

Providing Accessible Natural Greenspace in Towns and Cities

A Practical Guide to Assessing the Resource and Implementing Local Standards for Provision in Wales



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Foreword

Hundreds of thousands of people come from around the world to walk in Wales's renowned open spaces¹ – which are often within sight of some of our most deprived communities. So why is it that seventy percent of our adult population gets insufficient exercise to promote good health and well being - costing Wales over £100 million per year²? This toolkit will help you create a solution to that problem.

The research behind this guidance revealed that generally people will not go far from home to enjoy the outdoors. 400 metres is the furthest that most of us will go each day to get to some greenspace – especially if we happen to be single parents with young children and a restricted income. Work through this booklet and you will soon see how our most disadvantaged citizens can be in view of countryside which is effectively unreachable. This toolkit provides simple, sensible ways to make more green spaces accessible close to home where they are most needed.

¹ See www.wtbonline.gov.uk/ for the Wales Tourist Board figures on visitors to Wales and their destinations

² Climbing Higher, Sport and Active Recreation in Wales, Strategy for Consultation. Welsh Assembly Government. Cardiff. 2003

Any old green space won't do when it comes to benefiting our health. We have evidence showing that people need to feel surrounded by nature in order to experience its stress-reducing properties. But the effects are dramatic: the clinical signs of stress begin to fall within only three minutes of entering the right kind of place. This toolkit will enable you to find those places, or help you to plan how to improve places that aren't up to scratch.

This toolkit is not intended to help you protect nature for its own sake: it is to help you identify the sites that your citizens need in order to benefit from contact with nature. It will give you transparent, evidence-based, defensible reasons for acting to protect those sites for the benefit of the people who need them – often the most vulnerable members of our society.

John Lloyd Jones OBE
Chairman
Countryside Council for Wales
January 2006.

Introduction

The Countryside Council for Wales believes that accessible natural greenspaces have an important contribution to make to the quality of the environment and to quality of life in 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 model does not seek in any way to replace them. Instead, this model provides a broader, more inclusive approach to ensuring that people in urban areas have the opportunity to experience nature close to their own doorstep.

What is the Accessible Natural Greenspace Standards Model?

Box 1: Accessible Natural Greenspace Standards

The Countryside Council for Wales recommends that provision should be made of at least 2ha of accessible natural greenspace per 1000 population according to a system of tiers into which sites of different sizes fit:

- no person should live more than 300m from their nearest area of natural greenspace;
- there should be at least one accessible 20ha site within 2km from home;
- there should be one accessible 100ha site within 5km;
- there should be one accessible 500ha site within 10km.

The purpose of this guidance is to set out the principles of the Accessible Natural Greenspace Standards model in order to help local authorities in identifying the current level of provision of accessible natural greenspace 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 standard, the needs of the local community and the value of accessible natural greenspace to it, the existing greenspace resource and funding constraints.

Box 2: What is natural greenspace?

Accessible Natural Greenspace Standards are an approach to promote experience of nature for urban residents. ‘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 process’ will be dominant and the visitor will enjoy a distinctive sense of place.

Urban areas can comprise a large range of greenspaces, such as public parks and gardens, playing fields, derelict land, greenspace on institutions and private greenspace, but also woodlands, wetlands, farmland on the 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.

The concept of natural greenspace will be explained in more detail. However, it is important to note here that the model 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.

The model and the guidance are mainly concerned with accessible natural greenspace on land, but in the Welsh guidance the importance of the coastline to quality of life and the natural experience it can provide, is recognised. Throughout this guidance, special reference will be made to the consideration of the urban coast under the standard.

The model should be viewed not as a rigid standard but as an aspirational target against which local priorities can be set and progress can be measured. Implementing the model 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 model and to present options as to how this might be tailored to suit available resources and the local context.

Box 3: Why do we need accessible natural greenspace?

The literature reviews (Harrison et al., 1995, CURE 2002) showed that there is ample evidence of the values of natural greenspace for amenity/recreation, pollution attenuation, moderation of the urban microclimate, support for biodiversity. More recently, economic benefits from greenspace reflected in property values and in particular the relationship between greenspace and human health and well-being are gaining increasing attention.

The reviews also revealed that:

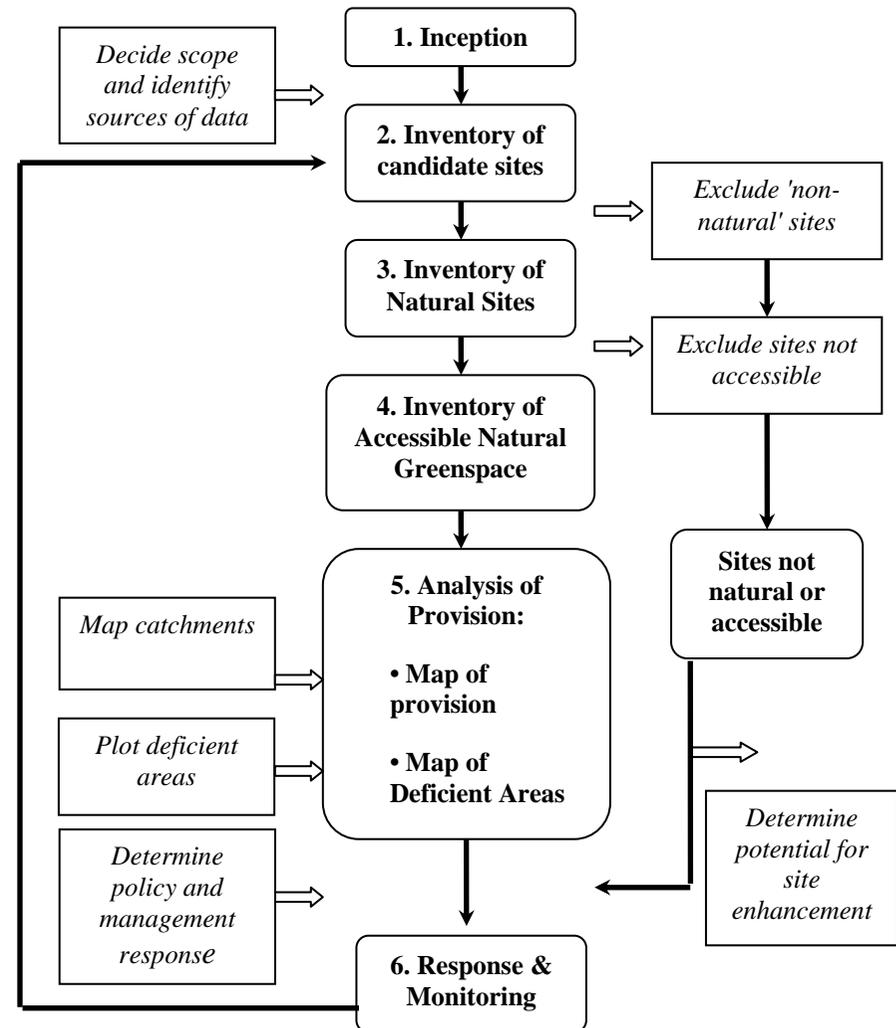
- Design, management and use of greenspace can be more important determinants of their ecological values than the size alone. Parks develop an interior climate when they are larger than 1 hectare. Research in respect of woodlands has indicated an area of two hectares as the smallest wood that people wish to visit regularly. Hierarchic approaches to planning for greenspace on different levels is necessary both from a conservation and a user perspective.
- 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.
- What is perceived as natural can differ between ecologists and greenspace users. While ecologists value greenspace by means of criteria such as species richness and occurrence of rare species, woodland visitors described 'natural' mostly as a contrast to the urban setting, where they could escape from urban life and activities and seek a sense of tranquillity.
- The experience of nature is an important quality a park should offer to be attractive, however, it is rarely the only, and the most important one. These findings are in support of 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. While recent research has called into question their ability to promote ecological connectivity, there can be little doubt that overall green networks 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 the model based on 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 is gathered, local greenspace identified and its status established against the model, so that the accessible natural greenspace resource is known;
- **Analysis** (step 5)- which consists of establishing the spatial pattern of accessible natural greenspace and its associated catchment zones, as well as identifying those areas currently lacking in provision;
- **Response** (step 6)- whereby the priorities are set out for policy and management action to address issues arising from the analysis.

Figure 1: The implementation process



Accessible Natural Greenspace in an Open Space Typology

The model can be applied alongside a typology designed for other purposes. An example of a typology for greenspaces recommended by the Urban Green Spaces Task Force³, for instance, is as follows:

- parks and gardens;
- country parks;
- 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;

The majority of accessible natural greenspace is likely to fall within the *country parks, natural and semi-natural urban greenspace and green corridor* types. However, **all** the categories of open space suggested in Final Report of the Urban Green Space Task Force might include accessible natural greenspace, while it might also be found in other locations, such as institutional grounds and industrial estates. The model aims to consider all natural greenspace that is accessible, regardless of ownership and status.

This point is well illustrated by the recommendation made in English Nature Research Report No. 153, *Accessible Natural Greenspace in Towns and Cities* (Harrison *et al.*, 1995, p6-7), that a definition of natural greenspace should include:

- *"sites awaiting redevelopment which have been colonised by spontaneous assemblages of plants and animals;*

³ *Green Spaces, Better Places- The Final Report of the Urban Green Spaces Task Force*, 2002, p.43, DTLR, London.

- *land alongside water-ways, transport and service corridors which, although perhaps once deliberately landscaped or planted are now mixtures of planted and spontaneous assemblages;*
- *tracts of 'encapsulated countryside' such as woodlands, scrub, heathlands, meadows and marshes which, through appropriate management, continue to support essentially wild plant and animal assemblages. Often these natural areas exist within the framework of formally designated public open space;*
- *ponds, ditches, rivers, lakes and reservoirs;*
- *the less intensively managed parts of parks, school grounds, sports pitches, golf courses, churchyards and cemeteries;*
- *incidental pocket-sized plots along residential and commercial roads, pathways, car parks and property boundaries, including walls and built structures which are often spontaneously colonised by plants and animals; and*
- *allotments, orchards and gardens."*

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 key to the effective implementation of the model.

The model 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.

Step 1: Inception

The inception stage 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 might be:

- identify the team responsible for implementation;
- allocate staff and financial resources;
- fix the scope and timescale of the project;
- set progress milestones; and
- specify 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:

- identify stakeholders for consultation;
- review of national and local policy; and
- survey for relevant existing sources of useful data and appropriate tools to assist the process.

Approaches to Implementation

Implementation of the model can be approached in several different ways, for instance 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 to inform policy and action (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

therefore likely to demand the highest input of time, money and technical resource. In view of this it is recognised that, while full implementation is the end goal, this may not always be possible at the outset of the project.

- 2. Progressive Implementation** allows for the initial implementation of only a part of the model with the intention of expanding coverage in future reviews until full implementation is gradually achieved. In this way an initially limited project allows for the development of familiarity and confidence of working with the model to be developed at a controlled pace.
- 3. 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 could 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 model. Some possibilities are as follows:

- **Site Size Tiers.** The model gives four tiers for site size and catchment and a measure for provision by population (see page 1), all of which should be assessed in a full implementation. However, it would be possible to work with a single tier of the model initially. Although the largest sites may be the more straightforward to consider, it is recommended that the Tier 1 (most local) sites are always covered, in view of the smallest, 'neighbourhood' sites being the most accessible to local communities.
- **Spatial Scope of Analysis.** A full implementation of the model would include the largest site sizes and their catchment

areas of 10km. In order to take full account of areas that are outside of the individual Unitary Authority (UA) administrative area it would be useful to screen for sites on the following basis:

- Any site within 300m of UA boundary;
 - 20 ha site within 2km of boundary;
 - 100ha site within 5km of boundary; and
 - 500ha site within 10 km of boundary.
- **Land Ownership.** For best results all land should be covered in an assessment for the purposes of implementing the model, as people do not consider who owns the land if it is accessible and provides the necessary quality of experience. Initially it would be possible to base implementation solely on, for instance, 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 potentially 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 simply apply a perimeter of appropriate radius around the boundaries of sites. This technique, known as **buffering**, can be carried out manually or through the use of a Geographical Information System (GIS) to yield a useful, if simplistic picture of the spatial pattern of provision. GIS also offers a more sophisticated technique, **network analysis**, to account for factors such as actual walking distance and access barriers. This reveals a more realistic picture of site catchment zones, but requires more detailed data and a greater degree of technical expertise to implement.

Another important step 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 model, 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 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 model 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;
- that changing local priorities, legal requirements and national policy guidance are recognised and accounted for;

- that priorities are revised to account for changes in patterns of need and in levels of available resources; and
- that familiarity with the model 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 could be fully informed by the other.

In the longer term, **extension** of the model's principles to cover all urban greenspace is considered to be the way forward. Implementation of the model to its full scope 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. A full exposition of greenspace strategy development is beyond the scope of this document but potential avenues for progress will be discussed at the conclusion to this publication.

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

OS base data



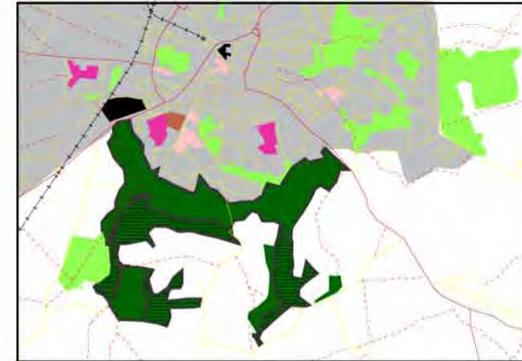
Built-up areas, infrastructure

Aerial photographs

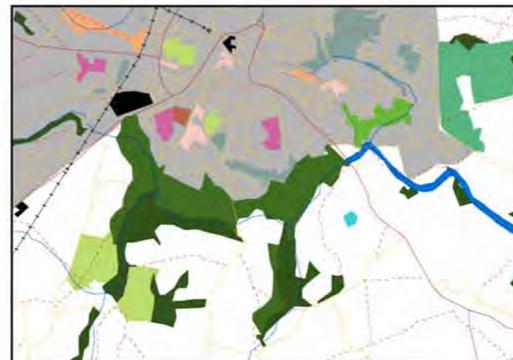


- Identification of further candidate sites by greenspace typology
- Update of existing inventories

Existing up-to-date greenspace inventories



- Designated sites: NNR, SSSI, SBI, LNR, SINC, Country parks
- Ancient woodlands
- Parks and public greenspaces
- Cemeteries
- Institutional: Education, other publ. institutions
- Sports: Playing fields, public golf courses
- Allotments



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Getmapping PLC 2004

Step 2: Mapping the Candidate Sites

The first step in implementing the model 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 under the model. 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 as having special value for biodiversity such as Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNR), Local Nature Reserves (LNR) and Sites of Importance for Nature Conservation (SINCs) or local equivalents. Sites such as these 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 model. 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 include the smallest sites that can practically be identified. No minimum size limit is suggested within the model, 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 in Box 4. 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.

Worked Example: Candidate Sites

In this guide the process of implementing the model will be illustrated in relation to a hypothetical urban area. Although based on the map of 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 product 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 inventory task. Figure 2 shows how this process might work, drawing on a number of example sources of information, and Figure 3 illustrates the outcome in detail.

Box 4: A Minimum Site Size

In deciding whether a minimum threshold for site size should apply within the model, 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 0.25ha is therefore suggested, though local authorities might find specific local circumstances which suggest a different limit.

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. An example is:

- Ordnance Survey MasterMap and aerial photographs

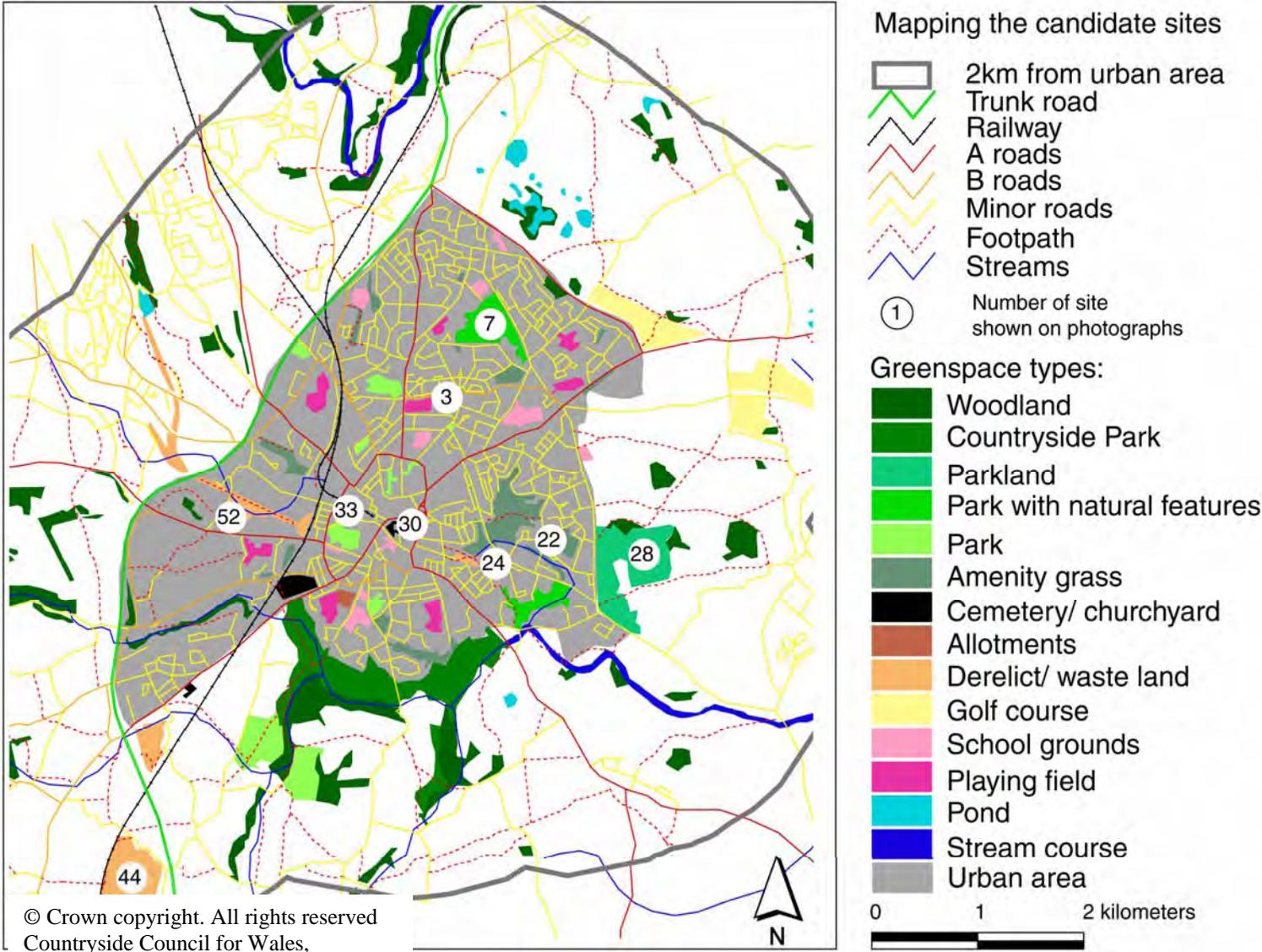
In this example, an OS MasterMap base is used to identify areas classified as ‘natural greenspace’, these can be cross referenced with aerial photographs and site survey data.



Figure 3: Ordnance Survey Base Data map based on OS MasterMap
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When the hypothetical urban area is subjected to this process, the picture that emerges is shown in Figure 4. Notice how, at this stage, the sites are shown by their primary categories within a local greenspace typology. In this example 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, among other sites.

Figure 4: Mapping the candidate sites



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Figure 5: Examples of candidate sites

Parks



Left. Site 33 A well maintained park in the centre of the case study area. However, the park is lacking in natural features and was therefore considered as non-natural.

Right. Site 7 Park with amenity grassland, a pond and a naturalistic tree planting in the background. Note new tree planting to the left. Because of the woodland, the park was considered to have a natural character. A less intensive management of the grassland in suitable areas could further strengthen the natural character of the park.

Parks with natural character



Church yards and cemeteries



Left. Site 30: A churchyard with non-natural character.

Right. Site 28: This parkland in the countryside around the town was considered as having a natural character mainly because of having impressive rows of trees as shown in this picture in the background.

Parkland



Amenity grasslands



Left. Site 24: Amenity grassland, a common type of greenspace in the case study area with a non-natural character

Right. Site 3: A playing field on school grounds, non-natural in character and with restricted access.

School grounds and playing fields



Wastelands



Left. Site 52: A wasteland of a disused railway line mapped as natural greenspace. Disused railway lines can provide important natural greenspace corridors in urban areas both for humans and wildlife.

Right. Site 22: A stream within a park: Establishment of natural stream borders such as reeds would improve habitat quality and give a natural character to the greenspace.

Linear greenspace: streams



Step 3: Is a candidate area natural?

Green space types

The aim of this model 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, among others.

The experience of nature is not restricted to places traditionally considered as natural, such as woodlands, but can also be found in parks and 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 essential⁴, and so the model is therefore particularly supportive of well-maintained multi-functional greenspaces.

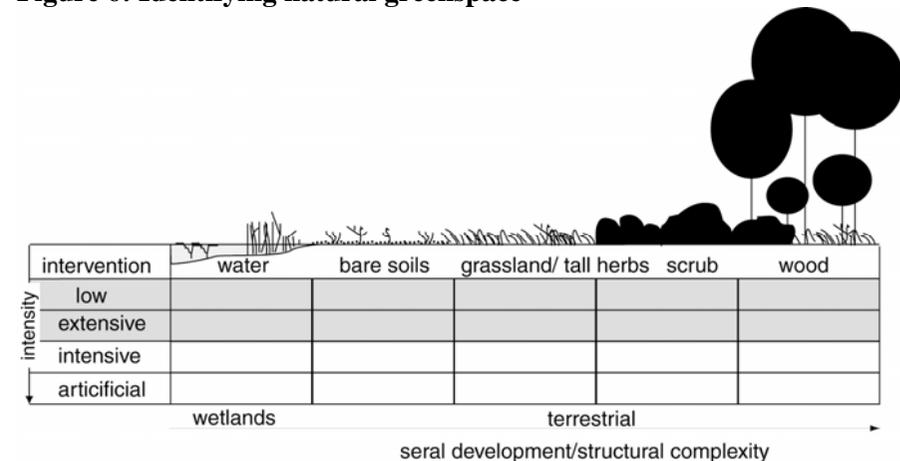
In view of this, the model adopts a comprehensive approach to defining natural greenspace, recognising that there are many different types of greenspace where nature can be enjoyed, and that there is a continuum from ‘wilderness’ to intensively managed greenspace and paved places which can still include natural features such as mature trees and fern-clad

⁴ In English Nature Research Report 153 (Harrison *et al.*, 1995), natural greenspace was defined as "Land, water and geological features which have been naturally colonised by plants and animals and which are accessible on foot to large numbers of people." This guidance suggests that this be interpreted broadly to include designed and managed sites of natural character as 'natural' for the purposes of the model

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.

In order to identify natural greenspace, the major distinction is based on the intensity of intervention, whether this is management or any other form of disturbance. For instance, plantation woodland can have freely growing herb, grass and shrub layers underneath and would then be considered as natural greenspace. Tree plantings with frequently-mown amenity grassland beneath them, on the other hand, would not normally be considered as natural. Equally, rough and semi-improved grasslands would be considered as natural whereas amenity grasslands would not normally be included. Figure 6 shows the basic principle of this approach. For each of the green structures shown, from woodland to bare soil and open water, a progression exists from natural to artificial.

Figure 6: Identifying natural greenspace



We offer a generic definition of ‘natural greenspace’ but it is not immediately clear how to operationalise this. We hereafter suggest a more pragmatic approach in which a greenspace may be considered as natural when it is **predominantly covered** by either one, or a mix, of the vegetation structures listed in the following box. A large greenspace may also count for the ANGSt model when it includes smaller natural areas even though these may not cover the majority of the greenspace.

Natural features of greenspace:

1. Woodlands and woodlots 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 forbs.
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 forbs, etc.
6. Coasts which have natural features such as tidal flats, sand dunes or rocky shores.

The above operational definition still leaves considerable scope for interpretation. Given the complexity of the matter, this guidance does not attempt to provide exclusive criteria for naturalness, nor does it suggest

absolute thresholds to distinguish natural from non-natural, e.g. in terms of the percentage cover of habitat types classified as natural or the percentage of native species. Instead, the guidance proposes that a comparative approach is adopted whereby the degree of naturalness of a greenspace or that of the elements within a greenspace is determined in relation to other greenspaces. A collection of photographs are shown below to provide pointers as to what can be considered as natural greenspace or natural features within a greenspace. We strongly recommend that a local authority might produce a gallery of its own photographs to provide a basis for discussion with local stakeholder groups.

The assessment of the natural value of the urban coastline will be important in many urban areas in Wales. The value of urban beaches as a leisure resource is very clear, but their ability to provide experience of nature is less so. The proximity of urban development, roads, sea defence works, piers, breakwaters and harbours all have a potential impact and, for this reason, many urban beaches may not be suitable to be classified as natural spaces under the standard. Exceptions to this may be relatively open stretches of beach, perhaps buffered by other greenspace types such as parks or dunes (which may be natural greenspaces in their own right) and which show only light development around the margins.

As the assessment of naturalness leaves scope for interpretation, it is most important that judgements are made on basis of information which is reproducible and can be communicated to all stakeholders.

Ecological surveys such as Phase I habitat mapping can provide an excellent source of information to identify natural greenspace or natural elements within a larger greenspace, but need to be adapted to the local urban context. The National Vegetation Classification, especially Volume 5 (*Maritime Communities and the Vegetation of Open Habitats*), might also be a useful reference. User surveys can provide a complement to

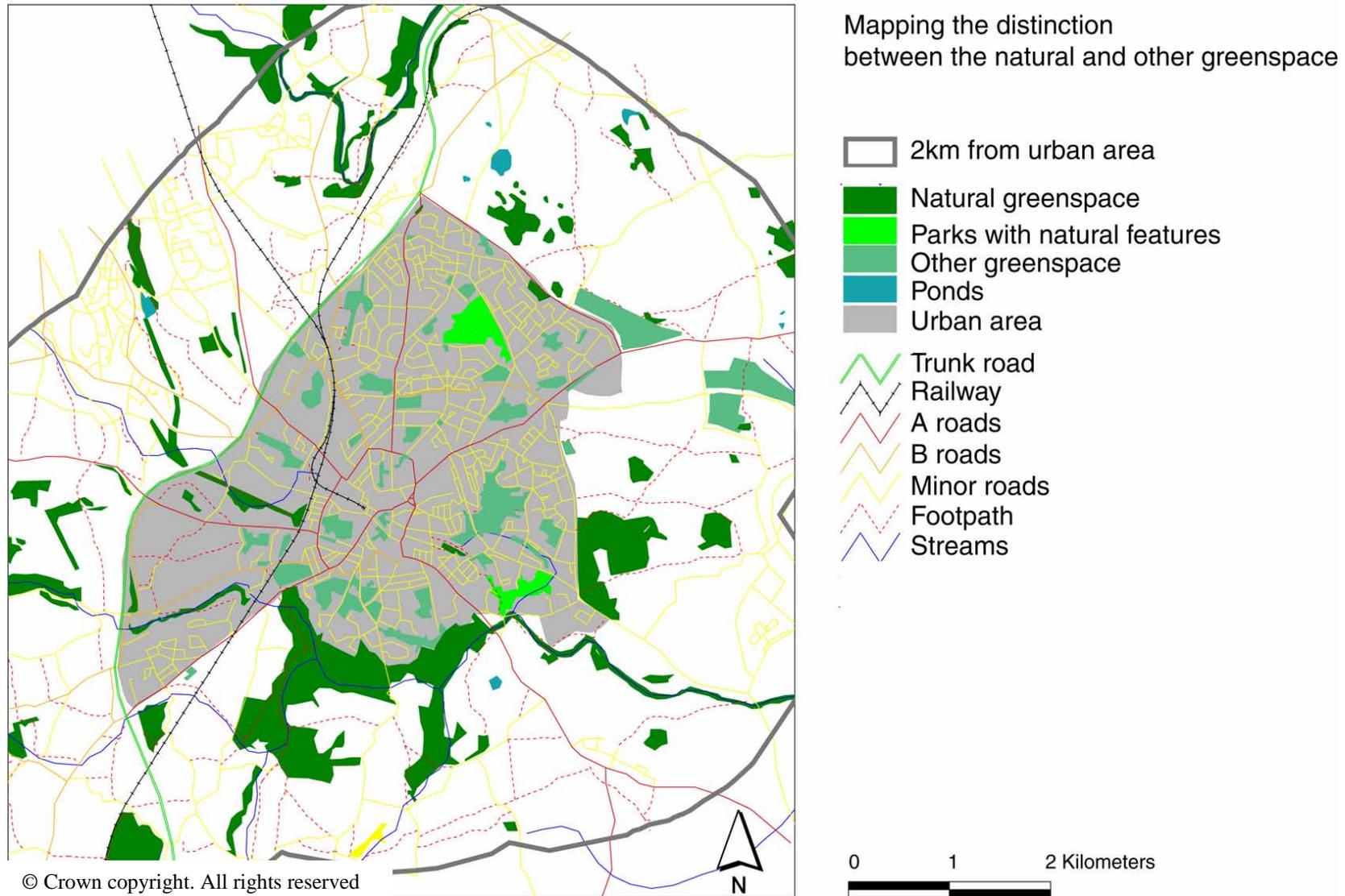
identify places generally *perceived* as natural although not necessarily recognised as such in ecological surveys. These surveys are also an important means to better understand the needs of local residents, the current uses of greenspace and barriers to their current and future use. Interviews with local people and interest groups, such as local Wildlife Trusts, can also provide important information unavailable from other sources.

Worked Example: Identifying 'Natural' Sites

This stage of the process involves examining the 'candidate' sites in order to determine whether or not to consider them to be natural. The map below, at Figure 7, shows the results of this process (note by comparison with Figure 4, 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.

In order to keep the process simple, all of the sites with recognised designations for nature conservation value have been included as natural without further consideration, which reduces the number of sites that require examination. Sites that do not fully meet the definition of 'natural' greenspace, but which contain significant natural areas (e.g. a large group of trees with rough grassland underneath), have also been shown.

Figure 7: Mapping the distinction between natural and other greenspace



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Figure 8: General Examples of Natural Greenspace



Rough grasslands, heathlands, bog



Left. Cemetery with natural character

Right. Parkland with natural character



Figure 9: The natural character of the coast



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



An example of a natural coastline. A sandy beach followed by dunes. Note the defence wall. However, the overall character of the coast is determined by its natural features.



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



Two examples of non-natural coastlines: urban features and defence works predominate the character of the coast



The tidal flat would not be considered as natural due to the predominance of breakwaters and defence works, but the dune area would qualify as a natural greenspace.

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 spectrum from the purely visual to the right to enter a greenspace, move about freely and experience it without disturbance. There is therefore a gradation of accessibility but for a site to be included as ‘accessible’ it must be possible 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 10):

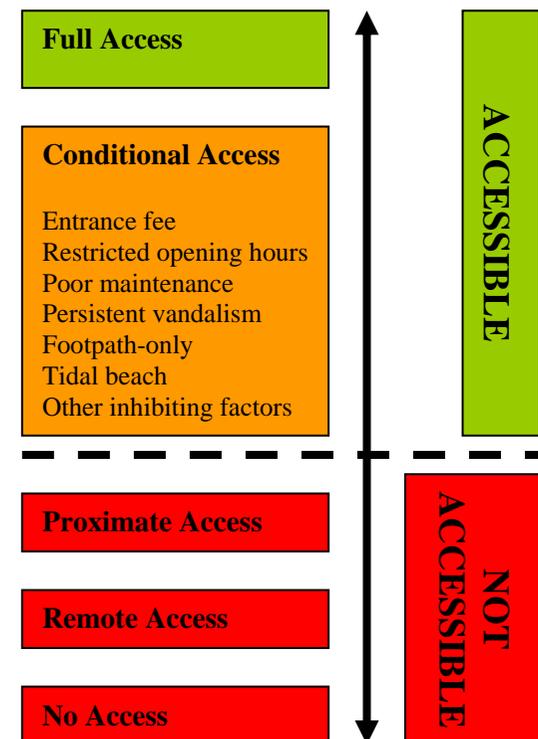
1. **Full Access:** Entry to the site is possible without restriction.
2. **Conditional Access:** A right of entry exists which is subject to or affected by one or more restrictions or conditions that may affect the quality of the natural experience enjoyed by the visitor.
Entrance fee
Restricted opening hours
Poor maintenance
Persistent vandalism
Footpath-only
Tidal beach
Other inhibiting factors
3. **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.
4. **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.
5. **No Access:** No physical right of access exists and views of the site are largely obstructed.

Proximate access is not considered sufficient under ANGSt because physical exclusion from the site remains. In order to be considered sufficiently accessible to satisfy the needs of the model, sites must be either **fully** or **conditionally** accessible. The factors inhibiting the use of

conditionally accessible sites should be identified and, where possible, action taken to address them.

Therefore, for the purposes of the model, accessibility is taken to mean the ability of visitors to physically gain access to a site (sites which satisfy this criterion are then considered to exert a catchment zone upon the surrounding area).

Figure 10: Assessing Accessibility



It is recommended that an accessibility check be conducted on all of the 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 page 29).

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 verification of the usage of sites is conducted from time to time, 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 facilities 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 in the spirit of the “Access for All” policy of the Welsh Assembly Government. For example, research has shown that

provision of good quality footpaths and ranger services can greatly enhance site use by women.

The Accessible Natural Greenspace Inventory

At this point in the process an inventory has been compiled of sites that have met the criteria as 'natural' and 'accessible' and which can therefore be classified as *accessible natural greenspace*.

Box 5: Case Study: The Countryside Agency "Visitor Welcome Initiative"

Described as "*guidance for recreation site managers on providing a welcoming environment*", this slim, practical guide presents a series of checklists to enable the assessment of many of the factors that affect the accessibility of a site to the public. Although for the purposes of the model physical access is the key element, the full consideration of access is considered good practice, and *The Visitor Welcome Initiative* provides a practical means of doing this.

The guide divides sites up into four categories and sets out standards for each. The site categories are:

- Type A: roadside picnic sites and viewpoints
- Type B: informal 'walk around' sites
- Type C: supervised sites
- Type D: prime sites.

Sites are then assessed against standards under seventeen checklist headings, which include identification of visitor needs, access for all, site entrances and exits, paths and trails, site care and site staff, among others. The local adaptation of this system for use on urban greenspace sites could provide a good basis for the assessment of access quality in addition to simply confirming that physical access is available.

A Worked Example: Identifying Accessible Natural Sites

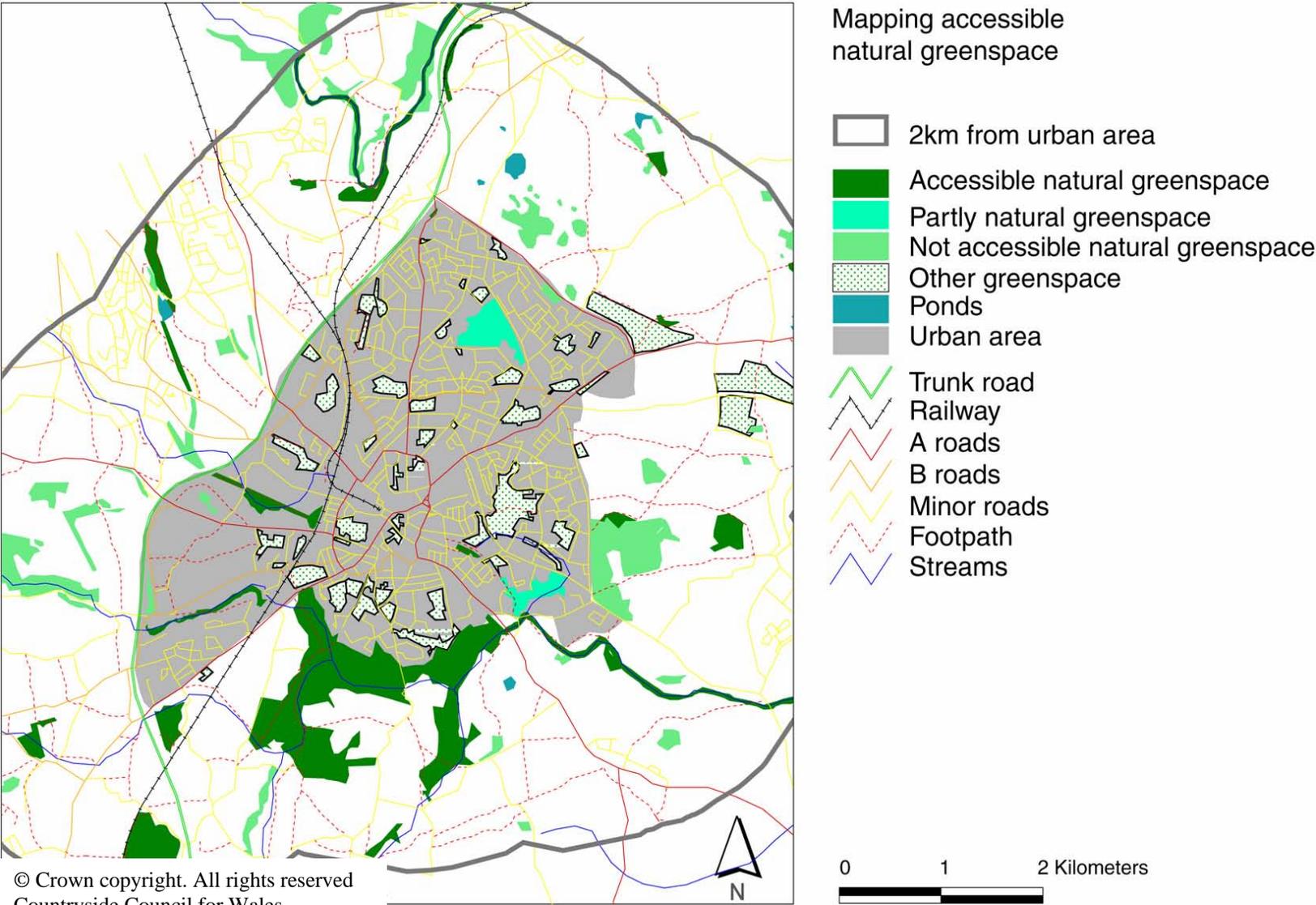
In this stage the natural greenspace sites are examined to determine whether people are able to gain access to them. There are many factors that may impact on accessibility, and it is recommended that these be considered as criteria when examining the quality of sites. However for the purposes of implementing the model it is simply necessary to verify whether the public are able, legally and physically, to enter a site and to move about within it.

Figure 12 shows what effect even this simple test might have on the greenspace map, as a number of natural greenspace sites have now been excluded on accessibility grounds. For the purposes of the model it is necessary only to distinguish between sites that qualify as accessible and those which do not, and that is the basis of the map at Figure 12. 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.



Figure 11: Examples of conditional access: factors include, among others, vandalism (a), litter (b), periodic closure (c)

Figure 12: Mapping accessible natural greenspace



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Step 5: Analysing Provision

In order to conduct effective analysis of provision, 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 place each site into the model's site hierarchy in order to determine the appropriate site catchment zone 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.

The zones of accessibility are best represented graphically by application onto 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).

The quality of the analysis is improved by applying the second and third of these options, but the complexity and difficulty is increased. While even

the first option, applying a simple buffer, provides a very useful illustration of spatial patterns of accessibility, it is recommended that implementers should, if possible, apply the third option, actual distance from site access points, as this provides a much more realistic picture, especially at the local level. 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.

It is recommended that site catchment zones are mapped at 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 later. 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 with the model, the level of provision at each Tier can be combined onto a single map using GIS overlay.

Figure 13: Mapping site catchment zones by buffering

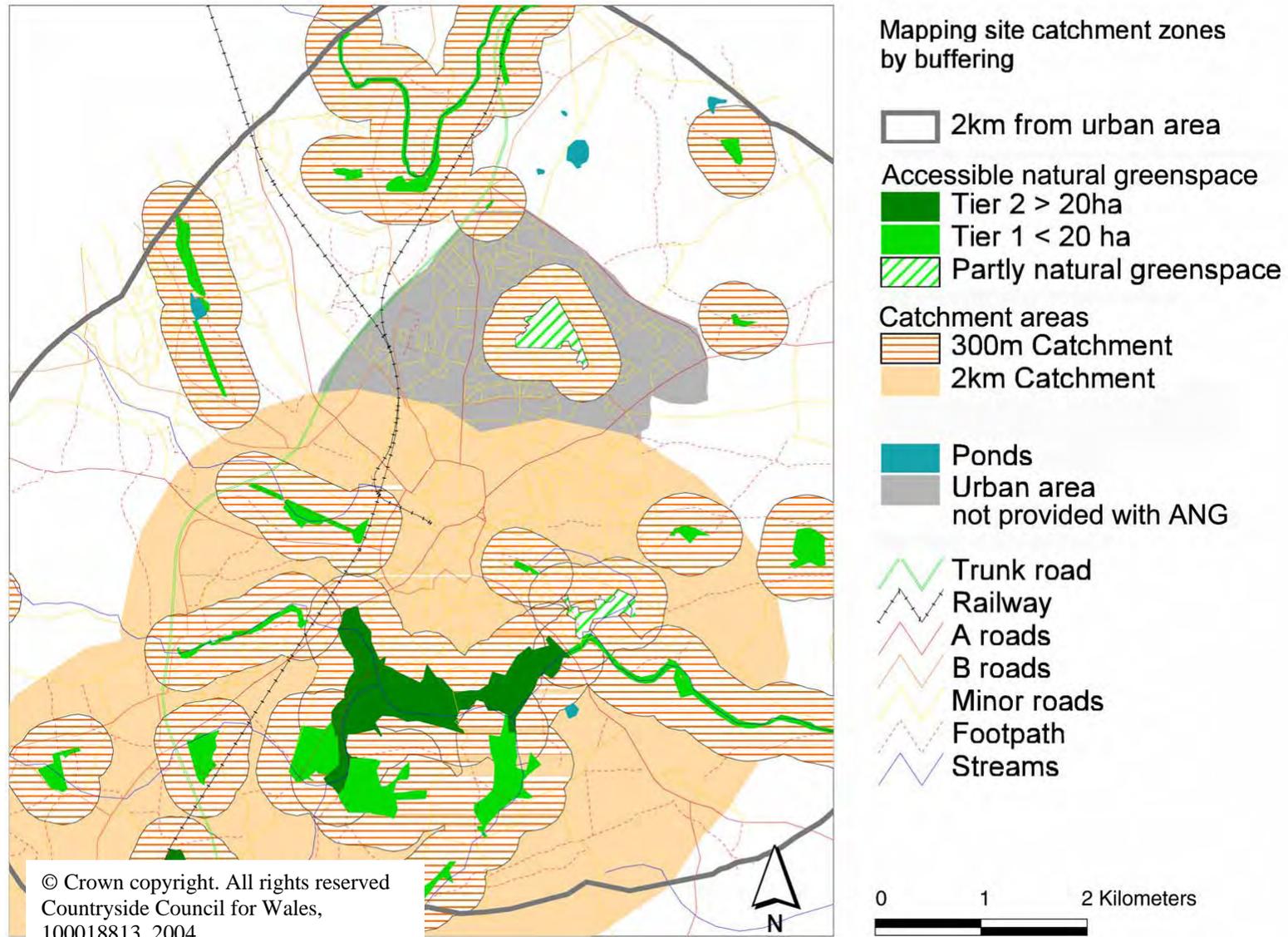
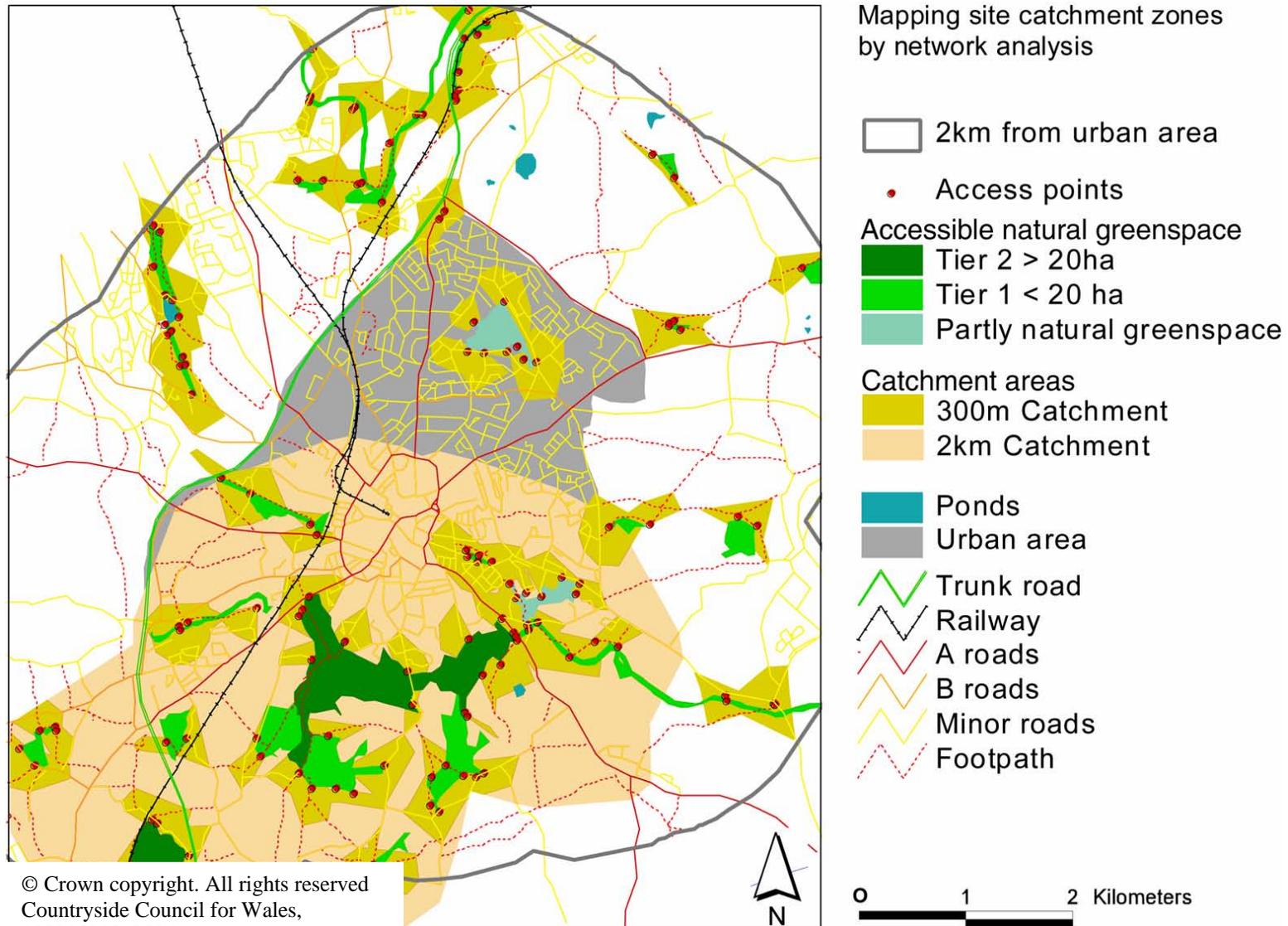


Figure 14. Mapping site catchment zones by network analysis



It is now possible to undertake an analysis of *accessible natural greenspace* provision in the context of the model. 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 model 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 relatively blunt instrument, as they are a purely spatial demonstration of patterns of accessible natural greenspace provision. 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 prioritisation:

- areas with high population density might be prioritised;
- areas with low general provision of greenspace of all types might have priority;
- areas where communities have limited mobility might be prioritised for increased local provision;
- areas close to schools might be prioritised;

- areas where it is possible to create coherent greenspace networks might be prioritised; or
- areas with a large proportion of space taken by private gardens might receive lower priority than areas of high urban density.

It is possible to conduct analysis 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 we have 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 Figure 13 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. Figure 14 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 catchment 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. It is important to note that using a network analysis approach the 300m buffer rule for the smallest sites should be extended to 400m but the distance measures for the other Tier sites should be kept the same.

Figure 14 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 catchment zones 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 the deficient areas indicate that large parts of the urban area may suffer from a lack of provision.

Comparing the distribution of areas of deficiency with data derived from the 2001 Census of Population enables the targeting of policy towards areas of high population density. Using other data sets 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.

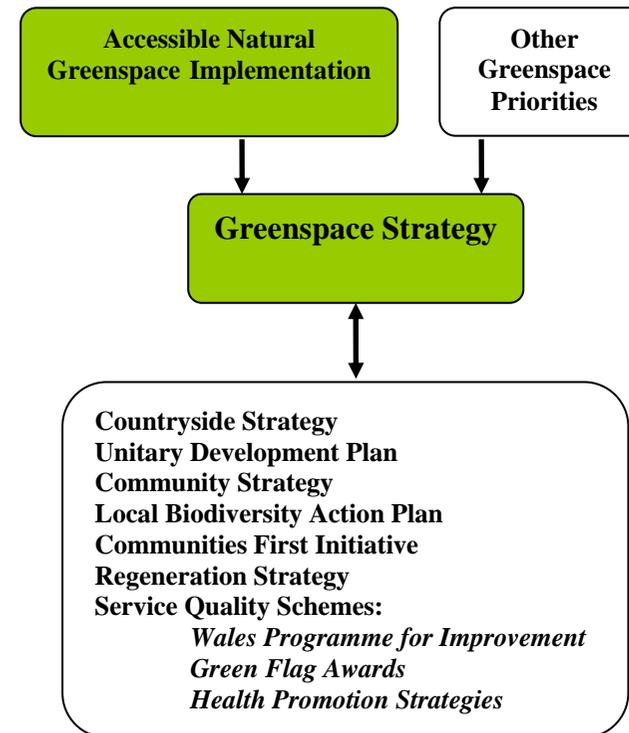
Step 6: Developing the Policy and Management Response

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 the Countryside Council for Wales considers it 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 *Greenspace 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 Greenspace Strategy should inform, and be informed by, other policy documents, such as the development plan, Communities First Initiative, nature conservation strategy and local biodiversity action plan (see Figure 15).

Figure 15: 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 could reflect general priorities for greenspace provision associated with certain significant classes of development. At present supplementary planning guidance tends to be produced in respect only of the provision of play space associated with new housing development (TAN5). This approach could potentially be extended to cover other greenspace functions (including *accessible natural greenspace*) and other types of development (such as industrial estates) involving significant areas of land; and
- 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 ensure that greenspace elements are included within a development, or that compensatory provision is made in respect of lost greenspace and that commuted payments for greenspace maintenance are made by the developer.

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, but some useful publications on this subject are listed in the bibliography; 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.

Figure 16: Examples of Actions to Increase Provision

There are many ways of increasing the amount of accessible natural greenspace. High quality footpaths (top far left) and other facilities can enhance accessibility; creative management can develop natural areas within formal parks (top left and centre); linear features (top far right and bottom right) such as derelict railway corridors and canals 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 (bottom left)



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 maintaining high quality 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 or ethnic minorities.

Areas Resistant to Improvement

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

- planting street trees; roof and wall greening;
- developing 'pocket parks' and 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. 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. We recommend to link monitoring to the cycle of the unitary development plan review.

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 act to 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; 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.

Figure 17: Additional measures to improve greenspace provision and quality in areas resistant to change



Left: Street tree plantings with quality trees



Right: Wall greening (Credit: I. Burkhardt)



Left: Quality residential greenspace . Mature stands of trees are important for wildlife such as birds (Credit: I. Burkhardt)



Right: Extensive roof greening specially designed for biodiversity (Credit: M. Frith)

Figure 18: Options for action to improve natural greenspace provision

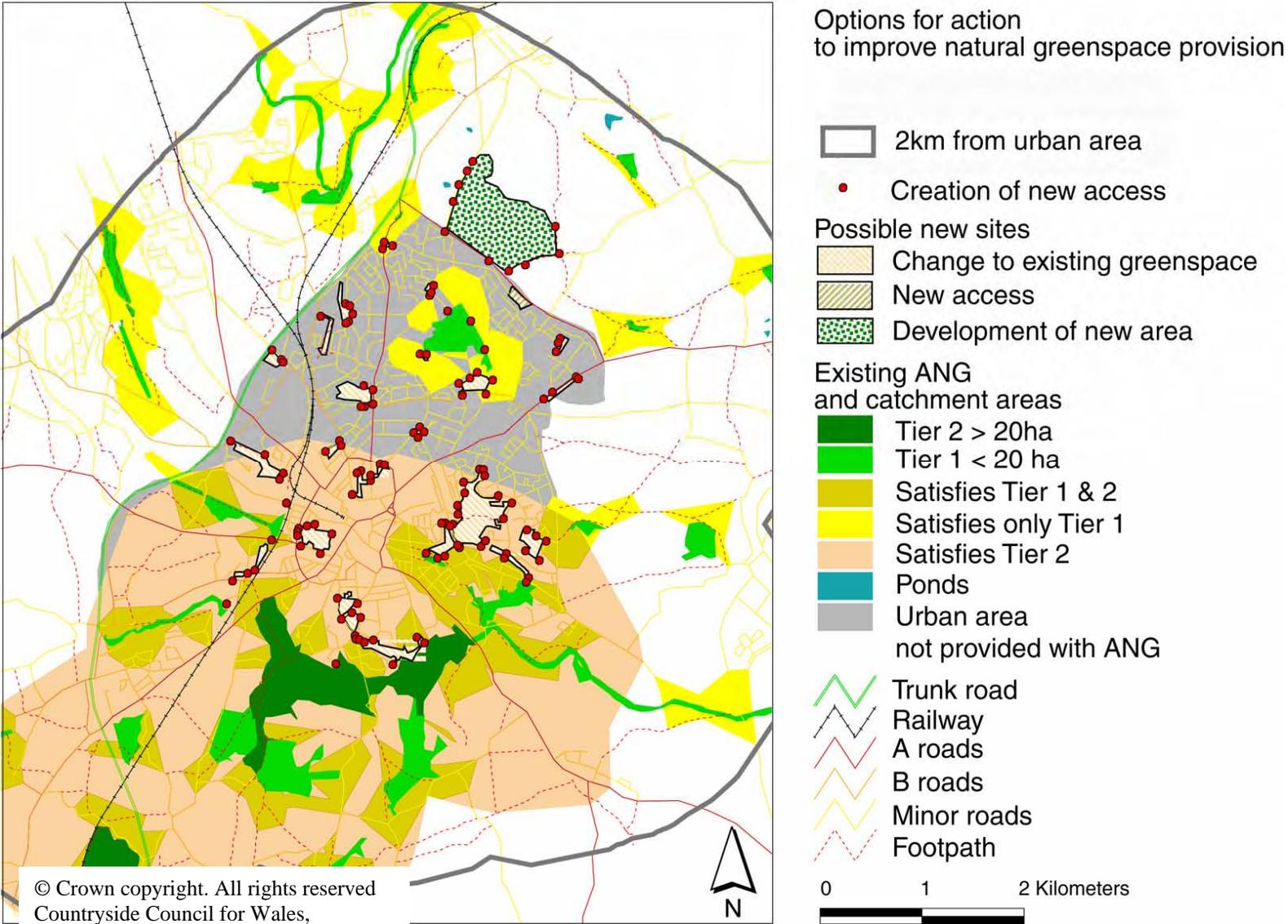
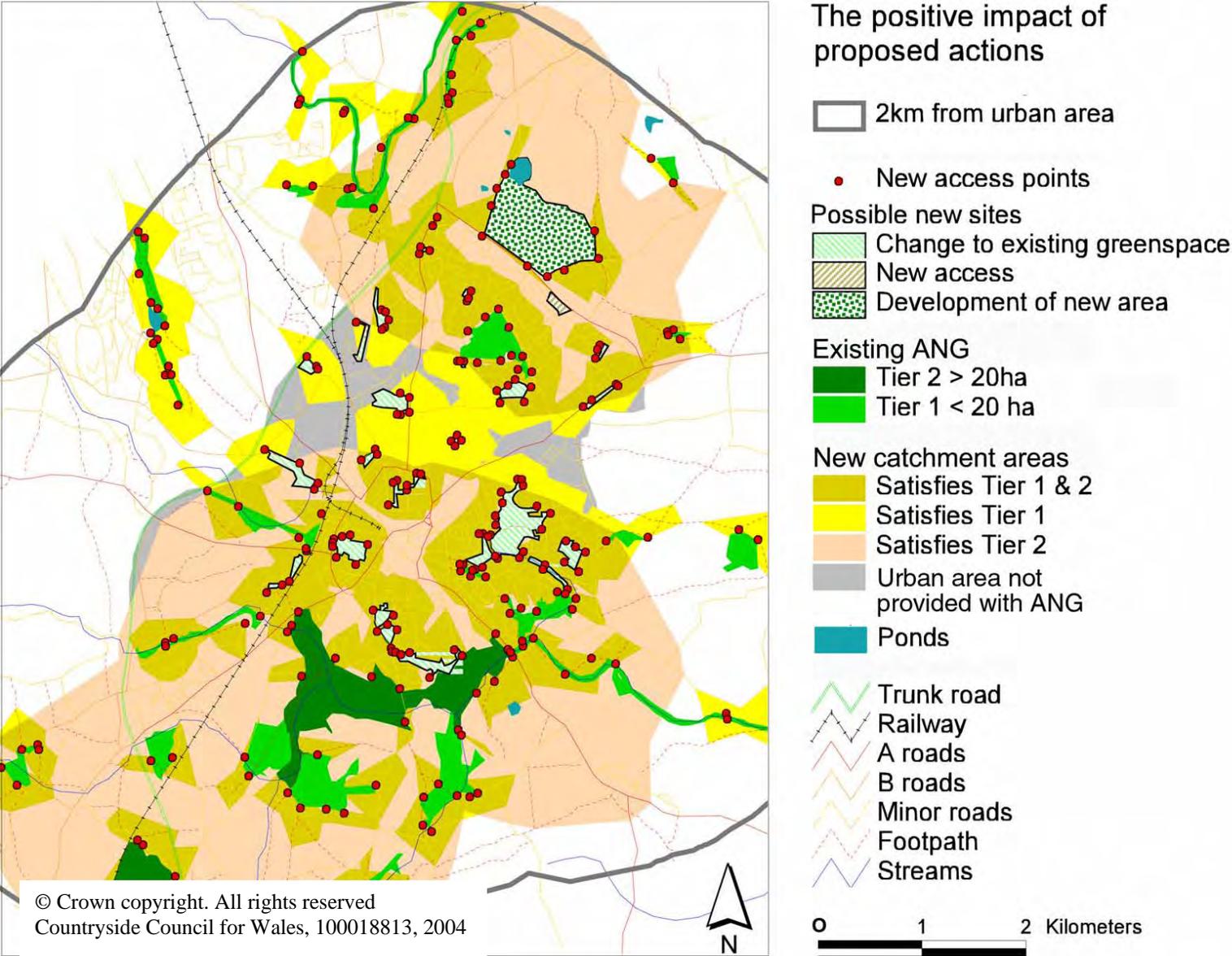


Figure 19: The positive impact of proposed actions from Figure 18



Conclusion

This guidance has presented local authorities with a practical method for implementing the ANGSt model for the provision of accessible natural greenspace in towns and cities. The model 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 accessible natural greenspace model 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 model does suggest yardsticks for the provision of natural green spaces 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 urban forestry, the greenway concept and greenstructure planning.

New sources of data are being developed that may help local authorities. Excellent aerial photography is now available in digital format as a main information source and in the near future high resolution satellite imagery is likely to become available for mapping of urban greenspace. Ordnance Survey products such as OS MasterMap can be used as base maps for the greenspace inventory. LANDMAP, the Countryside Council's geographical information system that records and makes available information about landscape qualities holds great potential to serve as a unifying spatial information basis for greenspace planning when extended to urban areas.

Support and Advice for Users of this Guidance

This guidance provides a brief discussion and summary of the Accessible Natural Greenspace model 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. The Countryside Council is committed to the continued support of the model and those that use it, and a range of information materials may be produced for this purpose. Training workshops might also be held in order to provide detailed support for implementers. Otherwise, advice about the model will be available from staff within the Countryside Council's network of local teams.

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This bibliography presents a sample of important background material and useful practical guidance for those seeking to work with the Accessible Natural Greenspace Standards model. It is not intended to be exhaustive and there is much other useful reference material available.

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Acknowledgements

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