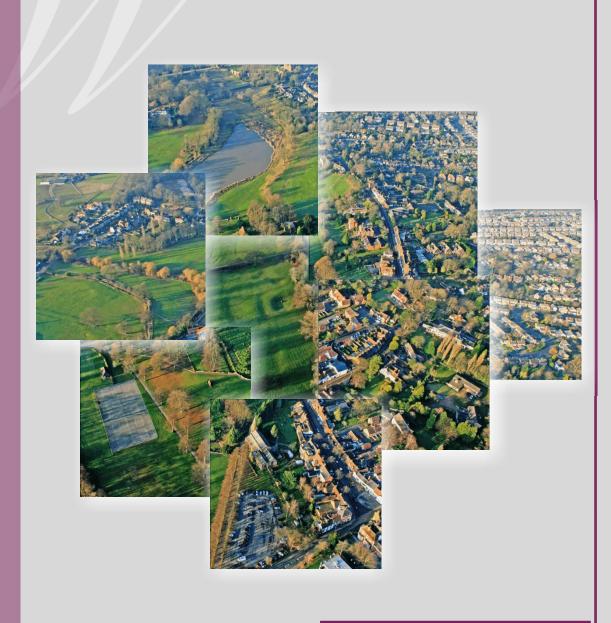
Local Development Framework



# green infrastructure study



# Green Infrastructure Study

Final Report

October 2010

Warwick District Council

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#### LIST OF PLANS

### **Green Infrastructure Assets**

#### Natural Processes:

- NP1: District Level
- NP2: Warwick, Leamington & Whitnash
- NP3: Kenilworth & Coventry Edge

#### **Ecological Assets:**

- EA1: District Level
- EA2: Warwick, Leamington & Whitnash
- EA3: Kenilworth & Coventry Edge

Health and Quality of Life:

#### Access & Recreation

- AR1: District Level
- AR2: Warwick, Leamington & Whitnash
- AR3: Kenilworth & Coventry Edge

#### Historic Environment

- HE1: District Level
- HE2: Warwick, Leamington & Whitnash
- HE3: Kenilworth & Coventry Edge

#### **Accessible Natural Greenspace Standards**

- AN1: Local Sites
- AN2: Town Sites
- AN3: District Sites

#### Strategic Networks

- GI1: District Wide Network: Warwick District
- GI2: Settlement Network: Warwick, Leamington & Whitnash
- GI3: Settlement Network: Kenilworth & Coventry Edge
- N.B. Selecting the plan titles above will open the corresponding plan automatically.

#### 1. INTRODUCTION

Warwick District Council is currently preparing its first Core Strategy, a document that will decide how it deals with the future growth and development of Warwick District for the period up to 2026. Evidence is necessary to support the approach and policies of the Core Strategy. A green infrastructure study for the District will form a key part of this evidence.

#### **Purpose**

The purpose of this study is to do the following:

- Be the catalyst for a co-ordinated greenspace strategy within Warwick District
- Complement the work undertaken so far on green infrastructure in neighbouring authorities within the sub-region
- Collate existing information on green infrastructure in the District from many varied sources
- Utilise Natural England's accessible natural greenspace standards (ANGst) to identify provision and deficiency in strategic green space within the District
- Identify the strategic green infrastructure networks and those elements that can make a local green infrastructure network
- Identify green infrastructure assets within and adjacent to the urban areas

#### **Defining Green Infrastructure**

In simple terms, green infrastructure is a network of green spaces and natural elements, which provides multiple benefits for people and nature.

To inform the work of this study the following definitions have been utilised:

National Planning Policy (PPS12):

Green Infrastructure is a network of green spaces and natural elements, which provides multiple benefits for people and nature.

Regional Guidance (Green Infrastructure Prospectus, West Midlands):

'Green infrastructure is the network of green spaces and natural elements that intersperse and connect our cities, towns and villages. It is the open spaces, waterways, gardens, woodlands, green corridors, wildlife habitats, street trees, natural heritage and open countryside. Green Infrastructure provides multiple benefits for the economy, the environment and the people.'

In essence, green infrastructure resources comprise the entire outdoor environment, be it land or water, both greenfield and brownfield and those elements that are associated directly with built structures such as green roofs and walls. Some elements of green infrastructure resource are, however, more important than others. This may be because of their location, use, functionality (for example enabling sustainable modes of travel), inherent value or potentially enhanced value. In this study, those elements of green infrastructure resources that are of particular importance for one or more of these reasons are referred to as 'GI Assets'.

http://www.growingourfuture.org/wmwff/taskgroups/gip/plan\_pros.htm

<sup>&</sup>lt;sup>1</sup> 'Green Infrastructure – A Prospectus for the West Midlands Region', WMRA 2006. url:

#### **Functions and Benefits of Green Infrastructure**

Clearly, from the definitions above, it is acknowledged that green infrastructure is multi-functional. Collectively green infrastructure provides multiple forms of public benefit in terms of natural and ecological processes and assets, and health and quality of life benefits for people through access, recreation and the historic environment. Some individual assets also provide multiple benefits. The benefits and functions of green infrastructure are diverse and can be summarised as follows:

- Provide opportunities for a healthy and diverse wildlife and ecosystems, and shifting species populations due to climate change driven migration
- Can help mitigate the effects of, and adapt to, a changing climate, through measures such as flood alleviation and drainage schemes; provision of outdoor shady space; opportunities for production of biomass crops and species for soaking up carbon dioxide
- Opportunities for informal recreation and access to nature, which can lead to improvements in health and quality of life
- Places for community activity, social interaction, education and rehabilitation
- Provide opportunities for understanding, promoting and managing the historic environment
- Provide sustainable alternatives to motorised transportation through green transport corridors, where cycling and walking can take place
- Provide areas for local and community based food production

These functions and benefits in turn can provide an attractive environment in which economic investment is encouraged and places where people want to live. A good example of a green infrastructure asset that provides a range of functions and benefits in Warwick District is the Grand Union Canal. In totality, it is recognised locally as an important and diverse local wildlife ecosystem with a diverse range of habitats residing within, nearby and alongside the canal. The Grand Union canal provides an urban cooling effect through the many trees and greenery that line the canal. It also offers an attractive environment for tourism and recreation. The canal can provide opportunities for education, for instance through the understanding of the historical importance the canal played in the area's industrial past and how this was a wholly created feature, forming part of the historic landscape that has affected the growth and morphology of the towns and settlements surrounding it. The canal also operates as a green travel corridor, providing walking and cycling opportunities around the towns and attractive route in which to access the countryside.

#### Study Area

Warwick District covers an area of 28,226 hectares (69,748 acres) and has a population of approximately 135,700<sup>2</sup>. The majority of the District's population live within the towns of Kenilworth, Leamington Spa, Warwick, and Whitnash. The District is within the Coventry, Warwickshire and Solihull sub-region of the West Midlands. In terms of physical geographical area, Warwick District is largely rural in nature with the majority falling within either the historic Arden or Dunsmore landscape character areas. A significant amount of the District is valued for either its environmental or historical importance, for instance around 4% is designated a conservation area and 4% of the District is made up by Registered Parks and Gardens. These designations are included in this report in relation to their value to green infrastructure in Warwick District.<sup>3</sup>

# **Key Drivers for preparation of Study**

Planning for green infrastructure is now embedded in national policy. Consideration needs to be given to green infrastructure in the same way that it has been given to other forms of infrastructure that have generally been planned for from the outset in previous developments for example roads and utilities. The Sustainable Communities Plan recognises green infrastructure as an important element of enabling sustainable development. In addition, Natural England have emphasised the importance of people in urban areas having access to high quality, and accessible natural greenspaces to help enhance quality of life, well being and enhance landscape biodiversity. The Commission for Architecture and the Built Environment (CABE) have also highlighted the environmental and social benefits of integrating green spaces into the design of new communities and more recently the benefits of shifting the focus of infrastructure provision from 'grey to green'<sup>4</sup>.

As the District's towns and villages develop and grow in the future, there is a need to ensure that key environmental assets that form part of the District's strategic green infrastructure network are protected and wherever possible enhanced rather than constrained or harmed by growth. In addition to this, larger developments may create the opportunity to provide meaningful new green infrastructure assets and improve existing ones. Where possible the green infrastructure provided within proposed new developments should connect with the wider green infrastructure network.

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<sup>&</sup>lt;sup>2</sup> Mid 2008 Population Estimates, Office for National Statistics

<sup>&</sup>lt;sup>3</sup> For a more detailed overview of the study area, see the Spatial Portrait in Warwick District's Core Strategy Preferred Options Paper, June 2009

<sup>&</sup>lt;sup>4</sup> See www.cabe.org.uk/grey-to-green

#### **Background to the Study**

This study has been completed in house by Warwick District Council officers in the Development Services unit. Input into this study at the evidence gathering, issues and the drafting stages has been undertaken in partnership with other departments within the Council, including Cultural Services, and key external stakeholders, including: Natural England, Warwickshire County Council (Ecology, Archaeology and Access), Warwickshire Wildlife Trust, British Waterways, the Forestry Commission, and the Woodland Trust.

#### 2. CONTEXT

In preparing this study, it has taken into account various national and regional planning policies and guidance, neighbouring local authorities' green infrastructure work and other studies and strategies local to Warwick District.

# **National Guidance & Policy**

# Planning Policy

Green infrastructure is embedded in national planning policy and needs to be planned for like *grey* infrastructure. PPS12 Local Spatial Planning states:

'.. core strategies should be supported by evidence of what physical, social and green infrastructure is needed to enable the amount of development proposed for the area, taking account of its type and distribution. This evidence should cover who will provide the infrastructure and when it will be provided. The core strategy should draw on and in parallel influence any strategies and investment plans of the local authority and other organisations. <sup>5</sup>

PPS1 Delivering Sustainable Development sets out the Government's overarching policy to achieve sustainable development through the planning system. The Planning and Climate Change supplement to this planning policy statement stresses that when selecting sites for development, planning authorities should consider how existing and possible new green infrastructure could help adapt to and mitigate climate change.

Given the multi-functional nature of green infrastructure, various other policies are pertinent as they consider the management of elements that contribute to green infrastructure (or have the potential to). These include PPS9 Biodiversity and Geological Conservation, PPS5 Planning for the Historic Environment; PPG17 Planning for Open Space, Sport and Recreation; PPS22 Renewable Energy and PPS25 Development and Flood Risk

The draft planning policy statement, *Planning for a Natural and Healthy Environment* combines and updates policies in PPS9 and PPG17 and elements of other national guidance relating to soil, agriculture, landscape, forestry and coastal management. Policy NE4: *Local planning approach for green infrastructure* states that 'Local Development Frameworks should set out a strategic approach for the creation, protection and management of networks of green infrastructure'.

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<sup>&</sup>lt;sup>5</sup> Planning Policy Statement 12 – Local Spatial Planning, CLG, 2008. url: <a href="http://www.communities.gov.uk/documents/planningandbuilding/pdf/pps12lsp.p">http://www.communities.gov.uk/documents/planningandbuilding/pdf/pps12lsp.p</a>

#### Other Guidance

Natural England's *Green Infrastructure Guidance* (2009) underlines the importance of early preparation of green infrastructure planning and integrating strategies into the local development framework and wider local area agreements. In addition, for a number of years Natural England (and its predecessors) has been stressing the belief and desire that everyone should have access to good quality natural green space near to where they live; this is reflected most recently in the guidance *Nature Nearby* (2010). The Government's cross cutting strategy for improving the quality of place, *World Class Places* (2009) recognises green infrastructure as critical to existing and future places. The Government's *Strategy for England's Trees, Woods and Forests* (2007) states as one of its key objectives, the need to include woodland in plans for green infrastructure and spatial planning.

#### **Regional Guidance & Studies**

As part of the now revoked Regional Spatial Strategy (RSS), the West Midlands Regional Assembly's Environment partnership produced a *Green Infrastructure Prospectus*, which provides this report with a working definition (see definition on page 2), highlights the benefits and need to invest in green infrastructure and provides a regional vision.

'Growing Our Future' is the West Midlands Regional Forestry Framework (WMRFF) produced by the Forestry Commission it has a vision to create a viable and inclusive woodland and forestry sector that maximises sustainable development through delivery of economic, environmental, cultural and social benefits to the people of the region. This framework is underpinned by the recently published WMRFF *Manifesto* and *Delivery Plan*. In addition the Woodland Opportunity Map Version 2 identifies the area around Bubbenhall, and Princethorpe in neighbouring Rugby, as one of the highest priority areas for the creation of woodland.

Through the 'Landscapes for Living' (2008) prospectus, the West Midlands Biodiversity Partnership has identified a 50 year vision for rebuilding biodiversity within the region. This includes four key principles: to improve access to wildlife rich open spaces; to maintain existing bio-diverse habitats; to restore habitat quality and re-connect habitats to improve function and resilience to climate change; and to re-create natural systems to support biodiversity such as sustainable farming and restoring river features and floodplain systems to alleviate flooding. The 'Landscapes for Living' prospectus is complemented by the 'West Midlands 50 Year Biodiversity Vision and Opportunities Map', which spatially identifies areas of strategic importance and improvement including landscape areas, strategic river corridors and cities and towns.

The Environment Agency, with consultants Brighton University, plus a wide range of partners are developing a set of strategic priorities for water-related recreation called *Enjoying Water* to address the gaps and increasing demand. This will result in a strategy specific to the Midlands for water related activities.

# **Neighbouring Local Authority Studies**

Within the Coventry, Solihull and Warwickshire sub-region, several local authorities have already undertaken green infrastructure studies and strategies.

Coventry City Council has produced a Draft Green Infrastructure Study (November, 2008), which examines provision and suggests opportunities for improvement within the boundaries of Coventry and its hinterland. Nuneaton and Bedworth Borough Council completed a Green Infrastructure Plan (October, 2009) which provides a comprehensive review, vision and strategy for green infrastructure. Rugby Borough Council produced a Green Infrastructure Study (June, 2009) that identifies strategic networks within the borough and provides a vision for strategic and local green infrastructure. At the time of writing, both Solihull Metropolitan Borough and Stratford on Avon District Council's are in the initial preparation and evidence gathering stages producing green infrastructure studies.

## **Local Policy & Studies**

The Warwick Sustainable Community Strategy (2009) (SCS) formulated by a wide range of stakeholders and expresses how Warwick District should be improved for both people and place. Many of the aims and wishes of the SCS can in part be fulfilled by the functions and benefits of green infrastructure.

In 2008, Warwick District Council produced a Parks and Open Space Audit, which assessed the type, spread, quality and quantity of accessible open space within the District. Open spaces assessed within the audit form part of the District's green infrastructure. However, green infrastructure planning focuses on the bigger picture of networks, landscape, historical context and the linkages between different geographical scales. In addition, open space audits focus primarily on access, quality and the management of green spaces rather than the various benefits and functions that the wider green infrastructure network can provide.

At the time of writing, the Council is undertaking a Playing Pitch and Indoor Sports Facilities study to assess existing provision and inform future needs for the District. A Green Space Strategy is also in preparation, which focuses on how Council owned green and open spaces are managed and will develop in the future.

The *Play Strategy for Warwick District 2007-2012* has been developed to address the issues and barriers that prevent children aged 0-19 from playing

naturally and to support the strategic establishment of quality play environments for all of the District's children and young people. The strategy looks at the term 'play' in relation to all activity children and young people partake in for their own intrinsic enjoyment. As such it is recognised that play environments of quality can be extremely diverse in their setting.

The Countryside Access and Rights of Way Improvement Plan 2006-2016 (2006) (CAROWIP) produced by Warwickshire County Council sets out the strategy for maintaining and improving recreational public rights of way and other highways within the strategy. This includes a long to term desire to create a footpath alongside the river Avon from Warwick to Stratford-Upon-Avon and enabling public access to Warwick Castle Park. At the time of writing, an updated CAROWIP is being prepared up to the plan period 2026 and is being prepared in conjunction with the review of Warwickshire's third Local Transport Plan.

The Warwickshire Historic Landscape Characterisation Project (HLC) has digitally mapped the present day historic character of the Warwickshire Landscape. This forms part of the local Historic Environment Record and the outputs of HLC can be used in various planning and development themes including the capacity of a landscape to adapt to change.

The Coventry, Solihull & Warwickshire Habitat Biodiversity Audit (HBA) is based upon a Phase 1 habitat survey of the sub region initially undertaken in 1999 and updated on a five-year rolling programme. The HBA undertakes ecological surveys and site assessments, which are stored in a detailed electronic geographical format.

#### 3. APPROACH AND METHODOLOGY

This study has had regard to other published studies within the sub-region in formulating the methodology. The approach set out has had particular regard to the work undertaken by Rugby Borough Council in its Green Infrastructure Study<sup>6</sup>.

#### **Datasets & Plans**

For the purposes of this study, a dataset can be described as collection of information with attributes related to green infrastructure, and typically with a geographical element. This study has analysed datasets from various sources but it has not attempted to create new datasets, instead it has collated existing data pertaining to strategic green infrastructure. These datasets have been mapped and analysed using a geographical information system and the results displayed spatially using a series of plans divided into four categories of natural processes, ecological assets, historical assets and access & recreation (the latter two categories relating to health and quality of life aspects). A complete list of the datasets used is available in Appendix 1 of this report. Assets displayed on the plans are limited to within the Warwick District Council administrative boundary except for the river network as this was comprehensively mapped at the sub-regional scale. Given the multifunctionality of many of these elements, it would normally be possible for them to be shown on multiple plans. However, for display and representation purposes it provides greater clarity if assets are categorised into their primary type.

#### **Components of Local Green Infrastructure Networks**

Local green infrastructure networks have not been identified within this study, as this is too fine a grain of information for a study of this nature to analyse at a District wide scale. However, these assets can play an important role locally and within the wider strategic green infrastructure network. An assessment of the green infrastructure networks at the local scale could include all elements that are contained within the strategic network, and in addition: trees; private gardens; small ponds and water bodies; hedgerows and green walls; highway and grass verges; footpaths and bridleways; and any other elements identified through the Warwickshire Habitat Biodiversity Audit not listed here. Local assessments could be undertaken as part of evidence gathering for parish, neighbourhood or area action plans.

<sup>&</sup>lt;sup>6</sup> Rugby Green Infrastructure Study, Rugby Borough Council, 2009

#### **Accessible Natural Green Space Standards**

The Accessible Natural Green Space standards (ANGst) developed by Natural England, are aspirational standards for the range of green spaces accessible within an area. The basic premise of ANGst is that everyone should have access to natural green spaces. The distance allowed from these green spaces increases as they increase in size. It is important to note that these are aspirational targets, although a significant amount of evidence has been gathered to support them. In certain situations, a pragmatic view may need to be taken.

ANGst divides sites into four categories based on the size of the site. Local or neighbourhood sites are those that are 2 hectares or greater in size and within walking distance, therefore a catchment of 300 metres is defined. Town sites are at least 20 hectares is size and have a catchment area of 2 kilometres, a distance at which people may be able to walk, cycle or take public transport to the site. District sites are greater than 100 hectares and have a 5 kilometres catchment reflecting the strategic importance to the wider area. The final level is sub-regional sites, which are greater than 500 hectares and are within 10 kilometres. In addition, the ANGst standards recommend that there be a minimum of one hectare of statutory Local Nature Reserves per thousand population.

For the purposes of this study, data from the Warwick District Parks and Open Spaces Audit ('the Audit') has been used as a starting point for assessment. A desktop survey undertaken for this study discovered that there were some additional accessible sites to be included in order to undertaken assessments based on ANGst. Sites in the Audit are classified within the Planning Policy Guidance note 17 on Open Space, Sport and Recreation typology. The following typologies with unrestricted access have been utilised: natural and semi-natural areas including woodland; parks and gardens; burial sites/cemeteries; green corridors and amenity greenspace.

Catchment areas have been measured from the boundaries of any given site. Whilst the above types have been used, general public footpaths and canal towpaths have not been included as this represents too fine a grain of information to interpret successfully, in addition not all of the data is captured spatially. It is acknowledged however that many people, particularly in the rural areas have access to the countryside (and thus natural green space) through the Public Rights of Way network, albeit in a strictly linear format.

Once the various ANGst standards were applied, it was possible to ascertain quickly a visual picture of where provision is. By utilising the authority's council tax records dataset, it has been possible to quantify how many households are covered as a proportion of the total within the District.

#### **Woodland Access Standard**

The Woodland Access Standard (WAst) was developed by the Woodland Trust to set an aspirational benchmark specifically for creation of accessible woodland. In developing the standards, The Woodland Trust has also undertaken an analysis of accessible woodland for the United Kingdom. The results of their assessment for Warwick District can be found below. Accessible woodland is also accessible natural greenspace and this is mapped on the ANGst plans.

The WASt is complimentary to Natural England's ANGST and is endorsed by Natural England. The Woodland Trust Woodland Access Standard recommends that no person should live more than 500m from at least one area of accessible woodland of no less than 2ha in size that there should <u>also</u> be at least one area of accessible woodland of no less than 20ha within 4km (8km round-trip) of people's homes.

Standard	Warwick District	County	West Midlands
% population with access to 2ha+ wood within 500m	12.48%	6.87%	15.42%
% population with access to 20ha+ wood within 4km	85.39%	51.56%	63.84%

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<sup>&</sup>lt;sup>7</sup> These statistics have been kindly provided by the Woodland Trust. For further detail on how these statistics have been derived please see 'Spaces for People' at: <a href="http://www.woodlandtrust.org.uk/en/about-us/publications/Pages/ours.aspx">http://www.woodlandtrust.org.uk/en/about-us/publications/Pages/ours.aspx</a>

#### 4. GREEN INFRASTRUCTURE ASSETS & ANGST

# **Natural Processes**

Plans: NP1, NP2 & NP3

The natural processes plans identify major and minor rivers and their associated flood zones and plains; local geological sites and geological/geo-morphological Sites of Special Scientific Interest. The rivers Avon, Leam and Sowe are the major watercourses running through the District, and it is clear from these plans that the District has many minor watercourses as well. There are four SSSIs recognised for their geological importance at Shrewley Canal Cutting, Guy's Cliffe, Coten End Quarry and Waverley Wood Farm. There are fifteen local geological sites; the majority of these are in the northern half of the District.

#### **Ecological Assets**

Plans: EA1, EA2 & EA3

The ecological assets plans show that the District is covered by a wide array of green infrastructure elements that support habitat biodiversity (including the river network identified in the Natural Processes plan). The Grand Union and Stratford Canals form key linear sites running through the District and are also recognised as potential local wildlife sites. The northern half of the District contains a number of large Ancient Woodlands. There are also a significant amount of local Wildlife Sites (LWS) and potential Local Wildlife Sites (pLWS) around the District that have been identified through the work of the Warwickshire Habitat Biodiversity Audit. In total, there are seven SSSIs wholly or partly within the District. Other than the geological SSSIs listed above, these are Ryton Wood, Oak Tree Farm Meadows and Brook Meadow.

#### Health & Quality of Life:

# **Access and Recreation**

Plans: AR1,AR2 & AR3

These plans display sites of all sizes within the Warwick District Parks and Open Space Audit, both accessible and limited access sites as accessibility is only one factor of green infrastructure. The majority of the sites in the audit are close to the urban areas of the District, of these, two of the largest sites have limited accessibility in Warwick Castle Park and Warwickshire Golf Course. Sites with limited access may still provide recreation to some and in addition may have ecological and natural functions. Warwick District has four promoted footpaths passing through its boundaries: the Coventry Way, Centenary Way, Heart of England Way and Shakespeare's Avon Way.

#### **Historic Environment**

Plans: HE1, HE2 & HE3

The historic assets plans identify Scheduled Monuments (SAMs), Registered Parks and Gardens, Conservation Areas within Warwick District and Ancient Tree Hunt date which is a survey of significant mature tree. In addition, the broad landscape character types of the Avon Valley, Feldon, Dunsmore and Arden are shown. The District comprises of 4% Registered Parks and Gardens including the town centre parks along the river Leam, Stoneleigh Park, Baddesley Clinton and Warwick Castle Park. In addition to this 3.9% of the District's area is covered by Conservation Area designation. SAMs are spread across the District, but there are clusters in certain areas including south of Warwick along the River Avon corridor.

Warwickshire County Council has undertaken a countywide Historic Landscape Characterisation project, which identifies the historic landscape character of all land and its type. This information should be used to inform local green infrastructure assessments. The disused railway network forms part of the HLC and have been identified on these plans, as they provide a good example of multi-functionality given their use for recreation and in addition the ecological assets running alongside them.

# **Accessible Natural Greenspace**

#### **Local Sites**

Plan AN1

This plan shows that there are some gaps in provision of accessible green spaces within walking distance. In particular, areas of Kenilworth and around the north of Leamington are two examples. The amount of existing households within 300 metres of a site of 2 hectares (or greater) is 52% as a proportion of the District.

#### **Town Sites**

Plan AN2

This plan shows that there are seven sites greater than 20 hectares in size include Newbold Comyn and the parks adjacent to the River Leam within in Leamington Spa, St Mary's Lands (Warwick Common) Warwick, and Abbey Fields in Kenilworth. The majority of the population of the District is covered as over 84% of existing households are within 2 kilometres of any one site. However, it is evident that there are gaps in accessible natural green space for the population of Warwick and Leamington in the central southern part of the urban area.

#### **District Sites**

Plan AN3

Newbold Comyn & Hay Wood are the only accessible natural greenspace sites with a size greater than 100 hectares. The majority of Warwick and Leamington are within 5 kilometres from Newbold Comyn, however none of Kenilworth is. Hay Wood is a large woodland in rural western half of the District, next to Baddesley Clinton and in close proximity to the urban population of Solihull Metropolitan Borough. Approximately 69% of existing households in the District are within 5 kilometres of any one of these sites. In addition, access to these sites by means other than a private car may be difficult for some.

#### **Sub Regional Sites**

There are no sites within the District of a size of 500 hectares or more. The nearest sites to Warwick District are Sutton Park in the West Midlands and Bradgate Park in Leicestershire at approximately 25 kilometres and 38 kilometres from the edge of the District boundary, as the crow flies.

#### **Local Nature Reserves**

Within Warwick District, there are over 94 hectares of statutory Local Nature Reserves (LNRs). The mid 2008 population estimates for the District are 135,700. This means that there is an under supply in the provision of LNRs based on the ANGst standards of one hectare of LNR per thousand population. With reference to the Ecologic Assets plans, Warwick town has less LNRs than the areas of Leamington, Whitnash or Kenilworth.

#### **Strategic Networks**

Having captured, mapped and assessed green infrastructure assets displayed in the various plans described above and considered access to natural green spaces for residents of Warwick District, it has been possible to combine the most important asset types into strategic network plans for the District and urban areas.

#### **District Wide**

Plan GI1

The strategic network for the District consists of major and minor rivers (and associated flood plains) and canal network, highlighting the importance that rivers and canals play from an ecological, natural, recreational and historic perspective. The disused railway network within the District connects the towns with the countryside and offers opportunities for recreation in terms of walking and cycling and providing strong linear habitats. The woodlands and nature areas within Warwick District and the wider sub-region for an important cluster which is recognised within the West Midlands Regional Woodland Improvement

Plan as a high priority for the maintenance and creation of woodlands in this area. Newbold Comyn is displayed on this map as a site of accessible natural green space over 100 hectares and therefore sufficient to be considered of a District scale. The majority of the Warwick, Leamington and Whitnash urban area are within 5km access from this site.

# Warwick, Leamington and Whitnash

Plan GI2

The strategic network for the urban area of Warwick, Leamington and Whitnash includes those green infrastructure elements at the District scale adjacent or within the urban area, and in addition, town scale accessible natural greenspace. This means sites (or collection of sites) identified as being 20 hectares in size or over, for example Warwick Common and Racecourse (St Mary's Lands), Newbold Comyn and the series of parks gardens along the river Leam corridor are identified.

#### Kenilworth and Coventry Edge

Plan GI3

The strategic network for Kenilworth and part of the District bordering the south of Coventry consists of those green infrastructure elements at the District scale with the addition of town scale accessible natural greenspace, for example, Kenilworth's Abbey Park and Ryton Wood bordering Rugby Borough are both included.

# 5. SUMMARY & WAY FORWARD

This study has identified the key natural, ecological, health, and quality of life assets and resources that make up Warwick District's strategic green infrastructure network. A wide range of sources from various organisations, including neighbouring authorities' existing green infrastructure plans, have informed the identification of this network. This study also recognised the importance of local green infrastructure networks and their role in contributing to the wider strategic network.

This study has utilised standards developed by Natural England and the Woodland Trust to assess the amount and distribution of accessible natural green space and accessible woodlands respectively. In doing so, this has highlighted areas of potential under provision within the District having regard to the standards.

This study and its findings will inform the District Council's approach to the protection, creation and management of green infrastructure within the District through documents such as the Green Space Strategy. This will set out how the District Council is going to change, improve and manage its existing green infrastructure and will set out an approach to the creation of new green infrastructure assets.

This study will also inform decisions about the location and nature of future development within the District, for example through documents such as the Core Strategy. This will provide protection for green infrastructure assets and networks from development, as well as identifying opportunities to enhance existing assets and networks, including potentially through new development. The Infrastructure Delivery Plan in support of the Core Strategy will set out in more detail how the enhancement of existing assets is to be achieved.

# APPENDICES

# A. Datasets used for spatial analysis

Name	Source				
Natural Processes					
Strategic Flood Risk Assessment Level 1	WDC				
Sites of Special Scientific Interest (SSSI) [Geological only]	WDC				
Local Geological Sites	WCC				
Local/potential Local Wildlife Sites (LWS/pLWS) [Formerly SINC/pSINC]	WDC				
Ecological Assets					
SSSI [AII]	WDC				
Habitat Biodiversity Audit	WDC/WCC				
Woodland Opportunity Maps version 2	FC				
Opportunity Mapping – Landscapes for Living	WMBP				
Ancient Woodland	WDC				
Local Nature Reserves	WDC				
Warwickshire Wildlife Trust Reserves	WWT				
LWS/pLWS	WDC/WCC				
Woodland Access Standards	WT				
Historic Environment					
Registered Parks and Gardens	WDC				
Warwickshire Historic Landscape Characterisation	WCC				
Landscape Character Areas	NE				
Scheduled Monuments	WDC				
Ancient Tree Hunt	WWT				
Access & Recreation					
WDC Open Space Audit	WDC				
Promoted Footpaths	WCC				
Council Tax Properties by Band (for ANGst assessment)	WDC				
Footpaths, Bridleways & Public Rights of Way (Definitive Rights of Way Maps still paper copies only - WCC Access working on digital GIS conversion)	WCC				



Where possible, information can be made available in other formats, including large print, cassette tape, CD and other languages if required. Tel. 01926 450000.





