

GUIDELINE FOR THE MAINTENANCE OF URBAN GREEN SPACES



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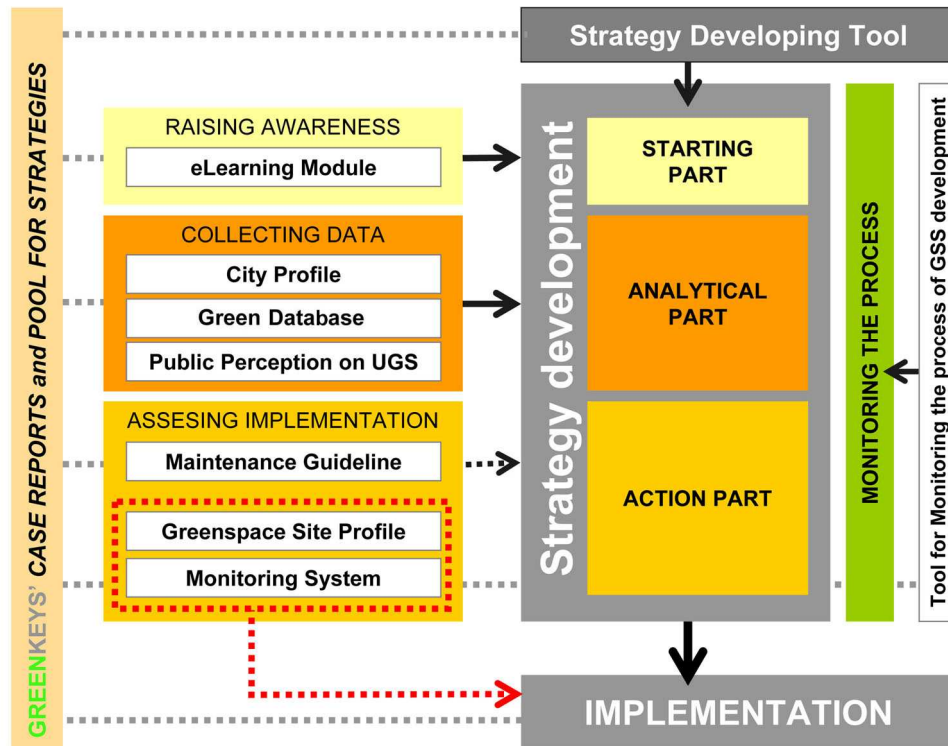


GREENKEYS

URBAN GREEN AS A KEY FOR SUSTAINABLE CITIES

Project coordinated by LEIBNIZ INSTITUTE OF ECOLOGICAL AND REGIONAL DEVELOPMENT, DRESDEN

Scheme: GreenKeys' Tools for Urban Green Strategy development process



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THE MAINTENANCE OF URBAN GREEN SPACE

I Introduction

Given the right guidance, understanding and political will, it is within the grasp of every local authority to successfully maintain its urban green spaces. This Maintenance Guideline provides guidance and support to enable European cities to formulate and implement their own strategies, methods and tools for the maintenance of their urban green spaces. It explores key issues related to the maintenance of urban green spaces and aims to trigger thinking and provide guidance to interested parties.

In particular, this document draws on the available literature and on experiences gained within the GreenKeys Project to highlight key points of best practice with reference to the maintenance of urban green spaces. The document was developed by taking into account the views of the city partners and by incorporating knowledge gained during the course of the Project.

The material upon which this document is based is derived from a variety of sources. In order to enhance readability and improve the flow of argument references have been removed from the text. They are, however, available at the end of the document.

The structure of the guideline is as follows:

- **Section 2** discusses why the maintenance of urban green spaces is important and addresses the problems that are generally encountered.
- **Section 3** places maintenance within a strategic context, highlighting its links with strategy and management.
- **Section 4** unfolds the various elements and dimensions associated with the maintenance of urban green spaces.
- **Sections 5, 6 and 7** put 'under the microscope' the issues of funding, organisation and community involvement respectively.
- **Section 8** highlights the importance, in terms of maintenance, of adopting a typology for urban green spaces and establishing an effective monitoring system.
- **Section 9** concludes and identifies the key issues and questions that need to be addressed when developing a unifying maintenance strategy.
- **Section 10** provides details of interesting literature concerning maintenance.

2 Urban Green Space Maintenance in Context

Urban green spaces define our cities. Good quality urban green spaces support the development of a healthy and sustainable urban environment. They help cities to strengthen their social fabric, shape their identity and enhance their attractiveness for living in, working in, investing in and visiting. On the other hand, poor quality urban green spaces are likely not only to downgrade the image of an area and attract anti-social behaviour, but may also become a financial liability – a 'black hole' into which resources flow for very little tangible return. Overall, it can be argued that the benefits of good quality urban green spaces are not just aesthetic: they are ecological, social and economic with complex interrelations among them. Investment in green spaces can, moreover, enhance the economic, social, and environmental well-being of communities.

Good maintenance is an essential element of high quality urban green spaces. This is because the spaces can change in appearance quite soon after their creation and can quickly exhibit signs of decay

and dereliction if appropriate management and maintenance regimes are not put into place. The quality of the spaces does not only rely on initial planning and design but is also dependent on effective and sustained management and maintenance. Unfortunately, however, urban green spaces are often taken for granted and become neglected. Certainly in the last few decades of the 20th century, the amount of money invested in the provision and upkeep of urban green spaces failed to reflect the vital role they play in people's lives.

'The well-being of a community can be measured by the quality and maintenance of local public spaces. Poor provision and maintenance gives the message to communities that the authorities do not care about them' (CABE Space)

A major obstacle to maintaining or improving the quality of urban green spaces is simply the lack of money: both capital, to invest in improvement and revenue, to pay for ongoing maintenance. Indeed, it is widely acknowledged that long-term under-investment was a significant reason for the decline in quality of these spaces. In order to rise to this challenge, therefore, there is a need to identify an alternative wider and perhaps more radical range of funding models, than those that are usually considered.

Lack of money is not, however, the only thing that endangers the maintenance of urban green spaces. Another negative factor is the lack of statutory requirement on the part of local authorities to provide green spaces. This means that their provision and maintenance can be an easy target for savings within the restricted financial environment in which most local authorities operate. Because of this, green spaces that depend on local authority budgets for their funding – which is the majority of cases – will be vulnerable. Here the competitive nature of the local authority funding process tends to direct finance towards statutory services or the services that generate revenue.

There is a further reason why urban green space budgets are relatively easy to cut. With these budgets the short term effects of reduction are often less noticeable than the impacts that arise from reducing the budgets for other services. It is for these reasons that urban green spaces are more prone to slip down the political agenda and their budgets are more likely to receive cuts in comparison to other services, especially when municipalities are financially constrained.

Although financial pressures and a lack of political commitment are the two main reasons for the decline in quality of urban green spaces, other factors are also responsible. These include the lack of an overall strategy, the lack of a modern management regime and the lack of information about urban green spaces.

One reason why many local authorities have been unable to take a strategic approach to their urban green space services is that responsibility for different aspects of green space maintenance is split across a range of directorates and departments within the authority. This results in a confusing and poorly integrated organisational structure and a lack of coordination of activities, services and responsibilities. Consequently, there is a resultant loss of service status associated with urban green spaces when compared to other services.

At the same time the skills base in green space maintenance and management is wasting away. The urban green space maintenance sector is in many cases suffering not only from a limited workforce and a shortage of skills but also from a critical lack of management, promotional, presentational and interpersonal skills.

This deficiency in management skills is linked to many interrelated issues. These include:

- the poor image that the public has of urban green space maintenance work, making recruitment difficult;
- the often lowly place of green space departments within local authority organisational structures;
- the consequent lack of career prospects and training, resulting in recruitment and retention difficulties;
- a lack of diversity among the people working in urban green spaces.

All of the above mentioned issues are exacerbated by a lack of information about the urban green spaces available and about the different problems and opportunities they present. Without baseline data about the quantity and quality of urban green spaces and how much they cost to run, it is very difficult to make a convincing case for spending more money on them. It is equally difficult to take a strategic approach to improving the quality of the service to be delivered to people through green space provision. It is quite impossible to know if the service is being run efficiently or whether the public money spent on the service is being well spent. Adequate and reliable information about urban green space is, therefore, a pre-requisite for any maintenance, management or funding decisions.

Successful urban green space maintenance requires:

- ✓ strategic perspective,
 - ✓ management scheme,
 - ✓ funding,
 - ✓ political commitment,
 - ✓ information and
 - ✓ public participation.
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3 Maintenance in a Strategic Perspective

The success of maintenance schemes is inextricably linked to the assets and resources available and the overall strategy a city authority formulates for the fulfilment of its urban green space objectives. These factors must be taken into account, therefore, in developing a maintenance scheme or regime. To do this, a framework is required to bring together issues of strategy, management and maintenance and to give clarity and structure to the links and relations between them. Such a framework is outlined in Figure 1 below.

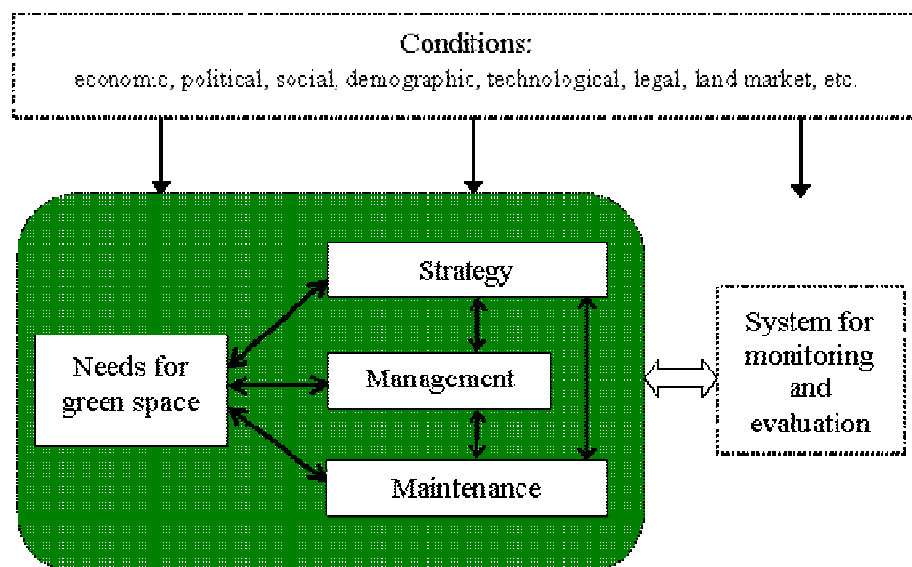


Figure 1: Maintenance in a strategic perspective, Source: own construction, adapted from Arvanitidis (2006)

Significantly, the framework formulates the idea of '**strategic maintenance**', moving through '**understanding context**', to '**defining a vision**', to '**coordinating actions**', to '**deliver outcomes on the ground**' and finally to '**review what has been achieved, and what has not**'.

In particular, it is argued that external and internal conditions provide the basis for defining the current adequacy of and future needs for urban green spaces, with successful provision organised into three levels of strategic maintenance: **strategy**, **management** and **maintenance**.

- **Strategy** refers to the process of setting short and long term targets for the whole urban green space portfolio after having evaluated the existing stock of, and future needs for, urban green spaces;
- **Management** is the process of translating this vision into tangible actions to be implemented; whereas
- **Maintenance** relates to the day-to-day management of the urban green space assets according to the objectives and decisions specified in the previous two levels.

Success at all levels presupposes the existence of adequate and reliable information and the development of an information system capable of handling and delivering this. Questions to be answered here include, *inter alia*, the quantity, quality, use, costs and benefits of the current and targeted urban green spaces (Figure 2).

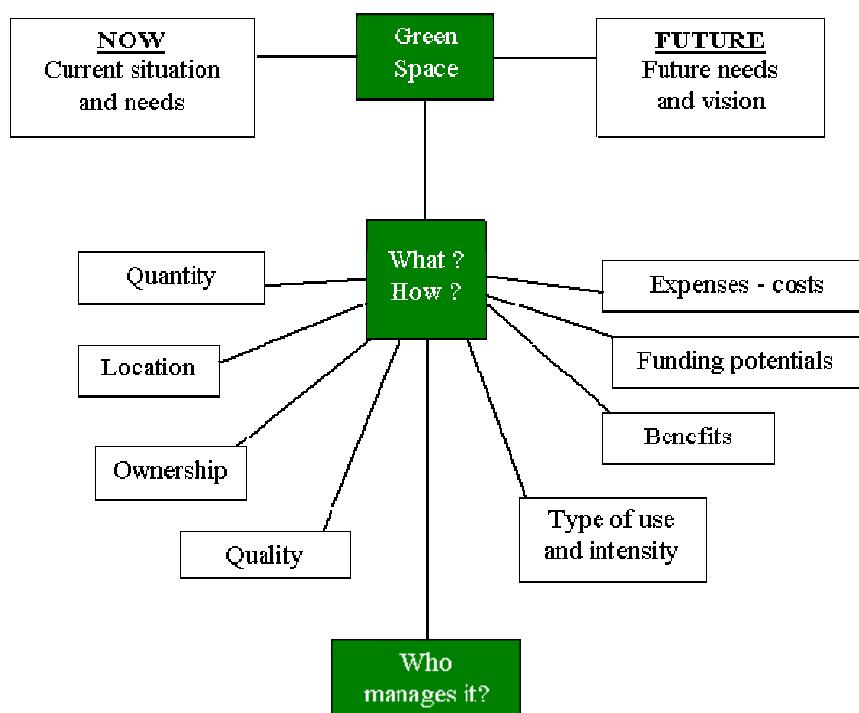


Figure 2: Required information for developing a strategic maintenance scheme, Source: own construction, adapted from Arvanitidis (2006)

It is important to mention that the current document places less emphasis on strategy development. This is because in Chapter 4.3 (Strategy Development Tool) in the Booklet and on CD-ROM Tools a corresponding guideline for strategy development is available. Readers, who are interested in this topic, are urged to consult the aforementioned guideline.

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- ✓ Successful urban green space maintenance is underpinned by a strategic approach.
 - ✓ Successful maintenance is informed by and, in turn, feeds back to the strategy adopted and the management scheme put in place.
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4 Unfolding Urban Green Space Maintenance

The impact of strategic aspirations and management decisions is eventually realised on the ground through a series of outcomes that are delivered. This operational process is identified as 'maintenance of urban green spaces'. It includes both the ongoing care of urban green spaces to retain their quality and the periodic decisions concerning reinvestment, aimed at the renewal of the urban green space infrastructure.

It is important to note here that the processes of reinvestment cannot be seen as being distinct from the day-to-day maintenance processes: rather as degrees along a continuum of caring for urban green spaces. While some tasks need daily attention others are on much longer time cycles, up to many years, as and when work needs to be done.

Literature reveals that there are a number of important dimensions to the maintenance processes about which lessons can be learnt. In general it is emphasised that although efficiency is an important objective need to ensure the prudent use of public money, of more importance is the ratio of the quality delivered for the investment made. On these grounds, quality seems to be a paramount and complementary objective.

Another point coming out of the literature is the importance of clearly defined and properly resourced **maintenance plans** as tools for assessing, coordinating and delivering asset maintenance and renewal. Such plans should be clear and transparent. These must reflect both workforce and organisational capacities and make unambiguous linkages between maintenance activities (both minor and regular works, to major and periodic work) on the one hand and management programmes and policy priorities on the other. Maintenance plans, moreover, when adequately monitored, can improve the ability to identify trends in the performance of green space designs, facilities and equipment and thus prevent costly remediation work (e.g. by identifying where maintenance needs consistently exceed or are below forecasts).

International evidence suggests there is no single best way of organising maintenance routines. Many cities opt for some form of geographical basis, with maintenance teams allocated to areas or districts within the city. Alternatively, maintenance may be organised by task specialisation (with specialist teams in, for example, tree pruning covering the city) with advantages for the optimum use of specialised skills and machinery. Whilst there seems to be an overall case for some form of geographical reference to maintenance, of equal importance is the consistent application of whichever approach to maintenance is adopted. This enables specialist/geographically-bound knowledge to be developed and put into practice. To that end the identified best practices highlight the significance of good communication and coordination between operational and managerial sections. There is a need for clear lines of responsibility and the provision of clear specifications and standards of delivery.

A further question raised in the literature relates to whether delivery of efficient maintenance services is to be achieved by retaining operations in-house or having them outsourced. It is argued that the delegation of some responsibilities is desirable if maintenance routines are going to be flexible enough to incorporate the varied and changing demands of users and the multiplicity of individual green space contexts. Thus, contracting out management and maintenance can be a successful practice if it is viewed as an outcomes-focused, mutually-supportive, long-term partnership between public and private sectors and not simply as a way of driving down costs in the short-term. Quality expectations need to be specified as carefully as prices on the basis of outcomes rather than inputs and delivery must be carefully monitored. International experiences, however, demonstrate that both in-house and outsourced maintenance services can be organised efficiently. The key seems to be to recognise the strengths and weaknesses of each approach, and to use them accordingly.

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- ✓ Quality, and not just economic efficiency, is a paramount objective in urban green space maintenance.
 - ✓ Maintenance plans (with clear linkages to strategic management) are required for ensuring successful maintenance.
 - ✓ Contracting out some maintenance responsibilities can advance flexibility but should be viewed as an outcomes-focused rather than a cost-cutting exercise.
 - ✓ The setting and monitoring of clear standards of delivery for all tasks is required.
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5 Funding

The challenge the green space sector faces, along with local government, is to ensure the long-term sustainability and quality of urban green spaces. Limited resources constitute, undeniably, the most serious constraint in this effort. In order to rise to the challenge, therefore, the identification of a wider, and perhaps more radical range of funding approaches than is usually considered, is essential.

Urban green spaces require two sorts of funding:

- **Capital**, to pay for one-off improvements, renovations and equipment; and
- **Revenue**, to pay for general maintenance and staffing.

These two are linked, as became evident from the previous section. Inability to pay for day-to-day maintenance will bring gradual decline in the quality of the urban green space, until it reaches such a poor state that it will need a considerable investment of capital to be restored.

International experience has highlighted a range of different approaches that can be used to fund urban green spaces. With some political will and lateral thinking these methods could become applicable to provide funding within the GreenKeys context.

‘Using a variety of innovative and different models for funding green space can result in better use of public money, and greater community involvement’ (CABE Space)

1) Traditional local authority funding

In many countries most urban green spaces are funded from local council budgets, financed by local taxation and/or central government transfers. Urban green spaces usually have to compete for this funding alongside other services. The decision about how the general revenue budget is distributed among competing services is made by politicians who are elected to the council.

Strengths

- Local and national taxation provides a relatively stable source of funding on an annual basis.
- Strategic thinking can enable the pooling of resources between and within local authority departments, neighbouring local authorities and the voluntary and community sectors.

Weaknesses

- Annual funding arrangements can result in financial uncertainty and an inability to think long term.
- Ring-fenced funding, specifically for urban green spaces, is unusual due to its non-statutory status and has often been cut when savings have to be made.
- Cooperation between departments or neighbouring municipalities can prove to be difficult.

2) Multi-agency public sector and European funding

Funding can be accessed from a range of government departments and agencies for the delivery of projects that meet cross-cutting targets (for instance targets for public health, crime reduction,

sustainable development, etc.). In addition, urban green spaces can also be funded from European programmes. These could directly aim to support the development of urban green (e.g. GreenKeys, URGE) or have a wider perspective, intending to support development at a local level (e.g. initiatives on sustainable development, urban regeneration, etc.).

Strengths

- Mutual goals can be supported, leading to efficiency savings and better value for money.
- The formation of partnerships is encouraged, building community capacity.
- The development of networks is encouraged, enhancing local know-how.

Weaknesses

- Such initiatives are usually one-off and of short term duration.
- There is competition for resources from other areas.
- Making a case for transferring money from one organisation's budget to another or allocating European money to urban green could prove to be very difficult.

3) Taxation initiatives

Revenue funding that is ring-fenced to fund the management and provision of urban green spaces can be raised from a variety of local taxation initiatives. Some of these schemes have limited transferability from one country to another, since local tax-raising powers are inextricably linked to the national fiscal context. Some taxation initiatives depend on a local mandate or are included as part of local development schemes. Taxation could be imposed upon the whole area that is administered by a local authority or on those localities affected most by the green space (e.g. on basis of proximity). Alternatively, levies on property (residential, commercial or industrial), or tax credits, can also be used to fund green space maintenance and provision. Such initiatives have been used in the USA over the last 20 years or so as a means of combating declining commercial and business activity in inner-city areas and to improve the business environment. These schemes not only protect the quality of the urban green realm in general but also provide better security, cleanliness and maintenance.

Strengths

- Dedicated local taxation can secure reliable and significant financial resources.
- Local taxation initiatives can ensure that green spaces benefit from any increases in property values that they help generate.
- In cases where the initiative is directed towards property owners, it can increase self-interested participation.
- Though not providing funding initially, tax incentives can provide a mechanism to encourage investment in local areas.

Weaknesses

- Most local authorities have limited autonomy and freedom to impose additional local taxes.
- Implementation depends heavily on local priorities, as green spaces have to compete with demands for funding other sectors.
- An initial financial outlay is involved and returns from schemes may take time to be realised.
- Revenues from property taxes are open to competition for funding other public services.
- The linkage between green space development and regeneration of an area can be difficult to identify and quantify, which may inhibit the introduction of the tax.

4) Planning and development opportunities

There are clear opportunities to use planning regulations to provide additional investment for green space, even in the most rigid planning systems. Developers can make significant provision for the development and maintenance of green space in a number of ways. These can be built into the negotiations surrounding the planning processes, incorporated into property design regulations, extracted as part of property management or rental fees or tied to the sale of property (residential or commercial).

Strengths

- Mutual public and private goals can be established as property developers are required to contribute to developing and maintaining publicly accessible green space that can in turn help to increase the value of their investments.
- By obliging property occupiers to contribute, as part of their management or rental fees, finance for maintenance can be made secure and sustainable.

Weaknesses

- The opportunities rely on development, so this method is not a certain stream of funding.
- Can be applied to fund green space only in new areas of development.
- Depends on existing property values.

5) Bonds and commercial finance

In the USA and some European cities, tax-increment finance provides an alternative way of funding regeneration and infrastructure schemes for green space development as part of a wider funding package. Tax-increment finance involves the raising of funds for specific investment projects on the assumption that there will be an increase in municipal taxes as a result of the new development. Commercial finance, moreover – such as bonds or prudential borrowing – can be accessed to fund green space investment and repaid through increased property taxation or commercial revenue streams. In some countries local businesses' and residents' votes are sought to allow the local authority to borrow such capital. This in turn will be repaid, including interest, over a period of up to 30 years.

Strengths

- An initial and significant source of capital finance to fund urban green space projects can be provided.
- Private companies, trusts or other bodies created to provide urban green spaces have better access to commercial finance and are free from the financial restrictions that local authorities usually face.

Weaknesses

- This is a method of 'front-loading' funding, and does not provide additional finance.
- Typically used only for infrastructure projects with predictable revenue. Urban green space assets need to generate sufficient financial return to support commercial financial instruments.
- There are restrictions on the amount that local authorities can borrow, limiting transferability.
- There might be legal issues as to whether local authorities are permitted to issue voter-approved bonds.

6) Income-generating opportunities

In green space sites business opportunities such as sponsorship and the management of sports facilities, restaurants, cafés, festivals and events, are ways in which private sector funding can be sourced. Another way of accessing funding from private business is through the granting of licences or franchises. Additionally, revenue income can be generated through the introduction of entry charges (where green spaces have special attractions), fines¹ and penalty notices for 'environment crimes' such as dumping litter, graffiti and fly posting. Revenue from these sources could, in principle, be reinvested back into the community and used to improve the local environment and maintain areas of green space. In addition, fines and penalty notices will help to increase environmental awareness and improve environmental behaviour. Another potential source of funding for green spaces is the opportunity they can provide for hosting environmental initiatives such as alternative energy production. Waste management initiatives such as local green waste recycling and composting could be integrated into the design and management of urban green spaces, and alternative energy fuels could be grown and sold to fund them. Funding opportunities may exist in other forms of

¹ For instance, in Curitiba, Brazil for every tree that is felled during development two must be planted or donated to the city; in Germany the National Law for Nature Protection regulates the compensatory measures which have to be done in case of interventions in nature – also within the urban fabric.

alternative energy production such as landfill gas, biomass, solar and hydro-power. Partnerships between the public and private sectors also provide opportunities to develop alternative ways of financing green spaces. Local authorities and the private sector commonly enter into special purpose funding vehicles (SPVs), for instance, to promote urban regeneration. Local authorities typically contribute land to the SPV, which in turn is developed for composite uses, potentially incorporating high-quality green space. Recurrent revenue requirements associated with the space could also be met under the SPV through the bonding of commuted payments drawn from private developers in planning agreements.

Strengths

- Additional private finance is generated and risks are spread.
- If ownership of land is retained by the local authority it provides a long-term investment.
- Additional facilities (such as restaurants, festivals and alternative energy facilities) add to the usage of green space and become attractions in their own right.
- It can encourage the involvement of local businesses and stimulate the local economy.

Weaknesses

- The urban green space sector may face difficulties in ring-fencing the income that is generated from business developments in green spaces.
- Unless managed carefully, business development can lead to over-commercialisation and environmental damage to urban green spaces.
- It is generally most relevant for areas of green space located in densely populated urban areas.
- Paying for attractions and major events is contrary to the traditional concept that public green spaces are free.
- Events and festivals in themselves may cause additional and costly management burdens and repair works.

7) Endowments

Endowments are another way to fund green space and have proved to be an extremely successful means of securing a long-term, protected source of income. An endowment is an asset that generates income: the income, or part of it, is used to fund the green space while the capital remains invested. An endowment could take the form of an investment in the stock-market which generates interest or, for instance, a property portfolio that generates rental income. Additionally, donations and fundraising activities can be used to build up or develop an endowment. In this case, the holder of the endowment provides an assurance that although the funding will be invested over the long term, the interest will be used to support activities in particular areas identified by the donors or fundraisers. Fundraising initiatives and donations for green spaces could therefore be held in an endowment, invested over the long term and grown to provide a sustainable source of finance from the interest gained. Example: "Found Stadtgrün Dresden"

Strengths

- Steady and secure income can be provided.
- Funding from other methods (for example, planning and development and income-generating opportunities) can be invested in the endowment to increase the potential return.
- The endowment fund can include investments in property and other financial funds (for example, the stock market, gilts, etc.) to spread the risks.
- The funding of green spaces from a property portfolio can help to increase the value of property and also raise the value of the endowment.

Weaknesses

- Endowments are usually invested in property, stocks and shares or other assets. Managing the investments of these assets to maximise income will require specialist financial skills that may not be available within local authorities.
- The endowment must be protected so that it cannot be sold or its income used to fund anything other than the green space for which it was acquired. This may be difficult within local authorities but can be achieved by the setting up of an independent trust to manage the green space for which the endowment is given.

- If the management of a green space is to be entirely funded by the income from an endowment, the size of the endowment will have to be very large in comparison to the value of the green space itself – securing an endowment of this size will be beyond most organisations.

8) Voluntary and community sector involvement

The voluntary and not-for-profit sector is an important stakeholder in urban green space development at the neighbourhood level. Voluntary and not-for-profit organisations can provide an important resource by contributing additional labour, providing public stewardship of green space, fundraising and assisting in community development and outreach. In addition, they can co-operate in programmes that train young people in gardening and related activities and provide the opportunity for employment in green space maintenance or environmental management. The management roles of the not-for-profit sector can take three forms: friends groups, which provide general assistance and support; partnerships, in which they have a degree of joint responsibility with local authorities; or the sector can have sole responsibility for green spaces.

Strengths

- The not-for-profit sector has greater flexibility with regard to debt than public organisations and often has a strong entrepreneurial culture to access funding from a variety of sources such as other business opportunities and commercial finance.
- The charitable status of not-for-profit organisations can bring tax-relief benefits and attract investment from sources that local authorities cannot.
- Partnership agreements can ring-fence funding for green spaces and prevent finance from being diverted by the local authority.

Weaknesses

- Fundraising and donor programmes are usually more suitable for capital projects rather than longer term revenue funding and many not-for-profit bodies struggle to survive financially due to the precarious nature of the income they rely on.
- Democratic responsibilities and accountabilities between the local authority and the voluntary-community sector are not always clear.
- The level of financial return from gift aid programmes and private sponsorship will be low in areas that are more deprived or where demand is low.

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- ✓ A range of very different approaches can be used to fund sustainable and high-quality urban green spaces. Instead of opting for one approach a combination of more should be sought.
 - ✓ There is much to be gained in exploring supplementary sources of funding. Although these are only likely to contribute a small proportion of the total green space management budget, their political benefits and the quality improvements they bring about in particular locations make them an extremely popular means by which to raise revenue.
 - ✓ Whichever approach is taken and whether a new space is being created or an existing space improved, it is important to set up dedicated funding and management arrangements from the outset.
 - ✓ The key point to be stressed is that adequate funding for green spaces is likely to remain dependent on the skills and political clout of green space managers and committed politicians to make the case for green space investment and to bargain with providers of other services for a larger slice of a limited cake.
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6 Organisation

Although funding constitutes a key element in the provision and maintenance of good quality green space, other parameters are also important. These refer to organisational and capacity matters and include the establishment of a well coordinated organisational structure and the enhancement of the

skills and knowledge base of those administering the green spaces, both at the management and the operational levels.

Local government on the whole is accountable for the management and maintenance of its urban green. Responsibilities are usually dispersed, however, between different levels of government, among different departments, or among divisions within the same municipal department. Even where the majority of responsibilities are held by one agency, department or division, others also retain an involvement to a greater or lesser extent. Most common amongst these are:

- spatial planning departments;
- highways departments;
- environment departments;
- sports and leisure departments;
- real estate departments; and
- health agencies.

The fragmentation of responsibilities for different aspects of urban green space maintenance can prove to be a serious hindrance to its efficient and effective provision. It may result in an inability to coordinate activities (including the work of external contractors), the wasting of resources and, ultimately, a reduction in the quality of the urban green spaces. This lack of coordination may also extend to a geographic context, with a tendency to impose top-down management solutions rather than empowering staff to act at the site-specific or neighbourhood scales.

Having all key players under the same organisational structure, though helpful, is not, however, the ultimate solution. International experience suggests that coordination is at its most effective when key responsibilities are unified under clear lines of responsibility and externally through a single point of contact for green space services. The point that needs to be drawn here is that the way different responsibilities are coordinated is so very important for the quality of management and maintenance of the green spaces; sometimes even more important than the formal distribution of those responsibilities.

Apart from good coordination of the key players, another critical element of successful maintenance is the quality and skills of the people who run urban green both at the management and the operational ends of the spectrum. Here there are two points to be highlighted:

- Firstly that high quality green space necessitates skilled personnel to do the job; and
- Secondly that the skill and knowledge base required reflects the increasingly diverse ways that urban green spaces are used, managed and funded.

On the one hand tasks include requirements for cleaning, repairing, and policing urban green spaces. On the other they also include responsibilities such as raising funds, engaging with the users, managing events and developing educational programmes. In light of these issues the importance of ongoing training and continual investment in skills across all management and operational levels, becomes evident. This in turn necessitates the creation of dedicated degree programmes and continuing professional development (CPD) opportunities in the sector: each being a valuable contributor to the tasks and challenges identified.

Another issue that the literature has highlighted relates to the fact that local authorities have difficulty recruiting and retaining suitable personnel who are able to meet the challenge of providing and maintaining quality green space. The reasons for this situation stem from the low status and recognition of the green space sector, the poor career development prospects and bureaucratic difficulties within recruitment procedures. Low pay in the sector, particularly at entry level, is also a contributory factor. The situation has resulted in increasingly poorly motivated, low calibre staff and a growing reliance on the out-sourcing of work and contracts. This in turn continues to erode the often poor skills base amongst those who are recruited. The solution here is straightforward and

requires the prioritisation of the sector's role as a means to raising the general prestige of green space services, and thereby the job satisfaction of employees.

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- ✓ Organisational matters and the skills/capacity of the people running green spaces have a clear impact on the quality and the sustainability of urban green spaces.
 - ✓ In terms of organisation the aim should be to create long-term stability in structures so as to nurture greater staff stability and commitment and the building of internal, personal and strategic links.
 - ✓ Separation of responsibilities need not be a problem as long as communication and coordination is good.
 - ✓ The importance of experienced staff, from the strategic to the operational level, is clear, requiring an emphasis on ongoing training across all levels, and a continual investment in staff resources.
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7 Community Involvement

Community involvement in the management and maintenance of urban green spaces is extremely important. Such involvement serves as a means of gaining public support for green spaces and as a vehicle to raise the issue up the local political agenda. Conversely, a general lack of community engagement in urban green spaces is associated with low demand and low aspirations for quality urban green from local actors (individuals, interest groups and businesses). This issue is compounded by local authorities struggling to grapple with the changing needs of an increasingly diverse urban population. They often fail to engage the various 'excluded' social groups in urban green space policy formulation, management and maintenance.

A number of mechanisms can be used to encourage community involvement. These range from one-off initiatives or consultations (e.g. on green space-related spatial planning policy), to the direct involvement of communities across the range of green space-related activities including the management and maintenance processes.

Specific proactive initiatives to involve and communicate with communities include the establishment of:

- **Local Administrators**, assigned with direct responsibility for public space management. These are usually well known to the local population and act as a direct conduit through which residents can contact local authorities.
- **Volunteer Rangers**, to help with the maintenance and policing of green spaces. A fully-paid volunteer coordinator can be also appointed to coordinate the activities of the rangers and help to establish better lines of communication between the authorities and the community based group.
- **Voluntary Local Boards**, made up of local residents and businesses. These may have their own financial or other resources and be able to implement their own initiatives or spending programmes.
- **Green Space Activity Councils**, established with the intention of bringing together urban green space users, staff and local residents to develop and run sports and recreational and programmes or other activities.
- **Local Partnerships**, which may reflect the new 'collaborative model' that brings together local authorities, the community and the private sector to undertake specific initiatives or programmes that relate to urban green.
- **Not-for-profit Local Trusts**, accountable to the local community. These take over the ownership of land or property which is often derelict, underused and owned by the local authority, in areas of low property demand. They then transform it into a local amenity from which revenue can be generated and reinvested for the future benefit of the community.

- **Participation in green space appraisal**, giving residents a role in assessing green space quality as a means of raising awareness of their urban green space assets.
- **Special events** organised to promote the importance of green space management in the city. These high-profile events attract significant financial support and can be used to debate city development issues and promote better quality green in the city.

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- ✓ Community involvement in the task of urban green space management/maintenance is immensely beneficial, not least as a means of giving urban green spaces a political priority and reflecting changing needs and preferences.
 - ✓ A framework is required which gives weight to different voices within the community and takes into account immediate and localised demands as well as long-term aspirations and city and region-wide objectives.
 - ✓ Too much community involvement can be as damaging as too little; green space managers need to get the balance right.
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8 Other Aspects of Urban Green Space Maintenance

Logically, the process of green space maintenance should begin by understanding the nature of the space. Answers are required, among other issues, to questions such as:

- What spaces exist and of what types?
- What are the conditions of the spaces?
- How is the urban green space in question currently being used and managed?

It is not possible to provide adequate answers to all these questions without putting into place a system that enables the analysis and monitoring of urban green. These issues are briefly discussed in the next section.

8.1 Classification

Different types of urban green spaces will inevitably be subject to different pressures, as well as (ideally) differing aspirations and management/maintenance regimes. It is important, therefore, to know where the green spaces exist, together with the types of these spaces. To do so it is essential to use a typology of urban green spaces that would enable their categorisation.

Nearly all cities use public space typologies as part of their approach to urban green space management, generally classifying spaces by size and function. Most typologies represent non-statutory, locally-derived systems that have been inspired by the local context, green space types and often by management convenience.

There are several problems to be addressed in identifying the different types of green space that exist in urban areas. These include:

- Ensure consistency in the definitions;
- Overcome the risk of double counting where certain types of green space overlap; and
- Ameliorate concerns about the compatibility between different local contexts.

An example for a typology of urban green spaces has been developed by Swanwick *et al* (2003) (Table I below). Each city has specific types of green spaces, the full range of different urban green

spaces together form the green fabric of the urban area. They may be publicly or privately owned and managed and may or may not be accessible for public recreation.

The typology is based on a hierarchical classification. This allows different categories to be either aggregated at a higher level or broken down further in a consistent way, depending on the level of detail required and the purpose of the report required.

- ✓ Locally-validated green space typologies are valuable tools that can differentiate between green space types and their appropriate aspirations and management regimes.
- ✓ If available a GIS (Geographical Information System) could be used for monitoring the changes.

MAIN TYPES OF GREENSPACE			
ALL URBAN GREEN SPACE	Amenity Green Space	Recreation Green Space	Parks and gardens
			Informal recreation areas
			Outdoor sports areas
			Play areas
		Incidental Green Space	Housing green space
			Other incidental Space
	Private green Space	Domestic gardens	
	Functional Green Space	Productive Green Space	Remnant farmland
			City farms
			Allotments
		Burial Grounds	Cemeteries Churchyards
	Institutional Grounds	School grounds (in cluding school farms and growing areas)	
		Other institutional grounds	
	Semi-natural Habitats	Wetland	Open/running water
			Marsh, fen
		Woodland	Deciduous woodland
			Coniferous woodland
			Mixed woodland
Other Habitats		Moor/heath	
	Grassland		
	Disturbed ground		
Linear Green Space	River and canal banks		
	Transport corridors (road, rail, cycleways and walking routes)		
	Other linear features (e.g. cliffs)		

Table 1: A typology of urban green space Source: Swanwick et al. (2003: 99)

8.2 Monitoring

In order to secure their continual good quality it is essential that urban green spaces are regularly monitored. This process enables the conditions of the spaces to be analysed, changes to be tracked over time and an evaluation to be made of the management and maintenance actions required.

Successful monitoring processes require reliable and adequate information on urban green spaces. Any lack of such information leaves green space managers unable to track changes, assess the outlay expended and identify the resources that are required to secure the quality green space. This in turn undermines their ability to argue the case for greater investment in the green spaces.

It is common knowledge, however, (argued in the relevant literature and confirmed in the process of the GreenKeys Project) that in general there is a lack of adequate and reliable data on green spaces. Additionally, there is a poor understanding of the changing demands and pressures put upon green spaces by urban populations. This situation has resulted in broad-brush maintenance approaches, rather than approaches informed by specific local needs and contexts. In turn this has brought about a general decline in quality, including the loss of features, detrimental impact on character and the demise of important ecology.

In concluding it is important to highlight the significance of a monitoring system to all levels of the strategic maintenance of green spaces. The process of developing such a monitoring system has been extensively explored by the URGE Project². This has provided a set of appropriate indicators (the ICC – Interdisciplinary Catalogue of Criteria) and evaluation methods for measuring and assessing urban green spaces. The task of updating and adapting this ICC to a more pragmatic and empirical situation was undertaken during the GreenKeys Project. The GreenKeys Monitoring System is described in Chapter 4.9 of the booklet and as a tool is available in Chapter 4.9 on the CD-ROM Tools of the GreenKeys Manual [GreenKeys @ Your City – A Guide for Urban Green Quality](#).

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- ✓ It is vital to accurately monitor the state, condition and any changes made to urban green spaces and evaluate the success of the management and maintenance processes.
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9 Concluding Remarks

In concluding this guideline it is essential to highlight a number of the key points, derived from the literature and the experience gained so far within the GreenKeys Project, which impact on best practice in urban green space maintenance.

Successful green space maintenance:

- 1) Results from strong, long-term political commitment to green space quality, reinforced by the technical skills of the people managing and the running green spaces;

² “URGE – Development of Urban Green Spaces to Improve the Quality of Life in Cities and Urban Regions” was a research project of Key Action 4 “City of Tomorrow & Cultural Heritage” of the programme “Energy, Environment and Sustainable Development” within the Fifth Framework Programme of the European Union. Further information under: www.urge-project.ufz.de.

- 2) Can be achieved only if a clear vision and policy framework for urban greens is in place;
- 3) Requires a carefully constructed set of statutory green space roles and responsibilities that prioritise maintenance and render its needs non-negotiable;
- 4) Needs adequate resources and reliable funding (coming from all sources) over the long-term;
- 5) Demands an efficient organisational structure with clear roles and responsibilities;
- 6) Is the outcome of dedicated leadership which is capable of marketing urban green spaces and convincing decision makers and the wider population of its benefits;
- 7) Is the product of a continually-trained, knowledgeable and engaged staff that knows how to combine political, economic, organisational and design skills and how to take advantage of the variety of opportunities available;
- 8) Necessitates the participation and care of local communities;
- 9) Demands accurate and reliable information and a monitoring process that is able to track changes and assess the work done;
- 10) Places appropriate emphasis not only on the quantity but also on the quality of urban green spaces;
- 11) Makes use of partnerships and collaborations between interested parties;
- 12) Calls for an appropriate balance between outsourced and in-house responsibilities on the basis of an outcome-focused, rather than cost-reducing, viewpoint.

In the light of the above remarks a number of questions that municipalities need to think over in formulating their green space maintenance strategies are posed. These are framed around 6 key headings:

1) Vision

- What are the aspirations for urban green space quantity and quality?
- What are the priorities for urban green space maintenance (e.g. tackle vandalism, improve quality, etc.)?

2) Monitoring

- What resources, staff and equipment are used for urban green space maintenance?
- What urban green spaces exist, how are they classified for maintenance purposes, and why?
- In what condition are the urban green spaces?
- What are the expenses and what amount of money is required for urban green space maintenance?
- Do there encounter any particular maintenance problems?
- Who are the users of the urban green spaces and are they satisfied with the spaces?
- What indicators and benchmarks are used to assess the existing capacity and quality of urban green space maintenance as well as user satisfaction, and how often is this information updated?

3) Organisation

- Who is responsible for urban green space maintenance and what are their roles?
- Are there specific maintenance plans to guide the operational delivery of urban green spaces?
- How are urban green space maintenance routines (e.g. cleaning, repair, planting, refuse collection, etc.) defined, organised, coordinated and implemented?

4) Skills

- Who is responsible for urban green space maintenance, and is this a sufficient resource?

- Are the expertise and skills required for urban green space maintenance available within the relevant department(s)?
- What kind of training is available, and how is it accessed?
- What kinds of relevant skills are used in urban green space maintenance by the various stakeholders?

5) Funding

- How is urban green space maintenance financed, and how is the funding coordinated?
- What role(s) does the earnings from urban green spaces (i.e. from advertising, events, sponsorship, etc.) play in resourcing their maintenance?
- What role is played by private and community resources, and how are they raised and deployed?
- What possible sources for extra funding exist?
- What use is made of alternative funding sources (e.g. supplementary local taxes/charges)?

6) Participation

- Who is involved in urban green space maintenance (other departments, private sector, citizens, organisations, third sector), and how?
- How are these players accountable, and to whom?
- Is there any prospect of other people becoming involved to urban green space maintenance who are currently not involved?

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