The Greenspace Toolkit

A Practical Guide to Assessing the Resource and Implementing Local Standards for Accessible Natural Greenspace Provision in Welsh towns and cities. **Cyfoeth Naturiol** Cymru **Natural Resources** Wales



Original Project Undertaken on behalf of the Countryside Council for Wales in 2006 by:

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Notes on the 2022 update

The Greenspace Toolkit is designed to help you assess whether there are enough green spaces of the right kind, in the right places to promote the well-being of local people. The Toolkit is particularly useful in built-up areas and it complements the larger-scale Green Infrastructure Assessments that Planning Policy Wales requires local planning authorities to do. Planning Policy Wales Technical Advice Note (TAN)16: Sport, Recreation and Open Space recommends the Accessible Natural Greenspace Standards set out in this toolkit.

Natural Resources Wales (NRW) updated the toolkit for publishing on the internet and for use by those with visual disabilities. Some sections have been re-worded to make them easier to understand and out of date references have been removed or brought up to date. The meaning of the toolkit and the Accessible Natural Greenspace Standards remain as quoted in TAN 16.

This updated toolkit will help you to monitor the effects of greenspace improvements showing the value created for any money invested. It will also show where new development has created the need for improvements – either to replace lost spaces, or improve access to existing spaces.

You can also use this toolkit to predict the effect of new developments or greenspace improvements on the provision of green spaces needed for peoples' health and well being. This can be used by both developers and local authorities as evidence during the planning process: the common standards in this toolkit can provide a shared language for dialogue and negotiation.

It is important to involve local people when you use the Greenspace Toolkit because their knowledge and opinions will add vital information to whatever you learn from studying maps and data. Unless you understand what local people think about their local green spaces you will find it extremely difficult to plan for the right kinds of green spaces in the right places to promote their well-being.

Introduction

Accessible natural greenspaces have an important contribution to make to the quality of the environment and to the quality of life in and around urban areas.

Such sites are valued by the community, provide important refuges for wildlife in otherwise impoverished areas, and are beneficial to public health and wellbeing.

There are established mechanisms for the recognition, designation and protection of sites with special value for biodiversity, and this toolkit does not seek in any way to replace them. Instead, it provides a broader, more inclusive approach to ensuring that people in urban areas have the opportunity to experience nature close to their own doorstep.



The Accessible Natural Greenspace Standards

Everyone should live within 300m of their nearest natural greenspace. This is about a six-minute walk. Ideally green spaces should be 0.25ha or larger. Provision should be made for at least 2ha of accessible natural greenspace per 1000 population.

That green space should be provided by following these standards:

- 1. Everyone should live within 300m of accessible natural greenspace
- 2. there should be at least one accessible site of >20ha within 2km of home;
- 3. there should be one accessible 100ha site within 5km; there
- 4. should be one accessible 500ha site within 10km.

The purpose of this guidance is to set out the rationale and principles for the provision of Accessible Natural Greenspace Standards in order to help local authorities identify the current level of provision and to assist with the production of local standards and targets. While it is expected that local authorities should aspire to meet the provisions of the standard, it is recognised that this will be more difficult in some urban contexts than in others. Local authorities are therefore encouraged to determine for themselves the most appropriate policy response in the light of a sound understanding of the rationale, the needs of the local community, the value of accessible natural greenspace to it, the existing greenspace resource and potential funding constraints.

What is natural greenspace?

'Natural' is understood here as a particular quality which greenspaces can offer. Natural areas are places where greenspace structure and quality of management combine to support a diverse or distinctive flora and fauna which otherwise might not be encountered in the built environment. Here 'natural processes' (growth, reproduction and mortality) are dominant and the visitor can enjoy a distinctive sense of place.

Urban areas can contain a wide range of greenspaces, such as public parks and gardens, playing fields, derelict land, greenspace on institutions and private greenspace, but also woodlands, wetlands, farmland in the wider countryside on the urban fringe and coastal areas. All of these greenspaces can provide for the experience of nature depending on the existence and cover of features such as woods and groups of trees with understory cover, extensively managed grasslands, wetland vegetation, and surface waters with broad margins where features such as reeds can develop.

However, it is important to note here that the toolkit promotes the concept of multifunctional greenspace whereby an area of managed parkland or playing fields could also be said to be natural, at least in part, if the appropriate criteria are met and sympathetic management is in place.

More guidance on the definition of natural is given in Step 3 of this guidance.

Whilst the toolkit is mainly concerned with accessible natural greenspace on land, in Wales the importance of the coastline in contributing to quality of life and the natural experience it can provide is also recognised. Throughout this guidance, special reference will be made to the consideration of the urban coast.

The toolkit should be viewed not as a rigid process but as an aspirational target against which local priorities can be set and progress can be measured.

Implementation is the starting point for a creative process of greenspace planning and management, and not an end in itself. This guide is intended to outline a general approach to the use of the toolkit and to present options as to how this might be tailored to suit available resources and the local context.

Why do we need accessible natural greenspace?

Literature reviews have shown ample evidence of the values of natural greenspace for amenity/recreation, the control of pollution, moderation of the urban microclimate for biodiversity and to support social interaction and cohesion. Recent studies have shown how Natural Greenspace improves the health and quality of life of residents of urban areas.

Literature reviews also reveal that:

- Design, management and use of greenspace can be more important determinants of their ecological values than the size alone. Parks develop an interior climate when they are larger than 1 hectare. Research on woodlands has indicated an area of two hectares as the smallest wood that people wish to visit regularly. Planning for greenspace of different sizes at different differences from where people live is necessary both from conservation and user perspectives.
- The vast majority of park users reach the park on foot: distance is therefore a major factor for open space use. A walk of about 5 to 6 minutes length, corresponding approximately to a 300m distance from home, seems to be a threshold beyond which the frequency of greenspace use sharply declines.
- This varies with the terrain. In very hilly terrain Naismith's Rule (formulated by William Naismith in 1892) suggests adding around 10 minutes additional time to a walk for every 100m of ascent.
- What is perceived as natural can differ between ecologists and greenspace users. Whilst ecologists value greenspace by means of criteria such as species richness and occurrence of rare species, users often describe as 'natural' areas (including the wider countryside) that act as a contrast to the urban setting, where they can escape from urban life and activities and seek a sense of tranquility.

The experience of nature is an important quality a greenspace should offer to be attractive; however, it is rarely the only, and the most important one. This supports multifunctional greenspace, where natural features are an integral component.

Green corridors are a popular means used in urban planning to connect greenspace and support biodiversity and should be preserved and enhanced for nature conservation but particularly to promote access to greenspace for recreation.



Achieving Progress

This guidance is based on the implementation of a staged pathway approach, as shown below in Figure 1.

This can be summarised into four equally important phases:

- **Inception (Step 1 in Figure 1)** the planning phase in which the team is established, information sources are identified, resources are allocated, the scope of the project set and progress indicators determined;
- Assessment (Steps 2-4) in which data are gathered, local greenspace identified and its status established, so that the accessible natural greenspace resource is known;

Analysis (Step 5) - which consists of establishing the spatial pattern of accessible natural greenspace and associated catchment zones, as well as identifying those areas currently

• greenspace and associated catchment zones, as well as identifying those areas currently lacking in provision;

Response (Step 6) - whereby priorities are set out for policy and management action to address issues arising from the analysis.

Community consultation should be an important part of the overall process, both in assessment of the greenspace resource and in the subsequent setting of appropriate management actions.

Figure 1. Implementation process



Accessible Natural Greenspace in an Open Space Classification

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The guidance can be applied alongside a classification designed for other purposes. Natural greenspace is likely to fall within several categories of open space listed in the current planning policy guidance in Wales.

In Tan 16 Sport, Recreation and Open Space¹, open space is classified as follows:

- Parks and gardens;
- Natural and semi-natural urban greenspaces;
- Green corridors;
- Outdoor sports facilities; Amenity
- greenspace;
- Provision for children and young people; Allotments,
- community gardens and urban farms; Cemeteries and
- churchyards;
- Accessible areas of countryside in the urban fringe Civic
- spaces
- Water

While accessible natural greenspace can be found in many of these open space categories, it may also be found in other locations, such as institutional grounds and industrial estates. The toolkit considers all natural greenspace that is accessible, regardless of ownership and status.

Creative site management might make it possible to develop areas of accessible natural greenspace within existing sites that have a range of other functions. The willingness to consider greenspace as potentially multifunctional is therefore vital to the effective implementation of the toolkit.

Local Nature Reserves (LNR)

The designation of Local Nature Reserves (LNR) can be used to enhance selected greenspaces, because this designation provides a focus for the local community and opens opportunities for education, as well as offering a useful tool for managing and protecting areas of greenspace.

In summary this guidance is intended to be a positive addition to the tools available to local authorities working to meet the needs of their communities. It provides a flexible and inclusive method for the understanding of the existing local greenspace resource and a decision support mechanism for the determination of future policy. It is not intended to be an unwarranted impediment to development where local priorities dictate otherwise, nor is it intended to promote the provision of natural greenspace at the expense of other types of open space of value.

The remaining part of this guidance goes through and illustrates the different stages of the implementation process.

Step 1: Inception

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Inception is likely to involve a number of activities and the making of decisions on issues that will govern the future conduct and ultimate success of the implementation process.

Some important decisions required at this stage include:

- Identification of the team responsible for implementation;
- Allocation of staff and financial resources;
- Confirmation of the scope and timescale of the project; Setting of
- progress milestones; and
- Specifying how the results of the project should be presented.

Activities to be undertaken at this stage would be those providing key information to inform the implementation process, such as:

- Identification of stakeholders for consultation; Review of
- national and local policy;
- Collation of relevant existing sources of useful data and appropriate tools to assist the process;
- Formulation of a strategy on how and when to engage local communities during the process.

Approaches to Implementation

Implementation can be approached in different ways, in order to suit the level of available resources or for the purpose of a limited trial. Broadly, three approaches are possible:

1 **Full Implementation** of the model will yield the most complete results (i.e. applying standards of all four tiers of provision), and is therefore recommended as the ideal. Clearly, full implementation is the most complex option and is likely to demand the highest input of time, money and technical resource. In view of this it is recognised that, whilst full implementation is the ideal goal, this may not always be possible at the outset of the project.

Progressive Implementation allows for the initial implementation of only a part of the

2. model with the intention of expanding coverage in future reviews until full implementation is gradually achieved. In this way an initially limited project allows the development of familiarity and confidence in the process at a controlled pace.

Selective Implementation utilises only specific elements of the model and implies no firm commitment to the expansion of coverage in future reviews. This option allows for some implementation to be achieved with limited resources but will produce results of limited value. However, expansion of coverage can then be achieved readily should additional resources become available.

These three options can be applied to various elements of the implementation process to provide genuine flexibility in the application of the toolkit.

Some possibilities are as follows:

• Site Size Tiers. Accessible natural greenspace standards suggest four tiers for site size and catchment and a measure for provision by population (see The Accessible Natural Greenspace Standards), all of which should be assessed in a full implementation. However, it would be possible to work with a single site size tier initially. Although the largest sites may be the more straightforward to consider, it is recommended that the sites within 300m of home are always covered, because these 'neighbourhood' sites are the most accessible to local communities.

Spatial Scope of Analysis. Residents living on the edge of a Unitary Authority (UA) may well utilise greenspace outside the Unitary Authority area. In order to take account of this, in a full implementation of the process it would be useful to look wider than the immediate Unitary Authority and include sites on the following basis:

- Any site outside of, but within 300m of UA boundary; Any 20
- ha sites within 2km of boundary;
- Any 100ha sites within 5km of boundary; and Any
- 500ha sites within 10 km of boundary.
- Land Ownership. Ideally all land should be covered in an assessment for the purposes of implementation, as greenspace users do not consider who owns the land if it is accessible and provides the necessary quality of experience. Initially it is possible to base implementation solely on, say, local authority land. The local authority is likely to be the single most important holder of accessible greenspace and may possess existing data that would aid the assessment process. However, any limitation of land coverage would inevitably underestimate the amount of natural greenspace accessible to the public.

Complexity of Catchment Analysis. The simplest way of showing catchment zones is to

• apply a perimeter of appropriate radius around the boundaries of sites. This technique, known as buffering, can be carried out manually or as a Geographical Information System (GIS). More detailed explanation of GIS techniques can be found in step 5.

An important process at the outset is the identification of appropriate data sources and tools. This document suggests a number of spatial data products that can assist in the process of identifying candidate sites. All of these data are available in digital form and suitable for use within a GIS. Regular audits of open space are the recommended means for developing a robust and current dataset, but it may also be possible to use other ongoing survey initiatives or to work in partnership with other bodies.

Whilst the use of a GIS is not essential for the implementation of the toolkit, it is strongly recommended.

A GIS application will facilitate efficiency and flexibility in allowing:

- The integration of different datasets and survey data;
- The use of a variety of analytical techniques to help with assessing current compliance with the standard;
- An assessment of the best policy options that will contribute toward the ultimate goal of full compliance; and
- Communication of the results and policy decisions to the public.

Effective planning on these issues from the outset will make implementation easier and allow for more rational and consistent interpretation of the results.

The Implementation Cycle

Effective use of this toolkit depends on its regular review as part of a recognised cycle. This is necessary in order to ensure that:

- The analysis and the data on which it is based are kept current;
- Changing local priorities, legal requirements and national policy guidance are recognised and accounted for;
- Priorities are revised to account for changes in patterns of need and in levels of available resources; and
- Familiarity with the process is maintained and the scope of its application adjusted as required by changing circumstances.

The frequency of review will depend on a range of local circumstances. However, many local authorities may find it convenient to make a link to the five year cycle of Local Development Plan review, which would facilitate 'joined-up' policy making by ensuring that each process can be fully informed by the other.

In the longer term, extension of the toolkit's principles to cover all urban greenspace is considered to be the way forward. Full implementation and, through a holistic approach, evaluating the whole greenspace resource within the urban area, might help to provide a balanced means for devising a comprehensive strategy for planning and management.

In summary the output from the inception stage is an understanding of the toolkit, a decision on the processes involved and a timetable for implementation.



The second step in the implementation process is to determine the location and extent of existing areas of greenspace that might qualify.

The approach outlined here is tailored for accessible natural greenspace, but could be adapted for inclusion in a more general audit of open space. This process should begin with the compilation of a list of sites for assessment. The content of this list will depend upon the scope of the implementation project but, within that, it is recommended that the list be as fully inclusive as possible, since to limit the range of sites considered will limit the value of the results obtained. Candidate sites can be divided into two groups:

• **Pre-qualifying Sites.** Sites that have an existing designation of international or national importance such as Special Protection Area (SPAs), Special Areas of Conservation (SACs) and Ramsar sites, Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNR), Marine Nature Reserves (MNRs) as

well as locally important sites or 'Local Sites' such as Sites of Interest for Nature Conservation (SINC's), Local Nature Reserves LNRs and Regionally Important Geological Sites (RIGS) can be considered to be 'natural' by definition and accepted as such without further review, though it will be necessary to assess their accessibility.

Potential Sites. The second list would include all other sites thought to potentially meet the requirements of the toolkit. Selection of these sites needs to be approached in a number of

ways, including local consultation, analysis of maps and from aerial photographs.

It is suggested that, for best results, the assessment should include the smallest sites that can be identified in practice. No minimum size limit is assumed within the toolkit, but it is recognised that there may be practical reasons for local authorities electing to apply one. Guidance on selecting a minimum size is given below.

However such a decision should be made as part of the project inception process.

Coastal spaces can also be included as candidate sites and should be mapped from the nearest urban development features to the high water mark. The nearest urban features might be sea defences, a promenade or a coastal road. In many cases it may be that the sea at high tide reaches the urban feature, leaving no practical access to the shoreline and therefore no site to map.

In this guide the process of implementation will be illustrated in relation to a hypothetical urban area. Although based on an actual city, the worked example is completely hypothetical to demonstrate the range of circumstances that local

authorities might encounter. At each stage the impact of the process will be shown on the map of the urban area and key issues highlighted.

The greenspace inventory can be done by straightforward desk study, tending towards the inclusion of any sites of uncertain value, as it is better to apply the 'precautionary principle' at this stage. Sites are best included when there is uncertainty over their status as they can easily be excluded later on. The diagram below shows how this process might work, drawing on a number of existing sources of information.

There is no single data source that provides an appropriate definition of natural greenspace suitable for this work. However, a number of useful datasets have been identified that can be integrated within a GIS or that can be examined as hardcopy to assist with the identification process.



Minimum Site Size

In deciding whether a minimum threshold for site size should apply, two questions need to be addressed:

• Is there an area below which a site cannot offer experience of nature to the visitor? If so, it has not proved possible to identify a single universal threshold. This is because the ability of a small site to provide a natural experience is dependant on its surroundings, the structure of the site itself and the perception of visitors to it. Each of these three factors is so variable that the performance of such sites can only be assessed individually as part of a survey exercise.

Are there operational factors that suggest an area below which local authorities will have

 practical difficulties surveying, mapping or managing a site? There are practical operational factors which might suggest a minimum site size. These include existing limits for identifying sites in a local development plan; adopting sites for local authority management; and for grant-aided urban forestry schemes.

For practical reasons a minimum size threshold of 0.25 ha is suggested, though local authorities might find specific local circumstances which suggest a different, and perhaps smaller limit, especially where pre-qualifying sites are concerned.

Figure 2 shows how this process might work, drawing on a number of sources of information, and Figure 3 illustrates the outcome in detail.

Figure 2. Identifying candidate sites from a variety of data sources



The most reliable means of identifying appropriate sites is through the use of site survey complemented by local knowledge. There are a number of additional datasets associated with the initial inventory phase which can help with identifying sites to survey. For example in Figure 3 the Ordnance Survey MasterMap is used to identify areas classified as 'natural greenspace' which are then cross referenced with aerial photographs and site survey data.

Figure 3. Ordnance survey base data map based on OS MasterMap



Community consultation can assist the candidate site identification process, allowing individuals, local communities and stakeholder groups the opportunity to comment on site selection. An effective way to achieve this is by putting maps of candidate sites online and inviting comment from local people (on the

identification of the sites, as well as on their subsequent assessment for naturalness and accessibility) improving 'buy-in' from local communities to the whole implementation process.

Worked Example: Identifying Candidate Sites

When the hypothetical urban area is subjected to this process, the picture that emerges is shown in Map 1.

In this example 'potential' sites which meet the requirements of the toolkit have been identified. Coverage is of sites in all ownerships, not just that of the local authority. In this way it is possible to include a number of private golf courses and institutional grounds, amongst other sites.

This assessment includes designated sites that pre-qualify as natural, needing no further consideration of naturalness, thus reducing the number of sites for subsequent assessment.

Whilst based on a real city, the worked examples in this guide are designed to be entirely hypothetical and purely illustrative of the processes involved.

In summary the output from Step 2 is a map and inventory of all candidate greenspace sites, ready to proceed to the stages of assessing naturalness and accessibility.

Figure 4 shows photographic examples of a range of candidate greenspaces, to illustrate the types of land potentially involved.

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Map 1. Mapping the candidate sites



Mapping the candidate sites



The Information on this map is for illustrative purposes only

Figure 4. Examples of candidate sites

Parks



A park with many trees and low level for management.



A park lacking in any natural features with intensive management.

Churchyards and cemeteries



An overgrown and unmanaged churchyard.

A churchyard with intensive management.

Amenity greenspace



Large open and intensively managed playing fields.



Smaller bowling green with restricted access.



Linear greenspace: streams

A canalised drainage ditch.



A natural meandering stream within a wooded parkland setting

Both provide linear greenspace linking other greenspace areas and forming corridors through urban areas.

Step 3: Is a candidate area natural?

Green space types

The aim of the whole implementation process is to promote the provision of natural places accessible to people in urban areas.

Towns and cities contain a great variety of green spaces, from woodlands and farmlands to designated greenspaces such as parks and playing fields, as well as greenspaces on institutional grounds, private land, allotments, post-industrial wastelands and along railway lines.

The experience of nature is not restricted to places traditionally considered as natural, such as woodlands, but can also be found in parks, in the wider countryside around towns and in other designated greenspaces. Greenspaces are particularly attractive when they offer the opportunity to engage in different activities, and where the possibility to experience 'wild' nature is integrated into a formal setting. Sometimes the vegetation on sites will be self-sown but this is not essential: the toolkit is particularly supportive of well-maintained multi-functional greenspaces.

In view of this, the toolkit adopts a comprehensive approach to defining natural greenspace, recognising that there are many different types of greenspace where nature can be enjoyed, and that there is a continuum from 'wilderness' to intensively managed greenspace and paved places which can still include natural features

such as mature trees and fern-clad walls. **Natural** is understood here as a particular quality which greenspaces can offer. Natural areas, in this sense, are places where greenspace structure and quality of management combine to support a diverse or distinctive flora and fauna which otherwise might not be encountered in the built environment. Here natural processes will be dominant and the visitor will enjoy a distinctive sense of place. The figure beneath highlights this process, as part of the fundamental concept of ecological succession, where natural processes replace the original ecosystem until a climax community is reached, this can only occur where there is a low level of management.

Figure 5 illustrates in chart form the range of 'naturalness', from non-natural artificial surfaces through decreasing levels of intervention and management to highly natural low level management woodlands and grasslands.



Green space types

The aim of the whole implementation process is to promote the provision of natural places

Artificial Surfaces



Would not be included in the 'natural' category E.g. Children's playground

Intensive Management



Frequently –mown grassland would not normally be included in the 'natural' category. E.g. playing fields, amenity grassland

Extensive Management



Rough and semi-improved grasslands would be considered as natural with extensive management E.g. Rough grassland

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Low-level Management

A Low level of management would be considered natural E.g. woodland



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Figure 5. When identifying natural greenspace, the most important factor is the intensity of intervention, whether this is management or any other form of disturbance.

This toolkit provides a generic definition of "Natural Greenspace" which needs to be interpreted site by site in order to decide which sites are "natural". To assist in this interpretation we suggest that Greenspace may be considered natural when it is predominately covered by either one, or a mix of the vegetation structures covered by the following list. Examples of how these natural features can translate into real greenspace examples are demonstrated in Figure 6.

Natural features of greenspace:

- 1 Woodlands and copses with freely growing shrubbery or extensively managed grassland underneath. Trees and tree clumps with freely growing shrubbery or extensive grassland underneath.
- 2. Freely growing scrub and dwarf shrubs (e.g. heathland).
- 3. Rough grassland, semi-improved grassland, wild herbs and tall broad leaved herbs.
- 4. Rocks and bare soil where natural succession is allowed to freely occur (including bare soils in wastelands).
- 5. Open water and wetlands with reeds, tall broad leaved herbs, etc.
- 6. Coasts which have natural features such as tidal flats, sand dunes or rocky shores.

Worked Example: Identifying 'Natural' Greenspace

At this stage of the process the focus will be on examining all candidate sites (other than those that pre-qualify as natural) in order to determine whether or not to consider them to be natural. The map below, at Map 2, shows the results of this process (note by comparison with Map 1, how many of the candidate sites have been excluded at this stage). The excluded sites may still have a role to play, as these are candidates for action to improve the provision of accessible natural greenspace through changes in the management regime.

Sites that do not fully meet the definition of 'natural' greenspace, but which contain significant natural areas within a mosaic with less natural greenspace (e.g. a large group of trees with rough grassland underneath in a wider managed parkland setting), can also be shown if appropriate.

In summary the output from Step 3 is a map and inventory of natural greenspace sites, ready to proceed to the stage of assessing accessibility.

Figure 6: Examples of natural greenspace in urban areas



City woodland. An area with both young and mature trees, which has freely growing shrubbery or extensive grassland underneath.



Cemetery: demonstrating areas of rough grassland, semi-improved grassland, wild herbs and tall broad leaved herbs.



Lagoon and Wetlands Reserve demonstrating an area with reeds and tall broad leaved herbs.



An area of freely growing scrub and heath.



Rocks and bare soil where natural succession is allowed to freely occur (including bare soils in wasteland.

Figure 7: The coast and the wider countryside

The coast



An open beach with tidal sand flat and gravel: this could be classified as natural although there is no vegetation naturally growing



Where breakwaters, defence works and piers determine the character of coastlines, these would not be considered as natural.

The wider countryside



Footpaths with low intensely managed surroundings would be considered natural.



Intensively managed farmland would not normally be considered natural.



Map 2. Mapping the distinction between natural and Non-natural greenspace

including pre-qualifying sites Non-natural greenspace Infrastructure Motorway Major roads Minor roads Railways Footpaths Urban area 1 kilometres

Map 2:

Candidate Sites

Mapping the distinction between natural and Non-natural greenspace

Natural greenspace

Hawlfraint y Goron. Codwir pob hawl. Cyngor Cefn Gwlad Cymru, 105010813 (2010).

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The information on this map is for illustrative purposes only

Step 4: Is a natural area accessible?

There are many factors that contribute to the accessibility of a greenspace, and they can act together in complex ways.

Accessibility encompasses a range of situations from the purely visual - accessible only from a viewpoint - to fully open access, with the right to move about freely and experience it without disturbance. There is a gradation of accessibility; however for a site to be included as 'accessible' within the toolkit it must be possible physically to enter it.

In conducting an accessibility check, there are a number of issues that need to be resolved to establish conditions on the ground and then to assess the level of accessibility that is possible. For this purpose we divide access into five categories (Figure 8):

- 1. Full Access: Entry to the site is possible without restriction.
- Conditional Access: A right of entry exists which is subject to or affected by one or more restrictions or conditions that may affect the quality of the natural experience enjoyed by the visitor. E.g. The public may have no right to leave a footpath which goes through the site.
 Proximate Access: There is no physical right of access but the site can be experienced from
- its boundary, where a close-up visual and aural experience of nature may be available.
 Remote Access: No physical right of access exists and the proximate experience is limited, but the site provides a valuable visual green resource to the community along a number of distinct sightlines and at distance.
 - No Access: No physical right of access exists and views of the site are largely obstructed.
- 5.

For the purposes of the toolkit, accessibility is taken to mean the ability of visitors to physically gain access to a site. This means sites classified as accessible must have either full or conditional access. Proximate access is not considered sufficient under the toolkit because physical exclusion from the site remains. The factors inhibiting the use of conditionally accessible sites should be identified and, where possible, action taken to address them.

Figure 8: Assessing Accessibility



It is recommended that an accessibility check be conducted on all of the natural greenspaces, including those with formal designation for nature conservation value. The reason for this is that some of the designated sites may be particularly sensitive to disturbance and damage through public access and therefore it may be

necessary to restrict or even to discourage visitors. Given the social and educational benefits that such sites confer on the urban environment every effort should be made to ensure at least conditional access.

While some accessibility factors directly affect the assessment of a site, others will be factors that affect its catchment zone; these will come into play in a spatial

analysis at a later stage. These will be physical factors such as the number of access points and the effect of barriers on the approaches to sites, such as railway lines, roads and rivers; the influence of these effects will be discussed later (see Step 6).

Access to coastal sites can be considered in the same way as for other sites. For instance, standing on the promenade overlooking a beach could be considered to be proximate access, while restricted access due to the tide would be a conditional access factor.

It is important that some site verification is conducted from time to time, to determine land usage as attitudes towards a greenspace among the local community will influence whether it provides effectively for their needs. A high quality natural site with excellent access will not be fulfilling its potential unless the local community makes effective use of it. Equally, if a site is well used by some sections of the community but is hardly used at all by others then it may not be providing for local people as it should. It is therefore important to identify and understand the social factors underlying such effects, so that practical action can be taken to rectify significant problems to ensure there is easy equitable access

to high quality green space as shown in the National Sustainable Placemaking Outcomes on page 19 of Planning Policy Wales Edition 11.

Worked Example: Identifying Accessible Natural Sites

For the purposes of implementing the toolkit it is necessary to verify whether the public are able, legally and physically, to enter a site and to move about within it.

Map 3 shows what effect this test might have on the greenspace map, as some natural greenspace sites have now been excluded on accessibility grounds. For the purposes of the toolkit it is necessary only to distinguish between sites that qualify as accessible and those which do not, and that is the basis of Map 3. However any further qualitative distinctions applied can be readily displayed, while refinement to show the presence of individual factors that affect accessibility is also possible.

Later, it will be demonstrated that physical access factors, such as the location of access points and transit barriers can be located on the map and their effects accounted for and displayed automatically by the Geographical Information System software.

In summary the output from Step 4 is a map and inventory of natural greenspace sites that are accessible to local people and the local community.

Figure 9: Examples of conditional access: factors include, among others



Vandalism



Litter



Map 3. Mapping accessible natural greenspace



The information on this map is for illustrative purposes only

Periodic closure

Step 5: Analysing Provision

To analyse provision it is essential to establish the spatial pattern of accessible natural greenspace and its associated catchment zones, as well as identifying those areas currently lacking in provision.

In order to conduct this, some basic data about the sites is needed:

- The site should be located on an appropriate map, The
- **boundaries** of the site should be identified, **Points of**
- access to the site should be plotted,
- The area of the site should be noted.

The next step in a full implementation is to map site catchments, initially by putting each site into a size hierarchy, in order to determine the appropriate site catchment as follows:

- Tier 1: sites up to 20ha: catchment zone 300m, Tier 2:
- sites of 20-99ha: catchment zone 2km, Tier 3: sites of
- 100-499ha: catchment zone 5km,
- **Tier 4:** sites of 500ha or more: catchment zone 10km.

In applying these tiers, it is important to note that larger sites also serve as greenspace on the lower tiers of the hierarchy. Thus for a site of 120ha, three zones should be applied: 5km, 2km and 300m.

Site catchments are best represented graphically on a map, ideally using GIS. There are a number of ways of doing this:

- Drawing a simple distance buffer around the boundaries of a site, Taking
- distance measures from points of access to a site, Calculating actual
- distance along principal routes of access (network analysis).

It is recommended that site catchments are mapped for each tier of provision, to provide a full picture. However should this not be possible, a staged implementation may be conducted, concentrating on a single tier to begin with and deepening the analysis when resources allow. If this option is taken, it is recommended that Tiers

1 and 2 (the most local sites) should take initial priority with others following as practicality allows. In order to assess compliance, the level of provision at each Tier can be combined onto a single map using a GIS overlay.

The quality of the analysis is improved by applying the second and third of these options, but the complexity and difficulty is increased. If it is only possible to carry out simple buffer analysis, further modification of the results could be carried out in order to take account of major barriers and other forms of impediment which the method has not addressed.

• **Buffering:** creating a zone of a specified width around a point, line, or a polygon area. It Provides a useful, simplistic spatial pattern of provision, can be done quickly, and offers the best option with time constraints. It can also be updated quickly. However, Does not take into account blockages such as railways, rivers, buildings and busy roads.

Point to point line distance calculation: Calculates the distance between two points - for example a park gateway to the front door of a school. It provides a quick analysis of distance but gives a very simplistic analysis of access because it does not take into account blockages such as railways, rivers, buildings and busy roads.

Network Analysis: calculates the distance between points via paths, pavements and other rights of way – this gives the best estimation of the path that a person would walk in real life.

It is especially useful when analysing access to green space at the local level e.g. a housing estate or neighbourhood. It can incorporate a range of different variables in order provide a more realistic simulation of travel distances and times, for example, if steep slopes are en-route then Naismith's Rule can be used to modify the calculated walking time to take account of the extra time needed to climb the slope. Network Analysis allows the integration of the demand for greenspace (population and demographic information) directly with greenspace provision. This technique offers the best analysis of greenspace provision but it takes time and expertise or the funds to pay for the time of a consultant who has the time and expertise. It can also be costly or time consuming to repeat the analysis or to compare different scenarios

Please note: The 300m standard for access to green space close to home refers to the straight line distance to the closest point on the boundary of the green space. If Network Analysis is used then the distance to home should be set to 400m to take into account the need for the walker to follow the road and footpath network to access greenspace, crossing streets and going round corners etc.

Map 4. Mapping catchment zones by buffering



Mapping catchment zones by buffering



The Information on this map is for illustrative purposes only

Map 5. Mapping catchment zones by network analysis



The information on this map is for illustrative purposes only

Map 5:

Mapping catchment zones by network analysis

Accessible natural greenspace



Tier 2 >20ha

Catchment areas.

Satisfies Tier 1&2

Satisfies Tier 2

Infrastructure

Motorway Major roads Minor roads Railways

Footpaths

1 kilometres

N

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It is now possible to undertake an analysis of accessible natural greenspace provision. First, the overall provision of accessible natural greenspace per 1000 population should be calculated and used as a guide to overall provision. The next step is to examine areas that are apparently deficient in accessible natural

greenspace, and this is done by highlighting the areas on the map that fall outside the catchment zones of the identified sites. These areas lacking in provision can themselves be mapped and locations where the population is poorly served can be indicated. In this way decision-makers have a useful visual tool to aid in the setting and communication of priorities for local communities.

It should be remembered that the toolkit has four tiers of provision. It is therefore possible that a location satisfactorily served at three tiers, might still be lacking in provision at the fourth.

The mapping of deficient areas is a purely spatial demonstration of where accessible natural greenspace provision is lacking. In an ideal world the local authority would recognise each area lacking in provision and take action to remedy it. However, it is recognised that in real terms this will rarely be possible, and local authorities are accordingly encouraged to use the analysis to decide an appropriate local response in the light of available resources and competing priorities.

In addressing areas where provision is lacking, local authorities might consider the following options for prioritising increased local provision:

- Areas with high population density; Areas with
- a high index of deprivation
- Areas with low general provision of greenspace of all types; Areas where
- communities have limited mobility;
- Areas close to schools;
- Areas where it is possible to create coherent greenspace networks Areas of
- high urban density might be prioritised over areas with a large proportion of space taken by private gardens

It is possible to conduct analyses at smaller scales than that of the whole local authority, such as according to electoral wards. If this is attempted attention should be given to the regular movement of population, in addition to residential patterns. For instance, some town centres may have very low permanent populations but high temporary ones during working hours, for whom there may also be a need to provide accessible natural greenspace.

Worked Example: Analysing Provision

At this point it is necessary to determine the sizes of the parcels of land identified as accessible and natural in the previous stages of the work. Here, the use of a GIS has enabled site areas to be determined easily as parcel size is either an integral component of the data or is readily calculable within the system. From this basis, it is then straightforward to classify particular sites into the Tiers identified above, and which will be used to determine the appropriate catchment size to be applied.

Once this is complete the catchment areas of the accessible natural greenspaces that have been identified can be plotted, in order to begin to build up a spatial picture of provision. In Map 4 catchment areas have been assessed through the use of distance buffers, with the radius of the buffer set according to the size, or tier category, of the site. In this example, for ease of visual interpretation of the results, only two Tiers have been considered. Note that there are obvious barriers to access, such as railways and rivers that are not automatically considered using this approach. Map 5 has used network analysis to help identify those zones which should be excluded (these can be removed from the map at this stage) and to calculate catchments based on actual walking distance.

The larger sites have multiple catchment zones and a seemingly large site can be given a buffer from a lower tier because it only has a low proportion of natural cover within it. Even this relatively simple map shows patterns that provide potentially very useful information for planners and the public. It is possible to refine this even further by plotting zones of accessibility to take account of site access points and by undertaking network analysis of approach routes, but this higher quality information requires the commitment of additional time and expertise.

If site access point data are available, it is possible to calculate distance buffers from these points to produce a slightly more representative picture, although it should be noted that the general drawbacks of the simple distance buffer approach still apply. Where access points are known and can be added to the GIS database

it is recommended that a network analysis approach is applied in order to get the most representative picture of the true catchments of sites. It is, however, recognised that the application of this method will require the commitment of additional time and expertise. Map 5 illustrates the effect of using a network analysis approach on the extent of the catchment zones in our hypothetical example.

Those areas not covered by site catchments are deficient in provision according to the model. These areas can be readily plotted and provide a key indicator of zones within the urban area that may be inadequately served by the local greenspace resource and which may accordingly attract priority focus for action to improve provision. In this hypothetical urban area both Map 4 and Map 5 indicate that parts of the urban area may suffer from a lack of provision, especially at the Tier 1 level.

Comparing the distribution of areas of deficiency with data derived from the latest census of population enables the targeting of policy towards areas of high population density. Using other datasets such as deprivation indices it would also be possible to add further information which may help in prioritising different candidate greenspace sites from the initial inventory to be made accessible and/or natural as appropriate.

In summary the output from Step 5 is a map and inventory of the catchment areas of accessible natural greenspace sites, and by default, areas lacking sufficient provision.



Step 6: Developing the Policy and Management Response

It is for local authorities to determine local responses to areas with low provision.

It is recognised that the scope for realistic progress from the identified current position towards that of the model will depend upon a range of factors unique to each local authority area.

However it is good practice for local authorities to undertake the following:

- To move towards full implementation of the principles of the model;
- To maintain and publish statistics and maps showing levels of provision; To set
- appropriate local targets for provision; and
- To take appropriate action to improve levels of provision in deficient areas in order to meet the adopted targets.

Good practice in this respect would be policy developed in balance with the full range of local development, social and environmental priorities. The preferred mechanism for policy delivery would be by means of a local Green Infrastructure Strategy that would set out the results of the implementation of the model and the policy response to it, in a manner fully integrated with other areas of policy, such as for formal town parks and playing fields. This could be a discrete document, but could also be a coherent set of principles set out within another appropriate policy tool. In turn the Green Infrastructure Strategy should inform, and be informed by, other policy documents, such as the Local Development Plan, Well-being Plans under Section 39 of the Well-being of Future Generations (Wales) Act 2015 and biodiversity plans under Section 6 of the Environment (Wales) Act.

Figure 10: The role of the Greenspace Strategy



Available tools: the planning system

There are a number of ways that the planning system can be used to support the achievement of objectives for natural greenspace provision:

• The use of planning policy to identify the key elements of the strategic greenspace resource and to protect it effectively, perhaps as part of a greenspace network;

Supplementary planning guidance reflects general priorities for greenspace provision

associated with certain significant classes of development. Current relevant supplementary
planning guidance is largely contained within TAN 16 (Sport, Recreation and Open Space),
although TAN 5 (Nature Conservation and Planning) supports greenspace provision from a
biodiversity perspective, and TAN 14 (Coastal Planning) deals specifically with coastal
planning issues;

The creative use of development briefs to set out greenspace requirements in respect of

• specific development sites, whether this is development of new greenspace of a particular type on a site, or the preservation of high quality greenspace (and the retention or development of access to it) within the development area.

Section 106 agreements can be utilised to secure funding through open space strategies linked to TAN16. Such agreements can be used to ensure that developers contribute towards accessible greenspace on new developments (usually on developments of up to 19 dwellings) so greenspace elements are included within a development, or that compensatory provision is made in respect to lost greenspace. The scope for 106 agreement has widened considerably as this toolkit has provided evidence to link developments to greenspace of 500ha within a 10km radius. For example a developer may provide for access or improvements to green space such as a Country Park up to 10km from their development.

Available tools: management approaches

There are three key means of using management approaches to support the implementation of the model:

- Strategic management planning, e.g. by means of a greenspace strategy, to identify spatial priorities and set out targets for action;
- Detailed management planning for individual sites which sets out the key purpose(s) of a greenspace and objectives for changing the character of areas in whole or in part from one type to another. In this way it might be possible to change, for instance, a little-used area of amenity grassland into a natural area through planned management action. Guidance on landscape management for this purpose is beyond the scope of this document; and

The local authority could approach private, or institutional, landowners to develop management agreements for particularly valuable greenspaces. In this way public accessibility to land can be obtained and maintenance quality standards agreed.

Management approaches can be reinforced by the use of local designations such as Local Nature Reserves (LNRs) and national greenspace quality standards such as Green Flag Awards to help maintain the credibility of sites included within the greenspace strategy and contribute to future management strategies.

Setting Action Priorities

Planning the right mix of actions in response to the accessible natural greenspace assessment may not be straightforward. A number of different approaches are available and some may be more difficult to apply than others. Reasons for this might include resource constraints or administrative complexity. Action-planning should always be rooted in the local assessment of the greenspace resource and its aims, objectives and targets should be realistic.

In order to achieve this it might be appropriate to work within a hierarchy of action and spatial priority, focusing first on the highest priorities and actions which yield the biggest impact for the investment made:

• **Spatial Priority** could be given to actions to address deficient areas or other greenspace priorities such as the enhancement of greenspace corridors within the urban area;

Action Priority should be given to actions that are likely to be easiest to implement and

- achieve the most gain for the least resource input. It is suggested that generally this will be as follows:
 - **action to improve accessibility** to sites by creating new or improving existing footpaths, providing additional access points, removing access inhibitors such as litter and vandalism, providing simple off-site infrastructure to overcome access barriers such as roads, rivers and railways or by facilitating access to private sites by negotiating management agreements with landowners;
 - action to manage existing greenspace for change by reviewing sites in local authority ownership to see if opportunities exist for making areas within existing sites 'natural' through management action;
 - action to create new accessible natural greenspace sites through the planning system by means of tools such as supplementary planning guidance, development briefs and Section 106 agreements. The development planning system is potentially a powerful tool at the disposal of a local authority, and much might be achieved through its appropriate use; and

• **Special Priority** could apply to action programmes linked to other cross-cutting priorities, such as the tackling of social exclusion by enabling the greater use of accessible natural greenspace by the disabled, women, ethnic minorities and children, simple steps could be taken for example including zig-zag paths which could control gradient for the elderly and wheelchair users.

Continuing community consultation at this stage will be important in keeping local communities and stakeholder groups informed and involved, increasing local community 'ownership' of local sites, and making future management and maintenance a more efficient and effective process.

National Standard for Parks and Greenspaces

The Green Flag Award scheme is the international standard for parks and green spaces. Sites applying for the Award are judged against the following eight criteria:

- 1. A Welcoming Place Healthy
- 2. Safe and Secure Well
- **3.** maintained and Clean
- 4. Environmental Management Biodiversity,
- 5. Landscape and Heritage Community
- 6. Involvement
- 7. Marketing
- 8. Management

Figure 11: Examples of Actions to Increase Provision

Below are examples of the many ways of increasing the amount of accessible of natural greenspace.











Linear features such as derelict railways, river and canal corridors can be given natural features and used to connect greenspace networks together



New accessible natural greenspace can be created in association with large development projects such as business parks

Additional example measures to improve greenspace provision and quality in areas resistant to change.

In many urban areas there may be zones which lack access to natural greenspace and for which significant improvements are not realistically possible. In these areas even small spaces can be improved by using techniques that introduce a measure of green structure into the urban context, such as:

- Planting street trees;
- Roof, wall and street greening; Developing
- quality residential greenspace;
- Creative conservation within school grounds and industrial sites.

These approaches may not improve the level of provision of natural greenspace, but could contribute to the improvement of the urban environment and enhancement of the quality of life in the short term. It can also encourage community interaction and improve community spirit by giving local people the opportunity to get involved. In the longer term, opportunities should be sought to develop more significant additional provision of greenspace.

Monitoring

Provision of accessible natural greenspace and progress made in implementing the standards should be monitored at regular intervals. Ideally monitoring will be linked to the cycle of the Local Development Plan review.

Figure 12: Additional example measures to improve provision in areas resistant to change



Roof Greening



Street Greening



Creative conservation within school grounds



Worked Example: Planning Action in Response to an Assessment of Provision

It has been shown that the hypothetical urban area has significant zones lacking in the provision of accessible natural greenspace. In considering how to address these it is first necessary to ask a number of questions about the existing greenspace resource:

• Are there existing natural greenspace sites to which accessibility is limited? If so, it might be possible to improve accessibility, perhaps by building additional points of access around the perimeter of the site, by reducing the effect of physical access barriers (e.g. by building a footbridge over a road, river or railway that might otherwise discourage visitors) or by negotiating an appropriate management agreement with a private or institutional landowner to facilitate visitor access;

Are there existing greenspace sites which lack natural areas or contain small natural areas that could be expanded? If so, it might be possible to change the management

arrangements for part of these sites to create 'natural' areas large enough to be significant (See Map 6) and

Is there the potential to create new accessible natural greenspace through

development? If so, then the local authority could work to facilitate this by producing supplementary planning guidance and development briefs for specific development sites and by following this up by actively using Section 106 agreements to secure the desired results.

In this way a range of possible actions can be identified, starting with the relatively straightforward improvements to access and moving through to more complex and long-term aims for the creation of new accessible natural greenspace in association with the development control system. By using this together with specified spatial priorities (such as areas of deficiency or green space networks) in planning future action, scarce resources can be deployed most effectively to achieve the best practical results. Additional example measures can be seen in Figure 11.

In summary the output from Step 6 is a management strategy for accessible natural greenspace, fully integrated into the planning and development processes of the local authority, supported by the local communities involved, that takes its place in contributing to the health and wellbeing of the local population.

provision

Map 6. Options to improve natural greenspace provision

The information on this map is for illustrative purposes only

Map 6:

Options to improve natural greenspace

Possible new sites

Change to existing greenspace New accessable areas

Creation of new access

Accessible natural greenspace

Tier 1 <20ha

Tier 2 >20ha

Catchment areas.

Satisfies Tier 1&2

Satisfies Tier 2

Infrastructure

Motorway

Major roads

Minor roads

Railways

Footpaths

1 kilometres

N

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Map 7. Positive impact of proposed actions



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Conclusion



This guidance has presented local authorities with a practical method for implementing the Greenspace Toolkit for the provision of accessible natural greenspace in towns and cities. The process need not place onerous demands on staff and technical resources and can provide excellent support to decision-making on management practice

and future policy in a way that is highly visual and readily understood.

The Importance of Creative Greenspace Management

The toolkit is an approach to promoting nature for the enjoyment of the people living in urban areas. Natural areas are mostly characterised by low management intensity, but providing for natural areas should not be taken as an excuse to neglect the management of existing greenspaces. Natural greenspace requires the long term commitment to skilled management and greenspace managers have a vital role to play in developing the natural potential of the sites under their care and in achieving a high quality, truly multifunctional, greenspace resource for the benefit of local communities.

The Desirability of Holistic Greenspace Planning

The toolkit suggests standards for the provision of natural greenspaces against which the performance of urban areas can be measured. However accessible natural greenspace is only a part of the overall urban greenspace resource, and is often closely related and complementary to other types of greenspace.

This guidance has already suggested that the planning and management of accessible natural greenspace should be placed in the context of a wider urban greenspace strategy. In the future, to increase the sustainability of towns and cities, it may be necessary to adopt even more holistic approaches, including climate change adaptation and mitigation.

Support and Advice for Users of this Guidance

This guidance provides a brief discussion and summary of the Greenspace Toolkit and the means of its implementation. It is not a comprehensive technical manual and from time-to-time detailed practical issues may arise that local authorities may need to seek specific advice to resolve. NRW is committed to the continued support of the toolkit and those that use it, and a range of information materials

may be produced for this purpose. Training workshops may also be held in order to provide detailed support for implementation and advice will be available from NRW staff.

Acknowledgements

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