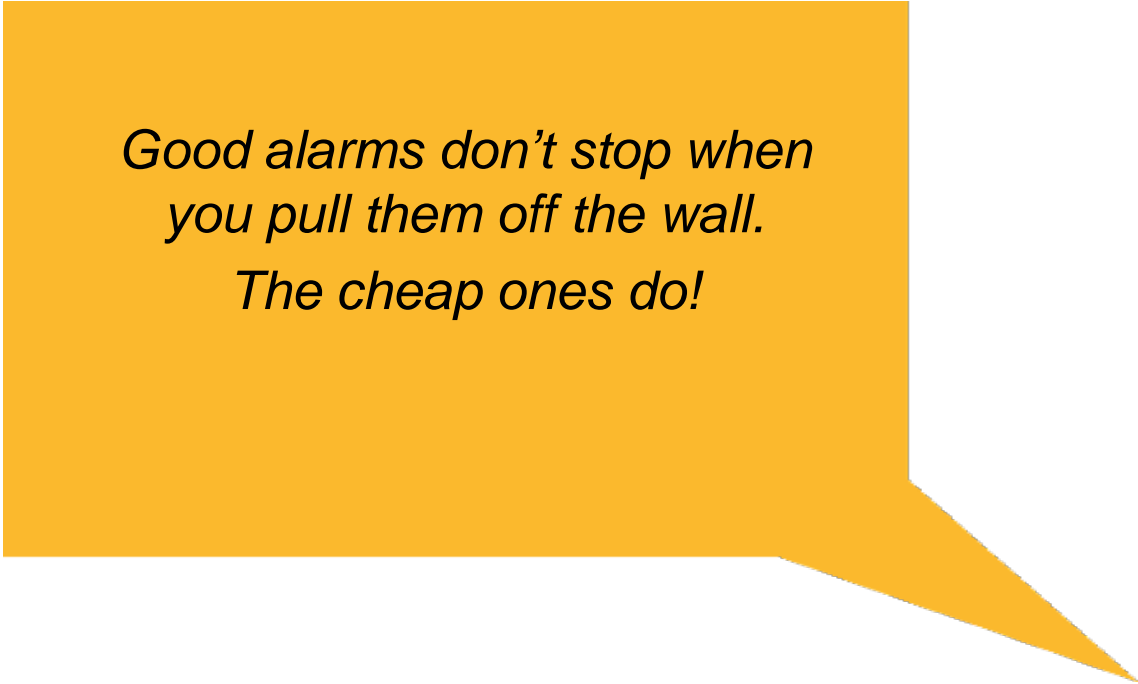
The hinges are on the outside of that door for God's sake, it's a 3 minute job. It's a cheap arse door that one!

This lock can easily be mole-gripped. You can tell because it's thin. The new ones are chunkier.

If manufacturers know that we can mole grip a lock, why don't they change that lock to make it harder to break in?


I would snap the cylinder on the side door – it's a really poor design is that door.

Physical security – not deterred by burglar alarms



*Good alarms don't stop when
you pull them off the wall.
The cheap ones do!*

Physical security – attracted to excessive security



*The security grille
makes me think
there's something
worth taking.*

The principles of CPTED

University of
HUDDERSFIELD

Through movement

Inspiring tomorrow's professionals



Secured by Design Homes

University of
HUDDERSFIELD

“Whilst it is accepted that through routes will be included within development layouts, the designer must ensure that the security of the development is not compromised by excessive permeability.”

“Footpaths linking culs-de- sac to one another can be particularly problematic, and in such cases the layout may need to be re-considered.”

Inspiring tomorrow's professionals

THE AWARDS
AWARD WINNER
UNIVERSITY OF THE YEAR

theguardian
UNIVERSITY
AWARDS
Winner
2013

2012
THE AWARDS
WINNER
Entrepreneurial University of the Year

THE QUEEN'S AWARDS
FOR ENTERPRISE



Through movement - gives them legitimacy

Yes, this is perfect! Easy pickings. I would first walk up and down this footpath. No-one would give me a second glance. Even if I was a tramp walking up and down I wouldn't look out of place – it's a footpath, no-one can question you.

Through movement – allows them to evade police

University of
HUDDERSFIELD

The appeal of a footpath is that you know how you are getting in and how you escape

Those ginnels and footpaths are more or less an escape route.

Having ginnels on an estate is great, cos you know the area better than the police, you'll easily lose them. You know the routes!

Burglars like footpaths, it makes it easy as the police can't get there easily

Through movement - don't have to retrace their steps

University of
HUDDERSFIELD

*On a cul-de-sac,
you have to walk
back out the way
you came in.*

*If it's a cul-de-sac
it's usually one way
in, one way out.
You'd be stupid to
do a cul-de-sac.*

*I wouldn't go further into the
cul-de-sac. There is no reason
to be on a cul-de-sac unless
you live there. You aren't going
anywhere so you are a
stranger. If it's a through road
you can just keep walking
through.*

The principles of CPTED

University of
HUDDERSFIELD

Defensible space

Inspiring tomorrow's professionals



“Where it is desirable to limit access/use to residents and their legitimate visitors, features such as rumble strips, change of road surface (by colour or texture), pillars, brick piers or narrowing of the carriageway may be used”.



Defensible space – don't like feeling that everyone knows each other

University of
HUDDERSFIELD

If a burglar had anything about them they'd know that all the people that live in those houses know each other and would be chatting to each other.

People living here will have a bee in their bonnet. This is a private road for private people. I would feel awkward here. It's all about the bluff and I couldn't pull it off here.

Everyone that lives there will be focused on the entrance and what goes on. They'll all know each other, keep an eye out for each other.

But.....

University of
HUDDERSFIELD

- 1) Implementation of Defensible Space
- 2) The concept of Management/Maintenance

Inspiring tomorrow's professionals

THE AWARDS
AWARD WINNER
UNIVERSITY OF THE YEAR

the guardian
UNIVERSITY
AWARDS
Winner
2013

2012
THE AWARDS
WINNER
Entrepreneurial University of the Year


THE QUEEN'S AWARDS
FOR ENTERPRISE



Defensible space – 'private road'

University of
HUDDERSFIELD

The 'private road' just means they have something to protect, so something to steal.

'Private Road' tells me they've bought their house – it's not council.

The word 'private' makes me think it's an exclusive area and they have more money. That would attract me.

'Private road' suggests this isn't council housing so won't be on benefits.

I'd think 'private road' means they've got coin.

It's a 'Private Road', this tells me they've bought houses, no council ones.

'Private Road' means they all bought their houses. You don't get rented properties on a Private Road do you.



Management and maintenance

University of
HUDDERSFIELD

No, it doesn't look worth breaking into as there would be nothing to take.

No, it's too scruffy there is nothing worth taking.

No, I wouldn't burgle this house. I would try and offer them help! Phone the council and get them some support!

They are scruffy b@stards they aren't going to have owt. Look at the state of that garden.

No – I wouldn't be in that area burgling. I'd go in with nothing and come out with nothing.

Those gardens are dirty and horrible, that'd put me off – you want a nice tidy garden, if you mow your lawn, you care for your house and will have nice things.

No, they would have nothing to steal.

They look methed out. I wouldn't go there.

If the house is well looked after, it tells me they've got money!

The principles of CPTED

University of
HUDDERSFIELD

CPTED principle	Proportion of offenders who referred to each CPTED concept (n=22)
Surveillance	100%
Physical security	100%
Movement control	82%
Management and maintenance	77%
Defensible space	36%

CPTED principle	Number of specific references to the term	Number of references to the concept
Surveillance	0	133
Physical security	0	103
Management and maintenance	1	40
Movement control	0	39
Defensible space	0	11



University of Huddersfield Repository



You are here: [Uni home page](#) » [Research and Enterprise](#) » [Repository](#)

Create

- Home
- About
- Help
- Search ▶
- Browse ▶
- Author Corner ▶

“Why my house?” – Exploring the influence of residential housing design on burglar decision making.

Armitage, Rachel and Joyce, Chris (2016) “Why my house?” – Exploring the influence of residential housing design on burglar decision making. In: Re-building Crime Prevention through Environmental Design (CPTED). Routledge, Oxford, UK. (In Press)



Microsoft Word
Restricted to Repository staff only
[Download \(6MB\)](#)

Tools

EndNote ↕ [Export](#)

[find a copy](#)

[SHARE](#) [f](#) [t](#) [e](#) ...

Inspiring tomorrow's professionals

THE AWARDS
AWARD WINNER
UNIVERSITY OF THE YEAR

the guardian
UNIVERSITY
AWARDS
Winner
2013

2012
THE AWARDS
WINNER
Entrepreneurial University of the Year





Transferability of CPTED principles

Other countries, cultures, climates

Inspiring tomorrow's professionals



Limiting through movement

Consider climate



- Footpaths should have clear surveillance, no obstructions and good lighting.
- Due to climate, footpaths (Sikkas) must maximise shade.
- Achieved through high walls/vegetation.
- Restricts surveillance/creates hiding places.

Limiting through movement

Consider culture

University of
HUDDERSFIELD



- Cultural importance placed on owning all boundary walls of property.
- Avoid 'sharing' boundary walls.
- Results in leftover land/spaces.
- These are not footpaths but are used for access/escape.

Ownership/territoriality

Consider culture



- Emirati tradition of 'gifting' plots at birth.
- Plot given at birth BUT may not be developed on for decades.
- Buildings surrounded by open space/building sites.
- Can create a lack of ownership and lack of clarity as to who should (and should not be) in the area.



Exercise

Inspiring tomorrow's professionals



[INSERT PRINCIPLE TITLE]	
Please insert an image that clearly demonstrates this principle.	
Please describe how this principle is demonstrated in the image.	
Please comment on the transferability of this principle (consider climate, culture etc.)	

J:
ciple.
ntation of
you must

ed (or not)

in the area
there be

Thank-you

r.a.armitage@hud.ac.uk

 @DrRArmitage

Inspiring tomorrow's professionals

THE AWARDS
AWARD WINNER
UNIVERSITY OF THE YEAR



THE AWARDS
2012
WINNER
Entrepreneurial University of the Year

