PROJECT No. HOME/2012/ISEC/AG/4000004321 "Development of existing urban design, planning and crime prevention methods and introduction of new ones to improve living environment safety (CPTED)"

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CPTED
MANUAL FOR POLICE OFFICERS



Andres Levald

Jelizaveta Jekaterina Sibul

Martina Proosa

Merli Klein

Panu Lehtovuori

Paul van Soomeren

Tarmo Viikmaa

Toomas Paaver

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INTRODUCTION

The project entitled HOME/2012/ISEC/AG/4000004321: "Development of existing urban design, planning and crime prevention methods and introduction of new ones to improve living environment safety (CPTED)" was active between 01.12.2013 and 30.11.2015, and involved eleven partners from Estonia, Latvia, Lithuania, and Finland.

The project's main aims were: 1) the development of existing CPTED methods in partner countries; 2) raising the levels of professional knowledge for CPTED participants; 3) the creation of a network to improve cooperation and the exchange of best practise; 4) the preparation of learning materials and a specific manual for police officers; 5) a CPTED topic will be permanently included in the teaching programme at the Academy of Security Sciences (Estonia) and the more active participation of police officers in spatial planning processes.

The main purpose of the CPTED manual is to compose a practical CPTED handbook specifically for police officers who are taking part in the planning processes, and also for other officials who are responsible for ensuring a safe living environment. The main target group is police officers, and the aim is to write a handbook that helps police officers to understand the main principles of CPTED and which gives them practical knowledge of how to be involved in planning processes. For other officials and key stakeholders the manual will provide an insight of how and when police officers should be involved in planning processes and what expertise knowledge police officers can give when it comes to planning.

The manual's key subjects are as follows:

- how to understand CPTED and its key principles;
- how to analyse the built environment in connection with crime, public order, traffic safety, and fear of crime;
- how to understand planning processes and related documents
- how police officers can intervene in the planning process and making suggestions

The manual is universal for all project partner countries (EE, FIN, LV, LT).

Authors of the manual: Andres Levald (Estonia), Martina Proosa (Estonia), Jelizaveta Jekaterina Sibul (Estonia), Toomas Paaver (Estonia), Panu Lehtovuori (Finland) and Paul van Soomeren (the Netherlands). The manual's coordinator is Merli Klein (Estonia) and the project manager is Tarmo Viikmaa (Estonia).



Tarmo Viikmaa (Estonia)

The Project Manager of the project. Currently working in the International Cooperation Bureau of Police and Border Guard Board. In police service since 1992. Master of Arts in Social Sciences (Public Administration).



Toomas Paaver (Estonia)

Estonian architect, working in his own enterprises Linnalahendused OÜ (Urban Solutions) and Paik Arhitektid OÜ. PhD student in the Estonian Academy of Arts. He has worked in Kuressaare municipality as town architect and at the Ministry of Internal Affairs as an adviser in the department of spatial planning.



Andres Levald (Estonia)

Estonian architect, spatial planner and landscape architect. At present time, he works in the Ministry of Finance in the Spatial Planning Department and manages regional planning. Lecturer on Inclusive Design, Urban Infrastructures in the Estonian Academy of Arts, Spatial Planning Theorie in Tallinn University of Technology, and also CPTED principles in Academy of Security Sciences. The Head of Delegation of the Estonian Union of Architects at the Architects' Council of Europe.



Martina Proosa (Estonia)

Estonian lawyer who works for Glikman, Alvin & Partners Solicitors and specialises in building and planning law.



Panu Lehtovuori (Finland)

Professor of Planning Theory at the Tampere University of Technology, School of Architecture. Before the current position, he was the Professor of Urban Studies at the Estonian Academy of Arts in Tallinn. Lehtovuori's research interests focus on contemporary forms of public urban space and new urban design approaches.



Paul van Soomeren (Netherlands)

Paul is the CEO and one of the founders of DSP-groep and works as a management consultant and policy researcher. He is a director of the board for the International CPTED Association (crime prevention through environmental design) and the European and the Dutch Designing Out Crime Association (see www.e-doca.eu). He is also part of the management committee of the EU COST (which stands for Cooperation in Science and Technology), TU 1203 (http://costtu1203.eu). He travels all over the world to lecture and carry out consultancy work on these subjects.



Jekaterina Jelizaveta Sibul (Estonia)

Estonian landscape architect. Jelizaveta completed her landscape architecture studies in 2005 in University of Life Sciences and has worked after that in Tallinn City administration first in Lasnamäe district and later in Urban Planning Department as city landscape architect. She has also worked for UN, launching the first UNITAR CIFAL Tallinn centre. From 2012 to 2013 Jelizaveta worked as adviser in Spatial Planning Department of Ministry of Interior. At the moment Jelizaveta is a freelancer.



Merli Klein (Estonia)

The CPTED manual's coordinator. She works in the Police and Border Guard analysis unit as analyst and also teaches CPTED principles at the Estonian Academy of Security Sciences.

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Note 3 Newman, O (1980), 'Community of Interest', New York: Doubleday.
Note 4 Jacobs, J (1961), 'Death and life of great American cities', New York, NY: Vintage Books.
Note 5 van Soomeren, P, de Kleuver, J and van de Klundert, W (2014), 'High-rise in trouble. The Bijlmermeer in Amsterdam'. COST Action TU1203: Crime Prevention through Urban Design & Planning: http://costtu1203.eu.
Note 6 Cleveland, J and Saville, G (1998), '2nd Generation CPTED: An antidote to the social Y2K virus of urban design'. Presentation at the 3rd International CPTED Conference, Washington, DC.
Note 7 Clarke, R V (Ed) (1997), 'Situational Crime Prevention (Successful Case Studies)', Second edition, New York: Harrows and Heston Publishers.

1. GENERAL CPTED PRINCIPLES

BY PAUL VAN SOOMEREN

1.1 CPTED's origins and growth

1.1.1 Origins

CPTED - Crime Prevention through Environmental Design; in the USA this is pronounced as Set-Ted. It was first mentioned by **C Ray Jeffery** in his 1971 book.[1] Jeffery argued that the crime prevention should focus more on factors that were related to the biology of crime (the brain) and on reducing the environmental opportunities for crime:

'*Crime can be controlled through urban design, wherein safety and security are designed into streets, buildings and parks. Our cities are unsafe because they present opportunities for the commission of crimes. Cities can also be designed so as to increase human contact of an intimate nature.*' (Jeffery, 1971/224).

Jeffery was a strong advocate for a pro-active interdisciplinary approach in which the environment-individual relation is crucial. A new mix of biology, neuro science, urban planning, environmental design, and criminology:

'*A successful crime control model must deal with behaviour before the crime occurs, must deal directly with criminal behaviour, and must deal with environmental design, rather that the individual offender. Control over the environment necessary for crime control can come about through urban planning, science and technology, and behavioural therapy.*' (Jeffery, 1971/278).

Only a year later the US architect and planner, **Oscar Newman**, published a book entitled 'Defensible Space' (1972).[2] Newman argued that the physical design of buildings and neighbourhoods can either increase or decrease a resident's sense of control over the environment in which they live. In a second, less well-known book Newman shifted his attention from the physical to the social environment.[3] In both books Newman used the ideas of the well-known journalist and merciless critic of 'modern urban design', Jane Jabobs,[4] who fought against the ideas of CIAM/Le Corbusier in their focussing on high-rise apartment complexes in a sea of green parks with a segregation of the residential functions in a neighbourhood and business and traffic functions which were polluting and unhealthy.[5]

Oscar Newman made a distinction between:

- public space; the roads, squares, and parks in a city
- semi-public space; a hallway or front garden that is open to the public
- semi-private; the interior corridors in an apartment complex or a communal garden within an enclosed building block
- a private space; the dwelling, a private garden

Newman argued that it should always be clear who has ownership of and/or control over a space. This way, space becomes a 'defensible space'. Most frequently this would not be achieved by hard boiled security measures (target hardening with locks, bolts, fences, and barbed wire), or with more police, but with subtle soft measures such as a change in colour and texture, a symbolic gate, low hedges, stones indicating demarcation, etc.

Newman's ideas are therefore not only focussing on the physical aspects (concrete, bricks, and mortar) but also on social and behavioural aspects. This social route was further explored and elaborated upon in the paper that was presented by **Gregory Saville and Jerry Cleveland** at the annual conference of the International CPTED Association (**www.cpted.net**) in Washington in 1998: '2nd Generation CPTED'.[6] Saville and Cleveland built on the experiences in the Netherlands with the early experiences with the Dutch 'Police Label Secure Housing'.

In the years following these early CPTED publications, several authors used and expanded upon the CPTED concept. In the UK, **Ronald Clarke** (then at the UK Home Office) published studies on 'situational crime prevention'[7], which he defined as an approach: '*comprising opportunity-reducing measures that (1) are directed at highly specific forms of crime, (2) involve the management, design or manipulation of the immediate environment in as systematic and*

permanent way as possible, (3) make crime more difficult and risky, or less rewarding and excusable as judged by a wide range of offenders.' (Clarke, 1997/4).

Similar approaches that have been developed in the UK are known as 'Designing Out Crime'[8] (DOC), 'Design Against Crime' (DAC; http://www.designagainstcrime.com/), and the police scheme entitled 'Secured By Design' (SBD). This approach has been developed by the UK police and uses a label to provide a reward and a trademark to good, secure designed buildings and environments (see www.securedbydesign.com for more information). The Dutch police used this UK scheme to develop the 'Police Label Secure Housing' scheme (www.politiekeurmerk.nl; see also the paper available on www.e-doca.eu by Armando Jongejan and Tobias Woldendorp).[9]

In the USA, environmental crime prevention blossomed with a focus on the geographical search patterns of offenders. See the research done by **Paul and Patricia Brantingham**, and more recently by **Chainey and Ratcliffe** (crime mapping and hot spot analyses).[10] In a paper from 1987,[11] **Paul van Soomeren** summarised these approaches in one scheme (on the next page the scheme is copied from a more recent EU COST action publication, 'A review of CEN 14383'; for more information visit http://costtu1203.eu. For further information about different schools, see Annex 1.

1.1.2 Growth

From 1990 the focus was not so much on ideas and theories but much more on the practice of CPTED. For the USA, **Timothy Crowe**'s book, 'Crime Prevention through

'Environmental Design' (1991) was a practical breakthrough. Tim Crowe - ex-policeman and CPTED trainer in Louisville, Kentucky - defines CPTED as:

'*...the proper design and effective use of the built environment can lead to a reduction in the fear of crime and the incidence of crime, and to an improvement in the quality of life.*' (Crowe, 1991/1 and Crowe, 2013/280).[12]

CPTED and Europe (EU and CEN):

In 2001 the Justice and Home Affairs Council of the European Union (in a meeting of 15.03.2001) reached political agreement on the conclusion of the EU experts' conference 'Towards a knowledge- based strategy to prevent crime' (Sundsvall, Sweden, 2001):

'"Crime Prevention through Environmental Design", or "Designing Out Crime" (CPTED/DOC) has proven to be a useful, effective, very concrete and feasible strategy to prevent crime and feelings of insecurity, integrated in a multidisciplinary approach.'

This EU conference also underlined: '*...that the fear of crime should be viewed and treated as a social problem in its own right*'.

Ten years later the Council of the European Union (Brussels, 24 March 2011, 8094/11) acknowledged that:

'"Crime Prevention Through Environmental Design" (CPTED) is a pro-active crime prevention philosophy based on the theory that proper design and effective use of the built environment can lead to a reduction in crime and the fear of crime, as well as an improvement in the quality of life for the community, and that it aims to reduce or even remove the opportunity for crime to occur in an environment and promote positive interaction with the space by legitimate users;'

The EU council then considers that:

- *the responsibility for reducing crime and the fear of crime should be shared between the police, local governments, local businesses, the voluntary sector, and the local community;*
- *training and information on the CPTED principles should be provided to everyone involved in the urban planning process to ensure that all participants are aware of their roles and responsibilities in relation to preventing crime and reducing feelings of insecurity within the community;*

In short: the crime prevention is a shared responsibility and CPTED education and training is essential.

Schemes, labels, standards and designing out crime (CIA) in Europe:

The British police scheme, 'Secured by Design', was already mentioned, and in elaborating upon this UK scheme the Netherlands began to experiment with the Dutch 'Police Label Secure Housing' scheme in 1993/1994, with it going nationwide in 1996. As in the UK, the Dutch scheme was - and still is - a big success. The risk of dwellings being burgled dropped significantly (down by 95% on new estates and 80% in existing neighbourhoods).

'Both the British as the Dutch labels are aimed at stimulating and supporting the client (from the private investor and owner to housing associations). It is important that the client demands that architects and urban planners incorporate as much safety and security as possible in the design of a development.' (Jongejan and Woldendorp, 2013/32).

Also in the 1990s both the French and the Dutch started to work on slightly more general methods to assess the risk of possible crime and feelings of insecurity in new build projects, as well as in existing areas or neighbourhoods: this was entitled the 'Crime Impact Assessment' (CIA).

In **France** such a CIA is called 'l'Etude Securite et Surete Publique' (ESSP).[13]

In the **Netherlands** it is called a 'Safety Effect Report' (or SER - for more information visit www.hetccv.nl; version April 2009). Before any actual construction takes place, possible risks are mapped out and safety measures are suggested.

Contrary to France, in the Netherlands the use of a CIA is not compulsory although local governments may ask the developer to carry out a 'Safety Effect Report' before building permission is granted. This idea of a CIA is also in an almost compulsory way incorporated into the planning system in **Manchester** in the UK. In this city the local governments require that a major planning application is accompanied by a 'Crime Impact Statement' (CIS). This document resembles the Dutch and French documents mentioned above. A CIS includes an analysis of crime statistics, reports from site visits, and local police knowledge on the potential crime risks in the area. The document also includes - like the Dutch and French documents - recommendations to mitigate the potential risks mentioned.

All of these European approaches which have been developed between 1990 and 2010 more or less resemble an approach taken by CEN, the **European Committee for Standardisation**, an association that brings together the National Standardisation Bodies of a total of 33 European countries.

In 1995 work started to make a European standard on 'Crime Prevention through Urban Planning and Design' (CP-UDP).[14] This standard, published in 2007, is the most general and important umbrella standard which combines question on:

- Content (what should we do in context X?)
- Process (who should do that and how?)

Estonia joined the work on this standard at a very early stage (Veiko Jurisson) and there was even an Estonian translation available - based on the first drafts - before the final European text was ready (EVS 809-1:2002). See for an overview of the history, content, and follow up of this standard the EU COST action publication, 'Review of CEN 14383'; see http://costtu1203.eu.

An implementation manual entitled 'Safepolis' (2008) was later created in order to make the work easier. Both standard and manual proved to be a sound basis for local governments, politicians, groups of residents, and business organisations that wanted to live and work

Note 8 Clarke, R V & Mayhew, P (Eds) (1980), 'Designing out crime', London: Her Majesty's Stationary Office.
Note 9 Jongejan, A and Woldendorp, T (2013), 'A successful CPTED approach: The Dutch "Police Label Secure Housing"' scheme, published in: BUILT ENVIRONMENT Vol 39 No 1. Pages 31-48.
Note 10 Chainey, S and Ratcliffe J (2005), 'GIS and Crime Mapping', Hoboken: Wiley.
Note 11 van Soomeren, P (1987), 'Safe and Secure Cities', paper presented as a general introduction at the 'Conference on the reduction of urban insecurity', Barcelona (Spain), November 1987.
Note 12 Crowe, T D (1991), 'Crime prevention through environmental design', Woburn, MA: Butterworth-Heinemann. Note: the new 2013 version is more up-to-date: Crowe, T D and Fennely, L J (2013). 'Crime prevention through environmental design', Third Edition, Butterworth-Heinemann (Elsevier).
Note 13 For more information visit for the French ESSP: http://costtu1203.eu/publications-on-urban-safetv-in-french/ .
Note 14 More information on this standard - 'The only Crime prevention Standard in Europe since the Roman Empire' - is available in Grönlund, B & Korthals Altes, H J & van Soomeren, P and Stummvoll, G (2014), 'Review of Cen 14383; The death and life of great European standards and manuals - Development and implementation of the CEN 14383 standards', COST Action TU1203: 'Working Group 2, Crime Prevention through Urban Design & Planning'. For more information visit http://costtu1203.eu.

in, as the European Urban Charter puts it, 'a secure and safe town free, as far as possible, from crime, delinquency and aggression'. From that moment on they could all simply say: '*Yes, I know safety, security, crime, and crime prevention are very difficult concepts. But when you as a planner, architect, policeman, resident, or teacher follow this CEN/TR 14383-2 as a guideline, it will make this city a lot safer!*'.

1.2 CPTED: definition and concepts

According to **Paul Ekblom** (2011) and Victoria Gibson (2013) and, as we have seen above, the roots of the CPTED concept are very diverse and different. In addition, very different groups of stakeholders have to be included in the process in order to make the process work in a specific national and local environmental context. Based on a meta-analysis of about two hundred CPTED books and documents, **Victoria Gibson and Derek Johnson** (Security Journal May 2013/16) stress the importance of one common language - an holistic framework. That is why we now focus on a workable definition of 'Crime Prevention Through Environmental Design'.

1.2.1 Definitions and concepts

First we return to the term CPTED:

- **Crime**: see the quote by Ronald Clarke above - this includes 'specific forms of crime' as well as fear of crime or feelings of insecurity. The specific forms of crime are often of an opportunistic nature. Crimes as well as incivilities or anti-social behaviour, these including burglary, theft, vandalism, street violence (not domestic violence), graffiti, littering, etc. It is important to understand that this list can only be made definitive in a specific environment: in neighbourhood X, or on public square Y, or on a set of streets Z1-Z5

- **Prevention**: this concept implies that you act before a problem arises. Pro-action instead of reaction. Though this might be a rather new approach for the police and justice authorities, it is fully incorporated in medical science (a good health policy starts with good sewer systems and good water supply), traffic engineering (most accidents are prevented by better road design and technically better-equipped cars) and the approach taken to prevent fires. A problem is that prevention is aimed at something which has not yet happened. Therefore the approach must be more scientific and based on thorough analyses; it's all about probabilities and chance

- **Through**: the way crime prevention is implemented and executed; though this may sound simple it is a crucial part of the work that has to be done: an interdisciplinary process in which several stakeholders including the police have to play their role. A process in which a thorough analysis is important (what is - or might be or become - the problem, where does it happen, and who is involved), but also a difficult multi-agency approach to find and implement a good, feasible solution to a specific crime problem

- **Environmental**: the environment is essential for an increase or decrease in [the opportunities for] crime. However, this is not only about the physical environment but also about the social environment and that also includes each individual. Here a person - body, brain, culture, behaviour - is literally vital. The environment is therefore a socio-physical space-time web of life

- **Design**: this term is actually too small; it is about planning, design, and the management or maintenance of a city, neighbourhood, or building with all of its physical features (bricks, mortar, concrete, and form) as well as the people who live, stay, and reside there. So it is also about social engineering. Hence not only are architects, town and urban planners, designers and engineers, and maintenance people involved, but also the 'social engineers': teachers, social workers, services, residents, politicians, and local governments, and of course the police

Hence our definition of CPTED would be as follows:

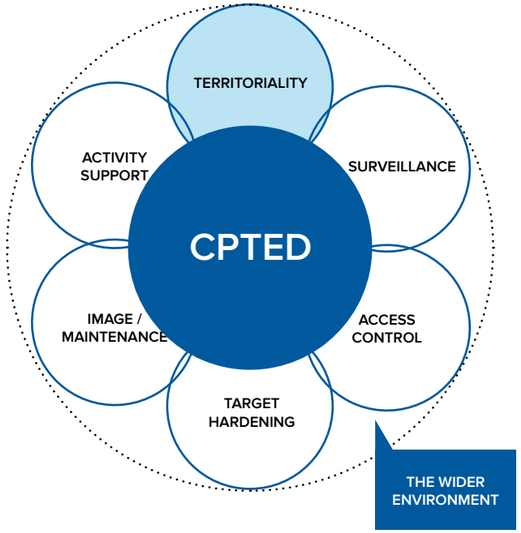
CPTED is an approach to prevent crime as well as incivilities or anti-social behaviour and fear of crime or feelings of insecurity (and/or to minimise the material and immaterial damage that is done), **through a multi-agency process that plans, designs, and maintains a particular physical environment or area** (be it a city, town, village, neighbourhood, or a set of buildings), including the social environment with all of the people involved who are a part of that environment or area.

Note 15 Cozens, P M, Saville, G, and Hillier, D (2005), 'Crime prevention through environmental design (CPTED)'; a review and modern bibliography. Property Management, Volume 23, No 5, Pages 328-356. Bingley (UK): Emerald Group Publishing Limited.

Principles

This CPTED approach uses several principles. In the literature several slightly different principles can be found. Jane Jacobs used concepts such as social capital, visibility, and territoriality. Oscar Newman distinguished five principles that made space defensible: territoriality, natural surveillance, image, milieu and safe adjoining areas. Tom Crowe (1991/30) mentions three overlapping strategies: natural access control, natural surveillance, and land reinforcement. Cozens, Saville and Hillier (2005),[15] mention six principles:

1. territoriality
2. surveillance (both formal and informal)
3. access control
4. image and/or maintenance
5. activity programme support
6. target hardening



Source: Adapted from Moffat (1983, p 23)
CPTED model

We will follow this set of six CPTED principles:

1. Territoriality:

This is all about ownership or a sense of ownership, an emotion by which individuals and groups of people define a space as their own: *'this is my/our courtyard! Get out!'*. Therefore there is an obvious motivation to control and protect a specific space which is rightfully owned and/or believed to be theirs. Signage, colour, demarcation, gates... these are all means to the end of helping territoriality. By these means '*physical design can create or extend a sphere of influence so that users develop a sense of proprietorship - a sense of territorial influence - and potential offenders perceive that territorial influence.*' (Crowe, 1991/31).

2. Surveillance:

A distinction must be made between natural surveillance of residents, formal surveillance duties by the police or by private security personnel, and semi-formal surveillance which is part of the normal routine for the postman, a housekeeper or concierge, a housing official, etc. Surveillance also includes technical surveillance with equipment such as cameras/CCTV, drones, mobile phones, or Google glasses. Surveillance assumes that there is visibility: light and lines of sight making it possible to properly see an area. But before surveillance can be effective more is needed than only visibility and eyes on the street. The eyes must be able and motivated to see something. Furthermore the eyes must understand what is happening ('*is what I see happening over there right or wrong?*'), and thereafter there must be a signal to react, to do something: whether it is to shout, warn others, or phone the police or the private security company. Hence from visibility to effective surveillance there are several steps that need to be taken.

3. Access control::

The general idea of access control is extremely simple: the offender should not dare - and/or be able - to get into an area, building, or space.

4. Target hardening:

Physical security and design in order to make it more difficult to enter a building or space or to vandalise an object. This is the most traditional response to crime: making it physically difficult for offenders by the use of locks, bolts, bars, doors, or gates: the medieval fortress approach. This principle is incorporated into the principle of access control.

5. Image and maintenance:

Does an area or space look rather nice and clean? Is it an attractive place? Management and maintenance are vital here. The principle is to keep an area free from litter, graffiti, vandalism, and damage. An area should not look run-down or not taken care of. This triggers more crime, and also crime in other forms, as well as feelings of insecurity. This is known as the 'broken windows theory'.[16] Practical behaviouristic experiments in the Netherlands strongly support this broken window theory.[17]

6. Facilitating positive use:

This principle relates to the creation of an environment which increases the likelihood that legitimate users will make use of an area. Such a 'better mix of users' is also important for areas such as crowd control: a mixed mass of people (old or young, men or women) is often more relaxed and less dangerous that a group that solely consists of young men.

1.3 A multi-agency process

Probably even more important than 'what to do', is the question of 'how to do it', and how to come up with the best solutions for the specific crime problems in a specific area, and how to implement and execute these solutions. This is of course mostly dependent upon 'how things are normally run in a country/city/neighbourhood/building plan'. The European standard, CEN/TR 14383-2:2007, suggests both a management structure and a management process.

The management structure shall first of all feature a 'responsible body', which is defined as '*authorities responsible for granting permission for developments in new and/or existing environments*', (CEN, 2007/22). In most cases, this will be the local or regional authorities. They have to take the lead in the process and they have to prepare the 'preliminary questions' of 'where?', 'what?', and 'who?' in order to set the scene for a crime prevention project. The police can be of great help to the local governments because the police are the real 'crime experts'. With the help of the police, these are the steps to take:

- identify the location ('where')
- the problems of (potential) insecurity are detected ('what')
- the key stakeholders ('who') are selected, and the planning process can start

The local or regional authorities (one of these being the responsible body) shall initiate the process by issuing a 'mission statement' that defines the main objectives to be pursued in quantifiable form, the composition of the working group, and the phases of design and implementation which require audits to be carried out.

Note 16 Wilson, James Q, & Kelling, George L (Mar 1982), Broken Windows: The police and neighbourhood safety, The Atlantic, retrieved 2007-09-03 (Broken windows (PDF), Manhattan Institute).
Note 17 Keizer, K, Lindenberg, S & Steg, L (2008). ‚The Spreading of Disorder'. Science, 12 December 2008: 1681 -1685.
Note 18 Felson M (1998, 2002), 'Crime and Everyday Life' (Second and Third Editions), Thousand Oaks, Sage Publications.
Note 19 The concept of a 'guardian' does not refer only to a police officer or security guard, but to any person whose presence or proximity discourages crime. In fact, the focus of much crime prevention is on the presence of informal guardians rather than formal ones.
Note 20 'Victimology can be considered the younger sister of criminology. Its object of study is the position of victims in society. Drawing upon the insights offered by law, psychology, criminology and other social sciences, victimologists look at the consequences of becoming of victim of crime, accident, or disaster, with the ultimate aim of setting people on the path of recovery and restoration.' Quoted from: The Master Victimology and Criminal Justice at Tilburg University (https://www.tilburguniversity.edu).
Note 21 Home Office (1997), Police Architectural Liaison Manual of Guidance. Crime Reduction College, York.

A special multi-disciplinary 'Working Group', with all the requisite skills, has to execute the 'mission statement'. The police plays an important role in this working group.

The CEN-standard offers two operational approaches for the functioning of the working group:

- The integrated approach: the working group for a regular planning process that is involved in a new or existing area should be expanded by including experts who specialise in safety, security, and crime prevention or reduction: police officers, security risk professionals, social workers, or some of the residents themselves
- The specialised approach: a separate working group that specialises in the prevention or reduction of crime and the fear of crime by means of urban planning, design, and maintenance should be set up to advise (and influence) the planners or designers, developers or builders, and/or services. (CEN/TR14383-2:2007:24). This may be a permanent group of well-trained police officers who have to be consulted by the people who are designing, planning, and maintaining the city: a special police crime prevention expert group of CPTED experts

Again it must be stressed that a CPTED process is of course mostly dependent on 'how things are normally run in a country/city/neighbourhood/building plan'. The examples presented above from France (ESSP), Manchester (CIS), and the Netherlands (SER) show how differently such a process may be designed from country to country and even from city to city

1.4 CPTED and the police

With the creation of the Metropolitan Police (the 'Met') in London in 1829, its founder Sir Robert Peel (to whose first name police officers owe their nickname 'bobbies') pronounced that the 'basic mission for which the police exist is to prevent crime and disorder'. But how does one prevent crime? Nowadays the police focus mainly on apprehending offenders ('catching the criminal'). However, opportunity for committing crime depends to a large extent on the social context of a situation in a specific place. Of particular significance to crime prevention is the presence or absence of observers or 'capable guardians' (Felson, 1998).[18] This approach reflects the 'Routine Activity Approach' (Felson, 2002), which in its most basic terms states that the convergence of three factors determines the opportunity structure of situations which are more likely to produce criminal behaviour. The three factors are:

- a motivated offender
- a suitable target or victim in the absence of capable guardians [19]
- a suitable opportunity (or place or space or situation)

Starting with Robert Peel's idea that police should prevent crime - instead of only 'catching criminals' - the police in several countries did not solely focus on offenders, but also opened up to victimology,[20] and started to take an interest in the place, situation and environment in which crime takes place.

1.4.1 Secured By Design (UK)

In 1989 the police in the UK introduced 'Secured By Design' (SBD); a scheme which nowadays is operated by most police forces in England and Wales (for more information visit: http://www.securedbydesign.com/). This scheme was a success right from the start. Every British police force has trained specialists known as 'Architectural Liaison Officers' (ALOs) or, as they are known in London, 'Crime Prevention Design Advisors' (CPDAs). An insight into their role and skills can be found in a manual published by the Home Office (1997).[21] The ALO police officers are essential for the implementation of the 'Secured By Design' scheme. SBD is aimed at actively encouraging the adoption of improved security measures. Developments that have followed police guidance can receive approval and gain entitlement to use an official logo or label as an accolade and for promotion in sales literature. The SBD label is awarded by the police to new dwellings or housing estates that possess good crime preventive and fear-reduction features. This police certificate obviously gives recipients a marketing advantage when it comes to selling or renting these houses.

1.4.2 The Dutch 'Police Label Secured Housing'

This label was introduced nationwide in 1996. The objective is to reduce crime (mainly burglary, vehicle-related crime, theft, vandalism, and nuisance crime), and the fear of crime through environmental design, architectural measures, and target hardening.

Both the British and Dutch labels are aimed at activating and supporting the client (from the private investor and owner to housing associations). In the end it has to be the client who demands safety and security measures from architects and urban planners. SBD and the Dutch label help to formulate these demands in a more clear and controllable fashion. In this respect, a police label is only a means to improve communication between clients and architects or planners.

The Dutch label borrowed Alexander's pattern language,[22] and focuses more on urban planning and landscaping. The offenders' perspective is another cornerstone of this scheme.[23] Two manuals are available - one for new neighbourhoods and one for existing neighbourhoods - each containing about forty requirements. Each of the forty requirements has to be checked, and in the end a fixed minimum number of points has to be scored in order to acquire the police label.

For the sake of an analogy with the planning process, and following Alexander's example, the forty patterns summarised in the manual have been arranged from large levels down to small-scale levels (macro to micro). The approach taken in the manual can be likened to a parachute jump: in the

beginning one has a good overall view of the area, later on more and more details are revealed. In the manual patterns are distinguished at several levels:

- Urban planning and design; the size of the district, its density, height and scale, and access to the district by car and bicycle, etc.
- Public areas; public lighting, open air parking, private garages, playing facilities, tunnels and subways, bus stops, back alleyways, including neighbourhood management, maintenance, supervision, etc.
- Layout; rear gardens, rear paths, etc.
- Buildings; estates, semi-detached houses, the layout of single-family terraced houses, inner grounds, enclosed squares, etc.
- Dwellings; the orientation of living rooms, low roofs, main entranceways, target hardening, etc.

Whilst parachute jumping, the police officers (Architectural Liaison Officers) can use the 'Secured Housing Label' manual as an automatic safety device that forces them to open their parachutes at the earliest possible moment. Acting too late - such as in checking only the target hardening of the houses - makes it impossible to gather enough points to award the 'Secured Housing Label', because in descending through the five levels and forty patterns, each pattern has to be checked (okay: 1 point; not okay: 0 points). Having landed on the ground, a minimum number of points need to have been scored. In the manual every pattern adopts a very strict page format. Referring to the end of Paragraph 2.2, above, this process of checking the designs and plans on their crime prevention features and strengths can be carried out by a police working group of CPTED experts (see Paragraph 2.2).

1.4.3 The police label for 'new estates'

When housing project developers or housing associations apply for 'Police Label Secured Housing', their building project and its environment must meet certain requirements. The label may be used only after the police have granted their permission. Permission cannot be given for only part of the project; it is all or nothing, an integral approach.

Police officers are, of course, not designers: they are not supposed to draw up design plans, but they have to check against the patterns summarised in the manual. Therefore, police officers have to be trained to be flexible in their thinking. Backed by the rigid structure

Note 22 Alexander, C, Ishikawa, S, and Silverstein, M (1977), 'A pattern language', New York: Oxford University Press.
Note 23 van Burik, A, van Overbeeke, R, and van Soomeren, P (1991), 'Modus operandi woninginbraak: eindrapportage daderonderzoek', Van Dijk, Van Soomeren en Partners/DSP-groep, Amsterdam.
Note 24 See: Jongejan, A (2007), 'Urban planning in the living environment using the Dutch "Police Label Secured Housing"'. Madrid. Jongejan, A & T Woldendorp (2012), 'A successful CPTED approach: the Dutch "Police Label Secure Housing"'. Special edition Journal of the Built Environment edited by Rachel Armitage on International Perspectives of Planning for Crime.
Note 25 Vollaard, Ben & van Ours, Jan C, 'Does the Regulation of Built-In Security Reduce Crime? Evidence from a Natural Experiment (April 16, 2010)'. TILEC Discussion Paper No. 2010-019. Available at SSRN: http://ssrn.com/abstract=1593552 or http://dx.doi.org/10.2139/ssrn.1593552.
Note 26 Lopez, M J J and Veenstra, C (2010), 'Een veilige wijk, een veilig gevoel. RCM-advies and Experian'. Den Haag.
Note 27 Armitage, R & Monchuk, L (2010), 'Re-evaluating "Secured By Design" (SBD) Housing In West Yorkshire'. University of Huddersfield and West Yorkshire Police. University of Huddersfield.

of the manual, police officers can negotiate with architects, planners and builders. Together they will find enough flexibility in the manual.

1.4.4 A police label for 'existing environments'

Based on experience with the label for new estates, only a few years later the Dutch police published a second label for 'existing houses' and neighbourhoods along the same lines. This label enables the police to structure negotiations on safety and security with the various players who are involved in the maintenance of existing houses or dwellings, estates, environments and neighbourhoods.

Because crime prevention in environments that already exist involves more players with vested interests, it was decided to break up the label for existing housing into three different certificates:

- Dwelling; a certificate for home owners and people renting their dwelling
- Complex or estate; a certificate for bodies such as housing associations, groups of owners, or a pension fund that is renting out a building or complex
- Environment or neighbourhood; the local governments who are responsible for a public space

Hence, for each scale level the most appropriate - or potentially motivated - stakeholder is given the opportunity to apply for a certificate. The police award the 'Police Label Secured Housing' in an existing area' when 60% of all dwellings and 60% of all complexes in a neighbourhood obtain all three certificates.

1.4.5 A new period: from police to municipalities and to the building codes

Together with the Dutch Police Force, the owner of the intellectual property of the police label, the Ministry of the Interior or Home Office, decided that this label was sufficiently developed for use by the local governments in the local municipalities (approximately four hundred of them). But was this the right decision? To take the police label away from the police as a neutral player in the world of builders and project developers can be argued against.[24] In every country it is therefore a fundamental question: leave a labelling scheme like the police label with the police or have the municipalities in charge.

In the Netherlands a few requirements from the police label also found their way into the national building code. So every new house that is built in the Netherlands has since 1999 been forced to comply with the requirements on burglary resistance (locks, doors, windows). The effect of this little change in the Dutch building code was evaluated by econometrists a few years later: 'As of 1999, all new-built homes in the Netherlands have to have burglary-proof windows and doors. We provide evidence that this large-scale government intervention in the use of self-protective measures lowers crime and improves social welfare. We find the regulatory change to have reduced burglary in new-built homes from 1.1 to 0.8 percent annually, a reduction of 26 percent (...). We find no evidence for displacement to other property crimes including theft from cars and bicycle theft (...) the social benefits of the regulation are likely to exceed the social costs'.[25]

1.4.6 An evaluation of SBD and the Dutch police label

Also other evaluations of the UK and Dutch police schemes show very good results. Burglary drops sharply when this scheme is implemented in a new or existing environment (Nauta, 2004, shows a drop of about 80% in the risk of burglary!). Other opportunistic crimes such as theft, vandalism, and street violence also seem to go down after the implementation of these schemes. In addition, the fear of crime is significantly reduced by the use of the police label schemes (Lopez and Veenstra, 2010).[26] More or less the same results come from the UK: 'The results were extremely positive with the findings from each strand of the analysis suggesting that SBD developments outperform their non-SBD counterparts in terms of the reduction of crime, fear of crime, and visual signs of disorder.' (Armitage and Monchuk, 2010/5).[27]

However, seeing these types of labels as a good, finished product might be the biggest threat to them. After their nationwide introduction, these labels were clearly successful and effective, but after a few decades their effect may very well begin to wane due to changes in crime patterns, perceptions and the working methods of offenders, not to mention changes in planning, architecture, and building that will take place. Hence, like every product, crime prevention ini-

tiatives such as SBD or the Dutch Police Label also have to follow a normal life cycle. When the effects of an initiative have 'bottomed out', management bodies will have to make a reasoned decision to extend the life of their product by measures such as re-launching it, providing additional resources, or providing innovation for the scheme. In the Netherlands the National Centre for Crime Prevention and Safety (CCV) did so and asked for new research into burglary, which included interviewing burglars,[28] and a study of the effect of the label (Lopez and Veenstra, 2010). It would have been even wiser to define the label and manual right from the start as a process instead of a finished product. Essentially this process consists of structured negotiations between crime prevention specialists and architects or planners that are aimed at combining the best knowledge and efforts from both expert worlds in order to prevent crime and to reduce fear. In this respect it is useful to keep the roots of, for example, the Dutch label and its manual in mind:

- research on environmental crime prevention
- site specific and building type specific crime analysis
- incorporation of the offender's perspective and working methods ('prevention interviews' of offenders by police officers)

Crime analyses and interviews with offenders must be seen as an essential part of the work to keep labels such as SBD and the Dutch label up-to-date in a constantly changing environment.

Hence, the big challenge is not only to 'sell' more and more labels, but also to develop a system - a continual research process - by which systemised police knowledge of the risks of crime and the perceptions and working methods of offenders is used to constantly adapt the labelling scheme. Part of this system should be a careful and constant evaluation of the risks that are encountered by labelled and non-labelled houses, neighbourhoods, and environments.

Note 28 Felson M. (1998, 2002): Crime and Everyday Life (2nd and 3rd ed.). Thousand Oaks. Sage Publications.

CASE STUDY 1. BIJLMERMEER [29]



Bijlmermeer (CPTED course participant's photo)

Bijlmermeer is one of the suburban areas of Amsterdam. Its design and planning were influenced by famous architect Le Corbusier. The vision for Bijlmermeer was a functional town in which people and cars could move on different levels. When people enter their living area, they leave their cars in the parking complex. Then they walk above a green level in tunnels to their apartments. Between the housing blocks there are large green spaces.



Bijlmermeer (CPTED course participant's photo) green areas between the blocks



Bijlmermeer (CPTED course participant's photo) - street level storage and a pedestrian bridge to the dwellings are reminders of local history.

The concept was a dream that never quite worked as planned. Not enough people wanted to move into the area. The number of vacant dwellings rose and a crime analysis showed a rise in crime and in the fear of crime. This all led to a solution which saw an enormous number of the buildings being demolished at a cost of 1.5 billion euros. The neighbourhood's redesign used the CPTED principles and followed requirements from the 'Police Label Secure Housing'. Nowadays the neighbourhood is very multi-cultural and its residents come from a large number of different cultures.

Bijlmermeer is an example of a high-rise complex that shouldn't be built. What was surprising was the fact that the density of people per square metre is relatively low on the area. The high-rise buildings block out the view and seem to serve to restrict the sense of open space.



Bijlmermeer (CPTED course participant's photo)

Note 29 Publication of the CPTED course, 2015.

It's important for people to know their surroundings, neighbourhood, and residents. When people sense communal interest they take care of their community and each other. At the same time, they focus on and observe the area better.



Bijlmermeer (CPTED course participant's photo) - untended areas

The general impression of the Bijlmermeer complex was fairly unpleasant even after a large number of improvements were carried out. The fairly large parks seemed to struggle with maintenance and the general view of public places was deserted. With the parks, there is still the chance of increasing their attractiveness. At the moment the public spaces are rather down-at-heel and not exactly inviting for residents who may want to spend time outdoors. For more information on crime/CPTED and Bijlmermeer see: www.e-doca.eu http://costtu1203.eu

2. HOW TO STUDY A BUILT ENVIRONMENT

BY PANU LEHTOVUORI

2.1 Urban processes

Urbanisation

The growth of urban settlements is called urbanisation. In most countries urbanisation is still today a significant process, changing both urban and rural areas. Cities are also the focal points of immigration from foreign countries. In the Baltic States, both immigration and rural-urban migration are slow and some cities have even lost elements of their population. In Finland the largest city regions, especially Helsinki and Tampere, are expected to grow a good deal in the coming decades. About half that growth will be based on immigration.

Deconcentration and reconcentration

Contemporary urbanisation is a regional process. Cities, suburbs and specialised centres of education, healthcare, production, and leisure form large urbanised areas, sometimes called multi-centred metropolitan regions (MMR). The Baltic States are characterised by rather small cities, but also in these countries cities and towns are linked to each other, forming poly-nucleated urban regions (PUR) (Gottdiener & al. 2015). The Tallinn region is good example of this: together, the city of Tallinn, suburban municipalities such as Viimsi, and small towns such as Saue form the functional Tallinn region, or Greater Tallinn. Because of cheap land and environmental preferences, both people and other functions tend to relocate further away from the traditional centres. This process is called deconcentration. Simultaneously, some functions such as, for example, logistics companies, may gather together, causing reconcentration. The dual process of general deconcentration and specific reconcentration characterises regional urban change.

Urban densification

Currently, there is a renewed interest in urban living and the qualities of traditional city centres. Even families with children may prefer inner city life instead of suburban life. Therefore, many cities are becoming denser and demographically more mixed. Increased demand for inner city space has led to urban refill and densification.

Gentrification

Gentrification refers to the economic and social process which sees wealthier people move in a neighbourhood, pushing poorer working class residents away. Therefore, property values and rents go up, and the service profile changes. Tallinn's Kalamaja and Turku's Port Arthur are examples of gentrification.

Gated community

A gated community is a specific type of upper-class suburban development, one that is characterised by having its own security systems, private guards, and often very specific building and maintenance rules. Amatciems in Northern Latvia and Tiskre outside Tallinn are examples of gated communities.

Negative spiral

Sometimes a neighbourhood becomes so unpopular that affluent residents start to move out. Over time, the share of poor and marginalised people rises, which makes the area increasingly problematic both in terms of crime and its poor reputation. Such a negative spiral is quite hard to stop and may lead to a serious loss both in terms of economic and social value. This is an important reason for managing urban areas in a balanced and equitable way, so that no place suffers from a clearly negative image.

Planning

Wikipedia defines urban planning as 'a technical and political process concerned with the use of land and the design of the urban environment, including air, water, and the infrastructure passing into and out of urban areas such as transportation and distribution networks'. In legal terms, planning provides the judicial base for urban development. Without an approved, detailed plan that has already been approved by the municipality, construction cannot proceed. The American Planning Association stresses the empowering and socially responsible role of planning: 'Planners help civic leaders, businesses, and citizens to envision new possibilities for and solutions to community problems'. For further discussion, see Andres Levald's article in this handbook.

Different types of the built environment

City regions are amalgams of very different types of built environment. The European CEN/TR14383 standard can be applied to all spaces that have a public use (streets, squares, parks and public gardens, etc) and to residential areas, city centres, commercial or industrial or office areas, and shopping or retail areas, as well as mixed-use areas. When working on crime prevention, specific areas such as schools, leisure centres, public transport and parking facilities, roads, stations, bus stops, and parking garages need attention.

It is important to classify the area under consideration either as a new or existing area. The standard suggests that a crime analysis of newly planned areas should be called a 'Crime Assessment'. This assessment can only rely on planning documents. The analysis of existing areas should be called 'Crime Review'. This can be based both on documents and observation on site.

2.2 Analysing crime and the built environment

Several scientific disciplines may contribute to the umbrella field of social research that is called Urban Studies. These include architecture, geography, political sciences, sociology, anthropology, criminology, demography, human etology, and even ecology. The broad and multidisciplinary character of urban analysis makes a comprehensive presentation of relevant methods difficult, if not impossible. However, it is useful to share an understanding on some important background ideas and concepts. Key Concepts in Urban Studies by Gottdiener & al. (2015) provides a good overview of the main concerns of that field of scientific enquiry.

The authors of this report share the conviction that while the built environment has a large role in explaining the occurrence and type of crime (see the 'crime triangle' in Paul van Soomeren's article in this handbook), structural social factors also play an important role. This means that we can seldom find a direct causal relation between certain environmental features and crime (or the fear of crime). Rather, the built environment should be conceptualised as a 'framing device' of human behaviour, one which is directed by multiple factors, such as economic needs, local or group cultures, political motivations, media representations, seeking out fame or pleasure, and so forth. The built environment can either facilitate or inhibit both individual behaviours and social processes. Good architectural and planning solutions work well both in preventing crime and in contributing to users' general well-being. The distinction between 'hard' and 'soft' CPTED methods which will be discussed below similarly indicates a gradient regarding how directly the methods tackle crime.

The main factors of the physical environment that should be taken into account are as follows (European standard CEN/TR14383):

- the general character of the area and land usage
- the form and density of the built-up area
- the characteristics of open spaces and green areas
- the relationship between public, semi-public, private, and semi-private spaces
- street frontage and building entrances
- public transport routes and stops
- traffic flows and parking
- pedestrian and bicycle movements
- ground floor activities and their time schedules
- prevailing activities in the upper floors
- public and private lighting in public spaces
- the presence of urban decay or derelict land
- the level of maintenance and care

Another list of where to focus when making the analysis is given by Paul van Soomeren in the context of the 'Secure Housing Label' process:

- Urban planning and design; the size of the district, its density, height and scale, access to the district by car and bicycle, etc.
- Public areas; public lighting, open air parking, private garages, playing facilities, tunnels and subways, bus stops, back passages, and also including neighbourhood management, maintenance, supervision, etc.
- Layout; rear gardens, rear paths, etc.
- Buildings; estates, semi-detached houses, the layout of single-family terraced houses, inner grounds, enclosed squares, etc.
- Dwellings; the orientation of living rooms, low roofs, the main entrance, target hardening, etc.

2.3 Working at a desktop or on site?

For the practical needs of this handbook, we propose a simple distinction between two main approaches when it comes to learning about the built environment: firstly, you can do it in your office, based on various sources and reports 'over distance'. Sometimes this is called 'desktop research'. Secondly, you can make observations on the street, collect data, and draft an analysis 'on site', using both traditional and new methods.

This distinction helps to structure concrete tasks in crime prevention. In most cases, it is a good idea to familiarise yourself with the site using statistics, maps, and reports covering earlier research before talking to participants and engaging in action on site. The review-plan-action process of the European standard follows a similar vein of logic.

Further structure for both the Crime Review and the Crime Assessment is provided by the six principles of CPTED. Territoriality, surveillance and access control can be studied both on maps and other documents and on site. Learning about image maintenance, target hardening, and signs of facilitating positive use usually need observation on site (see Paul van Soomeren's article for further ideas).

The following table collects together some of the accessible methods:

OVER DISTANCE - using existing data	**ON SITE - collecting new data**
Statistical analysis • demographic and socio-economic composition • jobs (type, location) • services • density of built environment • insurance data • longitudinal social studies	Surveys • traditional survey forms • soft GIS, participatory GIS • victim surveys, use the International Crime Victim Survey structure and questions to build up comparable data
Geographic information systems (GIS) • basically any information linked to location and therefore mappable • owners of properties • planning situation • data on both buildings and uses; eg: YKR in Finland; ALIS in Estonia • crime data collected by the police	Interviews • Structured • Semi-structured • Groups
Spatial analysis based on maps • Space Syntax • Visibility analysis • Townscape and landscape • Mobility	Observation • Pedestrian and traffic counting • Photography • Written notes • Measuring the site
Simulations • agent-based modelling of crowds • simulating urban processes on square-based (geo-coded) statistical data	Focus groups • A city walk with experts and laymen • Usability analysis • Design workshops based on visual material
Research reports and evaluations • Environmental impacts • Socio-cultural impacts • Culturally valuable sites • International Crime Victim Survey (ICVS)	Measuring and assessing the site or area • Star Model of Public Space (Varna 2014) • New methods based on mobile devices, such as giving camera phones to users so that they can map 'fear' locations
Novels, films • Sügisball by Ounapuu	Action research • 1:1 interventions • real-life tests of illumination

2.4 Different tools for different scales

Crime prevention tasks can range from national policies to very local interventions in specific public spaces or individual buildings. Most methods can be scaled relatively easily, but not all of them. The following table indicates some dimensions of that issue.

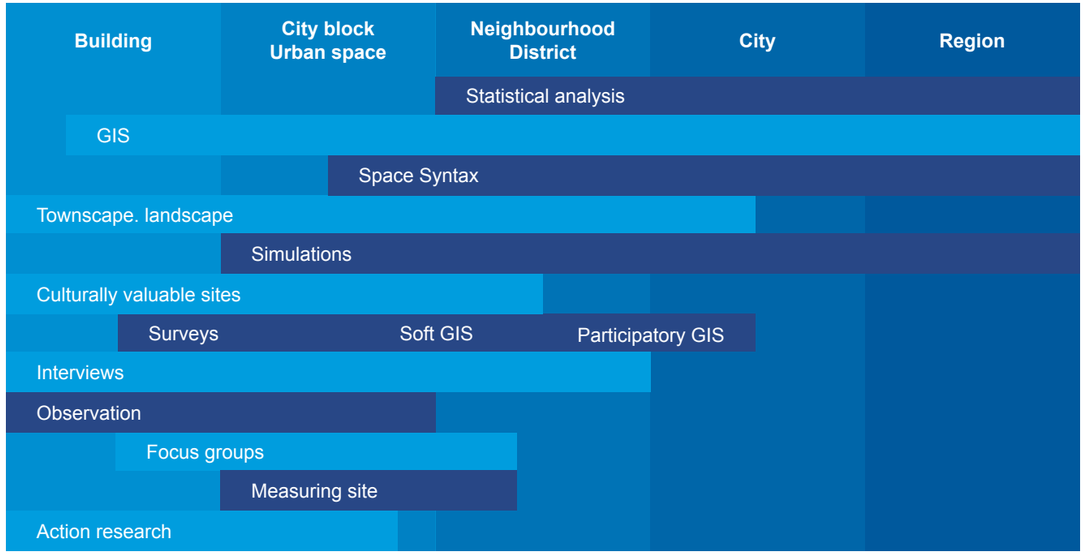
2.5 Validating results and making sense of the research

While the above tables are far from exhaustive, they give some useful ideas about the options available when it comes to studying the built environment. Some methods clearly need academically-trained staff or consultations (marked yellow), but many are open to any interested user.

Independent of the choice of methods or who is carrying out the actual practical research work, it is important to do some kind of cross-checking before accepting the results. Everything from the data itself, the methods employed to use it, and the way in which conclusions can be drawn up are prone to errors. Triangulation means using more than one independent method and data source to address a problem. If an analysis from different starting points seems to lead to similar results, then we can be relatively confident of their validity. An expert opinion (asking your superiors) or peer review (asking colleagues who are at the same level) are other much-used methods to add quality to the analysis.

Lastly, I'd like to remind readers of a key methodological issue, the so-called 'interest of knowledge'. Jurgen Habermas has made an important distinction between 'technical', 'humanistic', and 'emancipatory' interests of knowledge, or underlying reasons for learning about the world. Crime Reviews and Crime Assessments are made to make a difference, to improve local situations. While they share a technical interest in knowing about physical-built reality, a humanistic interest to understand both victims and offenders may also be present. In the best cases, collaborative work on crime prevention may empower some participants. In these cases, the work could be said to have an emancipatory role.

Data collection methods



CASE STUDY 2. THE MUOTIALA AREA [30]

The detailed city plan for the Muotiala area is the first detailed city plan in Finland that systematically takes into account the goal of safety in the built environment. 'Muotiala was the first and only CPTED neighbourhood in Finland.' In 2008 the outcomes of the approach were evaluated by the Helsinki University of Technology. Overall the results were very positive: residents considered Muotiala as being very safe and they used the public space a great deal, while planning solutions that focussed on facilitating social interaction proved to be successful, and well-designed lighting promoted a sense of safety and the active use of spaces, and the building costs were no different from those of other projects.[31]

The creation of a safer environment was a central theme in cooperation with the residents from the very beginning of the process in which the residents of the city were heard in an interactive planning process. A representative from the local police district participated as an expert on safety issues in all planning meetings that were involved in developing the detailed city plan for the area. The police brought in their everyday know-how on crime and disorder such as, for instance, when evaluating local crime concentrations and their impact on the draft plans.

The detailed town plan includes particular regulations that are related to safety. Safety is consciously taken into account in the regulations for lighting plans, landscape planning, and instructions for construction methods.



Muotiala (CPTED course participant's photo) - a walking route between housing and the day-care centre. Note that there are no fences. Small gestures, such as changes in material and the inclusion of stones, mark the boundary between the public walkway and semi-public open space. Good care of vegetation is also important for the general positive feel.

Spatial hierarchy has been accentuated by changes in the materials used in coffering.



Muotiala (CPTED course participant's photo) - pedestrian paths and building masses are located in such a way that promotes natural surveillance, while areas with the character of a no-man's land have been minimised. Measures of activity support enliven both public areas and semi-public open spaces.

For instance, pedestrian paths and building masses are located in such a way that promotes natural surveillance, while areas with the character of a no-man's land have been minimised.

Note 30 Publication of the CPTED course, 2015
Note 31 http://costtu1203.eu/wp-content/uploads/2014/10/03.-Review-of-CEN-14383-The-death-and-life-of-geat-European-standards-and-manuals.pdf.



Muotiala (CPTED course participant's photo) - the location of car parking facilities is a central question in creating safe environments. In Muotiala, cars are always located near the houses, either on streets or in small parking areas and pockets between the houses. This ensures that natural surveillance of parking areas is possible and helps to maintain these areas to a small scale in public areas.

On average, the problems of crime were considerably lower in Muotiala than in Tampere. Inhabitants identified very few experiences of feeling unsafe inside the Muotiala area, while several such experiences were pinpointed as having taken place in the neighbouring blocks.

Traffic information and control centre

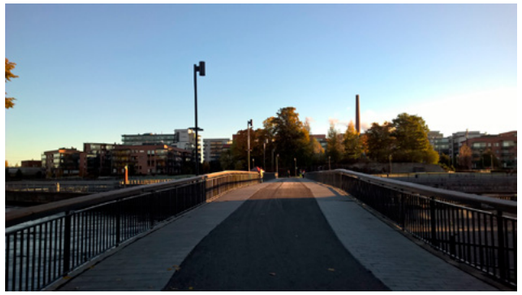
The Finnish Transport Agency is responsible for Finnish roads, railways, and waterways and for the overall development of Finland's transport system. They take care to safeguard the normal operation of the transport system also under abnormal conditions and in exceptional situations under normal conditions. The Transport Agency's data that is collected will be opened up to the general public and the various participants.

The current traffic situation is available in the form of up-to-date information on Finnish roads that covers roadworks, congestion, and other disorders. This service is also available via weather camera images.

Tampere city centre

The city of Tampere is one of the most attractive growth centres in Finland. Managing this growth poses a challenge to the functionality of the region's community structure, the balanced development of the different areas, and also to ecological sustainability. Tampere is a lakeside city. The proximity of water makes Tampere attractive an attractive place of residence. As the centre must be prepared for 10,000 new inhabitants, the construction of housing will continue over the coming years.

The centre formed a comfortable and attractive pedestrian-orientated area, one that supports the development of trade and services. A tunnel and interchanges provide easy access for sub-regional traffic when departure and destination locations are outside of the city centre.



Tampere - (CPTED course participant's photo) - A new pedestrian and cycling bridge over the river improves accessibility, the chances of a social encounter, and general observation. In general, walking and cycling are facilitated, and public transport and underground parking run smoothly.

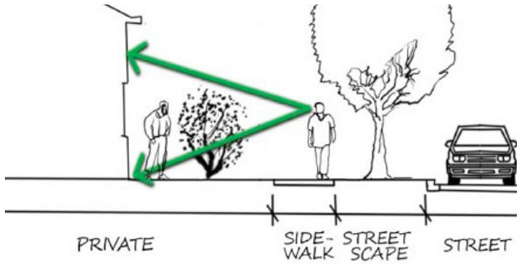
3. ASPECTS OF LANDSCAPE DESIGN IN CRIME PREVENTION

BY JELIZAVETA JEKATERINA SIBUL

There are ways in which security measures can be aesthetically integrated into outdoor areas. Through a process of thoughtful design, opportunities for crime to occur can be minimised and a site can be made less attractive to criminals and vandals. The following provides security consultants for planning and projects directions on how to achieve this through the main principles of CPTED - surveillance, access control, territoriality, maintenance, and target hardening.

3.2 Surveillance

The main principles of securing outdoor areas through landscape design are as follows:



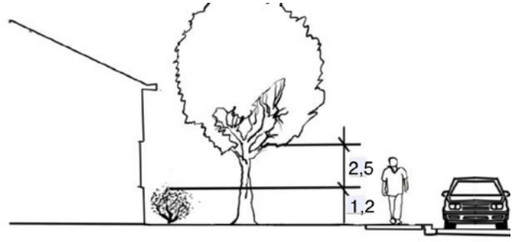
The view is blocked by shrubs.

Keeping the view open

When designing a secure urban environment within the streetscape, something that is not recommended is the use of large obstructive plants or elements that will block the view of observers from the street or those observing from buildings. Any view that is open and free of obstacles is ideal for observation. In places in which fences are allowed and are actually used it is suggested that light, transparent fences be used.

Trimming plants

Specialists consulting on security aspects should suggest a regulation be included in any detailed plan and the subsequent project, one that defines that existing and planned trees and shrubs should be trimmed. Trees should be trimmed to a point at least 2.5 metres from the ground (known to horticulturalists as 'raising'). This will allow a clear line of visibility and will prevent potential criminals from reaching up, hoisting themselves into the tree and using it as a hiding spot. It is recommended that shrubs are trimmed low (between approximately 1- 1.2 metres from the ground). This will prevent someone from hiding behind them.



Trees and shrubs allow the view to remain open.

When planning a park or other public recreational area (especially one is a large-scale dwelling area), avoid designing shrubs that block visibility around benches. It is far better to use shrubs that are no

Pictures from: 'Preventing crime through landscape design. Sustainable design + Consulting'. Available at sustainabledesingandconsulting.com

higher than 1.2 metres. The same requirement should be applied when planning shrubs and trees for car parks. This, however should not mean that all shrubs higher than 1.2 metres should be avoided. The aim is to avoid creating closed and ‘hidden’ places.

Paths

Paths are certainly more aesthetical when they are designed to include greenery. To keep it safe, it is appropriate to include low decorative shrubs (up to 1.2 metres in height) along paths within the design. Higher decorative shrubs should be designed for use farther away from paths.

Lighting

To ensure that people can properly see their surroundings in the dark, it is important to design sufficient lighting for outdoor areas. No unlighted shadowy shortcuts or narrow paths should be planned into dwelling areas. It should also be kept in mind that street lamps should not be positioned close to trees as their foliage can lessen the visible light that is available.

3.2 Access Control

Access control allows one to have control over the ingress and egress of visitors to property. Usually it also limits the number of entrances and exits around a property. This could be done by adding barriers such as transparent fencing, gates, or hedges. The idea is not to create an impenetrable fortress-like design, but rather to design a clear, limited access to everything on the site via a predetermined route and to lessen the likelihood of someone coming in or leaving in any other way.

When controlling access with design it is important to create one clear path to the building’s main entrance and to denote it with landscaped elements, such as sculptures, hedges, or other decorative elements.



To ensure access control, the entrance is designed in glass in order to provide visibility. The courtyard is defined as a private area with a paved structure and shrubs. (Source: www.ikeadesign.com)



A clear entrance to the front door is denoted with decorative planting, which also works as a barrier to keep visitors on the paved path. (Source Photo from Homeedit.com. Available at http-// www.homedit.com/modest-yet-gorgeous-front-yard)

Fences

In areas in which fences are allowed, it is recommended that shoulder-level, open fencing be used between the semi-public and public streetscape in front of the building and the more private rear garden.

Shrubs

It is also possible to use impenetrable decorative shrubs (even going so far as to employ shrubs with thorns) either by themselves or next to fences in order to discourage unwanted people from entering.

In order to keep intruders away from windows, it is possible to use low growing, thorny decorative bushes under ground level windows.1

In order to provide safety it is preferable not to use design features that provide access to balconies, second stories or over fences right up alongside buildings. These include climbable trees, benches, and any hardscape or architectural features that can be climbed.

3.3 Territorial reinforcement

Territorial reinforcement defines an area as public, semi-public, or private. This process of adding structure can be developed with the use of design elements. The perception of a boundary between a private area and the public area creates a sense of territoriality and is a statement to potential offenders that they should keep away and stay out.1

In addition to different ways of creating private areas that are described in the previous section, designing decorative planting (such as, for example, shrubs or flowerbeds) that fit in with the street design can reinforce the perception of space as being semi-public. That space is perceived as being an area that can be viewed but one that cannot be entered without permission.



The semi-public space is marked out by shrubs. (Source: Picture from: “Muljeid Uue Kodu Päevalt” Noole 8 elamukvartal. Ikodu kinnisvarablogi (http://blog.ikodu.com/page/30/)

Water

Another good way to give a site a public/private territorial structure is to use water if the landscape conditions allow it. Canals very clearly define public and private space and are safe barriers that also keep the view open.



Water canals give a site good territorial structure (Souce: Picture from: Tanjing Tongren Housing Development BeijingA&S International Desig. Futurarc 2006 vol. 3)

3.4 Maintenance

Overlapping with territorial reinforcement, maintenance is an expression of ownership of the property. Deterioration indicates less control exhibited by the owners of a site and a greater acceptance of low standards and disorder. It also suggests that the owner's situational awareness of the surroundings is minimal.1

It is important to outline regulations for the future maintenance of the site at this stage of a project. When the detailed plan is being drawn up the need for these regulations should be highlighted in the chapter of requirements that should be implemented after the conclusion of the project work.

3.5 Target Hardening

Target hardening is mostly accomplished in terms of the design for the site's public and semi-private areas, those that are open to the street. In terms of design, one should give preference to elements that add safety to the site. This can be done by the use of physical features that prohibit access and make getting into the private area more difficult. Often these features overlap with those that have been described in the section on access control, above.

3.5.1 Greenery

Greenery should be maintained and trimmed, as described in the section covering surveillance. Planting high shrubs, mass planting, or trees with massive foliage next to a building's exterior doors is not safe. This can be a spot that provides potential for hiding.



Maintained and trimmed greenery provides security. Pictures before and after. Picture from: Tanjing Tongren Housing Development BeijingA&S International Desig. Futurarc 2006 vol. 3, 'We do it all' lawncare website. Available at http://www.wedoitalllawncare.com/before-after.jpg.

3.5.2 Lighting

It is important to design enough lighting so that possible problem areas are properly illuminated. These include the front entry point, paths, corners, and stairs. Lights should switch on automatically, as someone appears in the specific area.



Proper lighting adds security (Vintech. Available at http://www.vintechnology.com/journal/wp-content/uploads/2011/12/LightingPlannerIllustration.jpg).

3.5.3 Climbing plants

The use of climbing plants to cover a building's walls or other surfaces that tend to be violated with graffiti is a good way to prevent further graffiti vandalism.

3.5.4 The use of shale gravel

A way of securing a building's surroundings is to use shale gravel. Shale gravel makes an obvious loud crunching noise when walked upon.1 To support the aesthetics of the site, it is better to use same materials in different variations, so that this recurrence creates style. Therefore decorative shale gravel can be placed strategically about the site, such as in areas like flowerbeds, as a thin strip around the building, or under the windows and by entrance points.

CASE STUDY 3. THE CITY OF RIGA [32]

Area description

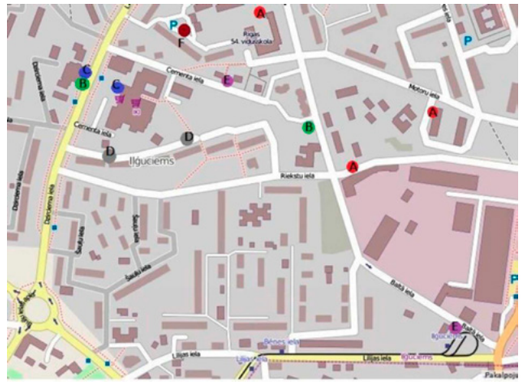
A residential area in Riga was selected (the Ilguciems district). The area defined consists mainly of blocks of flats, some childcare centres, schools, and one shopping mall is located. For Analysis 2, specific areas were chosen - such as Sector 1 on the map and the additional Sector 2. Sector 2 was added because people living in the defined area reported feeling unsafe when on a particular street.



Reported problems and incidents within the defined area

In Area 1 there are about ten blocks of flats and eight smaller houses, two schools, one childcare centre, two shopping malls, a post office, a small casino, a market (close to the shopping mall), a bar, and a car park with guard. However, near both areas the municipality's social housing is located.

In Area 2 there are garages, an old factory site, a few blocks of flats, and a tram stop. People residing in Area 1 should pass through Area 2 from the tram stop in order to reach their homes.



Based on police data from 1 January 2014 to 15 April 2014 the following incidents were reported in Sector 1 - (A) one case of a drug addict being on the street (two cases in adjacent sectors); (B) two cases of intoxicated persons being on the street; (C) 24 cases of shoplifting; (D) two cases of burglaries; (E) one case of men urinating on the street; (F) one case of theft from a car.

Area of burglary:



Area of burglary (source: Google maps).



Area of theft from the car (source: Google maps).

Note 32 Publication of CPTED course, 2015

Based on police data from the period between 1 January 2014 and 15 April 2014 the following incidents were reported in Sector 2 - (E) one case of men urinating on the street.

In Area 2 no any incidents or crimes were registered, although people reported being nervous about passing close by this street. The possible reason could be that this street has no escape routes. On one side of the entire street there is a brick wall and on the other there are other garages.



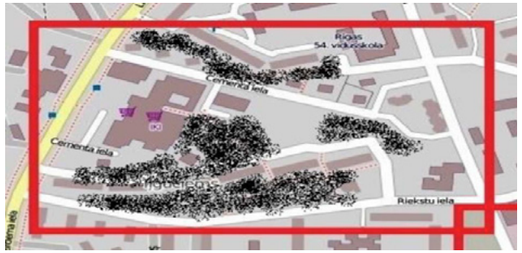


Balta iela - the street on which no incidents or crimes were registered, although people reported being scared of using it (source: Google maps).

At night in the defined area

The defined area was observed during the night in order to identify any possible problems that could occur after sunset. Patrols started at 00:25 and were completed at 01:25. During this time the area was quiet, with around twenty people (all male) were spotted travelling on foot (one of them was drunk).

During the patrol it was noticed that all of the main roads are illuminated. However, paths between apartment blocks were dark, without any lighting.



Based on the observations the following map of dark places in area.

The black areas indicate the totally dark places in Area 1. People living in this area are forced to go through this dark area if they want to visit the nearby shopping mall. None of the pedestrian footpaths have any lighting.



Area with good lighting, with only one place being dark (source: Google maps).



Area near Balta iela illustrating the dark areas in this neighbourhood.

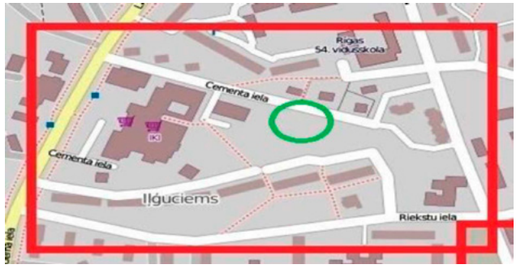
Main stakeholders

- Municipality
- Business organisations - shops, car parks, casino, bar
- Apartment owners (or their representatives)
- Post office
- Police
- Schools
- Garage owners

Possible solutions

In analysing the territory two possible needs were identified:

1. Investment in the environment (refurbishing the playground for the kids and the graffiti problem)



Playground area in Cementa iela (CPTED course participant's photo)

The playground for the kids was built in the Soviet era (its location is shown by the green circle) and has now decayed almost to the point of destruction. The area has not being used for its true purpose and at the moment is unused. Nearby is located a guarded car park.

The area around the former playground is covered in graffiti. The playground has no facility for night-time illumination.

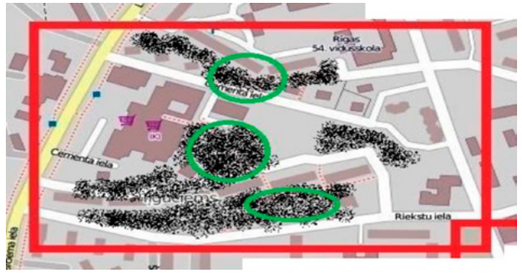




Playground area in Cementa iela (CPTED course participant's photo)

2. Lighting problems at night

People going to the shops should use the unlit path. They should cross the dark areas (outlined below by the green circles) or carry out a fairly long avoiding action to get to the shopping mall. "IKI".



Area between apartment blocks with paths, illustrating the dark areas the paths cross.



Although no crimes were reported in these areas, people feel unsafe. The tunnel through the shopping mall is also dark (CPTED course participant's photo).

4. A GENERAL OVERVIEW OF SPATIAL PLANNING

BY MARTINA PROOSA

The role of **spatial planning** is to create a basis for a balanced and sustainable environment for people by establishing **spatial plans**. In order to achieve this goal the spatial planning process is public and therefore has to deal with conflicting interests in the use of space balancing and adjusting these interests.

In other words, spatial plans that are prepared alongside interested stakeholders and through a process of public participation **lays down the conditions for land use and construction** in those cases and areas in which the preparation of a plan is obligatory. In rural areas where the population density is lower, construction may be usually carried out without a plan.

The common feature in all countries is that planning is carried out on different levels - both at the state and local municipality level. State level plans create wider visions of the spatial development for the country or region. **Municipal level** plans deal with more specific land use issues, while **comprehensive plans** deal with the entire area of the local municipality and **detailed plans** are prepared for land plots.

A spatial plan is a document that is drawn up as a result of the planning process. A spatial plan consists of text and technical drawings which complement each other and constitute a single whole. In the text of a spatial plan the goals of spatial development are stated, with these being based on the spatial development analysis by the planning area and the descriptions and justifications issued for planning solutions.

Whilst the **principles of spatial planning** are common in most countries, **specific rules** vary in different countries and depend on cultural, political, and other conditions.

The CPTED principles are not stated in legal acts that are issued in Estonia, Latvia, Lithuania, and Finland, so there are no compulsory CPTED requirements in these countries. International standards exist that may be referred to during the planning process.

Some requirements that are related to CPTED are contained in the Dutch Building Code and these provide the rules for secure doors and windows and a light near the front door that have to be followed in the case of any new residential buildings and extensive refurbishment work. For more information see Annex 2.

5. HOW TO PARTICIPATE IN THE PLANNING PROCESS AND MAKE SAFETY-RELATED PROPOSALS

BY ANDRES LEVALD

5.1 An introduction to planning processes and documents

Within urbanised areas security and safety can be improved both in existing and newly planned environments. Urban planning has an impact on the different types of crime and the fear of crime by being able to influence the conduct of people such as offenders, victims, residents, or police, and also their attitudes, choices, and feelings.40

Every intervention in the built environment has a physical and social impact on the immediate surroundings. It is therefore necessary to undertake specific actions in order to soften the impact of change. Types of spatial planning and design have their own specific aims, strategic prospects, and levels of generalisation. Pursuant to this they have unique tasks in the design of the built environment. Spatial planning types are generally divided into national, regional, and local levels as described in Annex 3.

National planning

The spatial development strategy for the entire country has to contain a vision of a settlement system which could provide a high-quality living environment that included most general safety matters.

Regional planning

This specifies the principles for and directions in spatial development for a settlement system for the region, and also serves as the basis for the preparation of comprehensive plans for rural municipalities and cities.

Local planning

On the level of comprehensive planning, eight types of urban environment can be identified in the sense of crime prevention. Every type has an appropriate set of measures that are aimed at preventing crime through urban planning and building design (see Appendix 4).

1. Residential areas D1
2. Schools or youth facilities D2
3. Commercial, industrial, or offices D3
4. Shopping or retail D4
5. Parks & public gardens D5
6. Leisure centres D6
7. Public transport and parking facilities D7
8. City or town centres and public spaces D8

A detailed plan has to establish specific requirements and conditions in order to prevent a risk of criminal activity that corresponds to the aforementioned urban environment types and appropriate measures.

Building design

Amongst those levels at which action can be taken in order to improve security in the built environment, there are at least four levels that are directly connected to urban planning and design (CEN/TR 14383-2:2007, see Table 1).

	Level of intervention	Examples of actions	The key players
1	Designing a new building	The design of the building and its relationship to its surroundings	Owners/futures occupants, developers, architects, builders
2	Designing a new development	Guarantee a vision for public spaces around buildings; promote the identification of inhabitants with the area; provide a clear definition of private and public space; activities at ground level; concierge; continuity of pedestrian routes; location and design of car parks, avoiding underground parking; consider management and maintenance in the design phase	Municipality, district council, local pressure groups, police, architects and planners, the traffic department, the public transport authority, public service managers, property managers
3	Planning new developments	Control building density; introduce mixed use; continuity of urban texture, built-up form and building types; provide continuity of street pattern, pedestrian and bicycle routes, control the shape and location of parks and schools; develop ground floor activities	Municipality, district council, local pressure groups, police, architects and planners, the traffic department, the public transport authority, public service managers, property managers
4	Planning new infrastructure	Avoid barriers and enclaves; guarantee accessibility; maintain the continuity of pedestrian movements; create a capillary public transport system	Municipality, district council, local pressure groups, police, architects and planners, the traffic department, the public transport authority, public service managers, property managers

It is important to classify the area under consideration either as a new or existing area. In the case of a new area only a plan exists. The consequences of these differences are far reaching:

- **new environment** (= new project): instrument: a Crime Assessment. The characteristics of crime and the fear of crime can only be assessed by using theories or by using experience and lessons from other neighbourhoods or projects that closely resemble the plan for this new environment; such a crime analysis (ex ante) should be called: a crime assessment (an estimate in advance (ex ante) of the problems which are likely to appear in future in a well-defined area after a plan has been turned into a completed construction);

- **existing environments**: instrument: a Crime Review. The characteristics of crime and the fear of crime can be analysed in real situations by way of such methods as registered crime figures, surveys, safety audits, recording the experiences and opinions of residents, people visiting or using the area, and professionals (police officers, shopkeepers, etc.), observations, interviews with victims and/or offenders, etc.: such a crime analysis (ex post) in an existing area should be called a crime review (an estimate (ex post) of the crime problems that are present in a well-defined existing (urban) area or neighbourhood).

By the crime assessment of a new environment a crime review of the existing environments in the neighbourhood have to take into account as a basic situation. Identifying and classifying those problems which affect an existing area or which may arise in a new area are a basic step towards selecting the proper strategies and measures in terms of planning and design in order to prevent crime. In carrying out a crime assessment for new environments or a crime review of existing environments, one should analyse both the crime patterns and the propensity of the area to attract crime. Insecurity is difficult to estimate and it is often necessary to use all types of information and surveys that exist in order to identify the participants that may affect insecurity and the specific location of any such insecurity. Urban planning and design cannot directly affect a fear of crime, although an environment which does not generate anxiety can contribute positively in reducing fear.

The police as an operational organisation ordinarily have to ensure that laws are respected, that they themselves response quickly to emergencies, and are quickly able to solve any real problems that may emerge. When it comes to the principles that are contained in this manual, the police must see and should reflect upon the

potential problems before they emerge. This approach concerns environmental prevention and is aimed at 'preventing crime from happening'. It deals with all those participants in the environment who can somehow affect the enactment of a criminal act.

As is the case with many urban problems, crime prevention through urban planning and design may seem to be a very complicated issue due to the following:

- it requires different degrees of know-how
- it simultaneously affects different services (planning offices, social services, police, maintenance services, etc.)
- it requires cooperation between different decision makers (public authorities, private investors, etc.)

5.2 Making safety related proposals - what should be kept in mind

Crime prevention is an integral strategical part of the whole planning and design process for a built environment and cannot be considered in isolation. For total design efficiency and cost effectiveness, security, safety, and CPTED measures are best applied at the beginning of a project.

Urban planning and design is a general concept, one that includes not only the actual design work as it is carried out by architects and urban designers, but also the planning work before the design is produced and the management work after the design is implemented.

Three types of strategies can be identified:

- urban planning strategies
- urban design strategies
- management strategies

Urban planning and design strategies are the most relevant for proposed new areas and neighbourhoods while management strategies are more relevant in existing areas.

5.2.1 Urban planning strategies

Planning strategies relevant to crime prevention include the following:

- taking into account existing social and physical structures
- guaranteeing accessibility and avoiding enclaves
- creating vitality (blending functions and activities, creating an attractive layout)
- providing mixed status (blending socio-economic groups, avoiding isolation and segregation)
- creating adequate urban density to allow vitality and natural surveillance (constant observance)
- avoiding physical barriers (due to infrastructure, etc.) and wasteland

These strategies aim at choosing the scale, function, and blending of functions in such a way that they are an incentive for liveliness, social control, involvement, and a sense of ownership. Implementation of these strategies prevents the existing 'urban fabric' (i.e. the vulnerable structure of streets, functions, and social networks) from being harmed. In the case of new developments, these strategies create the conditions for the formation of social networks and for making the new development part of the surrounding urban fabric as quickly as possible. Planning strategies can prevent large building complexes (which may be safe and secure inside) functioning as isolated urban fabrics. This can be achieved by avoiding the physical isolation of these complexes from their surroundings by not allowing the presence of large, isolated car parks or no-man's land areas around them.

The development of shopping areas can be taken as an example here. The planning strategies encourage the concept of well integrated, open air shopping areas rather than creating a shopping mall as an isolated development.

5.2.2 Urban design strategies

Urban design strategies for crime prevention include the following:

- layout (continuity of urban fabric and pedestrian and cycle routes)
- a specific location for activities
- coordination of time schedules to guarantee continuous natural surveillance
- visibility (overview, sight lines between dwellings and public space and the like, lighting, etc)
- accessibility (orientation, space to move, alternatives routes, limiting access for unauthorised individuals)
- territoriality (human scale, clear public and private zones, compartmentalisation)
- attractiveness (colour, material, lighting, noise, smell, street furniture)
- robustness (materials such as street furniture and fences)

These strategies aim at creating the conditions for social control, natural surveillance, a sense of ownership, and a feeling of belonging. The design strategies are complementary to the planning strategies.

Consequently CPTED utilises six (6) primary overlapping principles: natural surveillance, natural access control, territoriality, maintenance, target hardening, and facilitating positive use.

Territoriality involves strategies that are generated so that they project a sense of ownership upon spaces so that it becomes easier to identify intruders because they don't seem to belong. Clear differentiation between public, semi-public, and private spaces by using signage, fences, pavement treatments, art, and flowers are examples of methods of expressing ownership.

Natural surveillance follows the premise that criminals do not wish to be observed; placing legitimate 'eyes' on the street, such as providing window views and lighting, increases the perceived risk to offenders, reduces the fear levels of bona fide occupants and visitors, and also lessens the reliance on camera-only surveillance.

Natural Access Control supplements physical security and operational measures with walls, fences, ravines, or even hedges in order to define site boundaries, to channel legitimate occupants and visitors to designated entrances, and to reduce access points and escape routes.

Maintenance is a key element in the preservation of lines of sights for surveillance, to retain the defensibility of physical elements, and to project a sense of care and ownership. Together, the CPTED principles increase the effectiveness of operational, technical, and physical safety methods, thereby lessening equipment and operating costs. The issue of future maintenance is also an important one to take into account in the early phases of design.

Target hardening: physical security and design in order to make it more difficult to enter a building or space or to vandalise an object. This is the most traditional response to crime: making it physically difficult for offenders with locks, bolts, bars, doors, and gates: the medieval fortress approach. This principle is incorporated into that of access control.

Facilitating positive use: this principle relates to the creation of an environment which increases the likelihood that legitimate users will make use of an area. Such a 'better mix of users' is also important for areas such as crowd control: a mixed mass of people (old or young, men or women) is often more relaxed and less dangerous than a group of young men alone.

Practically no urban area is completely self-regulating; most urban areas need a certain level of professional surveillance and maintenance. The main participants in the physical environment who need to be taken into account are as follows:

- the area's general character and land usage
- built-up form and density
- the characteristics of open spaces and green areas
- the relationship between public, semi-public, private, and semi-private spaces
- street frontage and building entrances
- public transport routes and stops
- traffic flows and parking
- pedestrian and bicycle movements
- ground floor activities and their time schedules
- prevailing activities in upper floors

- public and private lighting in public spaces
- the presence of urban decay or derelict land
- the level of maintenance and care (CEN/TR 14383-2:2007 p16)

Planning also implies decisions being taken in regard to the layout of infrastructure; in many cases road and transport routes fragment the urban structure, creating isolated areas or derelict land that become difficult to control.

- The structure and street pattern of a new development or of an area that is being regenerated should be planned so that it avoids creating any urban enclaves
- To connect a project to the entire urban area it is important to ensure good accessibility by public transport
- Slow and moderate traffic flows provide a valuable 'eye on the street' which, being dynamic, is a powerful deterrent against crime

In order to improve crime prevention, planning and design should avoid creating deserted spaces (without any vitality), as well as undefined or hidden places, because vandalism and other criminal acts tend to concentrate in these places. If it is unavoidable, these places should be managed in terms of safety.

A continuous urban grid and a clear layout of public places improves the self-orientation of its users and their feelings of safety. The visibility of pedestrian spaces and routes from surrounding buildings and streets improves crime prevention and the perception of safety. Similarly, a clear delimitation between public and private space facilitates the management of the spaces.

'*If we shift the focus from defending the private sphere to a general discussion about feeling safe while walking in public space, we will find a clear-cut connection between the goal to strengthen city life and the desire for safety.*' (Gehl, J, 'Cities for People', 2010, p 98).

'*Transition zones between the private and public sphere must be carefully articulated in order to clearly distinguish between what is private and what is public.*'

'*Changes in pavement architecture, landscaping, furniture, hedges, gates, and canopies can mark where public space ends and fully or semi-private transition zones begin. Height differences, steps, and staircases can also mark the transition zone, providing a critical prerequisite for the important function of soft edges as the link between inside and out, between private and public. Only when areas are clearly marked can the private sphere afford the degree of protection that people need in order to be able to make contact with others and to contribute to life in the city.*' (Ibid. p 103).

5.3 Intervention options

There are several options and times in which interventions can be made.

5.3.1 The legal approach

During the preparation process of official planning there are legally-guaranteed proceedings that will endeavour to uncover all interested parties and will also consider their proposals.

1. Co-operation in the preparation of plans. It is important that local governments involve in any planning commission or confirmed leading or working group representatives of the police so that they are able to take into account all possible safety-related aspects. Local police officers can express their willingness to participate and can nominate their competent representatives.

2. According to the law, local governments are responsible for organising public discussions so that the initial planning outline can be presented to the public, along with draft plans and the potential impact of the implementation of a comprehensive plan.

3. The public display of plans. During the time in which the plan is on public display, all interested parties will have access to all of the materials and any information that is related to the plan in the possession of the county governor or local government body who administrates the preparation of the plan. Such public access shall be made available during the office hours of those government bodies. Everyone has the right to present their own proposals and objections in relation to a plan during the time in which the plan is on display to the public.

In addition:

1. Everyone has the right to make proposals concerning the urban planning behind the design and the local government has to be able to communicate, register, analyse, weigh up, and keep in mind any such proposals for further use. There are technical solutions available that allow to participate online in the whole spatial planning process and obtain any relevant information (such as **https://rpis.andmevara.ee/**; **http://www.tallinn.ee/est/ehitus/Planeeringute-register-2** ; **http://ksv.hel.fi/keskustelut/** and others)

2. In the era of e-information and the internet, information on spatial planning has to be easily available to everyone via open source e-systems, provided as an easily-readable presentation, as well as in a technical format that is ready to use by non-experts.

3. There are now newly-evolving technical options available that allow observations and proposals to be transmitted at short notice (such as the mobile app, 'Anna teada': **http://kov.riik.ee/annateada/** and others). A description of the public planning instruments can be found in Annex 3.

4. The local police have to constantly cooperate and negotiate with administrative bodies and communicate all their findings and concerns where these refer to urban planning and design matters.

5.3.2 A strategic approach

However, most effective are the systematic approaches and appropriate strategies that are described in urban planning and design standards for crime prevention (CEN/TR 14383). The police must promote the implementation of these standards, and actively participate in relevant practical activities. It should generally be kept in mind that the safe living environment is a collective creation for the public at large and the police are not a single player in this field.

Once any crime problems have been identified for a defined area through a crime review or a crime assessment, the aims and goals of any prevention activities should be defined. After setting out these goals, appropriate strategies should be selected in order to reach them.

In order to be implemented, strategies need to be translated into a set of coordinated actions and measures. However, these actions and measures depend on local context, cultural tradition, and past experience, and may therefore vary considerably from place to place.

At first the relevant partners have to be sought. Particularly careful consideration has to be given to dialogue with partners whose advice is sought, as they constitute the operation's final users.

Three broad categories of stakeholders can be distinguished:

- owners and contracting authorities
- specialists who bring their expertise to the project
- residents and users

The main practitioners who can contribute in the planning process are these:

- designers and planners: town planners, architects, landscape architects, transport or traffic engineers, civil engineers
- police and security professionals: crime prevention officers, victim support officers, private security firms and consultants, insurance companies
- social workers: social assistants, conflict mediators, assistants to marginal groups, assistants to drug addicts
- sociologists, psychologists, and research consultants

Of the general population (whether individuals and/or organisations) planning process involves:

- people who live on the site (residents)
- people who work on the site (shopkeepers and local business managers, local companies or services for the delivery of goods such as lighting, transport, waste management and cleaning, maintenance for various types of public space (parks, streets, parking), shop employees, social workers, medical practitioners, school managers, teachers, professionals who work within the project's catchment area and with the local population)
- other users: other people who use the space or the project's catchment area without being inhabitants or residents.

The most important partners for the police are those authorities that are responsible for granting permission for developments in new

and/or existing environments and they are referred to here as a 'Responsible Body'.

The RB should provide evidence of its commitment to the prevention or reduction of crime and the fear of crime by urban planning and building design by means of the following:

a. communicating and disseminating the importance of meeting safety and security requirements

b. establishing a safety and security policy

c. conducting crime reviews in existing environments and crime assessments in proposed new environments

d. ensuring that general safety and security objectives are related to the relevant rules if they are established

e. defining those areas which are subject to the procedures outlined in this document

f. providing technical support for a safety and security policy

g. ensuring the availability of resources

It is advisable that a technical structure be set up in order to support a crime prevention policy.

In the case of a development or building project for a new environment, or a project for rebuilding, refurbishing and/or maintaining an existing environment, the 'Responsible Body' should start a process that is aimed at meeting the safety and security objectives as formulated by that Responsible Body.

The RB should appoint a representative from its midst who, irrespective of other responsibilities, should have responsibility for and authority over:

a. ensuring that the necessary steps in the process (see Figure 1) are established, implemented and maintained

b. reporting on the process to other members of the Responsible Body

A multi-disciplinary 'Working Group' (WG) should be set up (if it is not yet in operation for other purposes) and the representatives of the stakeholder organisations should be involved in this particular project.

This working group should develop and, later on, implement and execute the mission statement (which is also referred to as the 'terms of reference') as defined by the Responsible Body. Its general tasks are as follows:

- to establish a mission programme
- to identify and study the crime and safety problems in the specific area
- to provide guidelines for designers and developers (public or private), in order to meet the mission statement (also called the 'terms of reference')
- to transmit to the RB an evaluation showing how the objectives are met and how the project is proceeding
- to implement and execute the mission statement (also called the 'terms of reference') as defined by the Responsible Body

For the functioning of the working group are the integrated or specialised operational approaches possible.

5.3.3 The integrated approach

The working group for a regular planning process in terms of a new or existing area should be expanded by adding some experts who are specialised in safety, security, crime prevention and/or reduction: including police officers, security risk professionals, social workers, or some of the residents.

5.3.4 The specialised approach

A separate working group that will specialise in the prevention or reduction of crime and the fear of crime by means of urban planning, design, and maintenance should be set up in order to advise (and influence) the planners or designers, developers or builders and/or services.

The working group should review the present crime prevention and fear-reducing performance of the environment as specified in the mission statement or assess these areas for the future.

The review or assessment should include the following:

c. a definition of the nature, type, and seriousness of the crime problems that are to be tackled (for an existing environment) or prevented (for a new environment)

d. a definition of the participants in the physical environment, the built-up form, and the design features that may directly or indirectly contribute to crime problems

The outcome of the review assessment should be discussed with the Responsible Body.

On the basis of the findings, the working group should define the project's specific objectives in accordance with the mission statement. These objectives should be listed in the form of a confirmed set of safety and security requirements, and should include the length of time in which these requirements should be fulfilled.

The working group should draft a plan that contains the following:

a. a scenario of what is most likely to happen in the near future if no measures are taken to prevent and reduce crime and/or the fear of crime. This will include a comparison of the outcome of the scenario with the safety and security requirements as specified in Step 2

b. the most effective strategies that are likely to reach the safety and security requirements that are specified in Step 2 and the measures that are to be taken. In the case of a large or complex project, a strong degree of interaction between the designers and the working group is desirable in order to obtain consensus before going further with the process

c. the costs involved

d. the anticipated effects of the proposed measures

e. non-conformities that may remain and the potential hazards and risks that could result from this non-fulfilment of one or more requirements

The working group should present the plan to the Responsible Body and to all of the stakeholders.

The Responsible Body should decide upon the following:

- which strategies and measures have to be implemented
- or which aspects of the plan have to be elaborated further by the working group; in this case the working group and/or the project proponents has to carry out additional work and the Responsible Body should present an adapted version of the objectives and requirements

Once a final decision on the strategies or measures has been made, these strategies or measures should be laid down in a final agreement between all stakeholders. This agreement should identify the following:

- who does what (the levels of responsibility for each party involved)
- time schedule
- intermediate controls for planned actions

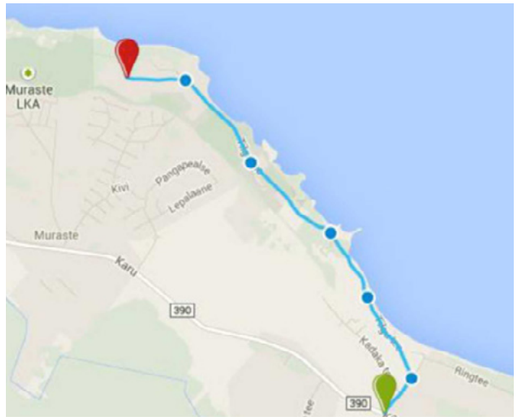
Each party that is involved in this agreement is responsible for the implementation of its respective actions and should keep the others informed of progress. The Responsible Body will define the way in which the control function is carried out. An evaluation programme should be planned. The selection of evaluating experts and the conduct of evaluations should ensure objectivity and impartiality in the evaluation process.

CASE STUDY 4. TALLINNA-RANNAMOISA-KLOOGARANNA (ESTONIA)

The problem defined

The highway between Tallinn, Rannamoisa, and Kloogaranna and Tilgu Road as far as the Police and Border Guard College of the Estonian Academy of Security Sciences, situated at 55c Tilgu Road, Harju County, Harku Rural Municipality, Muraste Village. Tilgu Road's width varies between 4.60 metres to six metres.

Party	**Problem**
Local residents	• Speeding drivers. • Sportsmen consider themselves to be the 'masters' of the road; they don't comply with the requirements of the Traffic Act. • Strategic vulnerability, including poor access for operational vehicles, because it provides the only access point.
PBGC personnel, including students	• Strategic vulnerability, including poor access for op-services, because it provides the only access point. • Speeding drivers. • Sportsmen consider themselves to be the 'masters' of the road; they don't comply with the requirements of the Traffic Act.
Visitors and holiday-makers	• There are no car parks. • Road markings are incomprehensible and unfamiliar.
Recreational sportsmen and professionals	• Speeding drivers. • The road is too narrow. • Drivers do not follow the requirements of the Traffic Act at junctions.
Users of Tilgu Port (fishermen and pleasure craft owners)	• Speeding drivers. • Sportsmen consider themselves to be the 'masters' of the road; they don't comply with the requirements of the Traffic Act. • Strategic vulnerability, including poor access for op-services, because provides the only access point. • Road markings are incomprehensible and unfamiliar. • There is not enough space for large vehicles in waiting.



Tilgu Road (source: Google maps).

On the four kilometre-long Tilgu Road are several contradictory markings and signals. Controversial traffic signs or signs which can be interpreted in different ways have been installed (holding positions have been installed on both sides of the bend because if two vehicles meet on the bend itself they may not have enough space to pass one another), and the road's surface markings are different from the usual kind.





Tilgu Road's speed limit signs. The road is very narrow with no broken white lines to indicate its centre. Broken white lines (see 923b) have been laid out on both sides of the road but their purpose is not generally understood by road users. (CPTED course participant's photo).

At present, the road has speed limit signs, concrete borders have been built along the edge of the shore where there is a danger of erosion, and the locations of culverts have been marked. Despite all of this, light traffic accidents occur on this road every year, usually with one of the cars involved being driven off the road. As most of the cases are insurance incidents only, they are not included in the national statistics.



Tilgu Road accident (CPTED course participant's photo).

There are compulsory road signs here (including a STOP sign), but drivers seem not to comply with these. Drivers do not stop before crossing a side road that has been designed for non-motorised traffic, where priority should be given to non-motorised road traffic users. During the photo shoot of the crossroads for this very manual, several drivers ignored the STOP sign. Visibility of the crossroads is limited due to the building that is located on the right. Drivers prefer to drive out onto the highway between Tallinn, Kloogaranna, and Rannamoisa whilst ignoring the STOP sign and without ascertaining the safety of any non-motorised road traffic users. What should the solution be? Give priority to drivers on Tilgu Road? Pull down the building? Remove the stop sign? Install a give way sign instead?



Tilgu Road's compulsory signs in front of the non-motorised road traffic crossroads (including the STOP sign) and at the highway itself (where there is a GIVE WAY sign) (CPTED course participant's photo).



This bus stopped on Tilgu Road due to a technical failure. The road was impassable for other vehicles due to the lack of space (CPTED course participant's photo).



Tilgu Road runs through Muraste nature reserve, which makes it impossible to widen it within about one kilometre of its length (CPTED course participant's photo).

Tilgu Road is the only road that is strategically vulnerable. In the case of an accident, fire service vehicles will not have enough space to use the road, which will lead to traffic jams, which in turn means a delay or help not arriving at all.

Parties

1. Local residents
2. PBGC personnel, including students
3. Visitors
4. Recreational sportsmen and professionals
5. Users of Tilgu Port (fishermen or pleasure craft owners)
6. The Estonian Road Administration
7. The Harku Rural Municipality authority
8. The Environmental Board
9. Conservationists

Explanation of the signs



Sign 555 ‘Waiting space’ indicates a narrow place at the side of the road where a road user should wait to allow an oncoming vehicle to pass.



Label 923b ‘Dashed line of equal length and equal spacing’, the length of both lining and spacing is one metre each, with a line width of 10 cm. 1) represents the interruption of Label 911 ‘Single continuous line’, that marks the edge of the road, at a crossroads or a turn-off; 2) represents the carriageway’s edge, where the maximum speed is 50km/h or less. Label 923b may be exceeded from both sides.

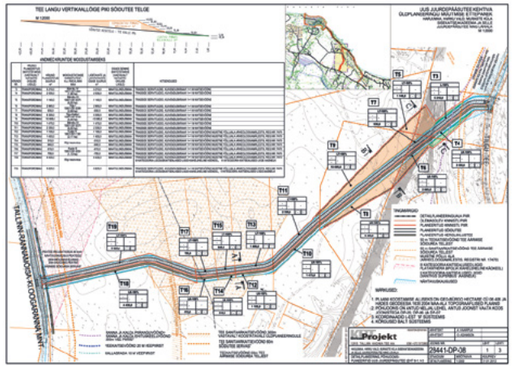
What kind of situation we would like to see in two years?

Problems experienced by all concerned parties will be relieved by the following measures: 41

1. Explanations will be added for Sign ‘555’ at the beginning of Tilgu Road and clarification will be provided for the electronic information board, ‘923a’
2. Waiting spaces will be added in front of Sign ‘555’
3. A review will be carried out of the number of signs and their locations
4. A ‘give way’ sign is to be installed in front of the crossroad for non-motorised road traffic users
5. Improved traffic inspection will be carried out, including police cadets

Measures to be taken in order to achieve the objective: Lasting or structural

A new road is to be laid out - according to the existing architectural drawings. The current road would be left for locals, recreational sportsmen, and users of the nearby port.



The new road - according to the existing architectural drawings. The current road would be left for locals, recreational sportsmen, and users of the port. Extra access points will be added.

6. HOW TO READ PLANNING DOCUMENTS

BY TOOMAS PAAVER

6.1 General

How planning documents should be read?

In reading any kind of planning and design documents, one should first imagine the space and the human environment that is to be created once those designs have been turned into physical buildings and other infrastructural items. One has to put oneself into that space, so to speak, visualising a person and their normal behaviour within that space. One must think about the overall environment as well as every smaller place in that space. In order to understand the space that is to be created, one must imagine different users in the space in different periods of time (for instance at night and day, during the summer and winter, or in crowded and deserted periods). One can visualise oneself in that space as a criminal or as an ordinary resident, as a pedestrian or as a car driver, as a child or as an elderly person, etc. Once this kind of diverse mental image has been created, a vision also emerges of the dangers and risks that can be found in the space, and similarly of the opportunities for avoiding them. The most effective way to create this kind of mental image is most probably through an exchange of views between the architect and a police official on the subject of each particular plan or design.

The built environment

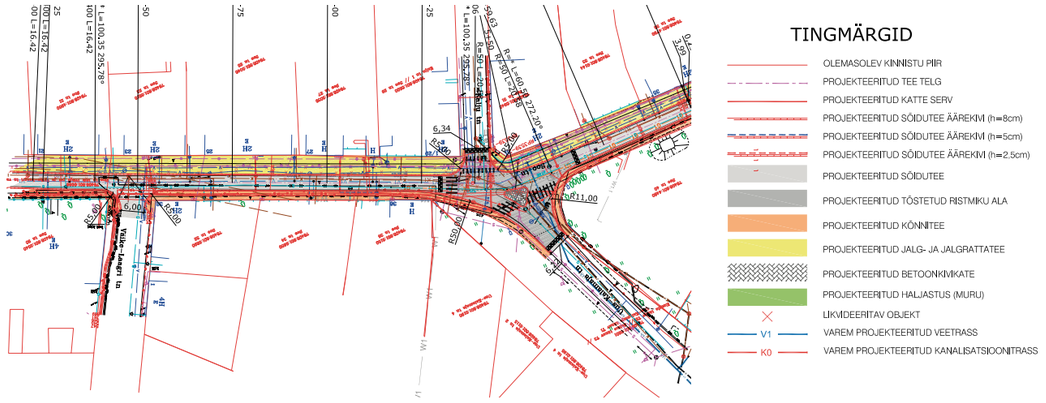
The built environment is a general concept for an environment that has either already been built or is to be built. The natural environment is created by nature, the built environment is built or will be built by people. Natural and built environments can be mixed together. The built environment as a whole consists of **buildings** and **exterior spaces**. The buildings and exterior spaces can be public, semi-public, or private and/or non-public. When an exterior space is to be built or reconstructed, it is usually categorised as a structure (or construction) or a complex of different structures. The precise solutions for buildings or structures that are to be built are detailed in designs.



An example of built environment, that is containing buildings, constructions and exterior public spaces. (The city centre of Zaandam in the Netherlands, which has been partially rebuilt as new . Architect Sjoerd Soeterrs. Photo Toomas Paaver).

The relationship between plans and designs

Planning and design documents generally have very different degrees of generalisation. The overall spatial structure for the human environment that is to be built will need to be built into the designs. In order to understand plans as more general documents, one has first to understand that the design is the direct basis for the actual space that is to be created. The general principles and basic conditions for drawing up designs for buildings and exterior spaces are created by plans. Plans should create the relationship and connections between any buildings and structures that are to be designed and built. Ideally, plans should allow the different buildings and structures in one area to be designed separately. Generally speaking, the spatial solution that is supplied by plans is not sufficiently precise to allow a direct



An example of exterior space design (the design of street, SKA Inseneribüroo)

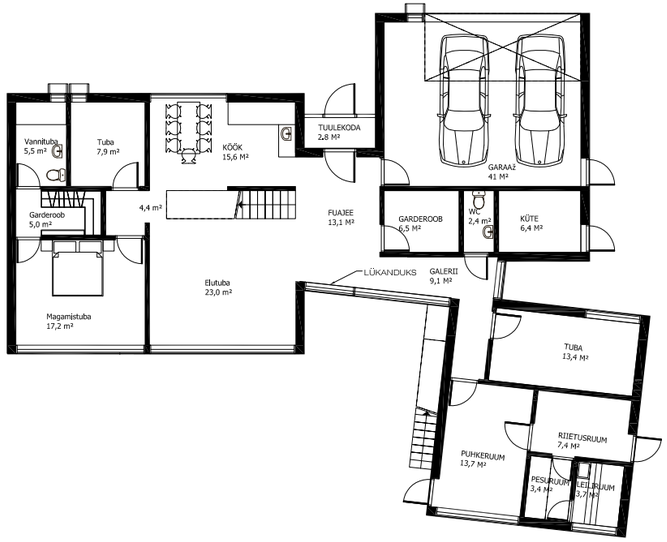
assessment of the behaviour of people in the planned space. At the same time, the overall probable effect on later designs can be evaluated in plans, and proposals can be made to guide designs towards spatial solutions that can create secure human environments.

6.2 The designs

Drawing up the design takes place over several stages with various levels of generalisation. Ordinarily, these stages are the sketch (a draft and/or a pre-design), the preliminary design, the developed design, and construction documentation. The sketch determines the spatial solution of a building or structure. All manner of more detailed solutions are specified in later stages. In order to achieve effective results in creating a secure human environment, it is prudent to cooperate at the sketch stage or, in exceptional circumstances, at the preliminary design stage.

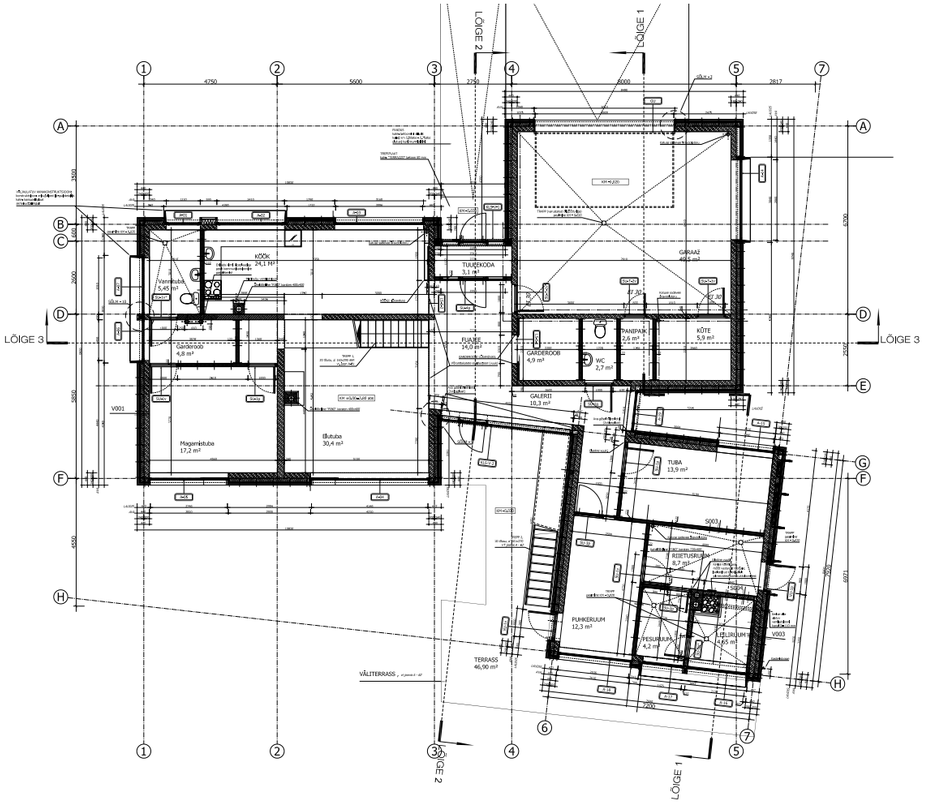
Designs for exterior space

Exterior space design can envisage public or non-public infrastructures, streets, squares, car parks, landscapes, green areas, ports, or other structures whether together or separately. The design of exterior space can be a mixture of new and existing structures. The designs for technical structures (such as underground cables and piping) are of less importance in creating a secure human environment, but they can also include above-ground elements that can have some impact. In designs for exterior spaces or structures, it is reasonable for the purposes of security to more thoroughly consider boundaries between public and non-public space, lighting, visibility, and every element that can cause danger. It is appropriate to predict the speed of vehicular traffic, the natural movement of people, opportunities for crime, and the options available for avoiding crime.

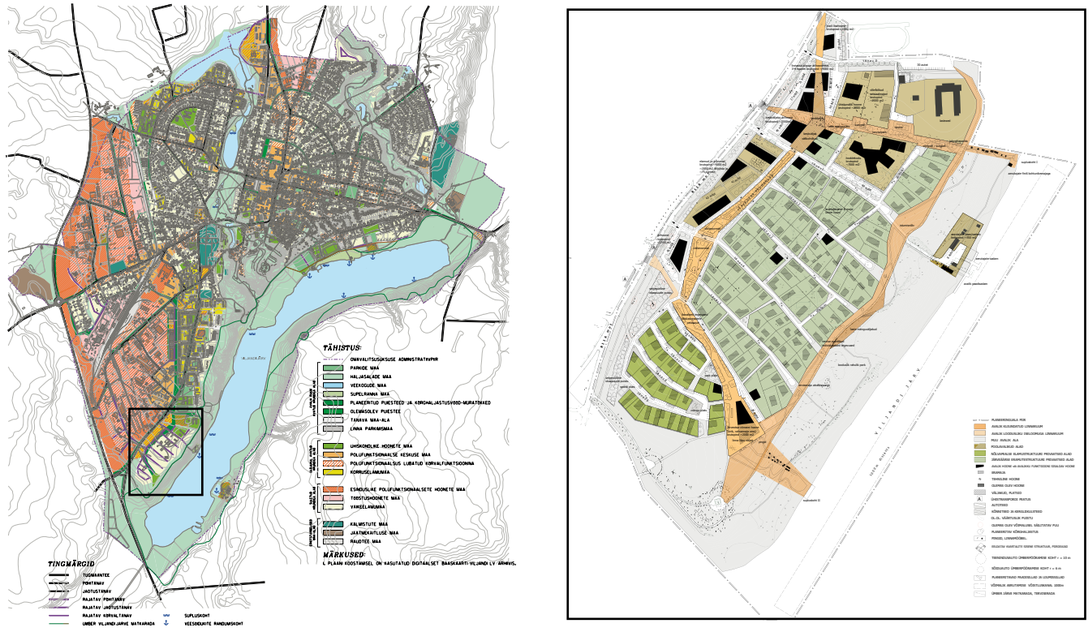


Designs for buildings

The design can envisage a new building or reconstruction of an existing building. Several buildings or structures are sometimes envisaged as being worked on together in one design. The buildings are usually designed in conjunction with their surroundings. In terms of security, it is important first to examine the connections and boundaries between internal and external spaces, and between public and non-public spaces. The spatial solution for the building's external surroundings is ordinarily shown on the design's site plan . The solutions for barriers, parking spaces, greenery, relief, etc, are also contained on the site plan or on other special drawings. The solutions for doors, windows, balconies and other connections between the internal and external space are on the level plans, plus those for elevations and sections, in the letter of explanation, and also in detailed drawings.



An example of the difference between sketch and developed design (ground level plan in different stages of building design, architect Lauri Saar)



An example of different degrees of generalisation in general plans. The general plan of Viljandi (Viljandi Town Government) and the general plan of Järveotsa district (architects Jaak-Adam Looveer and Toomas Paaver)

6.3 The plans

The degree of generalisation in the plans

The degree of generalisation in various types of plan differs widely. Local municipal authorities plan their developments using general (comprehensive) plans and detail(ed) plans. The degree of generalisation for both comprehensive plans and detail plans can fluctuate when comparing different cases - some comprehensive plans may even be more precise than some detail plans. As a general principle, the more general the planning document, the greater the importance of the textual portion (this being the letter of explanation). The drawings are more important in more detailed planning documents. The textual portion of more comprehensive plans describes the principles and conditions that must form the basis for drawing up the design of the more detailed plans.

A detail plan as the basis for designs

The detail plan consists of drawings and explanatory text. There is usually a main drawing (followed by many other drawings) that explains the plan's spatial solution. The scale used in the main drawing is usually 1:500. The detail plan's main drawing is in essence quite similar to the design's site plan for a building or structure, but it can be more general. The solution for the detail plan can more or less be altered during the design process. There are sometimes difficulties with the readability of detail plans. It can be almost impossible to create a mental image of the human environment. That problem seems especially relevant in post-Soviet countries (Estonia, Latvia, and Lithuania). Planning documents are more easily readable in Western countries (such as Finland and the Netherlands). The reason for badly readable detail plans lies in the practice of local municipal authorities, where owners are more concerned about the actual conferral of building rights than with creating a spatial design, and also with the field's relevant legislation. If the detail plan is not clear enough then making proposals to create a clearer spatial solution in detail plans is highly appropriate. One of the most important problems that occurs on a frequent basis is the fact that in many detail plans, public and non-public space is not clearly differentiated or defined. Thanks to this, it is appropriate in this situation to present proposals to the local municipal authority to have public and private spaces specified more precisely if necessary



An example of fragment in readable detail plan (architects Ivo-Martin Veelma and Rasmus Reinolt)

Design criteria (design conditions) as the basis for designs

In many cases (especially where reconstruction work is involved), the process of creating solutions for a new built environment starts with the sketch phase of the design for buildings or structures, without any plan forming the basis for solutions. In addition, sometimes the design specifies the spatial solutions used in the detail plan to a great extent. The proportion of such processes depends on regulations that are different in every country and regional municipality. When the detail plan does not form the main basis for the design, the document that is named as the design criteria or design conditions (which is usually to be issued by the local municipal authority) is the most important basis for the design of buildings or structures. If there is a need for resolving questions that are associated with security, it is appropriate to cooperate and write the corresponding principles during the process of drafting the design criteria.

6.4 Cooperation

The local authorities (at a municipal level)

Planning and designing the built environment is more or less coordinated by local authorities. Local municipal authorities can come in many different sizes and shapes, and the form of cooperation used also depends upon this factor. Generally, ordinary cooperation is effective with medium-sized local municipal authorities. In the smaller local municipal authorities (which generally oversee less than 5,000 residents), there are rarely employed any officials who have the necessary professional competence (architects or other specialists who operate within a similar profession), which makes cooperation in planning and design more difficult. This field of work is divided up between several officials in very large local municipal authorities (primarily in Tallinn in Estonia, which has over 400,000 residents), for which reason it is not easy to find a good partner with whom to engage in cooperation. A suitable model for cooperation and to whom proposals can be presented has to be developed in cooperation with the corresponding local municipal authority.

6.5 How should proposals concerning security be presented?

The most effective way of presenting proposals is through creative cooperation with the architect, planner, designer, or corresponding official in the local municipal authority (for instance, the city architect). It is possible to raise the effectiveness of cooperation levels and obtain better results when important input information is received by the architect at as early as possible a stage of the design process. Also, cooperation is more effective when local authority officials are familiar with the security risks and know the crime statistics for the relevant area, and the reasons for crime and accidents there. Therefore, generally speaking, a prerequisite of good cooperation is for the most part a constant running exchange of information with the local municipal authority.

6.6 General diversity in creating a built environment

In conclusion we can say that every place needs different spatial solutions when it comes to creating security. Every plan or design needs a site-specific and creative way of thinking which also needs to be extended into cooperation between the involved parties. Design processes can also be diverse. Therefore, universal outlines cannot be prescribed when it comes to reading planning and design documents or for presenting proposals concerning them. It is important for police officials to comprehend the diversity of this field and the dynamic development of the environment that takes shape through the cumulative effect of very different kinds of documents. Currently, the minutia of the processes used for creating a secure environment and the options available for implementing known principles are still at the developmental stage in many countries. In the event that specific regulations are drawn up, the danger is that altogether excessive bureaucracy can easily emerge instead of the benefits that have been hoped for from such regulations. Therefore in the current period, testing different models for cooperation, improving the exchange of information, and training architects and planners are of priority in starting up systems that will ensure the creation of a more secure human environment.



ANNEX 1.
THE ULTIMATE CPTED SUMMARY SCHEME

PAUL VAN SOOMEREN

Scheme 1: the ultimate CPTED summary scheme - Paul van Soomeren (1987/1996:19)

School	Chicago school USA; 1920	Romantic school USA; 1961	Newman the Young USA; 1972	Newman the Purified USA; 1980
Authors	Shaw and McKay	Jacobs, Wood	Newman	Newman
Key work	Juvenile Delinquency and Urban Areas	The Death and Life of Great American Cities	Defensible Space	Community of Interest
Area of Interest	The residences of juvenile offenders.	Unsafe city streets. Crime site in relation to surrounding buildings.	The architectural design of unsafe estates. Physical possibilities for control.	The physical setting of social communities.
Main questions	Where do juvenile offenders live? Why do they live there?	How can a city's streets be given good crime prevention qualities?	Does a different housing design give residents options for exercising informal control over their environment?	See: Newman 1972.
Answer or theory	Where: the zonal model for urban form (Burgess/Park). Highest number of delinquents living in the concentric zone adjacent to the central business district (zone of transition/slums). Rates declining with increasing distance outwards. Why there: social disorganisation. Youths learn criminal behaviour from their peers.	A clear demarcation between public and private space. Eyes on the street (both the eyes of residents and the eyes of people passing by). Buildings orientated towards the street. 5 Streets must be busy and must be used continuously. Night shops, pubs, bars, etc., can create late night activity.	Defensible space - natural surveillance coupled with residents' feelings of territoriality.	Informal control will flourish in a residential environment whose physical characteristics allow inhabitants to ensure their own security. Community of interest (grouping of life-styles)
Critique and remarks	Research in Europe showed a totally different pattern of residence. Danger of ecological fallacy.	Research proved Jacobs' 'sale streets' to be unsafe! More people - more trouble (especially from pubs and bars). Physical determinism. See also the Newman critique.	Changing the physical environment does not necessarily result in a different response to crime. The offender is neglected: how does he perceive D S?; there are always ways to avoid surveillance. Methodological errors in research.	Again: too much physical (or architectural) determinism. Offender still neglected. Strange: Newman 1980 causes little debate; is neglected or unknown in most European countries.
Most useful application	Preventing youngsters from initial involvement in crime.	A reduction in the fear of crime by promoting community file.	Creating better options for natural surveillance and therefore reducing feelings of insecurity. Effects on offenders seem to be moderate at best.	See: Newman 1972.

School	Situational approach UK; 1980	Spatial school USA; 1980	Rock hard school Worldwide since 10000 8C
Authors	Clarke, Mayhew and others	Brantingham and Brantingham and others	
Key work	Designing Out Crime	Environmental Criminology	
Area of Interest	Crime-specific criminal acts resulting from offenders meeting or seeking opportunities. Physical and social environment.	Analysis of the location of crimes, sorting out patterns in the 'where, when, and how' of crime.	The physical strength of objects or parts of buildings.
Main questions	How can opportunities for offenders be reduced?	Where does crime occur? Why there?	How to prevent (by physical means) people from damaging or demolishing an object or a building.
Answer or theory	Prevention strategies are different for each type of crime. In general: 1. Target hardening 2. Target removal 3. Removing the means to commit crime. 4. Reducing the pay-off 5. Formal surveillance 6. Natural surveillance 7. Surveillance by employees 8. Environmental management.	Without offenders no crime. Offenders make rational choices. Attention has to be paid to the decision-making process of an offender which is time and/or spatially constrained: offenders prefer to operate in areas they know. Crime risks are highest along the movement paths of offenders and on the borderlines of districts where a lot of offenders reside.	Target Hardening and urban alarm systems. Strength of target has to keep pace with: • The offenders profit when they succeed after all (Fort Knox high profit -> this target must be quite hardened? Time needed to react (police, neighbours, employees, etc.).
Critique and remarks	In the eighties the opportunity-focused situational approach and the spatial school become strongly intermingled. See Clarke and Cornish 1985 for instance: criminal behaviour is seen as the outcome of the offender's broadly rational choices and decisions.	Displacement of crime. Creates a bunker environment. Target hardening can promote a fear of crime.	Displacement of crime. Creates a bunker environment. Target hardening can promote a fear of crime.
Most useful application	Preventing a specific form of crime in a very practical (manageable) way. Fear of crime is barely incorporated into the theory.	Predicting which areas or routes are at risk; modelling offender's decisions by physical environmental changes makes rational crime policy (displacement policy) possible.	Preventing victimisation in a particular case.

ANNEX 2. A GENERAL OVERVIEW OF SPATIAL PLANNING

MARTINA PROOSA

Estonia

Planning regulations

In Estonia planning is regulated by the Planning Act. The first planning law was adopted in 1995, the second in 2002, and the third awaits adoption by parliament. The first law also contained the building regulations, while those following it set out rules for spatial planning. There are no further legal acts that provide any rules for spatial planning.

During the preparation of the spatial plans, a 'Strategic Environmental Assessment' (SEA) is carried out. During this process the impact of the plan's implementation is assessed and the findings of the assessment are used in the plan's preparation. The rules for the SEA are set out in the respective law.42

Types of spatial plans

There are four levels of spatial planning and plans - national, regional, comprehensive, and detailed plans. The national plan covers the entire country, while all subsequent lower levels specify a more comprehensive plan.

The last national plan was adopted on 30 August 2012, and in 2013 the preparation of the new regional plans for all fifteen regions started. Almost all of the 213 local municipal authorities have a comprehensive plan.

CPTED legal framework

Spatial plans are also a tool for safer environment, including crime prevention work. Crime prevention is regulated at the municipal level - in the comprehensive plans and detailed plans. One of the functions of the comprehensive plan is to make proposals to prevent, by way of planning, the risk of crime in urban areas. Detailed plans establish requirements and conditions to prevent the risk of crime. There are no specific rules describing how to solve these questions in more detail.

Responsibility for planning and the planning process

On the municipal level, responsibility for preparing the spatial plans lies with the local municipality. In preparing the detailed plan, the local municipality may involve consultants who help to work out the planning solution and prepare the plan's technical drawings. Information regarding the spatial plans may be found on the websites of the local municipalities. Everyone has the right to make a proposal that will trigger the preparation of a spatial plan. After the initiation of the planning process, preparation of the plan starts and the planning process is concluded by the plan's adoption.



Environmental Impact Assessment and Environmental Management System Act.

Notifications are compulsory during the whole course of the planning process, especially after the initiation of the planning process, the plan's acceptance, and the plan's adoption. **Cooperation** during the preparation of the comprehensive plan is required with the local governments that border the planning area; plus the county governor; any residents who are living in the planning area; non-profit associations and foundations that may represent residents who live in the planning area, the Environmental Board, the Rescue Board, and the National Heritage Board, if relevant, and other interested parties;

In the case of a detailed spatial plan cooperation is required with those residents who live inside the planning area; owners of land that is going to be included within the plan's area of demarcation and people who live along the border of the planning area; owners or possessors of existing or planned utility networks; the Environmental Board, the Rescue Board, and the National Heritage Board where relevant; and non-profit associations and foundations that represent residents who live in the planning area.

During the cooperation process, those authorities that are involved will ensure that respective strategies, development plans, and other important strategic documents are taken into account while preparing the plan. The local government will involve any parties that are concerned in the preparation of a detailed spatial plan and inform such parties thereof at the first possible opportunity.

Approval of the comprehensive plan is required by the following:

- the local governments bordering the planning area and also the Environmental Board
- the relevant government ministry
- the relevant government ministry if the plan proposes the creation of a construction that has significant spatial impact
- the Ministry of Defence if the plan potentially entails a reduction in the planned performance capacity of an installation that is of importance for national defence purposes
- the Ministry of Economic Affairs and Communications, the Ministry of the Environment, the Ministry of Defence, the Estonian Maritime Administration, the Estonian Civil Aviation Administration, and the National Heritage Board if the plan envisages encumbering a public water body with construction work
- the Ministry of Defence if construction work is envisaged in the planning area or around a public water body where the construction will exceed 28 metres in height, and the Ministry of Defence and the Ministry of the Interior if construction work is envisaged in the planning area or around a public water body where the height of the construction will exceed 45 metres in height

Approval of the detailed plan is required by the following:

- the relevant government agency
- the Ministry of Defence if the plan potentially entails a reduction in the planned performance capacity of an installation that is of importance for national defence purposes
- the Ministry of Economic Affairs and Communications, the Ministry of the Environment, the Ministry of Defence, the Estonian Maritime Administration, the Estonian Civil Aviation Administration, and the National Heritage Board if the plan envisages encumbering a public water body with construction work
- the Ministry of Defence if construction is envisaged in the planning area or around a public water body where the height of the construction will exceed 28 metres in height, and the Ministry of Defence and Ministry of the Interior if construction works is envisaged in the planning area or around a public water body where the height of the construction will exceed 45 metres in height
- the Ministry of Defence and the Ministry of the Interior if wind turbine work is envisaged in the planning area or around a public water body where the height of the turbine(s) will exceed 28 metres

During the approval process the authorities have to examine whether the spatial plan is in accordance with the laws of their field of activity. After the plan has been approved, the local municipality will accept it and arrange for it to be placed on display for the general public, which is usually followed by a public discussion. Proposals and protests regarding the plan may be submitted at that stage by members of the public. After any necessary amendments have been made, the comprehensive plans and, in some cases, detailed plans are submitted for supervision to the regional council. After the regional council has approved the plan it is ready for adoption.

Lithuania

Planning regulations

There are few legal acts regulating spatial planning and building, and building maintenance in Lithuania. The main act is the 'Law on Territorial Planning of the Republic of Lithuania'. This sets out the rules for territorial planning within Lithuania, along with the rights and duties of the authorities who are responsible for planning, the entities that are involved in the preparation of plans, along with any private or public individuals or bodies, and national and municipal institutions.

In addition, 'The Environmental Protection Law of the Republic of Lithuania' and the 'Protected Areas Law of the Republic of Lithuania' are implied as they set out the rules for environmental assessment that should be carried out within Lithuania. In addition, comprehensive county plan development rules, the municipal master plan rules should be followed during the preparation of plans.

Types of spatial plans

There are four levels of planning - national, regional, local, and private and/or legally-established entities. At the national, regional, and local level there are two types of plans - comprehensive plans and special plans. At the local level the third type of plan - detailed plans - is added.

Comprehensive plans are prepared for national or county areas in order to establish the spatial concept of the planned construction zone and the principles of use and protection of the area concerned. A comprehensive plan may also be prepared for the municipality as a whole or for only part of it (such as a town or a city).

The detailed plan is a territorial planning document that sets out the land parcel boundaries, and the territorial management and land use regime (including construction and other compulsory operating conditions). The detailed plans may be prepared for towns and parts of city areas (down to individual neighbourhoods), and villages, and land parcels or groups of land parcels.

Special plans are prepared for specific purposes or themes such as, for instance, infrastructure items, water and forest management purposes, etc.

The land use plan (project) is a document in which the framework for the use of the land in rural areas and its protection are established, as well as where this may cover specific land use planning measures.

In addition to the 'Law on Territorial Planning', specific planning tasks may be incorporated within other legal acts.

Private entities have the right to prepare and finance detailed plans. The tasks involved in comprehensive plans that are prepared at different administrative levels are not differentiated by law; the variations in the degree of detail and/or generalisation in the plans of different levels are relatively smaller than in other countries. The objective behind Lithuanian local detailed plans and/or special plans include in some certain cases land and forest consolidation tasks among others.

Municipal comprehensive plans set out compulsory requirements. The task is to set out building and land use regulations, the design of optimal target areas for engineering and communication corridors; providing for areas of social infrastructure, identifying specific land use conditions, measuring both natural and immovable cultural heritage and usage, providing for the development of green areas, evolving measures to restore them, and the protection of existing usage in order to establish optimal urban structure.

CPTED legal framework

A secure development environment is guaranteed by spatial planning documents in the form of comprehensive and detailed plans. There are no specific rules for CPTED.

Responsibility for planning and the planning process

Planning organisers are either the government itself or those public administration bodies that are authorised by it, or the county governor, or the director of a municipality administration. The authorities can transfer all of the rights and duties of the planning organiser with the exception of the decision to prepare a plan and then approve it.

Comprehensive, special, and detailed planning is to be made public.

The 'Law on Territorial Planning' describes twice the role of the participants as well as their competence in planning: first generally and then again in more detail - highlighting the preparation of plans in separate regulations for the drafting of plans (something that is sometimes introduced by government resolution, or sometimes by an order issued by the Minister of the Environment).

The process involved in general territorial planning:



The process of detailed and special territorial planning:



The 'Law on Territorial Planning' foresees the requirement to hold a public hearing. This is due to the fact that the established procedures that ensure public access to information regarding future territorial planning, require a public meeting to be organised during which any and all issues that are related to such territorial planning, including any alternatives and the submitted proposals themselves, can be thoroughly digested and discussed by the general public. The procedure for coordinating the municipality level planning documents shall be performed at the Permanent Commission on Construction of a respectful municipality and shall be completed within 15 working days from the day of submission of the application by the organiser of planning to coordinate the territorial planning document. The Commission shall be composed of the representatives of the institutions preparing the planning conditions who are authorised to take decisions.

Any spatial planning commission should consist of the following:

- The chief architect of the municipal administration body;
- A representative of the Fire and Rescue Department under the Ministry of Internal Affairs;
- A representative of the Ministry of the Environment where this ministry is responsible for environmental protection;
- A country-level representative from the public health centre;
- A representative of the Cultural Heritage Department of the Ministry of Culture.

The body that is responsible for approving any master plan will consist of the environment minister, the minister of culture, and the prime minister's advisor, plus representatives of the environmental, financial, economic, social protection and labour, transport, home affairs, and agriculture spheres.

The public is informed about the preparation of plans during their formulation. When the public is able to study plan projects, individuals will also have the chance to provide their own proposals and get feedback on possible solutions (such as altering various plans in small ways to bring about a desired improvement). The 'Law on Territorial Planning' distinguishes 'interested members of society', i.e. that part of society which is influenced or which can be influenced by territorial planning document solutions or which takes an interest in implementing those solutions. Plans are co-ordinated with a) institutions of high status (which are responsible for those sectors to which the plan can attach significance, and b) neighbouring, territorial, and administrative formations. Before preparing any territorial planning documents, the planning organiser must apply to the said institutions so that they can propose planning conditions. When the organiser has finished the project, this individual will co-ordinates that project with said institutions.

Authorisation will also be supplied by the Municipal Traffic Safety Commission and the Municipal Construction Commission (approved by the municipality), during which the police delegate will participate in the decision-making process.

Supervision of project plans (which corresponds to certain laws, other legal documents, and higher level plans) is carried out by the appropriate subdivisions of territorial and administrative units that are of a higher status. On the national level, controls over territorial planning document projects is executed by the 'State Inspectorate of Territorial Planning' under the administration of the Ministry of the Environment; the county governor's administrative body is responsible for carrying out controls over municipal project plans.

In Lithuania the municipality council approves both the master plan and detailed plans for a municipality. Regional comprehensive plans are approved and/or enforced by the national government (regional special plans are approved by regional governmental authorities).

Finland

Planning regulations

Legislation controlling land use, spatial planning, construction and traffic is wide-ranging in Finland.

The most important legislation that serves to control land use, spatial planning, and construction in Finland is contained in the 'Land Use and Building Act', which came into force in 2000. The Land Use and Building Act aims at handling the following areas:

- it organises land use and building work so that the basis is created for high quality living environments
- it promotes ecologically, economically, socially, and culturally-sustainable developments
- it ensures that everyone has the chance to participate in open planning processes
- to guarantee the quality of openly-publicised planning decisions and participatory processes, and to ensure that a wide range of planning expertise is available

More detailed regulations and controls on land use and construction are included in the Land Use and Building Decree.

The 'National Building Code' contains regulations and guidelines that complement the legislation in the Land Use and Building Act. The building regulations must be followed, but building guidelines are not obligatory, and other solutions may be used in construction projects as long as all of the compulsory regulations are observed. The National Building Code especially underlines structural fire safety and personal safety requirements.

All of these objectives have been designed in order to help make living environments healthy, safe, attractive, and socially functional, with the needs of different groups being fully considered. In addition to legislation, there are numerous directions and recommendations that are supplied by the Ministry of the Environment.

Types of spatial plans

In Finland, at the national level, national land use objectives are decided upon by the council of state. The various types of plan include regional and local master plans (comprehensive plans), and detailed plans.

The regional plan sets out the principles of land use and the community structure, and designates areas that are necessary for regional development. Land use in municipalities is organised and steered by local master plans and local detailed plans. The local master plan indicates the general principles of land use within the municipality. The local detailed plan indicates how land-areas within a municipality are used and built upon.

Local master plans provide general guidance regarding the community structure and land use in a municipality or part of that municipality, and local master plans may also be drawn up to guide land use and building in a specific area. The local master plan presents the principles of targeted development and indicates those areas that are required as a foundation for detailed planning, other planning, and building, and other land use. The local master plan may also be drawn up in stages or by sub-areas.

The local detailed plan is drawn up for the purpose of organising at a detailed level any land use, building work, and development, with the aim of designating areas that are necessary for various purposes and for steering building and other land use, as required by local conditions, the townscape and landscape, good building practices, promoting the use of existing building stock, and other steering goals for the plan.

CPTED legal framework

According to §184 of the 'Land Use and Building Act', the police are obliged to provide assistance to the Municipal Building Authority and to the authority that is in charge of products for building when it comes to obeying the law and regulations that are issued under various laws. This Act (§§ 14-15) also defines the local Municipal Building Code under which certain issues, related security requirements, and regulations (covering how to use the building site, fences, etc.) are managed.

Since 2003 Finland has a Public Order Act in place which strives to promote order and security in public places. The Public Order Act applies to places that are designated for public use, regardless of ownership. Such places include streets and roads, pavements, market squares, parks, beaches, sports fields, cemeteries, public buildings, means of public transport, government offices, other office premises, and also restaurants. This act is quite an important tool for the police when maintaining public order and safety.

Safe city websites which provide guidance on the design of and safety for the built environment, helps members of the public to become active in the whole process.

In Finland it is the municipalities and cities that draw up safety plans, which are related to security in general urban spaces, mobility and public safety in public transport, the business environment and in doing business, and also in the security of the authorities and companies; in other words they cover all areas that are related to the safety of the built environment. The police have been closely involved in the local security planning process with other authorities. To be able to bring security plans into practice will require close interaction, participation, and a partnership between public authorities and members of the public.

Responsibility for planning and the planning process

The regional council carries out regional planning duties and the local government takes charge of land use planning, and building guidance and controls within its own local borders.



The initiation of the planning process must be publicised so that interested parties have the opportunity to obtain information regarding the principles of planning and of the participation and assessment procedure.

The authority that is responsible for preparing plans must publicise planning information so that those concerned are able to follow and influence the planning process and express their opinion on the matter (by registering objections).

Plans must be prepared while interacting with any parties that may be substantially impacted either positively or negatively by the plan. Plans must be founded on sufficient studies and reports. When a plan is drawn up, the environmental impact of implementing the plan, including socio-economic, social, cultural, and other impacts, must be assessed to the necessary extent.

See: http://www.turvallinenkaupunki.fi/.

During the preparation of the regional plan the competent ministry and the regional environment centre will be involved in order to clarify how national objectives and other key goals pertain to the drawing up of the plan. Other plans which concern national or important regional land use objectives, or which are otherwise important in terms of land use, natural values, cultural environment, or the implementing obligations of government authorities must be prepared while remaining in contact with the regional environment centre.

The Fire and Rescue authorities have a significant role (such as that outlined in the Rescue Act) when it comes to construction work, covering areas such as securing expert opinions and active controls. The municipal authorities may also ask the police to provide an opinion in connection with security and traffic planning. The practices vary a great deal locally, but are developed while the safety planning design itself progresses.

The local master plan is approved by the local council. The local detailed plan is approved by the local council. When the plan does not have any significant level of impact, the local council's authority may be delegated in standing orders to the municipal board or to a committee.

Latvia

Planning regulations

In Latvia the 'Spatial Development Planning Law' regulates spatial planning. Spatial planning is closely related to regional development and environmental protection. In addition, there are related cabinet rules and decrees that set out specific rules for planning.

Types of spatial plans

In Latvia spatial development documents also include strategies and development plans at the national, regional, and local level. On the national and regional levels, sustainable development strategies and development plans are prepared for Latvia and for the planning regions. For the most part they contain long-term strategic objectives, priorities for the planning region, and the spatial development perspective in written and graphic form. The most important planning documents on the national level are the 'Strategy for Sustainable Development of Latvia Until 2030' (a fragment of the strategy is shown below), and which outlines the principles for sustainable development for the country and the National Development Plan 2014-2020. The goal of the National Development Plan is to agree upon the most important medium-term priorities, areas of action, objectives, and the indicators for their implementation. This is also closely related to the Sustainable Development Strategy of Latvia Until 2030 (Latvia2030) and the National Reform Programme for Implementation of the EU2020 Strategy (NRP).

There is also a maritime spatial plan which defines land use at the sea by considering functional links to the land itself. Preparation of the maritime spatial plan has been initiated at the beginning of 2013.

In a **local government spatial plan**, regulation must be provided for the functional zoning and public infrastructure, land use and building work, and other conditions for land use and restrictions.

A local government spatial plan may be detailed in a **local plan**. After any sustainable development strategy that is issued by a local government comes into effect, the local government spatial plan may be amended in the local plan, insofar as the local plan is not in contradiction with the local government's sustainable development strategy. A local government may use the local plan as the basis for further planning, as well as for building design work.

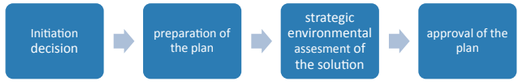
There are 140 municipalities in Latvia who are responsible for planning at the municipal level. The types of and restrictions for land use that are provided for in the functional zoning that is specified in a spatial plan or local plan must be detailed and specified in a **detailed plan** according to the scale precision, specifying the requirements for land use and building for each land unit.

CPTED legal framework

There are no specific rules for CPTED.

Responsibility for planning and the planning process

A local government develops and approves the local government development strategy, the development programme, spatial plan, local plans, detailed plans, and thematic plans.



A local government spatial plan and a local plan are approved by the local government.

Spatial plans are prepared through public participation. The authority that is responsible for preparing the plan has to ensure the openness of information and decision-making, as well as ascertaining public opinion and organising public participation in spatial development planning, providing as detailed and comprehensible a breadth of information as possible.

In order to ensure the public discussion of a spatial plan, the relevant authority must consult with the public before any decision-making takes place. Through its internet website, the authority will publish information regarding the commencement of the development of a spatial plan and any amendments that have been made to it, the procedures for it, the location of and time periods for the public discussion, the place and time at which the particular spatial plan and any amendments will be on display to the public, and the procedures for submitting written proposals and opinions.

During the public participation process, the interests of private individuals and public interests shall be balanced against sustainable spatial development.

Everyone has the right to acquaint themselves with spatial development planning documents which are in force and which have been handed over for public discussion, to participate in the public discussion, to express and defend their own opinion, and to submit written proposals within the specified time period.

The Netherlands

Planning regulations

Spatial planning is regulated by the 'Spatial Planning Act', which came into effect on 1 July 2008. The act is supported by the 'Spatial Planning Decree' ('Besluit ruimtelijke ordening').

In the future, the Spatial Planning Act is expected to be integrated into the 'Environment Act' ('Omgevingswet') together with other laws and decrees such as the 'Environmental Management Act'. The aim of this process of integration is regarded as being the simplification of procedures in order to speed up the decision making process to ensure consistency with spatial plans and projects or activities that are related to the environment and to nature, and to enable the application of laws that conform with the current situation in the regions. The scheduled enforcement of the new environmental act is set for 2018.

Types of spatial plans

National, provincial, and basic municipal authority plans were all replaced by structural visions ('Structuurvisie'). Structural visions, which are related to strategic policies, set out the basic principles for spatial policies, as well as the mode of execution for the policies.

Unlike previously, the national and provincial structural visions are internal guidelines and are not binding on lower level authorities.

Instead of the plans the provinces and the national government may issue general orders, the instruction and the implementation scheme. The provinces have a provincial order (known as a 'provinciale verordening'), while the national government has an 'Order in Council' ('Amvb'). The provinces and the national government can set rules that relate to the contents of zoning schemes. The municipalities must adapt zoning schemes in accordance with the rules that have been set out by the province or by the national government.

An instruction will ideally be used by the province or the national government if something needs to be arranged for one specific situation (known as being 'pro-active'). The municipality then has to adapt the zoning scheme with due consideration to the guidelines that are provided with the instruction.

The Spatial Planning Act requires that the local municipalities devise and update zoning plans for all areas. The law permits the municipalities to devise plans without provincial approval, and enables the provinces and the national government to devise an adaptation plan ('Inpassingsplan') with respect to land use zoning that affect their respective interests.

Once every ten years municipalities must check to see if their zoning schemes and management regulations are still up-to-date.

CPTED legal framework

A municipality's structural plan is also a relevant plan for crime prevention. Some requirements for this can be found in the national building code (a code with which everyone has to comply when engaged in building construction). These requirements are taken from the 'Police Label Secure Housing' scheme. The requirements are essentially for a good lock, a strong door, etc. (which should be burglary-proof for a period of at least three minutes), and a light in front of a house.

Responsibility for planning and the planning process

The Spatial Planning Act does not prescribe procedural or formal requirements. The aim is to use simple, shorter procedures to reduce administrative and governmental hassle. The new Spatial Planning Decree ('Besluit ruimtelijke ordening') will contain a provision that specifies structural vision ensuring that members of the public and social organisations have been involved in the preparation of that vision. However, sectoral requirements with regard to procedure or form could apply.

'Territorial Democracy and Public Participation in Spatial Planning. A Guide for European Citizens and Institutions'. Council of Europe Conference of Ministers responsible for Spatial/Regional Planning. Draft Document. Napflion 2014.

45 Issue: Spatial planning and infrastructure: http://www.government.nl/issues/spatial-planning-and-infrastructure/spatial-planning-in-the-netherlands (29.10.2014).

Note 33 'Territorial Democracy and Public Participation in Spatial Planning. A Guide for European Citizens and Institutions'. Council of Europe Conference of Ministers responsible for Spatial/Regional Planning. Draft Document. Napflion 2014.

Note 34 Issue: Spatial planning and infrastructure: **http://www.government.nl/issues/spatial-planning-and-infrastructure/spatial-planning-in-the-netherlands** (29.10.2014).

ANNEX 3. PLANNING LEVELS IN PROJECT PARTNER COUNTRIES [33]

Planning types	Estonia EE	Finland FIN	Latvia L V	Lithuania LT	Netherlands NL[34]
National	National Plan Estonia 2030+. Provides an outline for the spatial development strategy for the entire country followed by an Action Plan	Not included. The Ministry of the Environment can provide national guidelines for specific planning issues that are of national importance.	• Sustainable Development Strategy of Latvia until 2030, which includes the Spatial Development Perspective for Latvia, • National Development Plan 2014-2020 • Land and infrastructure that is of national interest • National sectoral plans.	• Comprehensive plan for the entire republic of Lithuania • Special (thematic) plans	• The National Spatial Strategy • Spatial Vision on Infrastructure & Spatial Planning (SVIR) • National Spatial Plan
Regional	County-wide spatial plan. Formulates a strategy for the development of a county or part of it, and its objective is to balance national and local interests on the regional level	Regional land use plan	• Sustainable Development Strategy • Development Programme	• Comprehensive plan for the entire region • Special (thematic) plans	• Regional Spatial Visions • The regional structure plan for the provinces
Local	Comprehensive Plan. Provides the outline for the physical development of a local government or part of it, and establishes general conditions for land use including the location of housing areas, recreational areas, principal roads, etc.	Master plan	• Sustainable Development Strategy • Development Programme • Spatial (Territorial) Plan (a comprehensive plan for the whole municipal region) • Local Plans (optional for a particular area of the municipality, amending the spatial plan for a particular area)	• Comprehensive plan for the entire local municipality • Comprehensive plans for the parts of the local municipality • Comprehensive plans for items that are of national importance • Special (thematic) plans	• The structure plan
	Detailed spatial plan. Determines detailed land use, building rights, the conditions and requirements for building and architecture, environmental protection measures, etc., and it is the basis for building activities in the short term.	Detailed Plan (town plan; building plan; shore plan)	• Detailed Plans (a more detailed plan including technical designs for one or several parcels of land)	• Detailed Plan	• The local land use plan
	Building design	Building design	Building design	Building design	Building design

ANNEX 4. PROBLEM X STRATEGY/MEASURE MATRICES FOR EIGHT TYPES OF ENVIRONMENT (ANDRES LEVALD)

D1 Residential

Strategy/measure	Fear	Burglary	Vandalism	Violence	Car	Theft	Arson
Respect structure	a						
Liveliness	b						
Mixed status	c	c	c	c	c	c	c
Urban density	d			d			
Visibility/overview/lighting	e	e	e	e	e	e	e
Accessibility	f	n			t	v	
Territoriality	g	aa	aa		u		
Attractiveness	h		h				
Robustness		o	o				x
Target hardening/removal		p	p				y
Maintenance	i		q				z
Surveillance	j		q	r	u	x	z
Rules	k		q				q
Infrastructure for particular groups	l		q				
Communication to the public	m		q				

a. The fear of crime will be reduced when the social and physical structure of areas that have been refurbished are respected and when social networks and familiar environments are conserved.

b. Mixed use of the area is the greatest determining factor for the creation of liveliness in the area. A lively area reduces the fear of crime. This can be created by mixing residential areas with offices, workshops, and shops, as well as providing a layout that includes green space and a network of footpath which invites the use of the space as a children's playground. Bars, pubs, and cafes which result in trouble being caused to the neighbourhood due to noise or nuisance or because they attract groups that cause fear to the residents have the contrary effect on the fear of crime. The pedestrian network should be simple. Routes for pedestrians and cars should preferably be joined. Building entrances should be connected as directly as possible to the main pedestrian routes.

c. Creating large-scale, isolated and segregated low income areas increases the risk of all types of crime and therefore also the fear of crime; the contrary is also true: a careful mix of social economic groups within a district reduces the risk of all types of crime and therefore also the fear of crime.

d. Integrating residential areas into the urban system (so that they are no longer separated from the rest of the system by wastelands or infra-structural barriers), and building in urban densities (around ten to thirty dwellings per acre) results in a sense of neighbourliness, and reduces the fear of crime and also the risk of street violence.

e. A good view from windows that overlook public spaces and a clear layout for public paths that are provided with good lighting reduces the fear of crime as well as the risk of burglary, vandalism, violence, car crime, and arson; a good view from balconies and gardens from dwellings reduces crimes of theft, such as stealing laundry, tools, or bicycles from private spaces outside the dwellings. The occupation of the ground floor by dwellings or shops is especially important.

f. Allowing limited traffic through a neighbourhood (and not building 'gated communities' or 'fortresses') and avoiding the total seclusion of people from the outside world reduces the fear of crime; a network of footpaths and cycle paths also reduces the fear of crime by ensuring that people are not too widely dispersed over the area (a certain bundling is required on a limited amount of routes at quiet hours of the day).

g. Building on a human scale (not building huge high-rise blocks), as well as creating a sense of ownership by residents for public spaces reduces the fear of crime.

h. Attractive landscaping, architecture, street furniture, and pavements increase the sense of ownership and therefore reduce the fear of crime, as well as the risk of vandalism.

i. Good maintenance, especially when the residents themselves feel motivated to help the professional maintenance organisations, increases the sense of ownership and therefore reduces the fear of crime. In order to motivate residents to take part in voluntary maintenance work, a certain degree of self-government for the area is effective. To realise this, a neighbourhood management system could be established in the area.

j. The fear of crime can be reduced by regular surveillance from police or security services, in particular by officers who are familiar with the neighbourhood and when the surveillance is conducted on foot (and not by car).

k. Setting out clear rules for the use of public spaces, either by the proprietor of a block or by an association of home owners, increases the sense of ownership and good maintenance, therefore reducing the fear of crime.

l. Provisions for juvenile groups (such as a youth centre), as well as provisions for drug addicts and homeless people, reduces the presence of fear-causing groups in public spaces.

m. Layout, architecture and signage that make people feel welcome in the area increases the sense of ownership and control, therefore reducing the fear of crime.

n. Avoiding rear access reduces the risk of burglary; securing doors and windows in (easy) reach of burglars reduces the risk of burglary.

o. Robust door and window frames, doors and windows, locks and glass reduces the risk of burglary and vandalism.

p. Target hardening after burglary or vandalism attack reduces the risk of subsequent incidents or repeat victimisation; when trying to limit the damage caused by vandalism, even the total removal of the object of such potential vandalism can be considered.

q. Quick repairs reduce further damage that may be caused by follow-up attacks of vandalism, graffiti, or arson; quick repairs can be helped by regular surveillance. The maintenance strategy works most effectively when used in combination with clear rules for the use of public space, and when communicated intensively by residents and anyone who is conducting surveillance upon groups of youths. In order to be effective, meeting places should be provided for youths.

r. Surveillance reduces the risk of violence; this service can be provided by the police or by a private security service, but also by a concierge or caretaker or by building guards who monitor that particular block alone, eventually (in the case of a housing estate) supported by CCTV, which allows the surveillance specialists to monitor the entrance, lifts, stairways, parking garages, and bicycle parking places.

s. Parking garages that are accessible only by residents (using a key card system) reduces car crime; parking areas in the open air are less attractive for car theft when provided with a barrier.

t. Individual car parking directly in front of buildings or clustering parking facilities in very small groups increases the sense of ownership and control, and therefore reduces the risk of car crime.

u. Surveillance of car parks and parking garages by the police, private security patrols, concierges, or more localised guards, supported by CCTV, reduces the risk of car crime.

v. Inaccessible entrance halls and parking places for bicycles reduces the risk of certain types of theft such as the theft of bicycles or post from mailboxes.

w. Surveillance of entrance halls and parking places for bicycles by a concierge, especially if supported by CCTV, reduces the risk of theft.

x. Dustbins that are made from non-flammable materials reduces the risk of arson.

y. Removing or replacing flammable materials reduces the risk of arson.

z. Good maintenance, in particular the quick removal of flammable refuse, reduces the risk of arson; although this requires regular surveillance.

aa. A clear difference between public roads and semi-private entrance roads to dwellings and apartment buildings reduces the risk of burglary, vandalism, graffiti, and arson.

D2 Schools and youth facilities

Strategy/measure	Fear	Burglary	Vandalism	Violence	Car	Theft	Arson
Respect structure							
Liveliness	a						
Mixed status							
Urban density	b	b	b	b	b	b	b
Visibility/overview/lighting	c	c	c	c	c	c	c
Accessibility		d	d		o		d
Territoriality		e	e				e
Attractiveness			f				
Robustness		j	j				
Maintenance		g					
Surveillance	h	h	h	h	h	h	h
Rules			m				
Infrastructure for particular groups	i		n				n
Communication to the public			n				
Communication to the public	m		q				

a. School routes along lively streets reduces the fear of crime; the location of youth facilities near a busy road and preferably also near a bus stop reduces the fear of crime and the level of nuisance to the environment.

b. Locating schools in a populated urban area (not in isolated areas or in a park) reduces the fear of crime as well as the risk of occurrence of all types of crime; the distance to surrounding dwellings, however, should be sufficient to prevent any disturbance to the residents by means of noise and nuisances.

c. Good visibility and lighting reduce the fear of crime as well as the risk of occurrence of all types of crime; this requires a compact school design (not sprawled developments) and landscaping with grass and trees (no shrubs); special attention should be given to parking areas, entrance zones, and playgrounds.

d. Fencing off the school area or youth facility reduces the risk of burglary, vandalism, and arson; this should be done in such a way that the attractiveness of the school or youth facility is not harmed and, if there are no other public spaces for children to play in, the work should be handled in such a way that playing after school, or on weekends and holidays is possible on the school grounds. Access to the building should be limited to as few points as possible, preferably only one.

e. Clear zoning of school areas (the playground) which surround public spaces enhances the sense of ownership and therefore reduces the risk of burglary, vandalism, and arson.

f. Attractive architecture, landscaping, street furniture, and playgrounds enhances the sense of ownership, therefore reducing the risk of vandalism and arson.

g. Good maintenance of school routes and the public area around the school reduces the fear of crime.

h. Surveillance of school routes and school areas reduces the fear of crime as well as the risk of occurrence of all types of crime; a janitor or caretaker is effective, especially when living in or near the school. At the entrance to the building there should be a clearly defined reception area with members of staff (the caretaker) present.

i. Provisions for drug addicts and homeless people in the neighbourhood prevent these groups from hanging around the school area, therefore reducing the fear of crime.

j. Robust door and window frames, doors and windows, locks and glass reduces the risk of burglary and vandalism.

k. Target hardening or removal after attack during a burglary or vandalism reduces the risk of follow-up incidents.

l. Good maintenance of buildings, playgrounds, and the public areas around the school reduces the risk of vandalism and arson (and this includes the removal of graffiti).

m. Clear rules for the use of playgrounds and behaviour in the surrounding neighbourhood reduces the risk of vandalism and arson; this is also true for the use of those public spaces that surround youth facilities.

n. The involvement of future users (local youth groups) and residents in the surrounding areas in the design of youth facilities reduces the risk of vandalism and arson.

o. Integrating parking facilities within the premises provides protection to vehicles without disturbing the neighbouring community.

D3 Commercial/industrial/offices

Strategy/measure	Fear	Burglary	Vandalism	Violence	Car	Theft	Arson
Respect structure							
Liveliness							
Mixed status							
Urban density							
Visibility/overview/lighting	a	e	e	e	e	e	e
Accessibility		f	j		o		
Territoriality		k	k				
Attractiveness							
Robustness		g	g				
Target hardening/removal	b	h	h				
Maintenance	c		l				
Surveillance	d	i	m	n	p	q	r
Rules							
Infrastructure for particular groups							
Communication to the public							

a. Good visibility and lighting reduces the fear of crime.

b. Invisible methods of target hardening reduces the fear of crime (no aggressive-looking fences).

c. Good maintenance reduces the fear of crime.

d. Surveillance reduces the fear of crime.

e. Good visibility reduces the risk of burglary, vandalism, violence, car crime, theft, and arson.

f. Limiting the number of entrances to the estate to one at night time and on weekends reduces the risk of burglary.

g. Robust door and window frames, doors and windows, locks and glass reduces the risk of burglary and vandalism.

h. Target hardening after an attack involving burglary or vandalism reduces the risk of repeat incidents; when trying to limit the damage caused by vandalism, even the total removal of the object of such potential vandalism can be considered.

i. Surveillance that is directed to vulnerable entrances, preferably supported by a CCTV system, reduces the risk of burglary.

j. Avoiding thoroughfares for youths through the estate reduces the risk of vandalism.

k. Clear differences between public areas and semi-private areas reduces the risk of burglary and vandalism.

l. Quick repairs reduces the risk of any further attack.

m. Surveillance that is directed at vulnerable spots reduces the risk of vandalism.

n. The surveillance of access routes, especially routes used at night, reduces the risk of violent crime; this strategy is particularly effective if supported by a CCTV system.

o. Controlling access to parking facilities reduces the risk of car crime.

p. The surveillance of parking facilities, preferably supported by CCTV, reduces the risk of car crime and theft.

q. Surveillance that is directed at spots that are vulnerable to vandalism reduces the risk of vandalism.

r. Surveillance that is directed at spots that are vulnerable to arson reduces the risk of arson.

s. Good maintenance, in particular the quick removal of flammable refuse, reduces the risk of arson; although this requires regular surveillance.

D4 Shopping/retail

Strategy/measure	Fear	Burglary	Vandalism	Violence	Car	Theft	Arson
Respect structure	w						x
Liveliness	a		l				
Mixed status							
Urban density							
Visibility/overview/lighting	b	g	g	g	g	g	g
Accessibility	c	h		o	q	o	
Territoriality							
Attractiveness	d		m				
Robustness		i	i				t
Target hardening/removal		j	j				u
Maintenance	e		n				
Surveillance	f	k	n	p	r	r	v
Rules							
Infrastructure for particular groups	o		o	o			
Communication to the public						s	

a. A lively environment reduces the fear of crime.

b. Good visibility and lighting reduces the fear of crime.

c. Clear access and good signage reduces the fear of crime.

d. An attractive layout, materials, and colours reduces the fear of crime.

e. Good maintenance reduces the fear of crime.

f. Surveillance reduces the fear of crime; permanent surveillance by a guard at entrances is preferable over surveillance by CCTV or irregular patrols.

g. Good visibility and lighting reduces the risk of burglary, vandalism, violence, car crime, theft, and arson.

h. Access control and compartmentalisation reduces the risk of burglary.

i. Robust door and window frames, doors and windows, locks and glass reduces the risk of burglary and vandalism.

j. Target hardening or removal following attack from burglary or vandalism reduces the risk of repeated incidents.

k. Surveillance that is directed at vulnerable entrances, preferably supported by CCTV, reduces the risk of burglary.

l. A lively environment reduces the risk of vandalism and graffiti.

m. An attractive layout, materials, and colours reduces the risk of vandalism.

n. Quick repairs reduce the risk of further damage due to repeated attacks of vandalism; repairs that are handled quickly can be guaranteed only if regular surveillance, monitoring and strict management policies are in place.

o. Controlling access to shopping malls keeps out disruptive youth groups and drug addicts and therefore reduces the fear of crime, as well as the risk of vandalism and violence; this measure works best in combination with provisions for these particular risk groups, in order to avoid a displacement effect.

p. Surveillance reduces the risk of violent crimes.

q. Controlling access to parking facilities reduces the risk of car crime.

r. The surveillance of parking facilities, preferably supported by CCTV, reduces the risk of car crime and theft.

s. Communicating preventive messages through the intercom and posters reduces the risk of theft.

t. The use of non-flammable materials for dustbins reduces the risk of arson.

u. Removing or replacing flammable materials reduces the risk of arson.

v. Good maintenance, in particular the quick removal of flammable refuse, reduces the risk of arson; this requires regular monitoring and strict management policies.

w. The fear of crime is reduced by avoiding areas of no-man's land between a shopping centre and the surrounding districts.

x. Developing parking solutions that do not require large car parks around the shopping area prevents the area from being isolated from the surrounding urban area and therefore reduces car crime.

D5 Parks and public gardens

Strategy/measure	Fear	Burglary	Vandalism	Violence	Car	Theft	Arson
Respect structure	a	a	a	a			a
Liveliness							
Mixed status							
Urban density							
Visibility/overview/lighting	b	b	b	b			b
Accessibility	c	c	c	c			c
Territoriality	d	d	d	d			d
Attractiveness			e				e
Robustness			e			f	
Target hardening/removal			f			f	
Maintenance	g	g	g				g
Surveillance	h	h	h	h		h	h
Rules	i		i				i
Infrastructure for particular groups	j						
Communication to the public	k					k	

a. a. Activities in parks during daylight hours provides natural surveillance which reduces the fear of crime, burglary, vandalism, violence, and arson. Do not create secluded or dead-end areas.

b. Good visibility and lighting reduces the fear of crime, burglary, vandalism, violence, and arson. Main paths should be well lit, while other paths could be left in the dark.

c. A clear system of paths and good signage reduces the fear of crime, burglary, vandalism, violence, and arson. According to the specific situation, closure of the entire park between sunset and sunrise is an effective measure as well. For small parks in inner city areas this measure is feasible, while for large suburban parks it is not. The costs of fences should not be covered from the budget for setting out the park in the first place. The network of paths should be connected to the surrounding urban environment in a clear way. The number of exits should be at least two, but preferably more if the paths can all be connected to the urban network.

d. The allocation and furbishing of specific zones of the park for special target groups according to the needs of these groups enhances the options for surveillance and the feeling of responsibility towards these zones by regular users, therefore reducing the fear of crime, burglary, vandalism, violence, and arson.

e. The use of robust materials for benches, dustbins, signage, playing equipment, etc., reduces the risk of vandalism and arson. Materials should also be attractive; attractiveness is the main aim of a park, and attractiveness is itself a prevention strategy.

f. Park benches and other objects that are prone to theft should be properly fastened down. Objects that are prone to vandalism should be replaced by more robust materials or moved to another location in the park, where the risk of vandalism is lower. Objects that are necessary for the functioning of the park, such as benches and dustbins, should never be removed entirely from the park.

g. Maintenance is important for the attractiveness and liveliness of the park. Maintenance concerns the cleaning of paths, the emptying of dustbins, and the upkeep of all greenery (plants, shrubs, and meadows).

h. Surveillance is very important in reducing the fear of crime, burglary, vandalism, violence, theft, and arson. Professional surveillance should be provided by mobile patrols, preferably on bikes. CCTV is not considered as a useful measure for parks.

i. Rules for the behaviour of visitors to the park are effective in reducing the fear of crime, vandalism, and arson. Rules should be communicated by a clear set of pictograms at every park entrance. Teaching these rules to school classes and youth groups is recommended. Specific rules for the use of barbecues (or not allowing barbecues at all) reduces the risk of fire and arson.

j. Provisions for drug addicts, homeless people, etc., reduces the fear of crime caused by their presence. These provisions should be located outside the park. Meeting places for youths could be located inside the park, preferably near the entrance zones.

k. The communication of preventive messages (e.g. warnings about pickpockets) help to reduce the fear of crime and theft. Posters near the entrances are the recommended medium. Announcements regarding public events that are taking place in the park could also be located here, therefore making the announcements preventive and attractive at the same time.

D6 Leisure centres

Strategy/measure	Fear	Burglary	Vandalism	Violence	Car	Theft	Arson
Respect structure							
Liveliness	a		l				
Mixed status							
Urban density							
Visibility/overview/lighting	b	g	g	g	g	g	g
Accessibility	c	h		o	q	o	
Territoriality							
Attractiveness	d		m				
Robustness		i	i				t
Target hardening/removal		j	j				u
Maintenance	e		n				v
Surveillance	f	k	n	p	r	r	v
Rules							
Infrastructure for particular groups							
Communication to the public						s	

a. A lively environment reduces the fear of crime.
b. Good visibility and good lighting reduces the fear of crime.
c. Good signage for entrances and exits as well as access control reduces the fear of crime.
d. An attractive layout, materials, and colours reduces the fear of crime.
e. Good maintenance reduces the fear of crime.
f. Surveillance that includes queue management and/or crowd control reduces the fear of crime.
g. Good visibility and lighting reduces the risk of burglary, vandalism, violence, car crime, thefts and arson.
h. Access control and compartmentalisation reduces the risk of burglary.
i. Robust locks, doors and glass reduces the risk of burglary and damage caused by vandalism.
j. Target hardening or removal after burglary or vandalism reduces the risk of repeated incidents.
k. Surveillance that is directed at vulnerable entrances, preferably supported by CCTV, reduces the risk of burglary.
l. A lively environment reduces the risk of vandalism and graffiti.
m. An attractive layout, materials, and colours reduces the risk of vandalism.
n. Quick repairs reduces further damage due to repeated attacks of vandalism; quick repairs can be guaranteed only if regular surveillance, monitoring, and strict management policies are in place.
o. Controlling access, which means keeping out aggressive people, reduces the risk of violent crime inside the facility; wide access routes to and from parking facilities reduces the risk of violence in the environment that surrounds the facility.
p. Surveillance that includes queue management and/or crowd control at entrances reduces the risk of violence.
q. Controlling access to parking facilities reduces the risk of car crime.
r. The surveillance of parking facilities, preferably supported by CCTV, reduces the risk of car crime and theft.
s. Communicating preventive messages over the intercom and putting up posters reduces the risk of theft.
t. Dustbins made from non-flammable materials reduces the risk of arson.
u. Removing or replacing flammable materials reduces the risk of arson.
v. Good maintenance, in particular the quick removal of flammable refuse, reduces the risk of arson; this requires regular monitoring and strict management policies.

D7 Public transport and parking facilities

Strategy/measure	Fear	Burglary	Vandalism	Violence	Car	Theft	Arson
Respect structure	a						
Liveliness	b						
Mixed status							
Urban density	c		c	c			
Visibility/overview/lighting	d		d	d	d	d	d
Accessibility	e		j	o	o		
Territoriality					q		
Attractiveness	f		f				
Robustness			k				
Target hardening/removal			l				
Maintenance		g	m				
Surveillance	h		j	p	r	r	v
Rules	i		i				
Infrastructure for particular groups	n						
Communication to the public	i		i			s	

a. A transport infrastructure that leaves the social and physical structure intact allows the option of for natural surveillance and therefore reduces the fear of crime.
b. Parking facilities, bus stops, and entrances to underground stations that are located in lively areas reduces the fear of crime.
c. Parking facilities, bus stops, and entrances to (underground) stations that are located in densely-built urban areas result in a feeling of human presence (with the chance of finding help in an emergency) and therefore reduce the fear of crime and the risk both of vandalism and violence. If a bus stop cannot be located at the most secure of places, a special bus stop for night use only could be considered at such secure places.
d. Good visibility and good lighting reduce the fear of crime and the risk of all types of crime where they are relevant to transport facilities: vandalism, violence, car crime, theft, and arson.
e. Limiting access to parking garages to users alone reduces the fear of crime. Vehicle exits and entrances to the garage could be equipped with a folding fence or roller shutter to prevent drug addicts and other unwanted groups from entering the garage.
f. Attractive materials and colours reduce the fear of crime as well as the risk of vandalism and graffiti.
g. Good maintenance reduces the fear of crime.
h. Surveillance reduces the fear of crime; in remote areas and in underground situations, emergency call boxes should make it possible to contact security services.
i. Clear rules set by the management about the proper use of parking and transport facilities, that are intensively communicated to the public over an intercom and through the use of posters, increases the sense of surveillance and therefore reduces the fear of crime as well as the risk of vandalism and graffiti.
j. Limiting access to underground stations to people who have been provided with a ticket reduces the risk of vandalism in the station as well as in trains; this strategy works best in combination with surveillance, including the establishment of ticket controls.
k. Robust materials for street furniture and lamp posts reduces the risk of vandalism.
l. Target hardening or even total removal of the object after an attack of vandalism reduces the risk of further attacks of vandalism.
m. Quick repairs reduce further damage due to repeated attacks of vandalism; quick repairs can be guaranteed only if regular surveillance, monitoring, and strict management policies are in place.
n. Providing a shuttle bus service to remote parking areas to avoid pedestrian routes that feel unsafe, especially at night, reduces the fear of crime.
o. Limiting access to parking garages, underground stations, and trains reduces the risk of violence and (in the case of parking garages) car crime; parking areas that are in the open air are less attractive for car theft when they are well lit and provided with a barrier.
p. Surveillance in parking garages, car parks, underground stations, and in all types of public transport vehicles reduces the risk of violence; this strategy works best if surveillance is supported by a central CCTV system.
q. Clearly separated areas for residential parking and visitor parking in combined parking garages reduces car crime.

r. The surveillance of parking facilities, preferably supported by CCTV, reduces the risk of car crime and theft.

s. Communicating preventive messages via an intercom system and by means of posters reduces the risk of theft.

t. Dustbins made of non-flammable materials reduces the risk of arson.

u. Removing or replacing flammable materials reduces the risk of arson.

v. Good maintenance, in particular the quick removal of flammable refuse, reduces the risk of arson; this requires regular monitoring and strict management policies.

D8 Town centres and public space

Strategy/measure	Fear	Burglary	Vandalism	Violence	Car	Theft	Arson
Respect structure	a						
Liveliness	b			p	r		
Mixed status							
Urban density	b	j		q			
Visibility/overview/lighting				q			
Accessibility	c	k		c		u	
Territoriality	d	l		d			
Attractiveness	e						
Robustness		m	m				w
Target hardening/removal		n	o				x
Maintenance	f		o				
Surveillance			o	d	s		o
Rules	g						
Infrastructure for particular groups	h						
Communication to the public	i				t	v	

a. Keeping intact physical structure and social networks in neighbourhoods enhances the feeling of control and reduces fear.

b. Blending residential function with other functions, thereby creating a lively neighbourhood during both day and night, enhances the feeling of control and reduces fear.

c. Reducing the accessibility of semi-public areas (turning these areas into semi-private areas) reduces fear levels as well as the risk of violent crime.

d. Compartmentalisation of big public spaces into smaller ones enhances the feeling of control and reduces fear; if combined with a surveillance strategy, territoriality also reduces the risk of violent crime.

e. An attractive street layout, pavement, greenery, and street furniture enhances the feeling of comfort and suggests a high level of surveillance and therefore reduces fear.

f. A high level of maintenance suggests a high level of surveillance and therefore reduces fear.

g. The feeling that there are clear rules in place for the use of the public space reduces the fear of crime.

h. Provisions for drug addicts, homeless people, etc, reduces the fear of crime caused by their presence.

i. The communication of preventive messages suggests a high level of surveillance and therefore reduces fear.

j. Locating entrances in lively public spaces reduces the risk of burglary.

k. Limiting access to zones at risk (burglary targets) reduces the risk of burglary.

l. Dividing public spaces enhances the feeling of surveillance and therefore reduces risk of burglary.

m. Robust locks, doors, and glass reduces the risk of burglary and damage from vandalism.

n. Target hardening after burglary reduces the risk of repeated incidents and/or victimisation.

o. Removing vandalised objects or replacing them with more robust materials reduces the risk of further attacks; this measure is especially effective when combined with surveillance, monitoring, and maintenance strategies (including a quick response to zones and objects that are at risk).

p. The presence of dwellers in areas reduces the risk of violence; if violent crimes occur, victims can be found and helped more quickly by residents.

q. A moderate to high urban density (intensive land use) increases the likelihood of there being people in the area at any given time; this reduces the risk of robbery or assault, or incidences of indecency; if these crimes occur, victims are likely to be found and helped earlier; especially if the space is easy to monitor and is well lit.

r. Locating parking places in lively areas which also have a residential function reduces car crime.

s. Car crime can be further reduced by supplementing the method of natural surveillance with the professional surveillance of parking places in public spaces.

t. The communication of preventive messages enhances the consciousness of car owners when it comes to preventing crime before it happens and therefore reduces car crime.

u. Public passages, corridors, and market places should be wide enough; crowded places are attractive to pick-pockets.

v. The communication of preventive messages via public address systems enhances the consciousness of visitors when it comes to preventative action and therefore reduces pick-pocketing.

w. Using non-flammable materials reduces the risk of arson.

x. Ensuring a high maintenance level in the area reduces the presence of flammable objects (refuse) that has been left by visitors, residents, and shopkeepers.

DEFINITIONS

- **Access control** - the general idea of access control is extremely simple: the offender should not dare - and/or be able - to get into an area, building, or space
- **Buildings** - estates, semi-detached houses, the layout of single-family terraced houses, inner grounds, enclosed squares, etc.
- **Activity programme support** - building design documentation consists of a set of documents that are required for the building and use of a construction project or part of such a project, including specifications, technical drawings, instructions on maintenance, and other relevant documents (such as explanatory diagrams, tables and charts for drawings, expert opinions and survey reports, and other documents). In addition to other information, building design documentation contains technical information that needs to be submitted to the local government when applying for written approval, a building permit, and a use and occupancy permit
- **Complex/estate** - a certificate for renting out a building or complex for applicants such as housing associations, groups of owners, or a pension fund
- **Comprehensive plan** - which should be prepared for land owned by the state or by a county governmental body in order to establish the spatial concept for the planned construction on that land and the principles of use and protection for that land. A comprehensive plan may also be prepared for the whole of the municipality or for part of it (such as a town or city)
- **Design** - this is all about planning, design, and the management and/or maintenance of a city, a neighbourhood, or a building with all of its physical features (bricks, mortar, concrete, and general form), as well as the people who live, stay, and reside there
- **Detailed plan** - this is a land planning document that set-out the land parcel boundaries, the land management process, and the land use regime (construction and other compulsory operating conditions). Detailed plans may be prepared for towns and for parts of cities (individual neighbourhoods), plus villages and individual land parcels or groups of land parcels
- **Environmental** - the environment is essential for an increase or decrease in [the opportunities for] crime
- **Facilitating positive use** - this principle relates to the creation of an environment which increases the likelihood that legitimate users will make use of an area
- **CPTED** - Crime Prevention through Environmental Design
- **Crime** - this includes 'specific forms of crime' as well as fear of crime and feelings of insecurity. The specific forms of crime are often of an opportunistic nature. Crimes, as well as uncivil acts or anti-social behaviour, can include: burglary, theft, vandalism, street violence (as opposed to domestic violence), graffiti, littering, etc.
- **Image/maintenance** - the principle is to keep an area free of litter, graffiti, vandalism, and damage
- **Land use plan (project)** - is a document for which the framework of the use of land in rural areas and its protection, as well as specific land-use planning measures, are established
- **Local planning** - Wikipedia defines local planning as being a matter that is related to a local government or council that is empowered by law to exercise statutory town planning functions for a particular area. At the level of comprehensive planning, eight types of urban environment can be identified in the sense of crime prevention. Every one of these types has an appropriate set of measures to prevent crime through urban planning and building design
- **National planning** - a spatial development strategy for the entire country has to contain a vision that foresees a settlement system which could provide a high-quality living environment that includes most general safety matters
- **Private space** - the dwelling or a private garden
- **Public space** - the roads, squares, and parks in a city
- **Public areas** - public lighting, open air parking, private garages, playing facilities, tunnels and subways, bus stops, back alleys, with these areas including neighbourhood management, maintenance, supervision, etc.
- **Prevention** - this concept implies that you act before a problem arises. Pro-action instead of reaction
- **Urban planning** - Wikipedia defines urban planning as being a technical and political process that concerns the use of land and the design of the urban environment, including air, water, and the infrastructure that passes into and out of urban areas, such as transportation and distribution networks
- **Regional planning** - this specifies the principles for a settlement system for the region and provides a direction for spatial development, serving as the basis for the preparation of comprehensive plans for rural municipalities and cities
- **Semi-public space** - a hallway or front garden that is open to the general public
- **Semi-private** - the interior corridors in an apartment complex or a communal garden within an enclosed building block
- **Spatial plan** - this refers to a document that is drawn up as a result of the planning process. A spatial plan consists of text and technical drawings which complement each other and constitute a single whole. Special plans are prepared for specific purposes or themes such as, for instance, infrastructure objects, water and forest management, etc.
- **Surveillance** - a distinction must be made between natural surveillance by the residents of a particular district, the formal surveillance duties that are carried out by the police or by private security personnel, and semi-formal observation that is carried out by the postman, a house keeper or concierge, housing officials, etc.
- **Target hardening** - physical security and design that is implemented in order to make it more difficult to enter a building or space or to vandalise an object
- **Territoriality** - ownership or a sense of ownership
- **'Through'** - a catchphrase for the way in which crime prevention is implemented and executed
- **Urban planning and design** - the size of the district, its density, height and scale, access to the district by car and bicycle, etc.

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CPTED

MANUAL FOR
POLICE OFFICERS