

Prevention of crime — Urban planning and design —

Part 2: Urban planning

ICS 13.310; 91.020

National foreword

This Draft for Development is the official English language version of ENV 14383-2:2003.

This publication is not to be regarded as a British Standard.

It is being issued in the Draft for Development series of publications and is of a provisional nature to give all countries the opportunity to compare experiences and to harmonize procedures. It should be applied on this provisional basis, so that information and experience of its practical application may be obtained.

Comments arising from the use of this Draft for Development are requested so that UK experience can be reported to the European organization responsible for its conversion to a European Standard. A review of this publication will be initiated 2 years after its publication by the European organization so that a decision can be taken on its status at the end of its 3-year life. Notification of the start of the review period will be made in an announcement in the appropriate issue of *Update Standards*.

According to the replies received by the end of the review period, the responsible BSI Committee will decide whether to support the conversion into a European Standard, to extend the life of the prestandard or to withdraw it. Comments should be sent in writing to the Secretary of BSI Subcommittee B/209/10, Security of buildings against crime, at British Standards House, 389 Chiswick High Road, London W4 4AL, giving the document reference and clause number and proposing, where possible, an appropriate revision of the text.

A list of organizations represented on this subcommittee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the *BSI Catalogue* under the section entitled "International Standards Correspondence Index", or by using the "Search" facility of the *BSI Electronic Catalogue* or of British Standards Online.

Summary of pages

This document comprises a front cover, an inside front cover, the ENV title page, pages 2 to 47 and a back cover.

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English version

Prevention of crime - Urban planning and design - Part 2: Urban planning

Prévention de la malveillance - Urbanisme et conception
des bâtiments - Partie 2: Urbanisme

Vorbeugende Kriminalitätsbekämpfung - Stadt- und
Gebäudeplanung - Teil 2: Stadtplanung

This European Prestandard (ENV) was approved by CEN on 21 November 2002 as a prospective standard for provisional application.

The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into a European Standard.

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Foreword

This document (ENV 14383-2:2003) has been prepared by Technical Committee CEN/TC 325 'Prevention of crime by urban planning and building design'. The secretariat of which is held by DS until October 2002 and since then held by SNV.

The status of European Prestandard (ENV) was proposed to give all countries the opportunity to compare experiences and to harmonise procedures.

This European Prestandard is one of a series for the "*Prevention of crime by urban planning and building design*", that consists of the following Parts:

- ¾ *Part 1: Terminology.*
- ¾ *Part 2: Urban planning.*
- ¾ *Part 3: Dwellings.*
- ¾ *Part 4: Offices and Shops.*

In the European Prestandard the Annexes A to D are informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this European Prestandard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

Introduction

Crime and fear of crime as major problems

The European Urban Charter asserts the basic right for citizens of European towns to "a secure and safe town free, as far as possible, from crime, delinquency and aggression". This basic right to a safe community has been enshrined into many national and local crime reduction programs all over Europe.

The final declaration of an International Conference¹⁾ organised by the Council of Europe's Congress of Local and Regional Authorities of Europe (CLRAE; Erfurt 26.-28. February 1997) stated: "that crime, fear of crime and urban insecurity in Europe are major problems affecting the public (...) and that finding satisfactory solutions for them is one of the main keys to civic peace and stability."

The first recommendation from this conference was that local and regional authorities in Europe develop integrated crime reduction action plans, with continuing public involvement, in which crime reduction is included as a policy in all aspects of the responsibilities of local authorities. Such a plan should define the nature and type of crime to be tackled, objectives, timetable, proposals for action and be based on a wide ranging up-to-date survey of statistics and diagnosis of crime.

In this respect the CLRAE conference in Erfurt also stressed the importance to promote collaboration between the police and professional designers and ensure that police officers are specially trained to advise on the relationship between crime and the built environment".

Crime prevention and fear reduction by urban planning and building design

The Justice and Home Affairs council of the European Union (meeting 15-03-2001) agreed politically on the conclusion of the EU experts' Conference 'Towards a knowledge-based strategy to prevent crime' (Sundsvall, Sweden, 21.-23. February 2001). This conference concluded that "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. Best practices regarding CPTED/DOC should be collected, evaluated and made accessible for stakeholders. This process should utilise a common framework of concepts and processes, and transferable principles should be identified".

This conference also underlined "as regards prevention of the fear of crime, that the fear of crime should be viewed and treated as a social problem in its own right".

Statements and recommendations about the collaboration between environmental design/planning specialists and crime experts are becoming more and more common nowadays in European countries. These statements and recommendations are based on assumptions regarding the inter-relationships between the physical environment and human behaviour. It is obvious that the results of urban planning and architecture do influence the choice of conduct and choice of routes of all people (young/old, woman/man, potential offender/potential victim).

Hence urban planning also has an impact on crime and fear of crime by influencing the conduct and attitudes of e.g.

- offenders;
 - formal guardians such as police;
 - informal guardians such as residents surveying an environment;
-

¹⁾ Crime and Urban insecurity: the role and responsibilities of local and regional authorities.

— potential victims (and/or targets) of crime or victims of fear of crime.

A great number of experiments have shown that particular types of crime can be reduced by modifying the opportunity for crime in the built environment. Moving the night-time tavern crowd away from vacant storefronts after closing time will inevitably reduce the number of burglaries and vandalism incidents to the stores. Controlling the access into, and natural sightlines through, underground parking areas will increase the opportunity for offenders to be seen and caught. This in turn will reduce the number of assaults and car crimes in those parking areas. The list of successful opportunity reduction examples goes on. In Canada and the USA this has come to be known as crime prevention through environmental design – CPTED (pronounced sep-ted)².

In Europe the concept is also known as 'the reduction of crime and fear of crime by urban planning and architectural design'. In short, "Designing out crime"³.

There are numerous examples of housing projects where bad design has contributed to the general decay and decline of urban areas. Badly designed housing estates have been rebuilt with thought and consideration to diminish criminal opportunity. In many cases after the refurbishment residents have wished to return to the estates where before they had left as they feared for their safety. New estates and housing projects are now incorporating good crime prevention features at the design stage.

Shopping centres are another building category that is benefiting from good planning ideas. The siting of the centre, car parks and transport infrastructure are all being incorporated at design stage to accommodate good design features. Supermarkets are also adopting designing out crime measures to reduce both internal theft as well as crime committed by customers.

Researchers have identified reductions in crime following, for example, the introduction of design changes in large municipal housing estates. There is also overwhelming evidence concerning fear and the built environment, e.g. pedestrian subways, lack of surveillance, and particularly the level of lighting and dark streets. Similar parallels can be drawn with regard to vandalism. When questioned, offenders (and victims) of burglary, car theft and rape/assault, have all mentioned environmental/design factors. The research findings show that the feelings of insecurity of victims are clearly related to the very same features of the place that attract offenders to commit a crime.

No wonder more and more local and regional authorities in Europe are now insisting on planning applications showing proof that the principles of crime prevention and fear reduction by urban planning and building design have been adopted.

Conclusion

The conclusion from the literature, research and project – or policy evaluations can be summarised as follows:

- 1) urban planning has an impact on the different types of crime and fear of crime by influencing the conduct, attitudes, choices and feelings of e.g. offenders, victims, residents, police;
- 2) crime can be subdivided in specific types (burglary, vandalism etc.);
- 3) crime and fear of crime are different phenomena;
- 4) fear of crime is an important issue but it has to be separated from a much broader set of feelings people have about the whole of their living space and about the degree to which they feel deprived of a good social and physical environment to live in;
- 5) a securer and safer city or neighbourhood is the result of a safety policy aiming at the physical and social environment;

²) The concept of CPTED is also used in the world wide association of researchers, specialists and practitioners in this field: the International CPTED Association (ICA; see: <http://cpted.net/>)

³) See also the European Designing Out Crime Association: <http://www.e-doca.net/> and the European Crime Prevention Network (Brussels): http://europa.eu.int/comm/justice_home/eucpn/home.html

6) policymakers and practitioners should never focus on planning and design only. Every newly built neighbourhood, public space or building needs good maintenance. Planning / design and maintenance are thus two sides of the same coin.

This Prestandard combines 'contents' and 'process'

- Contents refers to the question: which strategies and measures may ⁴⁾ be implemented to prevent and reduce crime problems in a given environment.
- Process refers to the question: how to follow an effective and efficient procedure in which stakeholders shall choose the strategies and measures most effective and feasible to prevent and reduce the crime problems as defined by the stakeholders.

The process is described in clause 6 (for a summary see table 4). In step 3 of this process the stakeholders choose strategies and measures. To help stakeholders make this choice they may use the strategies and measures as presented in clause 5 (and Annex D).

Hence by adopting this Prestandard the process described in clause 6 is adopted while the definitive choice of strategies and measures (see clause 5 and Annex D) is left to the stakeholders and in the end to a responsible body (most often local and regional authorities issuing rules for urban planning, building/planning codes and permits) involved in a concrete plan for building, reconstruction or the management of an area.

Before the contents (see clause 5) and process (see clause 6) are presented, a preliminary set of questions is elaborated upon in clause 4: the identification of the area (where), the crime problem (what) and the stakeholders (who).

⁴⁾ Note the word 'may' (and not shall or should) is used deliberately here because the actual choice for certain strategies and measures can only be made by the stakeholders, and in the end by a responsible body.

1 Scope

This European Prestandard gives guidelines on methods for assessing⁵⁾ the risk of crime and/ or fear of crime and measures, procedures and processes aimed at reducing these risks.

Design guidelines are given for specific types of environments to prevent or counteract different crime problems⁶⁾. Furthermore, guidelines for a step by step process are presented to involve all stakeholders engaged in urban planning⁷⁾ and environmental crime reduction⁸⁾ as well as all other stakeholders - mainly local and regional authorities and residents - in the multi-agency action needed to minimise the risks of crime and fear of crime.

This European Prestandard is applicable to the planning process of new, as well as existing, urban areas. An area can be the neighbourhood or environment ranging from just a few houses or streets to a city centre, industrial estate or large open space for public use.

2 Normative references

This European Prestandard incorporates, by means of dated or undated references, provisions from other publications. These normative references are cited at the appropriate places in the text. For dated references, subsequent amendments to or revisions of any of these publications apply in this European Prestandard only when incorporated in it by amendment on revision. For undated references, the latest edition of the publication referred to applies (including amendments).

prEN 14383-1 Prevention of crime. Urban planning and building design - Part 1 - Terminology

prENV 14383-3 Prevention of crime. Urban planning and building design - Part 3 - Dwellings

prENV 14383-4 Prevention of crime. Urban planning and building design - Part 4 – Offices and shops

3 Terms and definitions

For the purposes of this European Prestandard, the terms and definitions given in prEN 14383-1 apply.

4 Preliminary questions: the area, its crime problems and the stakeholders

4.1 General

Cities all over the world are facing problems of insecurity and safety: urban violence and other forms of crime, feelings of insecurity caused by crime, graffiti and anti-social behaviour in the public sphere. These threats to the urban quality of life are obvious in most European cities.

Local and regional authorities generally react to these problems by more law enforcement input (police, private security services). However, now most European specialists agree that the actions needed to counteract the threats mentioned above have to be of an integrated and multi-disciplinary nature. Authorities and law enforcement specialists, as well as environmental specialists, city maintenance and management

⁵⁾ Méthodes d' évaluation, Bewertungskriterien

⁶⁾ Crime problems = one or more of six types of crime and/or fear of crime; see 4.3.

⁷⁾ People engaged in urban planning: e.g. urban planners, town planners/architects, governmental bodies, municipal services, private developers/builders, housing associations, consultants, landscape specialists, etc. (see 4.4).

⁸⁾ Note 6 plus police, justice, insurance companies, private security industry, social workers (see 4.4).

personnel, retailers and other business people, social workers, teachers and, last but not least, citizens are all stakeholders in this process.

The orchestration of the stakeholders, as well as the type of actions needed in the different urban environments (city centre, retail neighbourhoods, residential areas, transportation system), is a very difficult mix to plan and manage.

There are several models for the delivery of crime prevention by urban planning and design. These range from partnership schemes where a formal lead party is lacking, to police controlled schemes and others based in the local authority. Wherever urban planning and building design is involved there shall always be a democratically elected body governing the planning, building or city/neighbourhood management process directly or indirectly. In clause 6 this body will be called 'the responsible body'. This may be a local council, a group of planners mandated by local, regional or even national authorities or an interdisciplinary steering group.

Although there may be a variety of stakeholders involved, in theory, the approach is simple. It starts with answering three questions:

- where: the identification of the exact location of the area (by co-ordinates, and/or defining boundaries, and/or postal codes, etc.) and the type of area; this area is either an area comprising an existing urban fabric of buildings and streets/roads or a planned (new) area.
- what: the first and general identification of the crime problems occurring in this existing area, or the future crime problems that may occur in this new area;
- who: the identification of the stakeholders involved in defining the crime problems more precisely, assessing or reviewing them in more depth and implementing/ executing the measures to prevent and / or reduce the crime problems.

4.2 Where: Identification of the area

4.2.1 Focus on urban environments

The key findings from the International Crime Victims Survey⁹⁾ show crime to be a serious urban problem:

For **more serious crime**, the strongest factor explaining risks across different countries was urbanisation - with crime increasing with the proportion living in larger cities. Next, lower affluence was significantly associated with higher risks. Urbanisation and lower affluence alone explained half the variance in victimisation rates in the 26 countries.

With regard to **petty crime**, urbanisation was again the strongest factor explaining risks. Levels of affluence were statistically unrelated to risks however.

⁹⁾ The international Crime Victimization Survey (ICVS) is the most far-reaching programme of fully standardized sample surveys looking at householders' experience of crime in different countries. The first ICVS took place in 1989, the second in 1992, the third in 1996 and the fourth in 2000. Surveys have been carried out in over 50 countries since 1989, including a large number of city surveys in developing countries and countries in transition. The citations presented here are taken from the ICVS report 'Criminal Victimization in Eleven industrialized Countries; Key findings from the 1996 ICVS; Pat Mayhew (Home office, United Kingdom), Jan J.M. van Dijk (Ministry of Justice/ University of Leiden, The Netherlands); WODC./Ministry of Justice The Hague 1997. The conclusions of the 2000 sweep of the ICVS are generally speaking the same: "Net of other effect, urbanisation continued to be an influential risk factor. Risks of property crime, for instance, were 60% higher in the most urban areas compared to the least urbanised ones" (Key findings from the 2000 ICVS, John van Kesteren, Pat Mayhew and Paul Nieuwebeerta, WODC/Ministry of Justice, The Hague 2000 page 58).

4.2.2 Level at which action can be taken

Within urbanised areas security and safety can be improved in existing as well as in new and future environments. As shown in Table 1 seven levels can be distinguished. Levels 1 to 4 are dealt with in prENV 14383-3 (dwellings) and prENV 14383-4 (offices and shops) while level 5, 6 and 7 are the subject of this European Prestandard.

Table 1 – Levels at which action can be taken to improve security in the built environment

	Level of intervention	The key players	Typical actions	What guidance can help?		
BUILDING DESIGN (prENV 14383-3 dwellings and -4 offices and shops)	1	Improving routine security precautions – but no physical change.	Occupants, management, security staff.	Change routine activity, management procedures, patterns of use/occupancy. Security staffing.	Guidance and check	SMALL SCALE ↑
	2	Up-grading security equipment.	Management security staff, security suppliers/consultants, locksmiths, builders.	Security equipment including: locking systems, alarms, cctv, lighting, access control, sensors.	Information on what the current range of equipment and security systems can do, and how effective they are.	
	3	Refurbishment and alterations to a building.	Owners/occupants, facilities managers, developers, architects, engineers, builders.	Remodelling of interiors and minor extensions, replacing windows and doors, fencing and gates, etc.	Guidance on secure windows and doors and how design modifications can improve the security of buildings.	
	4	Designing a new building	Owners/future occupants, developers, architects, builders.	The design of the building and its relationship to its surroundings.	Guidance on how building design can influence crime.	
URBAN PLANNING (this ENV 14383-2)	5	Large scale developments – shopping centre, housing or industrial development.	Architects, developers, builders, major tenants/occupiers.	The layout and planning of groups of buildings, parking, vehicular and pedestrian movement, etc.	Guidance on how layout planning can influence crime.	LARGE SCALE ↓
	6	Improving safety in public places.	City planners, public services managers (transport, parks, etc.) local action/pressure groups.	Locating public facilities, landscaping open spaces, street lighting.	Guidance about how the design and management of public spaces can reduce crime risk.	
	7	Neighbourhood planning – a strategy for continuous improvement of safety and security.	Planners, developers, local action/pressure groups, local politicians, regional government agencies, business community.	The gradual/incremental redevelopment and improvement of urban neighbourhoods/districts.	Guidance on how urban and neighbourhood planning can influence crime.	

4.2.3 Type of area

This European Prestandard is focussed on:

- urban areas;
- urban planning scale, see level 5, 6 and 7 in Table 1; this will include small developments but in most cases will refer to larger areas, for example parks, estates and whole neighbourhoods.

Within this focus eight types of areas can be distinguished:

- 1) residential;
- 2) schools/youth facilities;
- 3) commercial/industrial/offices;
- 4) shopping/retail;
- 5) parks and public gardens;
- 6) leisure centres;
- 7) public transport and parking facilities, stations, bus stops, parking garages etc.; but excluding the transport system itself;
- 8) city/town centres and public space.

Several combinations of these types are also possible, e.g. a mainly residential area with some schools, a youth facility, some shops and a small park.

It is important to classify the area under consideration as either 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): characteristics of crime and fear of crime can only be assessed by using theories or by using experiences and lessons from other neighbourhoods/projects closely resembling the plan for this new environment; such a crime analysis *ex ante* shall be called: a crime assessment¹⁰⁾;
- existing environments: characteristics of crime and fear of crime can be analysed in real situations by way of e.g. registered crime figures, surveys, safety audits, recording experiences and opinions of residents, people visiting/using the area, professionals (police officers, shopkeepers etc.), observations, interviews with victims and/or offenders, etc.: such a crime analysis (*ex post*) in an existing area shall be called a crime review¹¹⁾.

¹⁰⁾ 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 built.

¹¹⁾ Crime review: an estimate (*ex post*) of the crime problems present in a well defined existing (urban) area/-neighbourhood.

4.3.2 Fear of crime

'Fear of crime' (see Annex C for more information) refers to the fear of personally becoming a victim of particular types of crime, e.g. a victim survey question which asks respondents how likely they think it is that they will be burgled in the coming year. Another type of victim survey question is often used to measure vulnerability to street crime and feelings of insecurity in relation to the urban environment¹⁴⁾:

- How safe do you feel walking alone in your area after dark?
- Do you feel very safe, fairly safe, a bit unsafe or very unsafe?

This question has typically been shown to paint a different picture of 'fear of crime' to that from questions which, for instance, ask about perceptions of risk. Typically, women and elderly emerge as the most fearful on this 'street safety' question. This may be because for some people the prospect of being out after dark evokes anxiety about a greater range of mishaps (e.g. accidents as well as crime).

Frightening or fearful places are not necessarily places where actual crimes occur.

There are three main factors which may characterise an "unsafe location" (see Annex C for more information):

- locations characterised by fear generating features (zones of prostitution, drug abuse, certain types of entertainment);
- neglected or badly maintained locations;
- locations suffering from problematic urban design features (lack of surveillance, visibility, orientation).

4.4 Who: Stakeholders

The prevention and reduction of crime and fear of crime in new and existing areas by urban planning and building design, inevitably involve stakeholders¹⁵⁾. The following categories present an overview.

- A Politics/legislature (Local, municipal, regional politicians):
 - 1) neighbourhood, local, regional, council;
 - 2) building and planning committees;
 - 3) committees for public safety/ security.
- B Designers and planners:
In public office and/or in private firms; their working area may differ: neighbourhood, local, regional, national or even international:
 - 1) urban planners;
 - 2) town planners;
 - 3) architects;
 - 4) landscape architect;
 - 5) civil engineer;
 - 6) transport/traffic engineer.
- C (Semi) private or public developers/builders:
 - housing association, company, co-operative;
 - property investor (pension fund, bank, etc.);
 - (big) contractors (building for own risk): project developers;
 - small contractors.
- D Police:
 - crime prevention officers,
 - victim support officers;
 - data analysis and processing units;

¹⁴⁾ See also ICVS 2000 question 300. United Nations Interregional Crime & Justice Research Institute (Italy). Internet: <http://www.unicri.it/icvs/>. See also ICVS 2000 report page 80.

¹⁵⁾ People and organisations having a stake or vested interest in the problem and/or solution.

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- management.
- E Security/risk professionals:
 - private security firms and consultants;
 - insurance companies.
- F Services:
 - municipal/regional/national companies or services for the delivery of goods like lighting, transport, waste management and cleaning, maintenance of different types of public space (parks, streets, parking).
- G Social workers:
 - community workers;
 - social workers.
- H Education:
 - educational facilities for education of all stakeholder-groups mentioned above.
- I Population (individual and/or organisation):
 - residents;
 - building owners (shops, offices);
 - users;
 - shopkeepers and shop-employees;
 - school managers, teachers.

4.5 In sum: identification of 'where', 'what' and 'who'

Crime and fear of crime can be reduced by urban planning and building design in new and existing areas. For this approach to be effective, a targeted approach is necessary in which three preliminary questions are dealt with before it is decided which measures are taken and by which stakeholder(s). These questions are:

- where: identification of the area;
- what: identification of the crime problem in general;
- who: identification of the stakeholders.

After these three questions are answered one may start to reach a decision on:

- what action might be possible, necessary and feasible;
- how this action will be implemented and executed.

Information regarding the first question is presented in clause 5 (design guidelines). In clause 6 (process) a step by step method is presented to help and support an effective and efficient process of implementation, execution and evaluation.

5 Urban Planning and Design Guidelines

5.1 Introduction

In clause 4 eight types of new or existing urban areas are identified (see 4.2.3) and seven types of crime problems are presented (see 4.3). By combining the problems and areas, several guidelines emerge which can be used to prevent and or reduce an identified crime problem in the type of area identified.

Guidelines can be presented as specific measures, such as improving street lighting or the application of a surveillance plan. The first important step, however, is to be clear about the aims of the prevention activity.

Therefore, sets of measures can be summarised as strategies. The list of measures and strategies presented in Annex D is built up from contributions of different experts on crime prevention, each specialised in crime prevention in different type of environments. All contributions have been discussed by a mixed team of experts in workshops.

The working method guarantees to the highest possible degree the applicability and desired effect of the measures and strategies represented in 5.2 and Annex D. All strategies and measures mentioned use urban planning and management as a starting point. Of course urban planners and designers can seldom influence the causes of crime: unemployment, poverty, rights versus duties, family breakdowns, drugs, violent role models in television and films, the car, increased opportunities, shortage of police and civic guardians, etc.

The fact that even design itself has been accused of causing crime does indicate however that designers shall ensure their schemes minimise opportunities and situations for crime and fear of crime to occur.

5.2 Three categories, 15 strategies, more than 100 measures

5.2.1 General

Urban planning and design is a general concept, which includes not only the actual design work as it is done by architects and urban designers, but also the planning work before the design and the management work after the design is realised.

In this European Prestandard, three types of strategies are discerned

- urban planning strategies;
- urban design strategies;
- management strategies.

Urban planning and design strategies are relevant for proposed new areas and neighbourhoods. Management strategies are relevant in existing areas. Planning and design adaptations are relevant in existing areas to a certain degree, but the feasible adaptations are modest and small in existing areas compared to the designs for new areas.

5.2.2 Urban planning strategies

Planning strategies include

- respecting existing social and physical structures;
- creating liveliness (blending functions and attractive street layout);
- mixed status (blending socio-economic groups, avoiding isolation and segregation);
- urban density (creating sense of neighbourliness, avoiding waste land and desolate areas).

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 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 the new development becoming part of the surrounding urban fabric as soon 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 car parks or no-mans-land 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.

5.2.3 Urban design strategies

Design strategies include

- visibility (overview, lines of sight between e.g. dwellings and public space, lighting, etc.);
- accessibility (orientation, space to move, alternatives routes, limiting access for non-authorised people);
- territoriality (human scale, clear public/private zoning, compartmentalisation);
- attractiveness (colour, material, lighting, noise, smell, street furniture);
- robustness (doors, windows, street furniture).

These strategies aim at creating the conditions for social control, sense of ownership, as well as regulating the accessibility of areas and buildings in such a way that the individual can keep control over the situation, and that trespassers are discouraged to enter the area or building.

The design strategies are complementary to the planning strategy.

5.2.4 Management strategies

Management strategies include:

- target hardening/removal;
- maintenance;
- surveillance (patrolling, camera monitoring);
- rules (for conduct of the public in public spaces);
- providing infrastructure for particular groups (e.g. youth, homeless, drug addicts);
- communication (of preventive messages and rules of conduct for the public).

Practically no urban area is completely self-regulating; most urban areas need a certain level of professional surveillance and maintenance.

These professionals can implement the management strategies. These strategies aim at supporting and encouraging the natural surveillance and sense of ownership by residents and visitors. They do not aim to take this task away from residents. The management strategies assume a certain level of self-regulation, which can be lifted to a higher level with help from professionals. The management strategies are especially important when the task is to solve crime problems in existing areas. In such cases, the possibilities to implement planning and design strategies are limited. Management strategies are needed to create a complete and effective set of measures.

All strategies can be elaborated in several measures and guidelines. The strategy 'accessibility', for example, can be elaborated in guidelines for the street layout, the pedestrian route network, the transport network, the location of entrances to buildings, etc.

However, the first question to answer is which strategies shall be chosen in any specific situation. The strategies shall then be further elaborated to form concrete measures. Examples of measures which fit the strategies mentioned above are presented in Annex D. Strategies and measures for the specific crime problems distinguished in 4.3 are presented separately for each of the eight environments distinguished in 4.2.3.

5.3 How to choose the strategies

Not all strategies are effective in all environments and in all circumstances. Some strategies help only in specific environments and/or to prevent specific types of crime. For this reason, the strategies shall be chosen according to their expected effectiveness in certain types of environments and against certain types of crime. If the stakeholders responsible for the choice of strategies know from the crime review or crime assessment which

types of crime problems are relevant in their case, they can look for the eligible strategies in the list specific for their type of environment. These lists (in the form of matrices "strategies x crime problems") for all 8 types of environments are included in Annex D.

The list of eligible strategies will be discussed by the stakeholders. The working group (see 6.2.2) is the platform for this discussion.

A definitive set of strategies, elaborated in concrete measures, will be chosen according to space, time, budget and personal preferences; the definitive measures will be recommended by the working group to the responsible body (see 6.2); which takes the final decision. This procedure is described further in the next clause.

Possible conflicts with other goals (apart from crime prevention) shall be considered to make a balanced set of strategies. Crime prevention is a part of the whole of a planning and design process and can not be considered in isolation.

6 Process to prevent and reduce crime problems by urban planning and management

6.1 General

While the preceding clause focussed on the question of which strategies and measures may be used in a local situation, this clause will focus on guidelines to implement a step-by-step process involving all relevant stakeholders and not forgetting essential pre-action steps such as a thorough crime analysis (crime review or crime assessment), establishing objectives, etc. This clause therefore offers a framework for the stakeholders involved in the process to develop a strategy following clear decision steps and taking into account the responsibilities of all stakeholders involved. Such an approach is often referred to as an integrated multi-agency approach. The approach is based on ISO 9001: 2000.

Nine broad categories of stakeholders (see 4.4) are distinguished:

- A politics/legislature (local, municipal, regional politicians);
- B designers and planners;
- C (semi) private of public developers/builders;
- D police;
- E security/risk professionals;
- F services;
- G social workers;
- H education;
- I population (individual and/or organisation).

These stakeholders, or at least some of them, will initiate or be part of a regular planning/management process resulting in the building of a new area or rebuilding, refurbishment or maintenance of an existing area. This regular planning/management process is already firmly established and has not been, nor will be in the future, subject to this European Prestandard. The only extra and new feature resulting from the adoption of this European Prestandard will be the incorporation of security and safety measures to prevent and reduce crime and fear of crime, and which are considered feasible by stakeholders, in the regular planning/management process.

6.2 Responsible body, mission Statement, working group

6.2.1 General

Authorities responsible for granting permission for developments in new and/or existing environments are referred to here as a responsible body (RB). In rare cases local or regional authorities may wish to delegate their planning permission responsibilities to another group of people, institute or corporation, in which case the delegated group, institute or corporation will be the responsible body.

The responsible body shall provide evidence of its commitment to the prevention/reduction of crime and fear of crime by urban planning and building design by:

- a) communicating the importance of meeting safety and security requirements;
- b) establishing a safety and security policy;
- c) ensuring that safety and security objectives are established;
- d) conducting crime reviews in existing environments and crime assessments in proposed new environments;
- e) ensuring the availability of resources.

In the case of a concrete building or development plan for a new environment, or a plan for rebuilding, refurbishing and/or maintaining an existing environment, the responsible body shall start a process – as elaborated below and summarised in Figure 1 – aimed at meeting the safety and security objectives as formulated by the responsible body.

The responsible body shall appoint a person from its midst who, irrespective of other responsibilities, shall 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.

First the responsible body is required to check how far the three preliminary questions mentioned in clause 4 have already been answered:

- the exact identification of the area under consideration (where);
- the general identification of the crime problems which may, will or seem to take place in this area (what);
- the identification of the key stakeholders (who); key stakeholders may include members of the stakeholder groups mentioned above (see 6.1 or 4.4); this list is not exhaustive.

6.2.2 Mission statement

A representative responsible body (RB) shall initiate a process aimed at preventing/reducing crime and fear of crime in a new or existing environment by issuing a mission statement that includes the following: objectives for the future security and safety situation within the defined environment and with involvement of the stakeholders mentioned.

The mission statement shall also comprise general guidance on the organisation of the process; e.g. deadlines for each of the steps distinguished, documentation requirements, resources, technical assistance, and relevant laws/regulations.

6.2.3 Working group

6.2.3.1 General

If not yet in operation, a multi-disciplinary working group (WG) shall be set up in which stakeholder organisations involved in this particular design/planning-, refurbishment- or maintenance project are represented.

This working group shall develop, and later on implement and execute the mission statement presented earlier by the responsible body (RB). The working group shall consult on the issue of crime and the perception of crime with stakeholders who are unable to participate in the working group.

Two approaches are possible.

6.2.3.2 Integrated approach

The working group is intended for the regular planning process of a new or existing area. Building, rebuilding and maintenance are the main tasks of the working group. In this case the working group shall be expanded with some experts specialised in safety, security, crime prevention/reduction and fear of crime: police officers, security risk professionals, social workers or some residents (see categories D, E, G and I in 4.4).

6.2.3.3 Specialised approach

In this model a separate working group specialised in the prevention/reduction of crime and fear of crime by urban planning, -design and maintenance shall be set up to advise (and influence) the planners/designers, developers/builders and/or services.

6.2.4 The planning document of the working group

When a working group is required to advise on a project/environment, it shall describe and define the following in a planning document:

- a) the safety and security objectives; these objectives shall be measurable and consistent with the safety and security policy issued by the responsible body;
- b) steps to be taken in the process, including planning and organisation (who does what and when);
- c) responsibilities and authorities of all participants involved;
- d) the documentation, including the relevant records needed to establish, implement, maintain and audit the steps in the process.

The working group's planning document shall be discussed with and agreed upon by the responsible body which issued the mission statement (see 6.2.2).

The responsible body, as well as the working group, shall keep records of all decisions, hearings, reports and consultations which are or have been the basis for (future) decisions.

6.2.5 Consultation mechanisms

The responsible body as well as the working group shall establish consultation mechanisms promoting close liaison, the exchange of information, joint work and the design of a coherent strategy with all stakeholders involved.

6.3 Steps to be taken

6.3.1 Step 1: Crime review or crime assessment

6.3.1.1 General

The working group shall review the present or assess the future crime preventive and fear reducing performance of the environment specified in the mission statement. The methods to be used for analysis in an existing environment and a new environment are different. Therefore, the methods are described in different subparagraphs below:

A receptiveness to the introduction or use of new methodologies is recommended in both cases (e.g. crime mapping, victim surveys, offender interviews, audits, etc.).

The review/assessment shall include:

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- a) Definition of nature, type, (probable) frequency and seriousness of crime problems to be tackled (existing environment) or prevented (new environment). The crime problems to be distinguished are summarised in 4.3 and include: fear of crime, burglary (residential/commercial), vandalism (including graffiti), street violence (robbery/fighting/sexual or indecent assaults), car crime (theft of/from car; and arson), theft (shop lifting/pick pocketing/theft of bikes/motorcycles etc), arson;
- b) Definition of factors, especially design features, that may directly or indirectly cause the crime problems mentioned above or contribute to them. See Annexes A, C, D for more information.

The outcome of the review/assessment shall be discussed with the responsible body.

6.3.1.2 Existing environment

A crime review of crime phenomena and related issues, including their characteristics, the factors leading to them, the form they take and the extent to which they occur, shall be carried out, according to Annex B.

6.3.1.3 New environment

An assessment of the crime preventive and fear reducing features of the project design or plan shall be carried out, using the examples as presented in Annex A.

6.3.2 Step 2: Objectives/requirements

The working group shall define more precisely the objectives being pursued in the form of a concrete set of safety and security requirements¹⁶⁾ and the time by which these requirements shall be attained (project plan, milestones). The working group shall establish these safety and security requirements in quantifiable figures. To choose realistic anchor points, the working group may use values, taken from a similar city, area or neighbourhood serving as a reference; the working-team could indicate the objective values as 'equal to', 'minimum 0 % better' or 'maximally 0 % worse' than the area under consideration.

6.3.3 Step 3: Plan

The working group shall draft a plan containing the following:

- a) a proposal of what is most likely to happen in the near future if no measures are taken to prevent and reduce crime and/or fear of crime (thus extrapolating the crime review or assessment mentioned in step 1). The method of drafting scenarios may prove to be a useful tool in this stage;
- b) a comparison of the outcome of a) with the safety and security requirements as specified in step 2; probable non-conformities¹⁷⁾ shall be indicated;
- c) the most effective strategies, likely to reach the safety and security requirements specified in step 2; 15 possible strategies are summarised in 5.2;
- d) measures to be taken; see the contents of the matrices in Annex D for more ideas about possible measures;
- e) the costs involved;
- f) the anticipated effects of the proposed measures (assessment of performance/conformity);
- g) non-conformities that may be left and the potential hazards and risks resulting from this non-fulfilment of one or more requirements.

The working group shall present the plan to the responsible body and to all stakeholders.

¹⁶⁾ Requirement: a need or expectation regarding safety and security that is stated in an objective, generally implied or obligatory; see ISO 9000:2000, clause 3.

¹⁷⁾ Non-conformity: non-fulfilment of a requirement.

6.3.4 Step 4: Decision by responsible body

The responsible body shall decide:

- *which strategies and measures have to be implemented;*
- *or the responsible body shall decide which aspects of the plan have to be elaborated further by the working group; in this case the working group has to carry out additional work and the responsible body shall present an adapted version of the objectives and requirements, so the process will have a loop starting at step 2.*

Once a final decision on the strategies/measures has been made, these strategies/measures shall be laid down in a contract between all stakeholders.

6.3.5 Step 5: Action and implementation

The measures described in the contract (see step 4) shall be implemented.

6.3.6 Step 6: Monitor, audit and corrective action

The performance of the measures implemented in step 5 shall be monitored in respect to their safety and security effects.

An audit shall determine whether the safety and security requirements specified in step 2 are met. An audit programme shall be planned, taking into consideration the status and importance of the processes and areas to be audited, as well as the results of previous audits. The audit criteria, scope, frequency and methods shall be defined. Selection of auditors and conduct of audits shall ensure objectivity and impartiality of the audit process. Auditors shall not audit their own work.

The responsibilities and requirements for planning and conducting audits, and for reporting results and maintaining records shall be defined in a documented procedure.

In the event of crime problems exceeding the specific requirements in a new environment, or remaining at unacceptable levels in an existing environment (reference points are again the objectives/requirements specified earlier in step 2), the responsible body shall decide upon corrective action, to eliminate the cause of non-conformities in order to prevent recurrence; e.g. take additional crime preventive measures or go on with (further) refurbishment of the area.

6.4 Flow chart

The procedure outlined in this sub-clause is summarised in Figure 1:

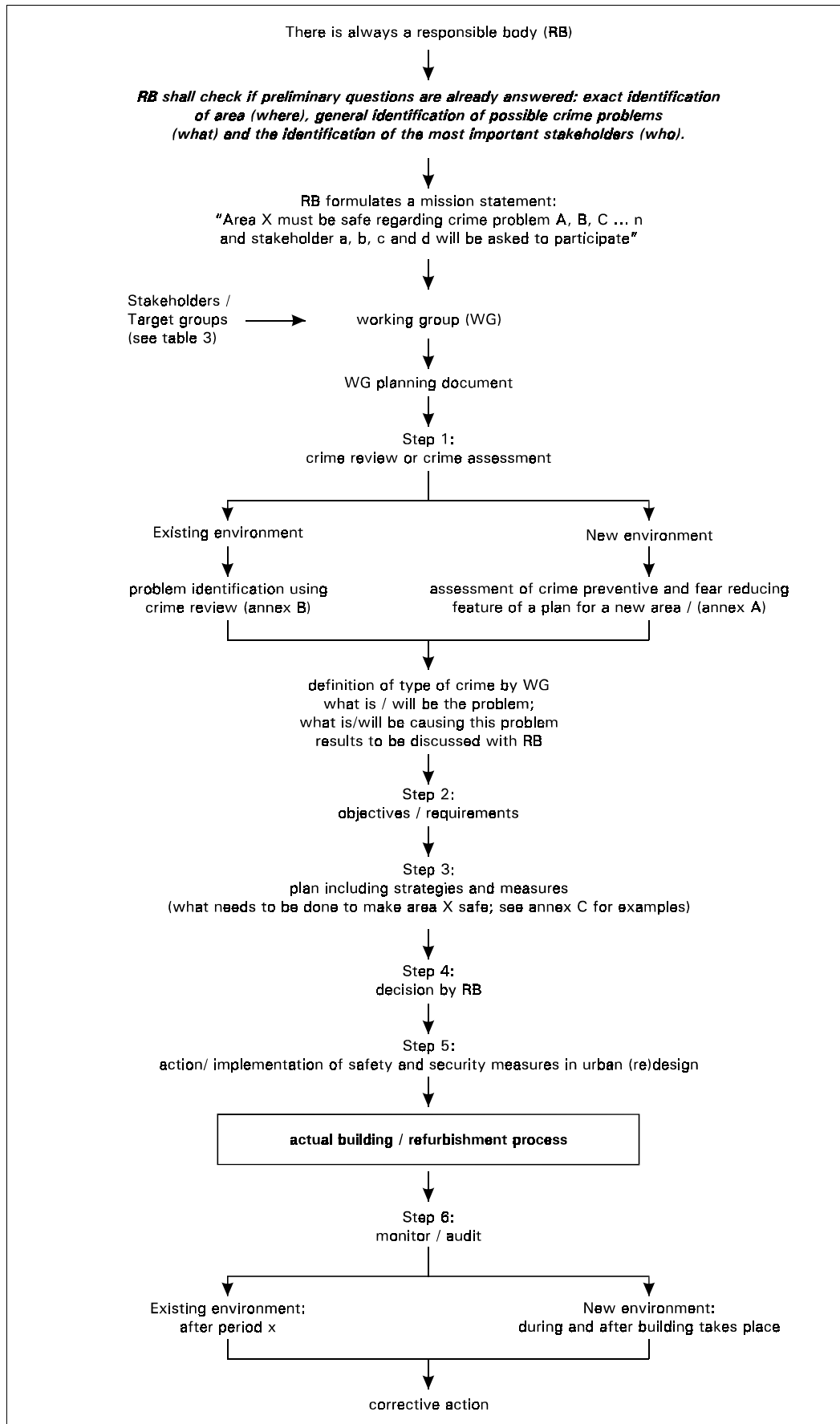


Figure 1 – Summary of process

Annex A (informative)

Assessment of crime preventive and fear reducing features of a plan for a new area

A.1 Introduction

This annex contains a list of **examples** of factors that explains the risk of crime problems taking place. In clause A.3 the risk factors for crime as well as fear of crime are presented. But first - in clause A.2 - the specific risk factors from clause A.3 are summarised under three general headings.

A.2 Risk assessment: three general aspects

a) Aspects relating to offenders

- The presence and number or concentration of offenders.
- The physical and psychological accessibility and possibilities for offenders to escape.

b) Aspects relating to guardians (formal: police; informal: residents)

- The presence and number of guardians able to exercise surveillance and control.
- The physical possibility for guardians to see what is happening: visibility (factors like lighting, lay-out, sight lines, use of CCTV).
- The physical and social/psychological ability and willingness of guardians to react.
- Reaction time of the guardians.

c) Aspects relating to victims/targets

- Attractiveness of a target.
- The physical vulnerability of a target.
- Possibilities to escape for potential victims.
- The ability of victims to react (lighting, surveillance, orientation).

A.3 Specific risk assessment factors for six types of crime and for fear of crime

Burglary (including theft of objects from gardens and trespassing without breaking and entering)

Factors that influence burglary:

- Accessibility of an area, e.g. distance to motorways, rail/ underground stations, large public buildings/ places/ functions, the number of entrances to a neighbourhood and physical- or psychological barriers;
- rich targets;
- presence and number of offenders;
- layout of roads and footpaths;
(escape routes for burglars and their chances of being seen)

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- cul-de-sac through grid;
- number of pedestrians, cars and other forms of transportation through the neighbourhood;
- mono functional areas (deserted at night/weekend); better to mix functions, e.g. housing/shops;
- lighting (burglary risk higher when dark);
- landscaping (sight lines, surveillance, cover/hiding places);
- rear access;
- territoriality/ownership;
- theft from small storage areas/sheds/lofts/cellars etc.;
- physical resistance time of doors and windows to burglary attempts (see EN 1627 and prENV 14383-3 and prENV 14383-4);
- presence of CCTV;
- street activities;
- risk of detection (technical or by people).

Vandalism

Factors that influence vandalism:

- presence and number or concentration of young people (<18) – especially males – in an area;
- design-material/strong;
- aesthetics;
- maintenance (quick repair after attack, painting over after graffiti);
- visibility;
- surveillance;
- divert interest (by providing children with alternative sources of entertainment or challenges ("another kick"), such as climbing walls);
- physical resistance time of objects against vandalism attack.

Street violence

Factors that influence assault/robbery:

- vulnerable groups (fear) e.g. tourists, elderly ;
- rewarding/risk targets especially on vulnerable locations, e.g. all-night shops, petrol stations, elevator/staircase in **block of flats**;
- public transport (stops), especially at night and areas around public transport stations;
- special situations (carnival, fair);

Factors that influence fighting/assaults:

- pubs, discos;
- recreation facilities, football grounds, etc.;
- drug dealing;
- crowded areas (more than 4 people per square metre can lead to unpleasant feelings).

Factors that influence sexual or indecent assaults:

- hidden/isolated spots;
- public transport;
- poor lighting;
- pubs, discos (including the journey home).

Car crime (theft of/from car, vandalism/arson of car)

Factors that influence car crime:

- car type/attractive target (see annual national hitparade issued by police)
- intention, e.g. for profit, for fun (joy-riding), for other criminal purposes.
- vulnerable areas like long term car parks (e.g. airport), pay and display, hidden areas/poor visibility/lighting;
- ownership of parking zones;
- fencing;
- formal surveillance, e.g. C.C.T.V. attendant;
- large car parking areas;
- **deprived** neighbourhoods (arson of car /joy-riding);
- large built garages.

Theft

Factors influencing theft:

- crowds e.g. markets, streets, public transport;
- unattended possessions, e.g. bags, coats, clothes;
- left luggage/lockers;
- school/university/public transport/large housing (bike theft).

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Arson

Factors influencing arson:

- waste/garbage containers/storage areas;
- schools – pavilions;
- bike sheds;
- letter box in building;
- children playing with fire/no control or surveillance;
- arson to hide traces of burglary (see burglary);
- material dividing building compartments (fire resistant yes/no);
- early warning: smoke detector, alarm, CCTV.

Fear of crime

- drug abuse (use of drugs, drug dealing);
- fear generating functions like zone for prostitution, drug abuse or certain types of entertainment;
- bad maintenance
- problematic urban design;
- lack of surveillance/ isolation - lack of visibility by others;
- lack of orientation and alternative routes.
- poor lighting/ dark areas;
- reputation of the area;
- knowledge of crime in the area, perceived crime level of the area.

Annex B (informative)

Crime review: problem identification in an existing area

The aim of the crime review is to make a brief and compact report on an area/ neighbourhood and the crime within that area. The following considerations are important when conducting a crime review:

- physical variables versus social-economical and demographic variables;
- objective variables (figures/numbers) versus subjective variables (opinions, fears/hopes).

The report contains:

1) Physical information:

Location, boundaries, number of m² (total as well as for different functions like dwellings, schools, offices, shops, industry/ factories parks/green/water, transport/public space), distance to city centre, lighting, visibility, characteristics of building envelope protection;

2) Socio-economic and demographic info:

- Who lives in the area? Age distribution, affluence/income, family composition, profession/class;
- Ownership (of dwellings/buildings/land);
- Who works in the area?
- Who uses the area, travels through?

3) Crime data:

Crime data shall help answer questions about the type and frequency of crime problems in an area, where and when incidents occurred (are there specific 'hot spots' where many incidents have occurred), who was victimised, what methods (modus operandi) were used by offenders, etc.

Possible sources are:

- From police and other sources: data on recorded crimes¹⁸⁾;
- From police and other sources: data on offenders;
- From police and other sources: command and control data (e.g. telephone requests for police services);
- Victim surveys (households and/or commercial victims like shopkeepers)¹⁹⁾;
- Self report data offenders, offender interviews;
- Opinions of relevant professionals, working in the area (e.g. police officer, schoolmaster, youth worker, doctor, etc.);
- Opinions of other people with local knowledge (residents, shopkeepers).

¹⁸⁾ Rather high percentages of crime are unrecorded; these percentages are different for types of crime as well as for countries; the percentage of unrecorded crime (dark number) can be estimated by using the 'percentage of offence reported to the police'. This percentage is available in most countries from victim surveys. See also: Key findings from the 2000 International Crime Victims Survey (ICVS), appendix 4 table 9. For more info: <http://www.unicri.it/icvs/>

¹⁹⁾ To make area/city victim surveys better comparable it is advised to use the procedure and questionnaires of the International Crime Victims Survey (ICVS). See on the internet: <http://www.unicri.it/icvs/>

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- Opinion of independent experts;
- Other specific data sources (e.g. repair registration for vandalism, first aid/hospital info for street violence);
- The frequency of people feeling unsafe, on the streets and at home; see International Crime Victim Survey ICVS questionnaire 2000 (question 300/301) on the internet: <http://www.icvs.nscr.nl>;
- Types of security precautions taken (see e.g. ICVS 2000, Appendix 4, Table 26).

4) Information from safety audits:

- In a safety audit a small group of residents and professionals or other stakeholders audit an environment by looking at e.g. lighting, maintenance, frightening places, etc.;
- Maps and other records that illustrate crime data from police and residents;
- Benchmarking: frequencies of different types of crime in the total area compared to frequencies in other areas (or total city/region/country).

Annex C (informative)

Fear of crime

C.1 Introduction

Usually 'fear of crime' refers to the fear of personally becoming a victim of particular types of crime, e.g. a victim survey question which asks respondents how likely they think it is that they will be burgled (or...) in the coming year. Another type of victim survey question is often used to measure vulnerability to street crime and feelings of insecurity in relation to the urban environment ²⁰⁾: 'How safe do you feel walking alone in your area after dark? Do you feel very safe, fairly safe, a bit unsafe or very unsafe?' This question has typically been shown to paint a different picture of 'fear of crime' to that from questions which, for instance, ask about perceptions of risk. Typically, women and elderly emerge as the most fearful on this 'street safety' question. This may be because for some people the prospect of being out after dark evokes anxiety about a greater range of mishaps (e.g. accidents as well as crime).

Why do people feel insecure while moving in public and semi-public spaces?

The degree of fear and the kind of crimes a person is afraid of, differ significantly depending on gender and age. Women, the elderly and disabled people are more likely to fear crime. They fear for their personal safety and are afraid of street violence and especially of sexual assault. It is far more terrifying to be confronted with crimes like rape, which threaten a person's integrity and dignity, than with the loss of material goods. For this reason women are usually more affected by this feeling than men.

Frightening or fearful places are not necessarily places where actual crimes occur. Nevertheless, fear influences the way people behave with regard to public spaces. In particular women and the elderly are more likely to use 'avoidance strategies' that keep them away from problematic spaces and situations. They tend to restrict their own and also their children's activities because of fear of crime. This behaviour has effects on neighbourhoods, which may even lead to economic decay.

Studies of public sites where sexual assaults have occurred show that the type and characteristics of fearful places, for example poor lighting and hiding places, correlate with the occurrence of crime.

There are three main factors which may characterise an "unsafe location":

C.2 Fear generating function

Crimes against an individual are more likely to occur in locations with fear generating features, such as prostitution or drug abuse, or in locations with certain types of entertainment or activities that attract people who generate fear in others.

Avoiding such mono-functional areas has to be the aim for urban planning and design. This can be achieved by mixing e.g. dwellings, entertainment and shopping. Social control can be improved in this way and the 'fear generators' can become less dominant. If such an 'entertainment' area already exists, it is important to offer alternative routes for pedestrians. These routes should be busy, well lit and easy to survey.

C.3 Vandalism and bad maintenance

The importance of regular maintenance and cleanliness cannot be emphasised enough. It should be co-ordinated and continuous. Litter and graffiti shall be removed quickly and repairs carried out to match the original materials. It is vital that the public realm does not lose its character through neglect, alienate citizens and visitors, and give encouragement to potential offenders because they feel no one cares.

The cleanliness of a place and its state of repair affect our attitudes and feelings. There is evidence that, by raising the quality and speed of maintenance, less wilful damage and neglect will occur.

²⁰⁾ See also ICVS 2000 question 300. Internet : <http://www.unicri.it/icvs/> ICVS 2000 report page 80.

Locations which are neglected or badly maintained can give an impression of danger, because lack of occupancy can be an indication for a socially disorganized neighbourhood. Sense of ownership, or territoriality is often considered a vital factor in making a place more safe. If residents feel that the area outside their door does not belong to them, they will not feel responsible for the maintenance. As a result urban design should adopt measures to increase the sense of territoriality

C.4 Problematic urban design

This is the third factor characterising an 'unsafe location'. There are several factors that may cause or increase fear of crime in public spaces:

Lack of surveillance

A lack of surveillance caused by poor lighting or nooks and crannies, which can be potential hiding spots, makes people feel insecure. Passing along or through such areas can be a frightening experience because people have little control over the situation.

Visual or real borders separating spaces of different ownership should not become a barrier for lines of sight between flats or offices and public places. Such a situation can cause a decrease of 'social control', which may increase crime.

Awareness of the environment and the ability to see and understand what is happening are important in ensuring a feeling of control in any given situation. The fear of crime can therefore be reduced by good lighting, clear sight-lines and the elimination of hiding places for offenders. In order to improve the personal safety of potential victims, a potential offender and his/her facial features, should be identifiable from a distance of at least 4 m.

Isolation - lack of visibility by others

Some locations are quiet and isolated during particular times of the day or night, such as industrial estates, large office complexes, public transport stations, shopping centres and city parks as well as multi-storey car parks, underpasses or semi-public spaces within dwellings and blocks of flats. This situation may be improved if these locations are populated or at least watched over by residents. The diversity of functions in a neighbourhood is thus an important factor in avoiding huge mono-functional and isolated areas, for which visibility by others is impossible to provide day and night.

Windows of dwellings facing public spaces are found to have a strong reassuring effect on most people, because there seems to be access to help, if needed. Major thoroughfares for pedestrians, as well as entrance areas of blocks of flats, should therefore be visible from dwellings, public buildings, cars, etc. For the same reason, rooms or infrastructure designated for common use in residential buildings should not be situated in the basement or in isolated parts of the building.

If "social control" is impossible to organise, quiet areas and semi-public spaces can be closed off during certain times of the day (e.g. city parks, railway stations, pedestrian underpasses, bicycle sheds, storage spaces). At the very least, the option to close these spaces should be provided.

The general idea is of course to get these paths, routes and spaces populated.

Lack of orientation and alternative routes

Knowing where you are and which way to turn contributes to a feeling of security. In situations of personal danger, it is important to find the fastest and shortest way out. Good signage is very important, especially in areas with poor visibility, to reassure people they can find an escape route if necessary. Alternative routes, which avoid potential entrapment-spots, should also be provided for remote pedestrian routes and routes through fear-generating areas.

Annex D (informative)

Problem x strategy/measure matrices for 8 types of environment

Eight types of environment

- 1) Residential;
- 2) Schools/youth facilities;
- 3) Commercial/industrial/offices;
- 4) Shopping/retail;
- 5) Parks & public gardens ;
- 6) Leisure Centres ;
- 7) Public transport and parking facilities;
- 8) City/town centres and public space.

Directions for the use of the matrices

When a number (1, 2, 3) is indicated in a cell the corresponding strategy is applicable for the corresponding type of crime.

The number leads to a corresponding explanation below or next to the matrix. This explanation contains a few examples for concrete measures.

It is neither possible nor useful to present a comprehensive list of measures because there are far too many possibilities as well as exceptions.

The definitive set of recommendations requires the effort of a crime prevention specialist, who is part of the working group. The matrices represented in this annex can never replace the involvement of such specialists in the process. This process is elaborated in clause 6 of this European Prestandard.

D.1 Residential

Table D.1

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	w	
Territoriality	g	o	o		u		
Attractiveness	h		h				
Robustness		p	p				y
Target hardening / removal		q	q				z
Maintenance	i		r				A
Surveillance	j		r	s	v	x	A
Rules	k		r				r
Infra for particular groups	l		r				
Communication to public	m		r				

a	Fear of crime will be reduced when the social and physical structure of reconstruction areas 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 fear of crime. This can be created by mixing residential areas with offices, workshops and shops, as well as providing a layout of green space and footpath networks which invite the use of space as children's playground. Bars/pubs/cafes which cause trouble to the neighbourhood because of noise/nuisance or because they attract groups that cause fear to the residents, have the contrary effect to the fear of crime. The pedestrian network should be simple. Routes for pedestrians and cars should preferably be joined. Entrances of buildings should be connected as direct as possible to the main pedestrian routes.
c	Creating large scale isolated and segregated low income areas increases the risk for all types of crime and thus 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 thus also the fear of crime.
d	Integrating residential areas into the urban system (not separated from the rest of the system by waste lands or infra-structure barriers) and building in urban densities (10-30 dwellings per acre) causes a sense of neighbourliness, reduces fear of crime as well as the risk of street violence.
e	A good view from the windows overlooking public spaces and a clear layout of public paths, provided with good lighting, reduces the fear of crime as well as the risk for burglary, vandalism, violence, car crime and arson; a good view on the balconies and gardens from the dwellings reduces crimes of theft, e.g. stealing laundry, tools and 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 (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 the public spaces, reduces the fear of crime.

^h Attractive landscaping, architecture, street furniture and pavements increase the sense of ownership and thus 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 thus reduces the fear of crime. In order to motivate residents for voluntary maintenance work, a certain degree of self-government of 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 to the neighbourhood and when the surveillance is conducted on foot (not by car).

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

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

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

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

^p Robust door/window frames, doors/windows, locks and glass reduce the risk of burglary and vandalism.

^q Target hardening after burglary or vandalism attack reduces the risk of following incidents/-repeat victimisation; concerning the damage limitation of vandalism, even the total removal of the object can be considered.

^r Quick repairs reduce further damage due to follow-up attacks of vandalism, graffiti or arson; quick repairs can be helped by regular surveillance. The maintenance strategy works most effectively in combination with clear rules for the use of public space, communicated intensively by residents and surveillants to youth groups. In order to be effective, meeting places should be provided for youth.

^s Surveillance reduces the risk of violence; this service can be provided by police or security service, but also by a concierge/janitor or by block guards, eventually (in the case of a housing estate) supported by CCTV, which enables the surveillants to monitor the entrance, elevators, stairways, parking garages and bicycle parking places.

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

^u Individual car parking directly in front of houses or clustering parking facilities in very small lots increases the sense of ownership and control, thus reducing the risk for car crime.

v	Surveillance of parking lots and parking garages by police, security patrols, concierges or block guards, supported by CCTV, reduces the risk for car crime.
w	Inaccessible entrance halls and parking places for bicycles reduce the risk of certain types of theft such as the theft of bicycles or mail from mailboxes.
x	Surveillance of entrance halls and parking places for bicycles by a concierge, especially if supported by CCTV, reduces the risk of theft.
y	Dustbins made from inflammable materials reduces the risk of arson.
z	Removing or replacing flammable materials reduces the risk of arson.
A	Good maintenance, in particular the quick removal of flammable garbage, reduces the risk of arson; this requires regular surveillance.
o	Clear difference between public roads and semi-private entrance roads to dwellings and apartment buildings reduces the risk for burglary, vandalism, graffiti and arson risk.

D.2 Schools/youth facilities

Table D.2

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				f
Robustness		j	j				
Target hardening / removal		k	k				
Maintenance	g		l				l
Surveillance	h	h	h	h	h	h	h
Rules			m				m
Infra for particular groups	i		n				n
Communication to public			n				n

- a School routes along lively streets reduce the fear of crime; location of youth facilities near a busy road and preferably also near a bus stop, reduce 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 all types of crime occurring; the distance to surrounding dwellings, however, shall be sufficient to prevent disturbance of the residents by noise and nuisance.
- c Good visibility and lighting reduce the fear of crime as well as the risk of all types of crime occurring; 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 for 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, in such a way that playing after school, in 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 (playground) which surround public spaces enhances the sense of ownership and thus reduces the risk of burglary, vandalism and arson.
- f Attractive architecture, landscaping, street furniture and playgrounds enhances the sense of ownership, thus 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 all types of crime occurring; a janitor/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 staff (caretaker) present.
- i Provisions for drug addicts and homeless people in the neighbourhood prevent these groups from hanging around in the school area, thus reducing the fear of crime.
- j Robust door/window frames, doors/windows, locks and glass reduce the risk of burglary and vandalism.
- k Target hardening or removal after attack from burglary or vandalism reduces the risk for follow-up incidents.
- l Good maintenance of buildings (including graffiti removal), playgrounds and the public areas around the school reduces the risk of vandalism and arson.
- m Clear rules for the use of playgrounds and behaviour in the surrounding neighbourhood, reduces the risk for vandalism and arson; this is also true for the use of the public spaces surrounding youth facilities.
- n The involvement of future users (local youth groups) and residents of the surrounding areas in the design of youth facilities reduces the risk of vandalism and arson.
- o Integrating parking facilities within the premises gives protection to the vehicles without disturbing the neighbouring community.

D.3 Commercial/industrial/offices

Table D.3

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				s
Surveillance	d	i	m	n	p	q	r
Rules							
Infra for particular groups							
Communication to 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 in weekends reduces the burglary risk.
- g Robust door/window frames, doors/windows, locks and glass reduce the risk of burglary and vandalism.
- h Target hardening after attack from burglary or vandalism reduces the risk of repeated incidents; concerning the damage limitation of vandalism, even the total removal of the object can be considered.
- i Surveillance directed to vulnerable entrances, preferably supported by a CCTV system, reduces the burglary risk.
- j Avoiding thoroughfares for youths through the estate reduces the vandalism risk.
- k Clear differences between public areas and semi-private areas reduce the burglary and vandalism risk.
- l Quick repair reduces the risk for further attack.
- m Surveillance directed at vulnerable spots reduces the risk for vandalism.
- n 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 Surveillance of parking facilities, preferably supported by CCTV, reduces the risk of car crime and theft.
- q Surveillance directed at spots vulnerable to vandalism reduces the risk for vandalism.
- r Surveillance directed to spots vulnerable to arson reduces the risk of arson.
- s Good maintenance, in particular the quick removal of flammable garbage, reduces the risk of arson; this requires regular surveillance.

D.4 Shopping/retail

Table D.4

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				v
Surveillance	f	k	n	p	r	r	v
Rules							
Infra for particular groups	o		o	o			
Communication to 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 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; the permanent surveillance by a guard at entrances is preferred instead of surveillance by CCTV or irregular patrols.
- g Good visibility and lighting reduces the risk of burglary, vandalism, violence, car crime, crime of theft and arson.
- h Access control and compartmentalisation reduce the burglary risk.
- i Robust door/window frames, doors/windows, locks and glass reduce the risk of burglary and vandalism.
- j Target hardening or removal after attack from burglary or vandalism reduce the risk of repeated incidents.
- k Surveillance directed at vulnerable entrances, preferably supported by CCTV, reduces the burglary risk.
- l A lively environment reduces the risk of vandalism and graffiti.
- m Attractive layout, materials and colours reduce the vandalism risk.
- n 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.
- o Controlling access to shopping malls keeps out disruptive youth groups and drug addicts and thus 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 Surveillance of parking facilities, preferably supported by CCTV, reduces the risk of car crime and theft.
- s Communicating preventive messages through intercom and posters reduces the risk of theft.
- t Inflammable 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 garbage, reduces the risk of arson; this requires regular monitoring and strict management policies.
- w The fear of crime is reduced by avoiding no-mans-land between a shopping centre and the surrounding districts.
- x Developing parking solutions that do not require large parking lots around the shopping area prevents the area from being isolated from the surrounding urban area and thus reduces car crime.

D.5 Parks and public gardens

Table D.5

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	e
Target hardening / removal			f			f	
Maintenance	g	g	g				g
Surveillance	h	h	h	h		h	h
Rules	i		i				i
Infra for particular groups	j						
Communication to public	k					k	

- ^a Activities in parks, during daylight hours provide 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, 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 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, for large suburban parks it is not. The costs of fences should not be covered from the budget for the refurbishing of the park. The network of paths should be connected with 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 Allocation and refurbishing specific zones of the park for special target groups according to the needs of these groups enhances the surveillability and the feeling of responsibility of these zones by the regular users, thus 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 for vandalism and arson. Materials should be attractive at the same time: attractiveness is the main aim of a park, and attractiveness is itself a prevention strategy.
- ^f Park benches and other objects prone to theft should be properly fastened. Objects prone to vandalism should be replaced by more robust materials or moved to another location in the park, where the risk for vandalism is lower. Objects which 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, 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 bike. 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 barbecue at all) reduce the risk for 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 youth could be located inside the park, preferably near the entrance zones.
- ^k Communication of preventive messages (e.g. warnings for pickpockets) help to reduce the fear of crime and theft. Posters near the entrances are the recommended medium. Announcements for public events taking place in the park could also be located here, thus making the announcements preventive and attractive at the same time.

D.6 Leisure centres

Table D.6

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							
Infra for particular groups							
Communication to 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 to entrances and exits as well as access control reduces the fear of crime.
- d Attractive layout, materials and colours reduces the fear of crime.
- e Good maintenance reduces the fear of crime.
- f Surveillance including queue management/crowd control, reduces the fear of crime.
- g Good visibility and lighting reduce the risk of burglary, vandalism, violence, car crime, theft and arson.
- h Access control and compartmentalisation reduce the risk of burglary.
- i Robust locks, doors and glass reduce the burglary risk and vandalism damage.
- j Target hardening or removal after burglary or vandalism reduces the risk for repeated incidents.
- k Surveillance directed at vulnerable entrances, preferably supported by CCTV reduces the burglary risk.
- l A lively environment reduces the risk of vandalism and graffiti.
- m Attractive layout, materials and colours reduce the vandalism risk.
- n 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.
- o Controlling access, 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 surrounding the facility.
- p Surveillance including queue management/crowd control at entrances, reduces the risk of violence.
- q Controlling access to parking facilities reduces the risk of car crime.
- r Surveillance of parking facilities, preferably supported by CCTV, reduces the risk of car crime and theft.
- s Communicating preventive messages by intercom and posters reduces the risk of theft.
- t Dustbins made from inflammable materials reduce 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 garbage, reduces the risk of arson; this requires regular monitoring and strict management policies.

D.7 Public transport and parking facilities

Table D.7

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				t
Target hardening / removal			l				u
Maintenance	g		m				v
Surveillance	h		j	p	r	r	v
Rules	i		i				
Infra for particular groups	n						
Communication to public	i		i			s	
a	A transport infra-structure that leaves the social and physical structure intact allows the possibility for natural surveillance and thus reduces the fear of crime.						
b	Parking facilities, bus stops and entrances to underground stations located in lively areas reduce the fear of crime.						
c	Parking facilities, bus stops and entrances to (underground) stations located in densely built urban areas cause a feeling of human presence (possibility to find help) and thus reduce the fear of crime and the risk of vandalism as well as violence. If a bus stop can not be located at the most secure places, a special bus stop for night use only could be considered at these secure places.						
d	Good visibility and good lighting reduce the fear of crime and the risk of all types of crime relevant to transport facilities: vandalism, violence, car crime, theft and arson.						
e	Limiting the access to parking garages to users only 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 fear causing groups to enter 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 shall make it possible to contact security service.

i Clear rules set by the management about the proper use of parking and transport facilities, intensively communicated to public by intercom and posters, increases the sense of surveillance and thus reduces the fear of crime as well as the risk of vandalism and graffiti.

j Limiting access to underground stations to people 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 ticket control.

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 vandalism reduces the risk for 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, specially at night, reduces the fear of crime.

o Limiting the access of parking garages, underground stations and trains reduces the risk of violence and (in the case of parking garages) car crime; parking areas in the open air are less attractive for car theft when well lit and provided with a barrier.

p Surveillance in parking garages, parking lots, in underground stations and in all types of public transport vehicles, reduces the risk of violence; this strategy works best if surveillants are supported by a central CCTV system.

q Clearly separated areas for residential parking and visitor parking in combined parking garages reduces car crime.

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

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

t Dustbins made of inflammable materials reduce 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 garbage, reduces the risk of arson; this requires regular monitoring and strict management policies.

D.8 Town centres and public space

Table D.8

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				x
Surveillance			o	d	s		o
Rules	g						
Infra for particular groups	h						
Communication to public	i				t	v	
a	Keeping physical structure and social networks in neighbourhoods intact enhances the feeling of control and reduces fear.						
b	Blending residential function with other functions, thus creating a lively neighbourhood during day and night, enhances the feeling of control and reduces fear.						
c	Reducing accessibility of semi-public areas (turning these areas to semi-private areas) reduces fear as well as the risk of violent crimes.						
d	Compartmentalisation of big public spaces into smaller enhances the feeling of control and reduces fear; if combined with the surveillance strategy, territoriality also reduces the risk of violent crimes.						
e	Attractive street layout, pavement, greenery and street furniture enhances the feeling of comfort and suggests a high level of surveillance and thus reduces fear.						
f	A high level of maintenance suggests a high level of surveillance and thus reduces fear.						
g	The feeling that there are clear rules 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	Communication of preventive messages suggests a high level of surveillance and thus reduces fear.						

- j Locating entrances in lively public spaces reduces the burglary risk.
- k Limiting access to zones at risk (burglary targets) reduces the burglary risk.
- l Dividing public spaces enhances the feeling of surveillance and thus reduces burglary risk.
- m Robust locks, doors and glass reduces the burglary risk and vandalism damage.
- n Target hardening after burglary reduces the risk of repeated incidents/ victimisation.
- o Removing vandalised objects or replacing them by more robust materials reduces the risk of further attacks; this measure is especially effective when combined with surveillance, monitoring and maintenance strategies (quick response to zones and objects at risk).
- p 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, assault and indecency; if these crimes occur, victims are likely to be found and helped earlier; especially if the space is easy to survey and 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 mentioned in 18 with the professional surveillance of parking places in public spaces.
- t Communication of preventive messages enhances prevention consciousness of car owners and thus reduces car crime.
- u Public passages, corridors and market places should be wide enough; crowded places are attractive for pick-pocketing.
- v Communication of preventive messages via public address systems enhances prevention consciousness of visitors and thus reduces pick-pocketing.
- w Using inflammable materials reduces arson risk.
- x High maintenance level of the area reduces the presence of flammable objects (garbage) left by visitors, residents and shop keepers.

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