Green Infrastructure Assessment (Final Version) March 2011
Green Infrastructure Assessment

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1. Introduction and Approach

1.1 Introduction

'Green Infrastructure is a strategically planned and delivered network comprising the broadest range of high quality green spaces and other environmental features. It should be designed and managed as a multifunctional resource capable of delivering those ecological services and quality of life benefits required by the communities it serves and needed to underpin sustainability. Its design and management should also respect and enhance the character and distinctiveness of an area with regard to habitats and landscape types.

Green Infrastructure includes established green spaces and new sites and should thread through and surround the built environment and connect the urban area to its wider rural hinterland. Consequently it needs to be delivered at all spatial scales from sub-regional to local neighbourhood levels, accommodating both accessible natural green spaces within local communities and often much larger sites in the urban fringe and wider countryside.'

(Natural England 2009 p7)

In addition, the benefits of green infrastructure should be considered in terms of its economic, social and environmental contributions. The above definition clearly highlights the multi-functional role of green spaces at a strategic level and emphasises the importance of strategic planning for green spaces, similar to any other form of infrastructure such as roads and utilities. This assessment provides the context for Cannock Chase’s approach to green infrastructure in the Core Strategy, which given the ecological importance and sensitivities of the area is of crucial importance to the future sustainable development of the District. It synthesizes the ranges of studies that have been completed which all help to inform a comprehensive approach. This will be implemented through the Council’s Local Development Framework policies to ensure that as part of the housing, employment and other developments in the District up to 2028 green infrastructure is duly recognized as a vital component. An overview of the policy context is provided firstly, followed by an assessment of Cannock Chase District’s green infrastructure resources and requirements. The implications for policy and strategy are then set out and further recommendations made.

1.2. Approach

As outlined above, the purpose of this assessment is to synthesise the various green infrastructure related evidence base studies undertaken to inform wider Council policy; principally the Local Development Framework. The Local Development Framework comprises of the Core Strategy, Site Allocations, Rugeley Town Centre Area Action Plan and various Supplementary Planning Documents. The assessment has been carried out by the Council’s Planning Policy team in conjunction with key internal partners, namely from the Parks and Landscaping and Countryside Service. Ongoing liaisons with external parties, such as Natural England and the Area of Outstanding Natural Beauty Unit, also informed its development. Before reviewing the findings of local level assessments a review of the national, regional and local policy context was undertaken.
in order to form the content and style of the assessment. Reference was made to various ‘good practice’ guides (summarized in Section 3) to inform decision-making throughout the process. Following this stage, the local level assessments were brought together to provide a complete picture of the District’s green infrastructure with the following key objectives in mind:

i) Identify those strategic key sites and areas that should be protected from harm and that could benefit from more sustainable management (the key green infrastructure assets);

ii) Identify strategic key deficiencies in green infrastructure provision and identify strategic key opportunities for enhancement works that will address deficiencies and help contribute to the local distinctiveness of the District’s character.

iii) Identify key measures needed to ensure delivery of good quality local green infrastructure.

The key local assessments utilised are:

- Accessibility Appraisal (2009)
- Cannock Chase AONB Assessment of Agricultural Landscapes (2006)
- Cannock Chase District Climate Change Background Paper (2011)
- Cannock Chase District Green Belt Review (2010/11)
- Characterisation Study of Cannock Chase District (2011)
- Extended Phase 1 Habitat Survey and subsequent SBI review (2009)
- Historic Environment Character Assessment (2009)
- Horsiculture Monitoring within the Cannock Chase AONB (2008)
- Landscape Character Assessments (County, 2000 and District level, 2009)
- PPG17 Open Space Assessment (2009)
- Visitor Impact Mitigation Strategy for the Cannock Chase SAC (2009 and ongoing)
- Strategic Flood Risk Assessments (2008, 2009)
- Water Cycle Study and Surface Water Management Plan (2010) - incorporating various relevant plans including River Humber Basin Management Plan; Catchment Abstraction and Flood Management Plans; and water company management plans.

Regard has also been paid to the various existing policies and strategies impacting upon the local level e.g. the Local Biodiversity Action Plan. Following synthesis of these studies and existing policies, the assessment seeks to identify those key green infrastructure assets and areas for specific enhancements and the necessary measures required to ensure delivery of good quality

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1 The draft of this assessment was prepared before the Regional Spatial Strategy was revoked. This final version thus reviews the regional policy context in light of revocation, highlighting evidence or former policies that may still be of relevance to the assessment

2 Currently under review
green infrastructure in the District. It also provides site-level information on alterations to the Green Space Network as part of an update to the Proposals Map, which will accompany the Core Strategy (see Annex 1).

The draft of this assessment was subject to a 6 week consultation alongside the Pre-Publication Core Strategy in June-July 2010. Comments received and the Council's responses are collated in Annex 3.
2. Executive Summary

Green Infrastructure is defined as “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 people” (West Midlands Green Infrastructure Prospectus, 2008). This assessment has highlighted the wealth of green infrastructure assets in the District; it is a major part of the District’s overall distinctive character and plays a vital multifunctional role in addressing the communities and natural environment needs.

The assessment has highlighted the District key, strategic green infrastructure assets which must be protected and enhanced through the Core Strategy overall spatial strategy for growth. It has also highlighted strategic areas of deficiency and the resulting need and opportunities for enhancements should be brought out in the area implications of the Core Strategy and where appropriate referenced in policy to ensure local issues are addressed. This is of particular importance where a deficiency of green infrastructure assets overlaps with areas of multiple deprivation in the District (as outlined above). The following recommendations will ensure that the District’s green infrastructure is protected or conserved, enhanced or expanded and benefits maximised:

1. Embed objectives of green infrastructure provision in line with this assessment throughout Core Strategy and Local Development Framework policy. These objectives are:

   i) Protect, conserve, enhance and expand natural assets (biodiversity and geodiversity)
   ii) Reduce the causes and impacts of climate change
   iii) Conserve, strengthen and enhance landscape character, including both natural assets and the heritage value of landscapes
   iv) Provide high quality environments that offer opportunities for recreation, improved health standards and contribute to the local economy
   v) Provide sustainable transport opportunities
   vi) Protect and manage the water environment, including flood risk

Given the cross-policy nature of green infrastructure e.g. its multi-functional recreation, ecology and landscape character role the Core Strategy should embed the objectives of green infrastructure provision throughout its policies. Particular emphasis should be upon the provision of green infrastructure in policies related to design; open space and recreation provision; landscape character; biodiversity and geodiversity; historic environment; climate change and transport. Further site-level proposals should be pursued through the Site Allocations DPD and if necessary an SPD could provide further detailed guidance on the delivery of green infrastructure. This could be combined with an SPD due to be produced for Open Space, Sport and Recreation standards and/or Design. Annex 2 sets out a potential approach for development management to be considered and elaborated upon further. Best practice guidance from key organisations, such as CABE, should be utilised to inform standards and guidance and wider Council policy i.e. the valuation of local authority owned green infrastructure assets.
2. Protect areas of key green infrastructure assets\(^3\) and support works for their enhancements:

- Cannock Chase AONB (including Country Parks, SACs and SSSIs)
- Hednesford Hills (now a SSSI), Hazelslade, Mill Green and Hawks Valley (pending designation) Local Nature Reserves and Sites of Biological Importance
- Cannock Chase District Green Space Network (particularly where the space forms a distinct, vital role i.e. flood risk management)
- Trent and Mersey Canal and River Trent corridor
- Parts of the Green Belt, namely planned coalfield landscapes to the north and east of Norton Canes and Wimblebury; heath landscapes to the east and north of Hednesford and Wimblebury; wooded estatelands and heath landscapes to the south of Rugeley and Brereton (leading into the Cannock Chase AONB)
- Chasewater Country Park (Lichfield District).

3. Key specific projects should be supported in their delivery to support enhancement works and address identified deficiencies namely the cross boundary landscapes scale projects (e.g. the former regional Cannock Chase-Sutton Park BEA); the Cannock Chase SAC mitigation strategy; the management of flood risk and water quality in line with Environment Agency plans; the achievement of PPG17 Open Space Assessment targets (to be set out in an SPD directly referencing the recommended 2009 targets); the provision of improved Rights Of Way in accordance with the ROWIP, 2007(particularly in areas with projected future deficiencies in relation to demand); and heritage-led regeneration opportunities along the Trent and Mersey Canal. The provision of SANGs is likely to a priority and the opportunity sites identified in this assessment should be explored further on a joint, sub-regional basis. In order to ensure smaller scale assets, primarily within the urban areas, are valued and recognised for their important contribution to the overall green infrastructure of the District, a full revision of the Green Space Network should be undertaken as ongoing work to this assessment and the Site Allocations DPD.

By ensuring protection of the District’s key green infrastructure assets and supporting key projects to enhance them, the Council can ensure that the multi-functional benefits of the Districts green resources are maximised and that overall growth in the District is sustainable.

\(^3\) It should be noted that these assets are not mutually exclusive i.e. some Sites of Biological Importance are also Local Nature Reserves and part of the Green Space Network.
3. The Policy Context- what is Green Infrastructure and why do we need to plan for it?

3.1 National Policy, Legislation and Best Practice Guidance

The term ‘green infrastructure’ has been increasingly used since 2000, with its origins dating back further in considerations regarding larger scale open and green space planning (Natural England 2009b p9). It gained particular prominence as part of the previous Labour Government’s Sustainable Communities and Growth Agenda (2003) and since then it has increasingly filtered into national, former regional and local policy. Planning Policy Statement 12 (PPS12- Local Development Frameworks 2008) clearly states that local authorities should consider the amount and type of green infrastructure required to ensure a sustainable spatial strategy. Typically open and green spaces have been considered in terms of Planning Policy Guidance 17 (PPG17-Open Space, Sport and Recreation 2002) assessments, which audit the quantity and quality of publicly accessible spaces according to a series of typologies. However, the shift towards ‘green infrastructure’ implies a broader definition and scope. Natural England guidance (2009b p10) highlights the following distinctions between PPG17 and green infrastructure approaches:

- “Green infrastructure goes beyond the site specific, considering also the ‘big picture’ – landscape context, hinterland and setting, as well as strategic links of sub regional scale and beyond;
- Green infrastructure considers private as well as public assets;
- Green infrastructure provides a multifunctional, connected network delivering ecosystem services;
- Whilst PPG17 compliant studies consider typologies beyond sports and amenity greenspace, spaces are considered primarily from access, quality and management perspectives, rather than consideration of wider environmental benefits and services. These green spaces are, however, important constituents of a green infrastructure network.”

Green infrastructure assets can therefore include those open space typologies considered by PPG17 assessments, such as parks, cemeteries, green corridors for cycle ways. But, it also considers areas without public access, which although not serving a recreational function still provide a number of social, economic or environmental benefits such as providing a high quality visual landscape or areas for important biodiversity functions. For example, large areas of inaccessible Green Belt would not necessarily be considered by a PPG17 audit; however they are likely to be a fundamental green infrastructure asset. Natural England guidance (2009) identifies a series of green infrastructure functions including habitat provision and access to nature; landscape setting and context for development; energy production and conservation; flood attenuation and water resource management.

The principles of incorporating sufficient green infrastructure are also encapsulated in various other Planning Policy Statements including PPS1 Delivering sustainable development (2005); Planning and Climate Change – Supplement to PPS1 (2007), which highlights that developments should incorporate green infrastructure and biodiversity as part of a strategy to address climate change; PPS7 Sustainable Development in Rural Areas (which has an emphasis on landscape character conservation and enhancement); PPS 9 Biodiversity and Geological Conservation which promotes protection, conservation and enhancement of all assets and PPS 25 Planning and Flood Risk...
(2005) which emphasizes the role of green spaces in flood risk management. The previous Labour Government released a new draft consultation PPS on Planning for a Natural and Healthy Environment (March 2010). This combines PPG17, PPS9 and elements of PPS7 and PPG20 (Coastal Planning). It sought to provide an integrated policy approach to the protection and enhancement of open spaces and the natural environment to ensure delivery of “healthy and sustainable communities which adapt to and are resilient to climate change” (p10). It also delivered, for the first time, planning policy on green infrastructure taking into account the Natural England definition of this as set out above. The recently released PPS5 Planning for the Historic Environment (2010) also sets out a broad definition of heritage assets to include not just ‘built’ assets but broader landscape designations and settings as well as typical green historic assets such as designated parks. This provides linkages between the historic environment agenda and green infrastructure ambitions by again highlighting the value and contribution they can together make to local character and quality of the environment. In light of the new coalition Government announcements regarding moves towards a revised National Planning Framework it is unclear at present what format future national policy references to green infrastructure may take. However, regardless of the format, it is highly likely that national recognition and support will continue to be given to green infrastructure.

In addition, there are various legislative directions which required the provision of appropriate green infrastructure, such as the Climate Change Bill (2008) that requires reports on climate adaptation measures and The Local Democracy, Economic Development and Construction Bill (2008) which has recommendations for economic development and regeneration including green infrastructure (Natural England 2009b p11). In specific relation to biodiversity, Section 40 of the National Environment and Rural Communities Act (NERC) 2006 place a statutory duty upon all public authorities to conserve biodiversity. Given the District is home to a number of international and nationally important ecological sites there are additional duties arising from European legislation in the form of the Conservation of Habitats and Species Regulations. This requires the Council to ensure there are no likely significant effects upon the integrity of protected sites arising as a result of development proposed in Cannock Chase District. The Council has accordingly undertaken a Screening Opinion of sites likely to be affected and two subsequent Appropriate Assessments on sites identified as being at potential risk; the Cannock Chase SAC (within the AONB) and the Cannock Extension Canal SAC. The implications of these assessments are discussed further in Chapter 4. Just before the 2010 national election, a key piece of legislation entitled the Flood and Water Management Bill was also passed, which sets out various requirements for the effective protection and management of the water environment. This clearly has implications for green infrastructure given its close relationship to many water and flooding issues.

In terms of best practice, there are various nationally recommended standards for green space and infrastructure typically associated with PPG17 assessments e.g. the National Playing Fields Association ‘Six Acre’ Standard for recreation provision. However, as early as 1995, Natural England has set out recommended distance and size standards for natural areas in its ‘Accessible Natural Greenspace’ standard (ANGST- see Figure 1). A number of best practice examples of green infrastructure and open space management or strategies take into account such national recommendations, but add a local element of analysis and standards to reflect specific circumstances. PPG17 guidance recommends the adoption of locally specific standards, based upon consultation and characteristics of the area.
Accessible Natural Green Space Standards (ANGSt)

Natural England’s ANGSt state that:

- that no person should live more than 300m from their nearest area of accessible natural green space of at least 2ha in size;
- there should be a least one 20ha accessible natural green space within 2km from home;
- there should be one accessible natural green space 100ha site within 5km;
- there should be one accessible natural green space 500 hectare within 10km;
- at least 1ha of statutory Local Nature Reserve (LNR) should be provided per 1000 population.

Figure 1. Natural England’s Accessible Natural Green Space Standards

Natural England has also set out an agenda for ‘Our Natural Health Service: the role of the environment in maintaining healthy lives’ (2009). This sets out the clear mental and physical health benefits of green spaces and sets out an ambition to increase the number of households that are within five minutes walk of an area of green space of at least two hectares and to enable every GP or community nurse to be able to signpost patients to an approved health walk or outdoor activity programme.

The Commission for Architecture and the Built Environment (CABE) has also produced a number of research studies and guidance for the provision and design of open spaces, for instance highlighting the role green spaces have in helping urban areas to adapt to climate change. The most recent and prominent publications ‘Grey to Green- How we shift funding and skills to green our cities’ (2009), ‘Making the Invisible Visible- the real value of park assets’ (2009) and ‘Urban Green Nation- Building the evidence base’ (2010) all seek to highlight the comparative lack of investment in green infrastructure compared with ‘traditional’ infrastructure such as transport. These reports highlight the need for a better connected network of spaces, with more investment for such works alongside enhancements and better management. It is emphasized that green spaces contribute to the attractive character of a place and therefore can act to stimulate further economic investment and growth by attracting businesses and new residents to locate in a high quality environment. However, the undervaluing (financially) of local authority green assets (i.e. a park can be typically valued at £1) means there is a resulting lack of financial commitment to maintaining and enhancing that asset. This is indicative of a wider lack of appreciation for the contribution green infrastructure can make to the local economy. Such considerations need to be taken into account as part of a wider Council policy approach to green infrastructure.

There are also concerted efforts by Government Agencies and organizations such as CABE to promote the use of green roofs and Sustainable Drainage Systems (SUDS- which are now mandatory under the Flood and Water Management Bill) specifically as part of new developments. The multifunctional benefits of such installations are apparent in various good practice schemes such as Eastside in Birmingham where the use of green roofs not only can help promote enhanced biodiversity (by providing a home for endangered species such as Black Redstart birds) but they can assist adaptation to climate change by reducing surface water run-off from buildings and assist
in the cooling of urban areas (http://www.sustainable-eastside.net/redstartproject.html). SUDS can be implemented in various ways, which means they can be adapted to local circumstances to help maximize other benefits including biodiversity and recreation opportunities.

### 3.2 Former Regional Policy and Evidence

During the preparation of this assessment the Regional Spatial Strategy for the West Midlands (RSS) was revoked by the new coalition Government. However, whilst the RSS policies may have been revoked the background evidence and work to it is still relevant to local policy formulation. As a result this section still reviews the former RSS in order to determine what sub-regional and wider linkages the District may need to still have regard to and how the area may fit into potential future larger scale plans for initiatives, such as landscape scale habitat restoration.

The former Regional Spatial Strategy for the West Midlands (RSS) incorporated a number of key regional aspirations and strategies for green infrastructure. The RSS Draft Phase Two Revision (2007) included a series of policies (primarily under the ‘Quality of Environment’ chapter) which aimed to set a framework for the delivery of appropriate green infrastructure at the local level. It set out the need to protect and enhance the natural environment assets, including the recognition of regionally significant designations e.g. Areas of Outstanding Natural Beauty and Special Areas of Conservation. There was a specific regional proposal for a Biodiversity Enhancement Area (BEA) which stretched from Cannock Chase AONB to Sutton Park in north Birmingham. The primary aim of this BEA was the restoration of heathland habitats as well as providing additional social and economic benefits arising from improved green infrastructure provision. The various BEAs were based upon biodiversity opportunity mapping across the region— a key piece of the regional evidence which is still relevant.

The former regional policy QE4- Greenery, Urban Greenspace and Public Space largely reflected national policy and guidance for green spaces/infrastructure whilst sustainability policies also flagged the role green infrastructure had to play in mitigating and adapting to climate change. The planned Phase 3 Revision of the RSS, which would have dealt with ‘Quality of the Environment’ policies, was put ‘on hold’ and interim regional planning guidance issued (March 2010), just prior to the revocation of the whole process. The interim policy guidance recommended altering RSS Policy QE4 to be entitled ‘Green Infrastructure’. It suggested that the West Midlands prospectus (discussed further below) should form the basis for a common definition and approach of/to green infrastructure in the region. There was a recommendation for mapping of resources in a holistic way and the encouragement/requirement for local authorities to produce green infrastructure strategies. The background work on regional opportunity mapping used to inform the RSS revision is discussed further under Section 4.

The West Midlands Regional Assembly also issued guidance in the form of a ‘prospectus’ for the region (Green Infrastructure- A Prospectus for the West Midlands Region 2008). This sets out the regional vision for green infrastructure and provides guidance on implementation at the local level, making reference to other regional initiatives such as the ‘Landscapes for Living’ programme (aims to enhance biodiversity assets, alongside the BEAs). Although its status may be reduced somewhat following the revocation of RSS policy support, it is still considered to represent a useful framework for local approaches. It emphasises the importance of considering the multiple economic, social and environmental benefits of green infrastructure and this background paper
draws upon the prospectus as a framework for its content and analysis— the West Midlands prospectus defined green infrastructure as,

“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 people.”

The Prospectus identifies a number of specific economic benefits of green infrastructure including increases in property or land values; sustaining environmental tourism, providing local job opportunities; assisting climate change mitigation and adaptation; and providing an attractive setting for economic growth and investment.

3.3 Sub-regional and Local Policy

In light of the RSS revocation, key former policy proposals such as the Cannock Chase-Sutton Park BEA, are somewhat more uncertain. However they are still relevant in that they were derived from a technical evidence base and they are likely to still be progressed, if in an alternative guise. For instance, the Cannock Chase-Sutton Park BEA area is recognised as an important one in terms of contributing to local Biodiversity Action Plan targets as well as national ones. The area is currently considered as one of several ‘landscape scale projects’ across the Midlands and may be taken forward as a national priority area, but these are not statutory designations. The Cannock Chase-Sutton Park BEA Action Plan was in final draft form and in relation to Cannock Chase there were are some initial recommendations for works in and around Norton Canes/Kingswood Lakeside for the expansion of heathland habitats (discussed further in Sections 4 and 5) which may still be relevant. However, there are no definite projects underway at present.

The Cannock Chase Area of Outstanding Natural Beauty (AONB), as a nationally important landscape, is recognisably the District's most important green infrastructure asset by virtue of its ecological, heritage, landscape and recreational values. The AONB Partnership Unit produces a management plan in order to appropriately balance the natural sensitivities of the area with recreational demands. The AONB Management Plan 2009-2014 sets out the vision, key objectives and priorities for action in relation to key themes of landscape; people; economy; recreation; and support (see Figure 2 below). The particular nature of these actions and their implications for the District are brought out further in Section 4.

By 2029, Cannock Chase Area of Outstanding Natural Beauty will be an enhanced area of national and international importance in terms of landscape beauty, wildlife and cultural heritage, centred on its heaths and woods. Improved management of both habitat and public access will bring conservation and enhancement of biodiversity and geodiversity and contribute towards a better quality of life both for local communities and visitors.

Figure 2. AONB Management 2009-2014 Vision
The Staffordshire County Council Local Transport Plan (2006-11, currently under revision) integrates the various transport needs of the District from road improvements to cycleway and public rights of way. The Rights of Way Improvement Plan (ROWIP, 2007) is of particular relevance given the strong relationship to green infrastructure deficiencies and enhancements. The current ROWIP sets out analysis of demand and supply, providing an insight into where the priorities for improvements are. This is discussed in further detail in Chapter 4. Derived from the County-wide Local Transport Plan objectives, there are a number of priorities for future capital investment including the implementation of national cycle network routes and improved pedestrian linkages to transport interchanges. Clearly, green infrastructure at the local scale will have a role to play in providing safe routes for such journeys. Staffordshire County Council is also responsible for large areas of green infrastructure, such as the management of County land within the AONB for instance, and its management of such areas is within the framework of obligations under international legislation as well as local strategies such as the Staffordshire Biodiversity Action Plan (currently under revision).

At the local level, the Council has an adopted Local Plan (1997) which contains a number of policies related to the protection, conservation and enhancement of the District’s open spaces. The Local Plan proposals map identified a ‘Green Space Network’ for protection from development and this was made up of the existing and proposed open spaces for recreation and other environmental benefits within the urban areas. As part of the Core Strategy process a partial revision to this network (to update key changes since 1997) has been undertaken (see Annex 1) and a full revision will be undertaken as part of a Site Allocations document. The Cannock Chase Council Sustainable Community Strategy outlines the environment as a key priority and this is carried forward in the Local Strategic Partnership Sustainable Development Group and Local Area Agreement. Local indicators such as the number of Green Flag Awards have also been taken forward. The Council’s Environmental Sustainability Priority Delivery Plan (up to 2012) takes forward such objectives to guide Council resources over the short-medium term. It includes LAA priorities for recycling and biodiversity, as well as the local ambitions for Green Flag Awards. In light of the new coalition Government agenda the LAA system is under review at the local level. Despite this, the Council will still have its own locally derived priorities and targets related to green infrastructure.

The Council has a number of strategies relevant to green infrastructure provision and its appropriate management. The Green Space Strategy (2005 and 2009 assessment update) provides recommendations for the management of the District’s open spaces from the results of a PPG17 assessment. The Urban Forestry Strategy (2008-2013) sets out the Council’s priorities for the management of woodlands, which given the coverage of the Forest of Mercia (Community Forest) across large sections of the District is a particularly important part of the overall green infrastructure. This sets out an aim for the District’s woodland which is “To sustainably maintain, improve and expand the quality of the existing tree and woodland cover”. The Forest of Mercia was one of 12 Community Forests established nationwide in the early 1990’s with the intention of improving people’s access to woodlands. In partnership with local authorities and landowners the Forest of Mercia has been able to expand the coverage and network of trees and carry out a number of complementary educational and recreation activities to help engage the local communities with projects. The Council has a number of management plans for key ecological sites, and has a statutory duty to co-operate in the maintenance of the quality of important sites (particularly SSSIs and SACs) with relevant parties. Other partner organisations strategies such as
the Staffordshire Local Biodiversity Action Plan also require consideration and these are discussed further under Section 4.

The District's Tourism Strategy (2003-2008) and Destination Management Plan (2008- currently under review) in principle support the development of the tourism sector in the District, but recognise the potential implications of growth upon sensitive ecological sites. Of principal focus is the Cannock Chase AONB, given its high recreation and tourism value and ecological sensitivities. As a result there is an objective to relieve pressure upon this key asset by supporting the diversion of activities to alternative locations, such as the Chasewater Country Park in Lichfield District, and via measures e.g. awareness raising of sustainable tourism through marketing campaigns in conjunction with the AONB Partnership. The Appropriate Assessment for the Cannock Chase SAC has being jointly commissioned alongside a Visitor Impact Mitigation Strategy for the AONB in order to address such issues (discussed further in Chapter 4). The Appropriate Assessment helps to jointly assess the impact of the proposed cross-boundary levels of development in the sub-region and recommends cross-boundary solutions. As part of this regard needs to be paid to other plans and guidance in place in neighbouring authorities such as Green Infrastructure Strategies. The only neighbouring authority with a Green Infrastructure Strategy in place is the growth point of Stafford Borough Council and its recommendations have been taken into consideration in the formulation of this study’s conclusions. There are a number of Green or Open Space Strategies in place, which derive primarily from PPG17 assessments and these will help to also inform the nature of measures recommended.

The Council’s Local Development Framework will direct future development in the District up to 2028. As outlined above, this will include provisions for appropriate green infrastructure alongside housing, employment and other developments. The Local Development Framework will comprise the Districts Core Strategy Development Plan Document (DPD), Site Allocations DPD, Rugeley Town Centre Area Action Plan DPD and various supporting Supplementary Planning Documents. The Core Strategy will set the principles for development and overall directions of future growth whilst supporting documents including a Site Allocations document and various Supplementary Planning Documents will provide detailed proposals and guidance. It needs to provide for the development of 5,800 new homes and around 84ha of employment land (as a minimum) for the period 2006-2028 (alongside office and retail development in Cannock Town Centre specifically). At present the strategy for the location of this development is to focus upon the urban areas in broad proportions to their existing share of the population i.e. Cannock/Hednesford/Heath Hayes to accommodate 68% of urban developments, Rugeley 26% and Norton Canes 6%. Each settlement then has its own sustainable urban extension. As part of the decision-making process the Council must have regard to the national and local policy context as set out in this section, alongside local evidence base work set out further in Section 4 (and relevant former regional work). This is now discussed in further detail in the proceeding section.

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4 Former RSS targets, but likely to be taken forward by the Council at present subject to further evidence base reviews
Summary

- The benefits of green infrastructure and its strategic planning are now recognised in national legislation and national to local policy. There is a duty on local authorities to consider the green infrastructure within their areas and plan for its conservation and enhancement.

- The benefits of green infrastructure are multi-functional and principally include assisting mitigation and adaptation to climate change; contributing to the local economy; assisting biodiversity and landscape character enhancements; providing for healthy lifestyles via recreation and sustainable transport opportunities.
4. Cannock Chase Districts' Green Infrastructure Resources - Local Assessments and Key Findings

This section sets out the existing resources and multi-functional roles of the Districts' green infrastructure, drawing on key findings of a series of evidence base studies relating to green open spaces, biodiversity, climate change and landscape character. Consideration is also given to the District's social and economic profile. This is in line with the West Midlands Green Infrastructure Prospectus (2008) which sets out the need to ensure maximum public benefits can be realised through enhanced provision. The particular attributes of the green infrastructure are discussed under the themes of biodiversity and geodiversity; climate change; landscape character and historic environment; recreation, health and the economy; transport; the water environment and flood risk. The themes are broadly based upon the identified key functions of green infrastructure, as set out in Natural England’s recent guidance (2009). These themes are then brought together in Section 5 order to provide a comprehensive assessment of the District's green infrastructure.

4.1. Overview

Cannock Chase District measures approximately 7,800 ha in size with a population of around 94,000. 60% of Cannock Chase District is designated Green Belt\(^1\)- within this lies the AONB (roughly 3,000ha in size). The remainder of the District represents a mixture between agricultural, rural communities and fairly self-contained urban areas bordering the AONB (see Map 1). The local economic base has developed and diversified from the mining heritage of the not too distant past with expansion of the tourism sector and growth in other non-manufacturing sectors. However, the local economy is still reliant upon the manufacturing sector and there are ambitions to increase the local offer of higher skilled manufacturing and service sector positions and bring the job density up to the Staffordshire average, which will also assist in reducing the high levels of out-commuting for work.

The Indices of Multiple Deprivation 2007 provide an overview of the most and least deprived communities across the District. The lower the score for an area the more deprived it is considered to be. Map 2 illustrates that on the whole the District lies outside of the lowest quartiles of deprivation; however there are pockets of more acute multiple deprivation particularly in the central Cannock area. It is in this area that health deprivation in particular is also relatively high (particularly relevant to green infrastructure assets). It should be noted that given the recent economic climate and unemployment figures, deprivation across the District is likely to have increased since the 2007 assessment.

Overall Cannock Chase is ranked by average score as the 135\(^{th}\) most deprived Local Authority in England, from a total of 354. Based on this ranking, Cannock Chase is the most deprived District in Staffordshire (excluding Stoke on Trent). Those areas within the District scoring 1-25% are considered to be within the lower quartile for all of England i.e. they are the most deprived. Deprivation is most prevalent in Education, Skills and Training and followed by Income, Employment, Health and Disability. This information can be juxtaposed with the local assessments of green infrastructure to better inform an approach that benefits those in most need.

\(^1\) It should be noted that as part of the Core Strategy, a Green Belt review is underway which may increase overall net coverage in the District.
Map 1. Overview of the District

² Green Belt is correct as at time of publication (Saved Local Plan Green Belt 1997) and does not account for potential changes occurring as a result of the Core Strategy Publication, Examination and Adoption process.
Map 2. Indices of Deprivation 2007
4.2. Biodiversity and Geodiversity

Biodiversity refers to the variety life in terms of natural ecosystems and wildlife species that support an overall healthy biological system. Geodiversity similarly refers to the variety of earth materials and process which shape the Earth as a whole. Map 3 below provides a summary of the District’s biodiversity and geodiversity assets. These include both designated sites and key links between those sites. The District supports 2 Special Areas of Conservation, 3 Sites of Special Scientific Interest, approx 30 local Sites of Biological Interest\(^1\), 2 Local Nature Reserves (1 additional pending) and 1 Regionally Important Geological Site at Etching Hill. The key links highlighted help to indicate broad areas where improved connectivity via strategic wildlife corridors would assist in providing strengthened habitats. There are clearly areas of strategic importance to the District, beyond those sites already protected by virtue of their international and national status. For instance areas north and south of Norton Canes represent existing and potentially key ones for strengthened habitats (including habitat creation), particularly linked to the former regional Cannock Chase-Sutton Park Biodiversity Enhancement Area (BEA) which remains a priority for heathland recreation. It is apparent that the majority of the District local Sites of Biological Importance (SBIs) form part of wider corridors for wildlife, connecting to other SBIs or non-designated habitats. This is particularly the case in areas south and east of Heath Hayes and across the AONB (Map 3).

The Council, in conjunction with the Staffordshire Biodiversity Partnership has prepared a local biodiversity opportunity map (Map 4). The map illustrates where it is considered that it is most important and feasible to target biodiversity enhancement action, and what that action should be. The map provides a spatial representation of local biodiversity priorities as set out in the Local Biodiversity Action Plan, which also takes into account national priorities e.g. heathland priorities to the east and in central parts of the District. The local biodiversity opportunity map will be continually developed and updated as local biodiversity action is progressed. It aims to complement the West Midlands Regional Opportunity Mapping and national mapping of priority areas.

The Regional Opportunity Map was prepared as part of background work to the RSS Phase 3 revision and it incorporated the mapping of zones (to identify the relative strength of areas in terms of their ecological networks and landscapes) and identification of a series of ‘landscape areas’ which are deemed as offering the greatest opportunities for enhancements over the next 50 years. One of these was the Cannock Chase-Sutton Park Biodiversity Enhancement Area; a sub-regional initiative to restore and enhance primarily heathland habitats and linkages. A Draft Final Action Plan (2009) was prepared and set out a series of ‘Opportunity Areas’ across the BEA and new/improved green way linkages. For instance, there were recommendations for an improved recreation linkage between Hednesford and Chasewater to divert pressures away from Cannock Chase (discussed further under ‘Transport’). Broadly speaking, the proposals for the opportunity areas complement the local biodiversity opportunity priorities (Map 4) and the key habitat links identified as already in existence and requiring enhancements (Map 3). For example, the BEA Action Plan highlighted the need for heathland restoration across main parts of the District. Whilst the BEA may no longer be regional policy, the principle of the ‘enhancement area’ is still relevant and the recommendations of the action plan may still be of use to guide future works.

\(^1\) Currently under review as a result of the designation of several SBIs as SSSIs in 2010/11
Map 3. Summary of Biodiversity and Geodiversity Assets and Key Habitat or Wildlife Links¹

¹ The Sites of Biological Interest are currently under review following designation of a new SSSI (shown on this map)
Map 4. Overview of Local Biodiversity Opportunities 2009/10
As part of its duty under the European Conservation of Habitats and Species Regulations (see Section 3) the Council has undertaken a series of Appropriate Assessments for the Special Areas of Conservation considered to be affected by future development in the District. The Appropriate Assessment for the Cannock Chase SAC concludes that there is the possibility of adverse effects upon the site due to increased development in the District. Such effects arise from an increase in recreational pressures (estimated to be a 9% increase in visitors from housing growth up to 2026), increased water abstraction due to increased household demand and increases in air pollution from higher volumes of road traffic. As a consequence a number of mitigation measures are put forward in a Visitor Impact Mitigation Strategy (2009) including the need to provide around 800ha of Suitable Alternative Natural Greenspaces (SANGS) for recreation purposes within 12 miles of the SAC; awareness raising; habitat management and visitor management e.g. directing visitors away from Brindley Heath to Marquis Drive by measures such as car park closures. This initial evidence is subject to ongoing work with Natural England. However, following on from the completion of this evidence the Council may need to consider, jointly with the other partner authorities, the possible future location of alternative recreational space and the role of potential developer contributions to various mitigation measures. It is evident that the District is relatively constrained within its borders; the only opportunities for additional larger scale provision are likely to be located within Green Belt areas around Heath Hayes/Wimblebury, to the south of the A5/M6 Toll or in areas to the south of Rugeley and Brereton. However, parts of these areas are in agricultural and other private ownership use so opportunities will need to be explored on a cross-boundary basis or focus put upon enhancing and expanding existing publicly accessible sites to qualify as SANGS. The Council can promote (in accordance with the PPG17 Open Space Assessment (2009) recommendations) the provision of smaller scale alternative recreational spaces on individual developments and seek developer contributions to the over-arching mitigation measures, if appropriate. The current open spaces of the District are also afforded protection by national and local planning policy (forming part of the Green Space Network) and they offer a range of alternative recreational opportunities.

The Cannock Chase Extension Canal Appropriate Assessment highlighted the potential adverse impact of the proposed Hatherton Canal restoration project (which would have connected into the Cannock Chase Extension Canal). This is mainly due to projected increases in boat traffic disturbing natural habitats residing in the canal. As a result the Hatherton Canal restoration scheme has now been diverted to avoid the previous connection and parts of the Green Belt to the south-west of the District will provide a new route for the scheme. Concerns do still remain regarding any potential impact upon the SAC, however this key green infrastructure asset is now more protected from harm by diversion of the original scheme. There is the potential for this site to be enhanced sensitively and consideration will be given to its designation as a Conservation Area to help guide investment into the site. The Appropriate Assessment for the Regional Spatial Strategy Phase 2 Revision (2008) highlighted potential adverse effects upon the Canal SAC due to highway drainage pollution from the A5 main road. However, further research has now alleviated this concern and it is not considered to be a hazard.

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1 These mitigation measures and costs will be set in a mitigation strategy and implementation plans, including the Infrastructure Delivery Plans of the relevant local authorities.
4.3. Climate Change

Climate Change is commonly identified as one of the greatest challenges facing mankind due to its potential wide-reaching implications. In the context of Cannock Chase District there are likely to be a range of impacts arising from projected increased temperatures, decreases in summer rainfall and increases in more heavy rainfall events (UKCP09 projections). These include increased pressure on water resources; increased sensitivity of biodiversity assets; increased demand for cooler buildings or open spaces and increased flood risk. One of the key consequences arising from the potential effects of climate change is an increased risk of flooding in the District. As set out in Section 4.6 below, the Strategic Flood Risk Assessments (SFRA) provide guidance on specific areas and sites in relation to the potential threat from flooding now and in the future. The Strategic Flood Risk Assessment suggest that there could be an increase in the coverage of Flood Zone 3B (highest flood risk, effectively a functional floodplain) and the frequency of flood events as a result of climate change. This particularly affects the central and northern Rugeley and central and southern Cannock urban areas. In order to address this potential increased risk, areas of green infrastructure already performing a flood plain or flood alleviation role need to be protected. Map 5 demonstrates the relationship between the District’s watercourses and the Green Space Network.

As discussed further in Section 4.6, the District’s green infrastructure not only serves as a role in terms of flood plains, but it can help reduce the risk and frequency of flooding by slowing the rate at which surface-water run off flows into the drainage system and rivers i.e. green spaces can better absorb precipitation in contrast to hard-surfaced tarmac areas. Given projections of increased heavy rainfall events in the future due to climate change, it is clear that such green infrastructure will be a crucial adaptation tool. In addition to flood risk alleviation and mitigation, green infrastructure has a role to play in reducing the potential effects of overheating in summer by providing shade and absorbing latent heat. It can also assist in the reduction of climate change causes by acting as a ‘carbon sink’, thus helping to reduce carbon emissions. Whilst it is difficult to quantify the precise contributions made in these respects is it clear that the development of a robust green infrastructure is vital to ensure Cannock Chase is positioned to face the challenges of climate change. The existing Green Space Network within the urban area (see Map 5) is a key local level mitigation measure, particularly given its passage through areas that are most susceptible to increased impacts of heat island effects and flood risks i.e. ‘vulnerable’ residential and critical infrastructure uses.

Research highlights the need to consider climate change impacts upon biodiversity. Changing habitats as a result of climate change can reduce the ability of species to adapt quickly and survive in the long-term. As a result existing habitats and the linkages between them need to be strengthened and enhanced so as to give wildlife the best opportunity to adapt and survive. Maps 3 and 4 above highlight such key areas and linkages and the Council needs to ensure such matters are duly considered in its green infrastructure approach e.g. via support for initiatives such as those arising from biodiversity opportunity mapping enhancements and via the management practices for individual sites.

The District’s green infrastructure also has a role to play in terms of mitigating the causes of climate change e.g. assisting reduced carbon emissions from car travel by promoting sustainable methods of transport (discussed further below) and by contributing to renewable energy targets.
Green Infrastructure can provide the fuel for biomass energy generation or on a wider scale provide the open space for larger-scale schemes such as wind turbines. However in such cases there is a risk of conflict with other primary aims of enhanced landscape character and habitats, although there is scope for mutually beneficial activities to be undertaken that mitigate potential adverse impacts. For example, the restoration of a site following its use for renewable energy installations could contribute to long-term improvements whilst landscaping works appropriate to the site could contribute in the short term.
Map 5. Watercourses and the Green Space Network in Cannock Chase District
4.4. Landscape Character and Historic Environment

Landscape Character refers to what makes a place unique as a result of a combination of natural and human processes e.g. certain natural landforms or vegetation combine with distinctive historical settlement patterns to produce a unique landscape character which can be of better or poorer quality than another. The historic environment is now more broadly defined to refer not only to traditional built assets e.g. listed buildings but also to the wider historic features of broader scale whole landscapes- it is therefore inextricably bound up in the landscape character of a place. Much of the District lies within the national natural character area of Cannock Chase and Cank Wood (Natural Area 67). The area approximates to the traditional site of the Cannock (or Cank) Forest, a royal medieval hunting forest. It is now characterized by a combination of human influences upon the landscape, including deforestation, agriculture, mining and urbanization. Coal extraction was important from the sixteenth century onwards and has made a major contribution to the landscape character of the southern part. Over 90% of the area is Grade 3 agricultural land or better, with the higher quality land mainly to the south and west of Lichfield. There are 8 Conservation Areas within the District, 67 listed buildings and 5 Scheduled Ancient Monuments.

The Landscape Character Assessment of Cannock Chase District (2008) provides a more detailed and focused assessment of the District through smaller units of land descriptions. Each of the Land Description Units is provided with a summary of its condition, strength of character and vision for the future. An overview of the recommendations is provided in Map 6 and Table 1 below.

The recommendations represent a mixture between conserving the existing character of ‘strong’ areas in ‘good’ condition, enhancing areas in a state that could be improved (i.e. ‘good’ areas could still be improved in some cases) and strengthening areas that are ‘weak’ or ‘poor’ in character and condition. The key priorities for action concern the conservation of the AONB character area via restrictions on development; monitoring the impact of horse grazing; and improving linkages to the urban areas without creating undue pressures on the landscape. In the south of the District there are key recommendations for the strengthening and enhancement of the landscape character, including heathland and other planting measures which could contribute to the local biodiversity opportunity mapping priorities e.g. the former BEA. There are recommendations for the improvement of recreational links between Norton Canes, Burntwood, Brownhills and Pelsall- these are discussed further below under ‘transport’. This local level assessment has also had regard to the County Council Landscape Character Assessment (encapsulated the ‘Planning for Landscape Change’ Supplementary Planning Guidance 2000) and many of the recommendations are concurrent to this strategic level analysis.

The impact of horsiculture upon the AONB landscape in particular is highlighted by specific studies on the agricultural landscapes and horsiculture monitoring within the AONB. These studies outline the need for positive management of horse activities, particularly upon the fringes of the AONB where insensitive stable and paddock developments can have a visually adverse effect on this highly valued landscape. Other issues also arise as a result of horse and agricultural activities such as nitrate pollution.
Map 7. Overview of Landscape Character Recommendations
<table>
<thead>
<tr>
<th>Landscape Type</th>
<th>Strength of Character/Sensitivity</th>
<th>Vision</th>
<th>Key Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandstone Hills and Heath</td>
<td>Strong-Moderate</td>
<td>Conserve</td>
<td>Conserve and create new areas of heathland. Monitor impact of horse grazing and encourage positive management of field boundaries, trees and woodlands. Resist inappropriate development given high inherent sensitivity of the landscape.</td>
</tr>
<tr>
<td>Wooded Estatelands</td>
<td>Moderate</td>
<td>Conserve and Enhance</td>
<td>Encourage planting of woodland belts at edge of farmlands/urban edges; encourage maintenance of field boundaries. Resist inappropriate development in visible arable landscapes and retain green wedge of Rising Brook Valley, connecting Rugeley to Cannock.</td>
</tr>
<tr>
<td>Settled Farmlands</td>
<td>Moderate</td>
<td>Conserve and Strengthen</td>
<td>Carefully monitor impacts of over development via new dwellings, extended dwellings, converted/extended farm buildings and other suburbanising pressures including horse grazing activities. Limited capacity for all but small scale changes in and around Cannock Wood.</td>
</tr>
<tr>
<td>Coalfield Farmlands</td>
<td>Moderate</td>
<td>Conserve and Strengthen</td>
<td>Encourage positive management of field boundaries, trees and woodlands. Encourage development of secondary woodlands around industrial development and intensive arable fields. Promote better maintenance of roadside hedgerows and verges, reduce litter and enhance safety of lanes by giving priority to cyclists and pedestrians.</td>
</tr>
<tr>
<td>Planned Coalfield Farmlands</td>
<td>Weak-Moderate</td>
<td>Strengthen and Enhance</td>
<td>Encourage heathland creation to link Hednesford Hills, Cannock, Chasewater and Brownhills Common. Encourage woodland planting at edges of Heath Hayes. Improve recreational access to Fair Lady Coppice and enhance existing links, such as Beacon Way, to connect Norton Canes with Burntwood, Pelsall and Brownhills. Matrix of mixed woodlands, wet grassland, secondary woodland and heathland would unify the area.</td>
</tr>
<tr>
<td>River Meadowlands</td>
<td>Moderate</td>
<td>Conserve and Strengthen</td>
<td>Protect floodplain from development and encourage traditional grazing management of the land. Promote restoration of traditional river meadow features along Rugeley by-pass. Promote links to landscape-scale enhancement projects such as ‘On Trent’ and restore character by removal of inappropriate development along flood plain.</td>
</tr>
</tbody>
</table>

Table 1. Summary of Landscape Character Recommendations
Whilst the Landscape Character Assessment (2008) considered cultural influences (by incorporation of the County-wide Historic Landscape Characterisation) further work was undertaken to fully assess the District’s historic environment assets in areas of potential large scale development pressures. The Historic Environment Character Assessment (2009) provides an insight into the potential impact of development upon key areas currently part of Cannock Chases’ strategic green infrastructure e.g. the Green Belt. There are areas of higher sensitivity to change and sites which could be further enhanced by improved management. Such areas highlight the potential benefits of green infrastructure to heritage-led regeneration in the District. However the potential impact of such increased activities upon sensitive ecological sites (particularly those of international importance) need to be managed appropriately, as discussed further below.

The District’s key historic environment assets are outlined on Map 7 (excluding listed buildings). Whilst these show mainly designated individual assets, the Historic Environment Character Assessments of sensitivity take into account non-designated assets to provide an overview of the potential impact of development upon a landscape area (Map 7). This clearly shows those areas of existing and potential value in historic environment terms by virtue of surviving features such as mineral railways, historic farmsteads or former moats alongside the possible survival of archaeological features due to a lack of recent development on some Greenfield sites. Table 2 below provides a summary of key recommendations for those areas of highest sensitivity. Whilst there may be areas of low or low/moderate sensitivity identified, this does not necessarily mean that there are no historic features worthy of attention. For example, at Cannock HECZ1 there is still the need to consider any surviving archaeological features and a historic bank (which has potential medieval origins) demarks the western boundary and in the south of the District the Cannock Chase Extension Canal is a key asset, although part of it is within an area of overall ‘low’ sensitivity.

In terms of the contribution of smaller scale green infrastructure, the ongoing Extensive Urban Surveys for Cannock and Rugeley provides some input into the historical development and sensitivity of present-day green assets within these urban areas i.e. the town centre churchyards. The Characterisation Study (2011) identifies the importance of small scale green infrastructure to the character of the District overall and the need for enhancements in some areas. The Urban Forestry Strategy (2008) already recognises the key role of individual trees and woodland areas to the Districts’ social, economic and environmental well-being and alongside long standing initiatives such as the Forest of Mercia, the Council is committed to retaining and enhancing these smaller-scale assets. There are many protected trees, covered by Tree Preservation Orders, throughout the District and the Conservation Area Appraisals also recognised the contribution made by significant groups or individual trees to the unique and important characters of the Conservation Areas.
Map 7. Summary of Historic Assets and Environment Sensitivity
<table>
<thead>
<tr>
<th>Area (see Map 8)</th>
<th>Overall Sensitivity</th>
<th>Key Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cannock HECZ4</td>
<td>Moderate</td>
<td>Retain and enhance existing historic buildings; retain claypit for historic and biodiversity value</td>
</tr>
<tr>
<td>Cannock HECZ7</td>
<td>Moderate</td>
<td>Potential for surviving archaeological features to be explored further</td>
</tr>
<tr>
<td>Cannock HECZ9</td>
<td>Moderate</td>
<td>Retain and enhance overall historic landscape character with particular regard to the surviving mineral railway; historic farmstead and potential archaeological features</td>
</tr>
<tr>
<td>Cannock HECZ13</td>
<td>Moderate</td>
<td>Retain and enhance overall historic landscape character with particular regard to surviving railway and tramway and potential archaeological features</td>
</tr>
<tr>
<td>Cannock HECZ16</td>
<td>Moderate</td>
<td>Retain historic lanes; remaining railway section; consider impact upon listed buildings settings and potential archaeological features</td>
</tr>
<tr>
<td>Cannock HECZ19</td>
<td>Moderate/high</td>
<td>Retain and enhance overall historic landscape character with particular regard to impacts upon surviving historic buildings and canals; outline of the Wyrley Common; surviving railway lines and potential archaeological features.</td>
</tr>
<tr>
<td>Rugeley HECZ2</td>
<td>Moderate</td>
<td>Retain and enhance overall historic character with particular regard to surviving historic farmsteads and potential archaeological features</td>
</tr>
<tr>
<td>Rugeley HECZ3</td>
<td>High</td>
<td>Retain and enhance overall historic character with particular regard to the settlement pattern and boundaries of Slitting Mill; the historic buildings; potential archaeological features and the promotion of the early iron working site to help understand importance of this industry to the local area</td>
</tr>
<tr>
<td>Rugeley HECZ4</td>
<td>Moderate</td>
<td>Retain and enhance surviving parkland features including the Grade 2 listed grotto and consider potential surviving archaeological features</td>
</tr>
<tr>
<td>Rugeley HECZ8</td>
<td>Moderate</td>
<td>Retain and enhance overall historic character with particular regard to potential for archaeological, mainly industrial features, to survive</td>
</tr>
</tbody>
</table>

Table 2. Summary of areas of highest historic environment sensitivity
4.4. Recreation, Health and the Economy

As outlined in Section 3 it is increasingly recognised that green open spaces not only provide all round health benefits, they also contribute to the economy of an area. The PPG17 Open Spaces Assessment highlights that the District is relatively well provided for in terms of the quantity of green spaces. It highlighted the continued importance of many of the Green Space Network sites and has informed the addition of new sites to the network (Annex 1). However, the distribution of this provision is not even and there are key areas of deficiency, both in terms of quantity and quality. Map 8 provides an example of accessibility in relation to semi-natural sites only. Map 9 shows the revised Green Space Network proposed as part of the Core Strategy and arising from this assessment.

In terms of these key deficiencies it is noted that despite access to large sites such as Cannock Chase AONB, Chasewater, Shoal Hill and Gentleshaw Common (all outside the District bar large tracts of the AONB) there is a lack of provision of alternative semi-natural sites within the Rugeley and central Cannock urban area. This is assessed in terms of a local accessibility standard of 480 metres to a site larger than 2ha. When the 300m Natural England ANGST is applied these deficiencies increase across the District. In relation to the Natural England ANGST for larger sites, the AONB serves as the 500ha site covering the whole of the District within 10km of its boundary. In terms of access to sites over 100ha there are deficiencies south of the A5 in Little Wyrley. There are deficiencies in access to sites over 20ha in size within 2km in western Rugeley and in some central areas of Cannock/Heath Hayes.

There is limited scope for the provision of large new sites given the existing development; however the potential for small scale sites or enhancements of existing ones will need to be pursued alongside urban developments to help re-address the imbalance. In the Cannock/Hednesford and Heath Hayes urban area (bar central Cannock) access to semi-natural sites is relatively good with Local Nature Reserves providing large alternative recreation spaces and habitats. However, there is a deficiency in access to play area provision in some parts of the Cannock and north Hednesford area. A lack of green corridors is most notable in the central urban area of Cannock (the rest of the District is relatively well provided for). Norton Canes is also relatively well provided for in terms of semi-natural spaces, with areas to the south-west being the only main exception. There is a lack of access to appropriate allotment facilities in the District and additional cemetery provision is also an issue being further explored by the Council. Such facilities may need to utilise existing green infrastructure in the District e.g. existing Green Belt land potentially. As part of a follow on from the PPG17 assessment, indicative opportunities for Green Space Network expansion have been considered and are discussed further in Section 5.

The AONB is a key recreation asset, not just for local residents but for visitors across the West Midlands. The AONB Management Plan (2009-2014) sets out the means of managing such recreation and tourism demands in order to retain and enhance the natural assets of the area which give rise to its designation and appeal. The plan, in accordance with its vision, sets out a series of high-level objectives and key themes for focusing management and delivery- Landscape; People; Economy; Recreation; Support. The plan recognises the dual benefits and pressures recreation brings to the AONB and has subsequently adopted a number of policies to manage this. For example policy RP1 seeks to divert pressures away from the more sensitive areas; RP4 aims to encourage sustainable tourism strategies amongst partner organisations; RP7 aims to increase
education and awareness amongst visitors whilst RP9 explicitly states that new, or expanded
recreational activities will only be supported where they are sustainable. The Management Plan
will be accompanied by an implementation plan, setting out specific projects and funds to meet the
objectives and policy aims.
Map 8. Semi Natural sites over 2ha in size with 480m walking distance ‘buffer’ zone
The AONB Management Plan and ongoing work by the AONB partnership is informed by a series of evidence base studies (such as those referred to above on the impacts of horticulture) including the State of the AONB Report 2004 and a Peace and Tranquillity Assessment 2010. The former helps to set out the key challenges, features and opportunities for the AONB based upon its present state. The latter assessment highlights the importance of maintaining the unique peaceful and tranquil environment of the AONB, providing a baseline assessment of current areas of ‘most’ and ‘least’ tranquillity - an important feature of the AONB character. The role of increased recreation and development pressure in affecting this should be recognised.

As outlined above, the Appropriate Assessment (2009 and ongoing) for Cannock Chase Special Area of Conservation (SAC - which lies within the AONB) recommends the provision of an additional 800ha of alternative green space within 12 miles of the SAC and the diversion of pressures to other parts of the AONB via visitor management techniques e.g. car park closures in sensitive areas to discourage visitors\(^1\). This requires the above deficiencies highlighted by the PPG17 assessment to be addressed and for the continued support of other nearby alternative areas e.g. Chasewater Country Park. Joint working with the other southern Staffordshire authorities, and potentially wider, will be required to identify additional areas of provision beyond Cannock Chase Council District. For instance areas including the Central Rivers (a 13 mile stretch of the river Trent and the river Tame in Staffordshire, between Burton on Trent and Tamworth) and the National Forest (covering parts of north/east Staffordshire) could assist in reducing visitor impacts from further a field.

Given that 60% of the District is Green Belt there is a notable ‘rural-style’ economy in operation, focused upon not just tourism but also agriculture in parts and the District’s green infrastructure obviously has a direct link to these sectors. In terms of the wider District economy, it is difficult to financially value the contribution that the existing and any future green infrastructure makes. However, as outlined in national guidance and research an attractive, high quality environment featuring good green infrastructure is clearly valued by businesses and influences their location decisions. At locations such as Kingswood Lakeside, Cannock there is a masterplan in place which seeks to achieve such an environment to attract high quality employers to the District. The Trent and Mersey Canal green infrastructure asset offers an opportunity for heritage-led regeneration, contributing to bolstering Rugeley town centre fortunes. There are also public health benefits which similarly can not be easily quantified at the local level, but as recognized in national guidance, there are costs to be saved in the National Health Service by providing good quality recreational spaces which have physical and mental health benefits.

\(^1\) It should be noted the precise mitigation strategy is still undergoing formulation in conjunction with Natural England.
4.5. Transport

A key function of the District's green infrastructure is to provide the area's residents with sustainable forms of transport, namely walking and cycling via public rights of way and the cycle network. There are a number of existing main public rights of way crossing the District, as well as cycle routes (Map 10). There are several 'promoted routes' for walking around Staffordshire; the Way for the Millennium is a promoted route running through the District via the Trent and Mersey Canal (see Map 10). As well as the longer distance, strategic links there are a number of local scale 'green corridors' (recreational footpaths/cycle ways) around the District which link the urban areas (discussed further below).

Maps 11-13 below outline those areas of anticipated deficiency in provision in relation to future demand for walking and cycling provision (derived from County Council ROWIP 2007). Overall, the key areas of projected deficiency in access to such routes are in the eastern areas (largely Green Belt around Heath Hayes and north of Norton Canes) and in the AONB. The County Council highlight “parts of Cannock Chase district such as the AONB, the Forest of Mercia and around the urban areas have already been identified in the ROWIP as areas where demand for access by walkers, horse riders and cyclists is already high and likely to increase. The ROWIP sets out a number of priorities for improving these routes and encouraging their use, particularly for commuting purposes, over the next ten years. As well as improving and promoting these routes, the ROWIP also acknowledges the importance of green spaces in and around urban areas such as Cannock town to promote healthier communities and increase tourism and boost the local economy. One of the main aims of the ROWIP is to link the existing path network with these green spaces” (Core Strategy Preferred Option Response 2009). Key proposed actions potentially affecting Cannock Chase District include the aim of creating long walking routes along the River Trent, the creation of additional walking routes centred around the existing 'Way for the Millennium' and other works e.g. general maintenance and signage improvements across the network.

Priorities for investment are derived from the Local Transport Plan (2006-11) and ROWIP (2007)². Recent investments in improvements such as the Chase Heritage Trail (spanning from the Cannock to Rugeley via the AONB) are highlighted and there are continued priorities for improving National Cycle Network (NCN) routes and local cycle routes across the District e.g. the NCN 5 route across Cannock Chase linking with Lichfield and Stafford and beyond. Part of the intended NCN 5 route runs via the former Rawnsley mineral railway line, located to the north of Hednesford Hills and passing through Rawnsley and Prospect Village on route to Gentleshaw Common in Lichfield District, and this is currently a saved Cannock Chase Council Local Plan 1997 transport proposal. The Draft Cannock Chase-Sutton Park BEA Action Plan (2009) also recognised the importance of such a link to help divert recreational pressure away from the Cannock Chase SAC. In addition, Staffordshire County Council has undertaken an Accessibility Appraisal (2009) of the District's proposed development areas in the Core Strategy. This identifies the current accessibility level of key sites and sets out what improvements will need to be made to transport networks in the future to support growth. As part of the individual key potential development areas there are recommendations for enhanced public transport links including cycle and pedestrian routes e.g. for land south of Norton Canes there is a need to provide appropriate routes to link to Norton Canes local centre and surrounding urban areas. The PPG17 assessment (2009) identified

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² The Local Transport Plan is currently under going revision
a series of green corridors (recreational routes) across the District which provide links to both the urban areas, open spaces within them through to the rural areas. Unsurprisingly, there is an overlap between the green corridors and open spaces (including the locally designated Green Space Network and other areas of publicly accessible space) - this highlights the importance of maintaining and where possible extending local links and green space coverage to enhance the local sustainable transport offer.

The canals in the District have been identified as green corridors in the District's PPG17 assessment and they provide a unique opportunity for sustainable transport, recreation and regeneration. The Trent and Mersey Canal is a strategic corridor linking the East and West Midlands with the River Mersey in Liverpool. Given that there are sections passing via Rugeley Town Centre, and its historical value is recognised by designation as a Conservation Area, there are particular opportunities for heritage-led regeneration and promotion of the route for sustainable recreation e.g. walking and cycling as well as boating. It already forms part of the Staffordshire promoted route the Way for the Millennium, stretching from Burton Upon Trent to Newport and part of the County-wide Staffordshire Way. In the south of the District, the Cannock Chase Extension Canal, although being internationally protected for its ecological value, still offers the opportunity for recreational links such as walking and cycling. The proposals for the new Hatherton Branch Canal (discussed in section 4.2) could have recreational and regeneration benefits for the District, however the diversion now means the route largely lies outside of Cannock Chase.

These analyses all highlight the importance of the District's green infrastructure in relation to sustainable transport and recreation links. There is a need to protect and enhance these areas in terms of their accessibility in order to promote the multi-functional use of green spaces District-wide. However, it should be noted that increased accessibility may not be desirable in all parts as a matter of principle. In accordance with the Appropriate Assessments for the Cannock Chase SAC and Cannock Extension Canal such sites of ecological sensitivity need to have recreation pressures managed carefully and reduced as far as possible to ensure the integrity of the sites.
Map 10. Overview of main Public Rights of Way routes through Staffordshire (reproduced from SCC ROWIP 2007 with permission from Staffordshire County Council)
Map 11. Density of walking provision in relation to anticipated demand (reproduced from SCC ROWIP 2007 with permission from Staffordshire County Council)

Map 12. Density of cycling provision in relation to anticipated demand (reproduced from SCC ROWIP 2007 with permission from Staffordshire County Council)
Map 13. Density of horse riding provision in relation to anticipated demand (reproduced from SCC ROWIP 2007 with permission from Staffordshire County Council)
4.6. Water Environment and Flood Risk

The Water Environment is crucial to the social, economic and environmental success of the District. Water abstracted from rivers or reservoirs is supplied through a complex supply network to homes and businesses where it is used and then returned via the sewerage network and sewage treatment works back to the river. Alongside this process is the natural cycling of water, as rainwater is directed through drainage systems into rivers and then to the sea. In towns and cities with a high percentage of impermeable surface heavy rain during storm events can cause surface water flooding as well as river flooding. In addition there is more frequent operation of Combined Sewer Overflows (CSO’s) and pollutants from roads and hard surfaces are washed into rivers. Green infrastructure (GI) integrated with Sustainable Drainage Systems (SuDS) can reduce these impacts as well as providing green space for people and habitat for plants and animals. This section outlines how green infrastructure has a key role to play in many parts of this water cycle and flood risk management.

The Cannock Chase Water Cycle Study incorporating a Surface Water Management Plan (2010) helps to identify key water environment issues. The study takes into consideration important local plans and objectives for the District’s water environment including:

- Humber River Basin Management Plan which is a key driver for improved ecological quality of water bodies in the District as part of the requirements of the Water Framework Directive.

- The Environment Agency Catchment Abstraction Management Plans which considers how to manage and protect the water environment from over abstraction.

- Water Company plans from the two companies serving Cannock Chase- South Staffs Water (water supply) and Severn Trent (waste water treatment).

- Strategic Flood Risk Assessments for the District and the surface water flood risk across the main catchment areas.

The Water Cycle Study considers in an integrated and holistic way the competing pressures on the water environment and the impact these have on potential land uses in and outside the District. It shows that for instance Sewage Treatment Works serving Cannock Chase discharge into watercourses within the District as well as outside the District boundaries. It highlights that the River Trent is a priority for improving its water quality under the Water Framework Directive and that other brooks in the District require management or improvements to Sewage Treatment Works to protect their water quality. In terms of water for supply, an analysis of the South Staffs Water Management Plan shows that their will be sufficient water to cater for new and existing households for the next 20 years. However the Environment Agency Catchment Abstraction Management Strategies (CAMS) show that there are a number of water sources which are over-abstracted or at risk of over abstractions in the District. This may impact upon commercial and agricultural users in particular as well as wildlife habitats.
Whist flooding is projected to increase as a result of climate change (see Section 4.3), flooding itself is still a ‘natural’ process that will continue to occur regardless of man-made climate change impacts. There are a number of main rivers and other watercourses within the District including the River Trent and Rising Brook (Rugeley), the Ridings and Saredon Brook (Cannock) and Gains Brook (Norton Canes). The Strategic Flood Risk Assessments (SFRAs) outline that the highest risk flood areas (from watercourses) lie along the River Trent/Rising Brook (Rugeley), the Ridings Brook/Saredon Brook (Cannock) and the Wash Brook (Norton Canes/Little Wyrley). This affects built up areas of the District, Rugeley town centre in particular and along the A5 at Bridgtown in southern Cannock. The Level 2 SFRA for Rugeley town centre recommends an area of high flood risk should be protected from future development in order to act as a natural flood storage area to the south of the town.

The SFRAs refer to the Environment Agency River Trent Catchment Flood Management Plan (which covers the whole District) that sets policy aims for areas in relation to their current and future flood risk. In relation to the Cannock urban area the Environment Agency has identified a need to ‘take further action to sustain the current level of flood risk into the future (responding to the potential increases in risk from urban development, land use change and climate change)’. This is because the risk is currently managed appropriately, but it is expected to rise so will require future increased levels of intervention. In relation to the Rugeley urban area there is a need to ‘take action with others to store water or manage run-off in locations that provide overall flood risk reduction or environmental benefits, locally or elsewhere in the catchment.’ The principle behind this is that flooding is transferred to places where it can bring benefits, which reduces the risk in areas where it is a problem. This can mean flood plains could be restored and improve habitats, reducing the negative impacts of flooding elsewhere within the catchment. It may include changing the way land is used to hold water within that part of the catchment for longer, reducing flood risk elsewhere.

Surface water flood risk is assessed as part of the Surface Water Management Plan (2010). It identifies that the Rugeley catchment (covering the whole northern part of the District) and the Cannock catchment (covering the whole southern part of the District, including Norton Canes) are both at risk of surface water flooding. At a more localised scale, the urban areas of Cannock and Rugeley are at highest risk. Such risks occur as a result of the combination of the drainage/sewage network or watercourses not being able to cope with heavy rainfall or demand, flooding from small open channels and culverted urban watercourses and overland flows from urban/rural fringe areas. Groundwater flooding from disused mines is also an issue specific to Cannock Chase as a result of its mining legacy and this is being monitored by the Coal Authority and Environment Agency.

The role of existing green infrastructure in flood management is highlighted by the location of some of the high risk flood areas within undeveloped open spaces e.g. the River Trent flood plain to the north, the Green Space Network at Mill Green and Green Belt across Little Wyrley (see Map 5). This key role of the Districts green infrastructure at both a strategic and site-level scale needs to be recognised and SuDS promoted. There are many types of SuDS but ones such as ponds and swales can contribute to the District green infrastructure by providing additional spaces for wildlife, or even recreation where appropriate and they can assist in pollution reduction from surface and flood water. De-culverting also offers opportunities for naturalisation of rivers, enabling them to function more efficiently and where possible this should be explored. In addition, better
management of existing green infrastructure could reduce risk e.g. recreation and agricultural practices create compacting of the ground or leaving land bare reducing its ability to absorb precipitation.

Green infrastructure can also assist in meeting helping to resolve issues with water quality and supply highlighted above. For instance SUDs can not only reduce flood risk but they can diffuse urban pollution by acting as natural filters of water. Acting as efficient storage vessels of water, green infrastructure assets may help to recharge river water supplies. Green infrastructure improvements can thus have a positive impact upon the 'grey' infrastructure of the water cycle. For example, it can relieve pressure from over-capacity drainage networks by reducing the volumes and speed of run-off waters entering the system.

In terms of SuDS the Water Cycle Study does highlight that not all areas will be as readily able to implement such solutions as others. This is because they may be areas of ground water vulnerability or source protection zones for water resources. As a result, pollution arising from SuDS could detrimentally impact upon these sensitive sites. Such considerations do not completely rule out such solutions necessarily but they need to be taken account of and may influence the type of SuDS adopted. For instance, green roofs can be effective SuDS.

This section has demonstrated that there is a need to protect the District's existing green infrastructure as far as possible, particularly where this plays a crucial role in relation to flood management in high risk areas. The safeguarding of specific green infrastructure assets e.g. land to the south of Rugeley town and Green Belt or Green Space Network sites acting as flood plains is also necessary. More generally the development and management of Green Infrastructure which incorporates sustainable drainage and considers the needs of the water environment can provide multifunction benefits for the people and wildlife of the District.
5. Implications for CCDC Green Infrastructure

The preceding analysis and policy review enables the key objectives of this assessment to be addressed and applied to the local context of Cannock Chase District. This section summarises the strategic green infrastructure assets identified, the strategic key deficiencies and the areas of the District with the need and opportunities for enhancements. It can also identify key measures needed to ensure delivery of the green infrastructure required. The findings and recommendations are presented by the main geographical areas of the District to give a clearer local dimension. Map 14 provides a summary of the main implications for the District. In line with the approach of the study this identifies assets and opportunities at a strategic scale. Recommendations for further work to assess opportunities at a smaller scale are discussed under ‘Delivery’ below and in Section 6.

This assessment has identified the following key green infrastructure assets in the District, which are important due to their combined benefits for climate change mitigation and adaptation, habitats, the historic environment and landscape character, amenity and recreation and water environment management. They are:

- Cannock Chase AONB (including Country Parks, SACs and SSSIs)
- Hednesford Hills (now a SSSI), Hazelslade, Mill Green and Hawks Valley (pending designation) Local Nature Reserves and Sites of Biological Importance
- Cannock Chase District Green Space Network (representing a range of formal and informal recreation opportunities and particularly where the space forms a distinct, vital role i.e. flood risk management)¹
- Trent and Mersey Canal and River Trent corridor
- Cannock Chase Extension Canal
- Major parts of the Green Belt, namely planned coalfield landscapes to the north and east of Norton Canes and Wimblebury; heath landscapes to the east and north of Hednesford and Wimblebury; wooded estateland and heath landscapes to the south of Rugeley and Brereton (leading into the Cannock Chase AONB)- incorporating a number of existing and potential SSSI designations
- Chasewater Country Park (Lichfield District).

Strategic Areas are identified for their existing assets and potential for further green infrastructure provision or enhancement works to address deficiencies. Opportunity Sites are also identified where there is the potential for further discussions and investigations into site-specific works (see Map 14). These sites have been identified from local knowledge and they do not represent firm proposals of any sort- the current Opportunity Sites are therefore not an exhaustive list and they are subject to change.

¹ In specific relation to the Green Space Network, as an entity it is considered to be a ‘strategic’ asset. However, it is recognised that parts of the network could be deemed more ‘strategic’ than others by virtue of their value i.e. Mill Green and Hawks Valley Nature Reserve performs a strategic role in terms of its ecological, recreation, landscape character and flood risk management functions, whereas other ‘less strategic’ parts of the network may perform a pure recreation and visual amenity function.
Strategic Green Links are defined as those that offer access for the movement of wildlife or people at a strategic scale e.g. links between designated habitats and the Trent and Mersey Canal. Existing and potential new links are identified (see Map 14).

Strategic Water Corridors are identified as areas where strategic watercourses, such as the River Trent and Rising Brook require specific green infrastructure management to mitigate flood risk and help contribute to the watercourses unique value e.g. via pollution alleviation.
Map 14. Overview of Strategic Green Infrastructure Assets and Priorities for Enhancements

- Cannock Chase AONB—priority area for green infrastructure
- Strategic Water Corridor
- Existing Green Space Network to be enhanced and extended (see Map 15)
- Strategic Green Links (existing to be conserved and enhanced or new links)
- Enhance landscape character at sensitive edges
- Strategic focus for green infrastructure conservation and enhancements (Strategic Areas)
- Local Nature Reserves—focus for biodiversity conservation and enhancements
- Cannock Chase Extension Canal
- Opportunity Sites

See local biodiversity opportunity mapping for landscape priorities (Map 4)
5.1 Strategic Areas and Opportunity sites

There are clearly areas where multi-functional benefits from similar actions could be realised i.e. in the Norton Canes area heathland restoration would not only contribute to biodiversity priorities it would help to strengthen the landscape character. Map 14 above highlights the key strategic green infrastructure areas. The implications for each of the Districts' communities are summarised below.

5.1.1. Cannock/Hednesford/Heath Hayes

Key Features

- Number of key infrastructure assets including Cannock Chase Extension Canal, Ridings Brook watercourse, Hednesford Hills, Green Space Network and pending Local Nature Reserve designation Mil Green and Hawks Valley. Strategic AONB adjacent to much of the urban area containing number of distinct assets.
- Strong landscape character to north requiring conservation (dominated by AONB designation); need for character of Green Belt around Heath Hayes and Wimblebury to be strengthened via better management.
- The Green Belt serves a role as a strategic wildlife corridor to the south-east of Heath Hayes and east of Wimblebury, linking local and national sites of ecological importance.
- Whilst there are no areas of ‘high’ sensitivity in terms of the potential impact of development upon the historic environment, Hednesford Hills and the Green Belt to the east of Wimblebury are identified as areas of at least ‘moderate’ sensitivity due to their potential for surviving historic assets e.g. archaeological deposits. To the far east of Wimblebury there are a range of heritage assets ranging from post-medieval to 19th century historic landscapes, farmsteads and mineral railways within the Green Belt area.
- It is apparent that recent developments, such as the M6 Toll have reduced connectivity between key green infrastructure assets e.g. reduction in connectivity of habitat linkages between areas south of Norton Canes going into Heath Hayes and Wimblebury. There have also been steps to enhance connectivity via the Forest of Mercia initiative and improved rights of way such as the recently completed Chase Heritage Trail. The Indices of Multiple Deprivation (IMOD) highlight particularly deprived areas in the central areas of Cannock, which coincide with some key deficiencies in open space access and sustainable transport linkages via green corridors.
- There are areas of higher flood risk located around the Saredon and Rising Brooks running via central Cannock and Bridgtown/southern Cannock (highlighted as strategic water corridors). The Cannock Flood Alleviation Scheme is located at Mill Green Local Nature Reserve. The urban area of Cannock is at a higher risk of surface water flooding and the water courses within the catchment are in need of quality improvements.

Key Opportunities

- **Strategic Area 2**: Adjacent to the strategic AONB green infrastructure asset. Contains a number of national and local sites of ecological importance acting as a strategic wildlife corridor to north and south. Potential for planned coalfield landscape character to be strengthened and enhanced, particularly via heathland creation as part of the local biodiversity opportunity mapping which would improve links to Hednesford Hills and
Chasewater Country Park habitats in particular. Some areas of recreational value to south
(north of Norton Canes) e.g. former Coppice Colliery and No Man’s Bank (Site C) with
potential for enhancements to act as Suitable Alternative Natural Greenspaces (SANGS)
to relieve pressure on the Cannock Chase SAC. To north, potential for additional cycle
ways and walking green links via restoration of former railway lines between Hednesford,
Rawnsley, Prospect Village with consideration of extension of routes to Norton Canes and
Chasewater to provide opportunity for residents of Hednesford to easily access alternative
recreation spaces (thus relieving pressure upon Cannock Chase SAC). This would assist
in addressing deficiencies in provision highlighted by the Rights of Way Improvement Plan
in this area. Improved access between the Hednesford urban area and Chasewater
Country Park is highlighted as a potential key action point which would help alleviate
pressures upon other sensitive heathland areas (see former Cannock Chase-Sutton Park
BEA Draft Action Plan, 2009). Restoration of historic mineral railway lines, alongside
enhancement of other historic environment features such as those related to the areas
mining heritage would also contribute to a strengthened and enhanced landscape
character. The potential long-term restoration of the currently operational Poplars Landfill
to publicly accessible land (Site D) also offers a SANGS opportunity with links to nearby
sites within the area.

- **Strategic Area 3**: Contains the key green infrastructure asset of Hednesford Hills (a SSSI)
and the Pye Green Valley area. Offers a range of alternative recreational opportunities via
high accessibility through public rights of way and established leisure attractions, such as
the Museum of Cannock Chase. Part of strong sandstone hills and heath landscape
character which is highly sensitive to inappropriate development. Continued management
of site via heathland restoration which will also assist in adding to local distinctive, high
quality character of surrounding Hednesford and the adjacent strategic AONB (an
application to include Hednesford Hills in the AONB is pending decision). The Hills may
also be added to the Green Belt as part of the ongoing review.

- **Strategic Water Corridors**: The strategic water corridors follow the route and flood risk
areas of the main watercourses through the area e.g. Ridings Brook through Cannock.
Along these corridors consideration needs to be given to the recommendations of the
Strategic Flood Risk Assessment (2008) which highlights the need for appropriate land
management practices to reduce flood risk and pollution, as well as implementing
Sustainable Drainage Systems (SUDS) throughout the catchment areas to reduce run-off
rates into the watercourses and assist in improving water quality. Any developments along
these corridors will, by virtue of the flood risk, need to undertake individual assessments
and appropriate mitigation/alleviation measures, which may include extra green
infrastructure in the form of SUDS. The Environment Agency has recommended that new
developments upstream of Mill Green, Cannock (where an existing flood defence scheme
is in place) should aim to achieve Greenfield rates of run-off. Water quality improvement
measures will also need to be taken into account either via appropriate drainage
infrastructure across developments in the whole urban area or specific works within the
strategic corridors.

- **Overall**: There is a need to carefully manage developments in close proximity to the AONB
and Hednesford Hills given the priority to conserve the strong landscape character of the
area. Appropriately designed schemes will contribute to the high quality environment and
local distinctiveness. The landscape character assessments and biodiversity opportunity
mapping both highlight a role for improved matrix of wet woodlands, wet grassland and
heathland in this area. The Forest of Mercia and other initiatives will all help contribute to these objectives. There are some site-specific opportunities for enhanced larger-scale green infrastructure provision such as the future need to restore the currently operational Poplars Landfill (Site D) alongside potential new large development sites, such as land west of Pye Green Road (Site F) which could subsequently act as SANGS to reduce recreational pressure upon Cannock Chase SAC. The latter could also protect and enhance the edge of the sensitive landscape character of the AONB.

- In the urban areas of deficiency in access, where there is limited space or opportunities to create new sites, improving and creating new links to existing spaces should be prioritised, for example completion of the National Cycle Network Route 5 linking Cannock/Hednesford with Stafford and Burntwood. The PPG17 assessment highlighted a need for additional provision of play spaces, green corridors and allotments- such expansions should form part of an extended Green Space Network in the urban areas. This could bring particular benefits to those areas of the highest multiple and health deprivation if focused on the central Cannock urban area.

- There is a need to manage river and surface water flood risk across the urban area and improve water quality along the Saredon and Ridings Brooks. SUDS are a crucial green infrastructure tool in helping achieve these aims and should be implemented across the area. The location of development in lower risk flood areas as far as possible is also a key factor.

5.1.2. Rugeley and Brereton

Key Features

- Number of key green infrastructure assets in the area including River Trent, Trent and Mersey Canal and Rising Brook, Etching Hill Site of Biological Interest/Regionally Important Geological Site and the Green Space Network, which adjoins parts of the Trent and Mersey Canal and River Trent corridor. The strategic AONB is directly adjacent to much of the urban area (to the south).

- To the north along the River Trent corridor there is a fairly strong landscape character, which could be further enhanced by ameliorating the impact of inappropriate developments, where possible. To the south there is also a relatively good landscape character, however there is a need to enhance this further via increased woodland belts in particular.

- Whilst there are no areas of ‘high’ sensitivity in terms of the potential impact of development upon the historic environment immediately around the urban area, the Green Belt and AONB landscape to the south is identified as being of at least ‘moderate’ sensitivity in large parts due to the potential for surviving historic assets e.g. archaeological deposits and the relative lack of disturbance from recent development resulting in surviving features. For instance, to the south of Etching Hill there are a number of surviving historic farmsteads from the 19th century.

- Green Belt to the south of Rugeley at Hagley Park provides a strategic green link area for people and wildlife. There are notable deficiencies in access to semi-natural sites of sufficient size (around 2ha) within the urban area.
- The River Trent and Rising Brook create a high risk flood area across the centre of Rugeley town and to the north of the District. Water quality improvements are also required along the River Trent. The urban area is susceptible to surface water flooding.

Key Opportunities

- **Strategic Area 4**: The area, consisting of some Green Belt land, contains several assets including Hagley Park, Rising Brook watercourse and the Chase Heritage Trail. It serves as a 'green wedge' contributing to the landscape character of the area, providing an ecological link via the Rising Brook valley and recreational benefits via the Chase Heritage Trail route and parkland. These routes then link into the Trent and Mersey Canal and River Trent corridor, helping to create a strategic ecological and recreational network through the urban area. Part of the area has been identified as being the preferred location for a Rugeley new 'super school', combining the existing 2 senior schools in Rugeley. This may result in the alteration of Green Belt boundaries at this location, but via appropriate design and landscaping the development could contribute towards enhancements of this green wedge. However, given that the area is one of high flood risk, there will be a need for any scheme to ensure it can mitigate and alleviate the flood risk, potentially via the provision of additional green infrastructure in the form of Sustainable Drainage Systems (SUDS) or protection of open space areas to act as informal storage zones e.g. the development could assist in reducing flood risk at Rugeley town centre via provision of such a storage area. Any risks of pollution to the Rising Brook will also need mitigating. There may be the opportunity for the provision of additional recreational space as part of the scheme (Site H) and this would help to address some deficiencies in access to SANGS in the Rugeley urban area. The moderate wooded estateland’s landscape character could be enhanced by increased woodlands planting at the urban edges and maintenance of field boundaries. Within Hagley Park there is the potential for enhancement of the historic parkland features setting.

- **Strategic Water Corridors**: The strategic water corridors follow the route and flood risk areas of the main watercourses through the area e.g. Rising Brook and River Trent. Along these corridors consideration needs to be given to the recommendations of the Strategic Flood Risk Assessments (2008 and 2009) which highlight the need for appropriate land management practices to reduce flood risk and pollution, as well as implementing SUDS throughout the catchment areas to reduce run-off rates into the watercourses. Any developments along these corridors will, by virtue of the flood risk, need to undertake individual assessments and appropriate mitigation/alleviation measures, which may include extra green infrastructure in the form of SUDS. The need to improve water quality along the River Trent also necessitates a response in terms of SUDS reducing pollution from surface water run-off or SUDS/other infrastructure reducing pressure upon ‘grey’ infrastructure in the District which contributes to the pollution e.g. sewage treatment. In terms of cross-boundary issues, the Stafford Borough Green Infrastructure Plan (2009) also highlights the River Trent as strategic water corridor along which Stafford Borough Council and other stakeholders should ensure and promote appropriate management techniques are employed to reduce flood risk, pollution and maximise wildlife opportunities.

- **Site I**: Potential SANGS site at Chetwynds Coppice with expansion of access to relieve pressure upon Cannock Chase SAC.
- **Site J**: Potential SANGS/additional recreation provision site associated with new developments at the former Power Station (outline planning permission for 650 homes with associated landscaping and open space).

- **Site K**: Potential SANGS at Wolseley Park with expansion of access to relieve pressure upon Cannock Chase SAC.

- **Additional site for further consideration**: As part of the Pre-Publication Core Strategy consultation in 2010 there was a representation promoting use of ‘The Slade’ former tip in Brereton as a recreation and leisure site. The potential for this site to contribute towards SANGS could also be considered.

- **Trent and Mersey Canal Strategic Green Link**: restoration and enhancements to help deliver environmental and heritage-led regeneration in the town centre particularly

- **Overall**: The landscape character assessments and biodiversity opportunity mapping both highlight a role for improved woodlands coverage and the need for river restoration along the Trent e.g. via the ‘On Trent’ Initiative. The PPG17 assessment highlighted a need for additional semi-natural spaces within the urban areas, alongside increased allotment provision and pockets of play area provision. There is a need to improve links through the urban area between larger sites given the relative deficiency of provision. The Green Space Network could therefore be expanded, or sites managed differently, alongside new development to address this. Given that almost half of the community lies within the 50% most deprived areas in England, such enhancements could help maximise public benefits. There is a need to manage river and surface water flood risk across the urban area and improve water quality along the River Trent and Rising Brook. SUDS are a crucial green infrastructure tool in helping achieve these aims and should be implemented across the area. The location of development in lower risk areas as far as possible is also a key factor.

5.1.3. Norton Canes

**Key features**

- Number of key green infrastructure assets in the area including Green Space Network sites such as Church Road Park and semi-natural space at the restored former Norton Canes colliery- number of assets adjacent to the urban area including local and national sites of ecological importance at Bleak House to the north and Chasewater Country Park to the east.

- The Green Belt surrounding Norton Canes serves an important role as a strategic green corridor for wildlife linking several local wildlife sites with international ones (although the M6 Toll has severed the former connectivity).

- To the south there is a ‘moderate’ strength of landscape character, whilst to the north there is a relatively ‘weak’ landscape character with need for enhancement.

- There are areas of ‘moderate-high’ sensitivity in terms of impact upon the historic environment surrounding Norton Canes. Key historic assets are mainly located to the relatively undeveloped southern areas and include surviving post medieval/late 19th century field patterns, a Grade 2 listed church building (at the edge of the urban area) historic farmstead features and remaining mineral railways associated with relics of the former colliery.

- There is relatively minimal flood risk from watercourses identified and there are no strategic water corridors, although surface water flooding is a risk in places. Water quality
related to the Water Framework Directive is not a direct issue due to the lack of main rivers in the area, however a number of minor watercourses and major ones within the wider catchment or those that are recipients of Norton Canes sewage treatment works (at Burntwood) may still require quality improvements.

Key opportunities

- **Strategic Areas:** Areas to the north and west of Norton Canes are covered by the opportunities for Strategic Area 2 under Cannock/Hednesford/Heath Hayes. The Strategic Area 1 to the south is covered under ‘Rural Areas’ below. Some parts of the Green Belt have recreational value to the north of Norton Canes e.g. Site C ‘No Man’s Bank’ and could help reduce recreational pressures upon Cannock Chase SAC by acting as SANGS, if improved. If developments come forward in the south of Norton Canes, further provision of green open spaces is likely to be needed, particularly in the south west. Additional recreation provision in the north-east and south alongside improved walking and cycling linkages to larger areas (such as Chasewater Country Park) would help to divert pressures away from the Cannock Chase SAC. As outlined by the Landscape Character Assessment, existing routes such as Beacon Way could form the basis for enhanced linkages.

- **Overall:** The landscape character and biodiversity opportunity mapping both highlight a role for an improved matrix of wet woodlands, wet grassland and heathland, including habitat creation and in strengthening existing habitat linkages; this area forms part of a larger one formerly designated as the Cannock Chase-Sutton Park BEA. The historic environment assets could be promoted to raise awareness of the contribution of the coal industry to the local area’s history. The PPG17 assessment highlighted that the community is relatively well provided for; however there are pockets where additional provision of semi-natural and play area spaces is required. There is a need to improve links to Chasewater Country Park across the boundary and enhance links through the urban area. Recent developments at Kingswood Lakeside have increased access in the area and these could potentially be added to the Green Space Network, with additional green corridors linking it to the urban area. The IMOD highlight a pocket of deprivation at the eastern edge of Norton Canes. By enhancing connections to areas such as Chasewater public benefits could therefore be maximised. Surface water flood risk and water quality should be managed via the application of SUDs and other mitigation techniques that relieve pressure on the ‘grey’ infrastructure of the area.

5.1.4. The Rural Areas

**Key features**

- Strategic AONB dominates central part of the District and contains wealth of distinct assets. Cannock Chase Extension Canal located in the south, alongside areas of recreation such as Wyrley Common.

- Strong landscape character to be conserved in the north (dominated by the AONB) and areas of farmland character to be conserved, strengthened and enhanced in the south.

- Areas of moderate-high historic environment sensitivity around the rural areas. One area of high sensitivity is identified around village of Slitting Mill where a wealth of historic assets, including potential features from the Bronze Age, are likely to survive. In the south
an area of moderate-high sensitivity is identified along the A5 given range of assets from field boundaries to railway lines, the canal and surviving historic buildings.

- Strategic water corridors pass through the AONB and the southern part of the District (Little Wyrley). These require flood risk management and water quality improvements.

Key opportunities

- **Strategic AONB**: The AONB is an asset in its own right, but contains several distinct assets including the Cannock Chase SAC, Castle Ring Scheduled Ancient Monument, large tracts of publicly accessible land and access routes such as the Chase Heritage Trail. The AONB Management Plan (2009-2014) objectives and policies provide a clear, detailed framework for the management of this area. There is a clear role for heathland creation and management across the area, with woodland planting also identified as being beneficial around the urban area edges to 'shield' the impacts of urbanisation upon the landscape (as identified in the Cannock Chase Landscape Character Assessment 2009). This habitat enhancement and creation will help assist strengthening of those sites of international importance and the sub-regional/local wildlife corridor of which they are part. In terms of cross-boundary issues the Stafford Borough Green Infrastructure Plan (2009) highlights the AONB as being a Landscape Quality Action Area, in which woodland could be better linked by small scale planting to complement the existing landscape character. In terms of impact upon the historic environment, there are areas of 'moderate' sensitivity associated with a range of surviving features, and although not surveyed, the AONB is likely to be considered of higher sensitivity given its historical development from a medieval hunting forest, several buildings and monuments of national designation and its largely undeveloped nature. The AONB Management Plan also identifies an ambition to promote the heritage of the area. In relation to this there is particular historic environment opportunity in the Flaxley Prisoner of War Camp at Stilecop Fields. Recreation use is a dominant feature of the area (alongside forestry and agricultural activities) and there is a need to balance this demand with the landscape and ecological sensitivities of the area. Therefore, whilst improvements to recreation routes and sites are likely to take place they will need to be undertaken sensitively. The Visitor Impact Mitigation Strategy (2009) prepared in response to the Appropriate Assessment\(^2\) for the Cannock Chase SAC outlines a series of measures specific to mitigating pressures upon the SAC, many of which are complementary to existing activities ongoing via the AONB Management Plan, such as providing sustainable recreation routes across the area. The area contains two potential sites for further investigation as SANGS. Site E is the Scheduled Ancient Monument of Castle Ring, which is already a popular recreation area and could be enhanced further. Site G is located with Beaudesert Park - again an existing area for recreation with potential expansion opportunities. There are likely to be other opportunities for 'diversion' within the AONB.

- **Area 1**: Contains Cannock Chase Extension Canal SAC, which could be considered further for designation as a Conservation Area to help guide investment into it and enhance its setting. The Canal serves as a green link providing walking and cycling access across the border into Walsall. There is a relatively 'moderate' strength of landscape character with a need to enhance it via new habitats and improved

\(^2\) Undergoing review as outlined previously
management of existing ones. This southern rural area already contains a number of Sites of Biological Interest and has potential for habitat creation in line with the local biodiversity opportunity mapping and landscape character assessment, which both set out a role for woodlands, wet grasslands and improved hedgerows. There is the potential for enhancing existing wildlife linkages to areas outside the District- Pelsall Common to the south and Brownhills Common to the east via such habitat creation. There are areas of moderate-high sensitivity in terms of impact upon the historic environment with surviving historic farm field patterns, country lanes and mineral railways which could be enhanced via new developments in or adjacent to the area, designation of the Cannock Chase Extension Canal as a Conservation Area and other works associated with improving recreation opportunities. Contains recreational site of Wyrley Common (Site A) which has potential for additional recreational value by enhancement works and restoration of former Grove Colliery (Site B) could also provide a new recreation or leisure site (subject to an assessment of any potential impacts upon the adjacent Cannock Chase Extension Canal SAC and Green Belt location). These could act as SANGs to relieve pressure from the Cannock Chase SAC. Parts of the area are also in agricultural use, an important part of the local economy.

- **Overall**: The landscape character and biodiversity opportunity mapping both highlight a role for an improved matrix of wet woodlands, wet grassland and heathland, including habitat creation as part of the former regional Cannock Chase-Sutton Park Biodiversity Enhancement Area and in strengthening existing habitat linkages. The proposal for the new Hatherton Branch Canal (identified as a potential strategic green link) lies along the western boundary of the District, only partially crossing into Cannock Chase. However, this is only indicative at present and will require further investigation. The water environment requires conservation and management to help alleviate flood risk and water pollution.

5.1.5. Overall

The above summary of implications for the main communities in the District highlights the key features of the strategic areas for green infrastructure (illustrated on Map 14). It is apparent that key actions, distinctive to each of the areas, are needed to protect, conserve and enhance these key assets. In addition, there is the District-wide issue of needing to provide additional recreation space to address impacts upon the Cannock Chase SAC. There will be a need for joint working with partner southern Staffordshire authorities in order to address the implications of potentially needing to identify additional alternative recreation space (SANGS). There are areas of Green Belt land within the District which have the potential to be given over to publicly accessible land (e.g. some of the strategic areas identified above), however legal and financial considerations will have to be taken account of. There are also cross boundary issues to be considered, highlighted on Map 14 and in the above summaries. The most important of these being the Cannock Chase SAC mitigation measures, the larger scale landscape projects (related to the local biodiversity opportunity mapping and the former regional Cannock Chase-Sutton Park BEA) and neighbouring authority's plans including the Stafford Green Infrastructure Plan.
5.2 Delivery

In order to ensure that the green infrastructure assets of the District are protected, conserved and enhanced consideration needs to be given to how this can be delivered on the ground. Delivery can be seen to consist of policy formulation, implementation and funding mechanisms. This assessment is primarily concerned with informing the Local Development Framework and future planning policies for green infrastructure so the focus is upon how planning can deliver, however implications for wider Council policy are brought out further in the over-arching ‘Conclusion and Recommendations’ section.

5.2.1. Policy Formulation and Implementation

There is clearly a need to ensure that the principles of green infrastructure are embedded throughout Local Development Framework policies. Given the multi-faceted nature of green infrastructure this will be across a host of typical areas for policy focus from transport to natural assets (e.g. Local Nature Reserves). In order to ensure these principles are incorporated the following key objectives for green infrastructure should be covered by a range of policies. These emerging objectives are identified as a result of the preceding policy review and local analysis:

i) Protect, conserve, enhance and expand natural assets (biodiversity and geodiversity)
ii) Reduce the causes and impacts of climate change
iii) Conserve, strengthen and enhance landscape character, including both natural assets and the heritage value of landscapes
iv) Provide high quality environments that offer opportunities for recreation, improved health standards and contribute to the local economy
v) Provide sustainable transport opportunities
vi) Protect and manage the water environment, including flood risk

Once these objectives are embedded with policy, there is a need to ensure implementation via development management. Further detailed guidance should be provided, potentially by use of a ‘development checklist’ to assist the decision-making process at the site-level scale. The above objectives, or the specific policies which seek to deliver them, should form the basis of this checklist. An example template is provided in Annex 2, and the principles for each objective/future policy should be informed by the best practice guidance available. It should be noted that many of the objectives are already being implemented in some form via the statutory duties of the main Government Agencies (highlighted further below). For instance, the recent Floods and Water Management Plan requires the implementation of SUDs and improvements in water quality. Planning policy formulation and implementation is therefore complementary to these existing functions.

The Green Space Network has been identified as strategic green infrastructure asset and a partial review of the network (undertaken as part of the Core Strategy proposals map update) is summarised in Annex 1. A full revision of the Green Space Network will be addressed at the site-specific level through the Site Allocations DPD process. This revision process will provide an assessment of the green infrastructure assets and opportunities at a smaller scale, assisting further delivery of an enhanced and expanded Green Space Network throughout the urban areas.
5.2.2. Funding and Partners

The Core Strategy is to be accompanied by an Infrastructure Delivery Plan which sets out the District’s strategic infrastructure requirements needed to ensure delivery of the spatial plan. There are a number of key existing funding sources and areas requiring developer contributions that should be highlighted by this infrastructure delivery plan so as to ensure the appropriate levels of green infrastructure required (identified in this paper) are secured. The following key sources are:

- Existing District and County Council resources committed to parks, open spaces and landscape management (as well as related activities such as flood management and transport improvements) e.g. Countryside Stewardship Funds;
- Forest of Mercia resources committed to woodland expansion/management;
- AONB resources committed to effective management of Cannock Chase AONB;
- Natural England resources committed to statutory duties to maintain/enhance biodiversity;
- Environment Agency resources committed to statutory duties to maintain/enhance the water and wider environmental quality or flood risk.

Further resources are likely to come forward via bid funding successes e.g. the Chase Heritage Trail was partly funded by the Heritage Lottery Fund. As a result there are a number of key local partners in the delivery of green infrastructure in the District including:

- Forthcoming Local Enterprise Partnerships (dependent on remit/priorities)
- AONB Partnership Unit
- Community Groups
- Cannock Chase District Council
- Developers
- English Heritage
- Environment Agency
- Forestry Commission
- Forest of Mercia
- Landowners
- Natural England
- Neighbouring Local Authorities
- Parish Councils
- Staffordshire County Council
- Staffordshire Wildlife Trust
6. Conclusions and Recommendations

This assessment has highlighted the wealth of green infrastructure assets in the District; it is a major part of the District's overall distinctive character and plays a vital multifunctional role in addressing the communities and natural environment needs. The assessment has sought to fulfil the following key objectives:

i) Identify those strategic key sites and areas that should be protected from harm and that could benefit from more sustainable management (the key green infrastructure assets);

ii) Identify strategic key deficiencies in green infrastructure provision and identify strategic key opportunities for enhancement works that will address deficiencies and help contribute to the local distinctiveness of the District's character;

iii) Identify key measures needed to ensure delivery of good quality local green infrastructure.

The assessment has highlighted the District key, strategic green infrastructure assets which must be protected and enhanced through the Core Strategy overall spatial strategy for growth. It has also highlighted strategic areas of deficiency and the resulting need and opportunities for enhancements should be brought out in the area implications of the Core Strategy and where appropriate referenced in policy to ensure local issues are addressed. This is of particular importance where a deficiency of green infrastructure assets overlaps with areas of multiple deprivation in the District (as outlined above). The following recommendations will ensure that the District's green infrastructure is protected or conserved, enhanced or expanded and benefits maximised:

1. Embed objectives of green infrastructure provision in line with this assessment throughout Core Strategy and Local Development Framework policy. These objectives are:

   i) Protect, conserve, enhance and expand natural assets (biodiversity and geodiversity)

   ii) Reduce the causes and impacts of climate change

   iii) Conserve, strengthen and enhance landscape character, including both natural assets and the heritage value of landscapes

   iv) Provide high quality environments that offer opportunities for recreation, improved health standards and contribute to the local economy

   v) Provide sustainable transport opportunities

   vi) Protect and manage the water environment, including flood risk

Given the cross-policy nature of green infrastructure e.g. its multi-functional recreation, ecology and landscape character role the Core Strategy should embed the objectives of green infrastructure provision throughout its policies. Particular emphasis should be upon the provision of green infrastructure in policies related to design; open space and recreation provision; landscape character; biodiversity and geodiversity; historic environment; climate change and transport. Further site-level proposals should be pursued through the Site Allocations DPD and if necessary an SPD could provide further detailed guidance on the delivery of green infrastructure. This could be combined with an SPD due to be produced for
Open Space, Sport and Recreation standards and/or Design. Annex 2 sets out a potential approach for development management to be considered and elaborated upon further. Best practice guidance from key organisations, such as CABE, should be utilised to inform standards and guidance and wider Council policy i.e. the valuation of local authority owned green infrastructure assets.

2. Protect areas of key green infrastructure assets and support works for their enhancements:

- Cannock Chase AONB (including Country Parks, SACs and SSSIs)
- Hednesford Hills (now a SSSI), Hazelslade, Mill Green and Hawks Valley (pending designation) Local Nature Reserves and Sites of Biological Importance
- Cannock Chase District Green Space Network (particularly where the space forms a distinct, vital role i.e. flood risk management)
- Trent and Mersey Canal and River Trent corridor
- Parts of the Green Belt, namely planned coalfield landscapes to the north and east of Norton Canes and Wimblebury; heath landscapes to the east and north of Hednesford and Wimblebury; wooded estate lands and heath landscapes to the south of Rugeley and Brereton (leading into the Cannock Chase AONB)
- Chasewater Country Park (Lichfield District).

3. Key specific projects should be supported in their delivery to support enhancement works and address identified deficiencies namely the cross boundary landscapes scale projects (e.g. the former regional Cannock Chase-Sutton Park BEA); the Cannock Chase SAC mitigation strategy; the management of flood risk and water quality in line with Environment Agency plans; the achievement of PPG17 Open Space Assessment targets (to be set out in an SPD directly referencing the recommended 2009 targets); the provision of improved Rights Of Way in accordance with the ROWIP, 2007(particularly in areas with projected future deficiencies in relation to demand); and heritage-led regeneration opportunities along the Trent and Mersey Canal. The provision of SANGs is likely to a priority and the opportunity sites identified in this assessment should be explored further on a joint, sub-regional basis. In order to ensure smaller scale assets, primarily within the urban areas, are valued and recognised for their important contribution to the overall green infrastructure of the District, a full revision of the Green Space Network should be undertaken as ongoing work to this assessment and the Site Allocations DPD.

By ensuring protection of the District's key green infrastructure assets and supporting key projects to enhance them, the Council can ensure that the multi-functional benefits of the Districts green resources are maximised and that overall growth in the District is sustainable.

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3 It should be noted that these assets are not mutually exclusive i.e. some Sites of Biological Importance are also Local Nature Reserves and part of the Green Space Network.
References


Ashmead Price on behalf of the AONB Partnership (2006) Cannock Chase AONB Assessment of Agricultural Landscapes

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CCDC (2010/11) Green Belt Review

CCDC (2009) PPG17 Open Spaces Assessment

CCDC (2011) Climate Change Background Paper

CCDC (various) Conservation Area Appraisals

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West Midlands Biodiversity Partnership (2007) Landscapes for Living

West Midlands Regional Assembly (2007) West Midlands Regional Spatial Strategy Phase 2 Revision

White Young and Green (2007) Habitats Regulations Assessment in relation to Cannock Chase Extension Canal SAC
### Annex 1 - Green Space Network Revision

**Norton Canes**

<table>
<thead>
<tr>
<th>Site Reference</th>
<th>Grid Reference</th>
<th>Removal/Addition</th>
<th>Reason for Removal/Addition/Adjustment</th>
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</table>
| NEW-NC1- Land south of Jerome Road Local Plan 1997 Proposed Open Space for Leisure and Recreation TRP 3 (i) allocation and New Housing Sites HP1.12 allocation | 402,230 308,000 | Removal/Addition | New Housing Site Local Plan allocation HP1.12 developed alongside proposals for open space (Local Plan policy TRP 3 (i)). Planning permission altered layout of former proposed allocations. Green Space Network updated to account for changes as per planning permission reference CH/99/0203 and CH/98/0454
Functions as a key local recreation space and contributes to local visual amenity value. |
<p>| NEW- NC2- Recreation Ground at Brownhills Road | 402,375 308,387 | Removal | Community Centre constructed adjacent to playing fields- building and hard surfaced area removed from Green Space Network as per planning permission reference CH/98/0453 |
| NEW-NC3- Green Space Network to west of Local Plan 1997 New Housing Site HP1.13 | 401,516 308,006 | Removal | Part of playing fields developed as part of HP1.13. Green Space Network updated as per planning permission reference CH/97/0024 and CH/97/0564 |
| NEW- NC4- White Land off Chapel Street | 401,475 308,094 | Addition | Part of open space of planning permission for Castlecroft residential development planning permission reference CH/94/0252 |</p>
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<th>Removal/Addition</th>
<th>Reason for Removal/Addition/Adjustment</th>
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<tr>
<td><strong>NEW-C1</strong>-Land at Laburnum Avenue Local Plan 1997 Proposed Open Space for Leisure and Recreation TRP 3 (v) allocation and New Housing Sites HP1.11 allocation</td>
<td>398,059 309,171</td>
<td>Addition</td>
<td>Alteration to TRP3 (v) as per planning permission reference CH/92/0240 and open space laid out as part of development of housing allocation HP1.11- planning permission reference CH/96/0148</td>
</tr>
<tr>
<td><strong>NEW-C2</strong>-Green Space Network at Industrial Estate off Wolverhampton Road, Cannock</td>
<td>397,333 309,331</td>
<td>Removal</td>
<td>Area developed by new factories and extensions. Green Space Network altered as per planning permission reference CH/00/0168 and CH/99/0252</td>
</tr>
<tr>
<td><strong>NEW-C3</strong>-Cannock Park</td>
<td>397,460 310,988</td>
<td>Addition/Removal</td>
<td>Area developed by Leisure Centre. Green Space Network altered as per planning permission reference CH/87/734 and CH/97/0037. North-eastern boundary altered to reflect golf course boundary and planning permission reference CH/03/0016. South-eastern boundary altered to include bowling green (mapping error on 1997 Proposals Map and Cannock Town Centre Inset).</td>
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<tr>
<td>NEW-C4- Former Recreation Ground at Wrights Avenue, Cannock</td>
<td>398,552 312,110</td>
<td>Removal</td>
<td>Area developed for residential. Green Space Network altered as per planning permission reference CH/96/0386.</td>
</tr>
<tr>
<td>NEW-C5- Land at Orchard Gardens, Cannock</td>
<td>398,700 312,448</td>
<td>Removal</td>
<td>Area developed for residential. Green Space Network altered as per planning permission reference CH/99/0106</td>
</tr>
<tr>
<td>NEW-C6- Bishops Court, off Burgoyne Street, and land off Saturn Road, Hednesford</td>
<td>399,052 312,063</td>
<td>Removal/Addition</td>
<td>Green Space Network removed to follow boundary of properties and land granted for residential use at Burgoyne/Cannock Road junction. Land granted planning permission with public open space at Burgoyne Road/Blake Close added. Planning permission reference 393/85, CH/87/350, CH/89/0496, CH/03/0242, CH/06/0010 and CH/06/0013. Public House car park also removed.</td>
</tr>
<tr>
<td>NEW-C7- Pye Green Valley Development, Hednesford</td>
<td>399,127 312,903</td>
<td>Removal/Addition</td>
<td>Green Space network altered in line with revised masterplan for area and following completion of the principal access road- as per planning permission references CH/06/0205 and CH/08/0386</td>
</tr>
<tr>
<td>NEW-C8- Hednesford Park</td>
<td>400,246 312,717</td>
<td>Addition</td>
<td>Altered to follow back line of properties as per planning permission reference CH/95/0169</td>
</tr>
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<td></td>
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<td></td>
<td>Altered to include Rawnsley-Hednesford Railway Path as per planning permission CH/06/0030</td>
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<tr>
<td>NEW-C9- Green Space Network to rear of Prospect Manor Court, Heath Hayes</td>
<td>400,117 311,297</td>
<td>Removal</td>
<td>Altered to follow back line of properties as per planning permission reference CH/90/0752, CH/96/0044 and CH/97/0086</td>
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<tr>
<td>NEW-C10- Green Space Network to rear of Apple Walk, Heath Hayes and 20 Hudson Close, Heath Hayes</td>
<td>399,450 310,523</td>
<td>Removal</td>
<td>Green Space Network mapping errors corrected- altered to follow back line of properties as per planning permission reference 184/84, CH/87/0205 and CH/90/0033</td>
</tr>
<tr>
<td>NEW-C10- Green Space Network to rear of Salisbury Drive, Heath Hayes</td>
<td>399,450 310,523</td>
<td>Addition</td>
<td>Additions as per Local Nature Reserve proposal at Mill Green and Hawks Valley</td>
</tr>
<tr>
<td>NEW-C10- Rear of Attingham Drive, Heath Hayes and Huron Close</td>
<td>399,450 310,523</td>
<td>Addition</td>
<td>Additions as per Local Nature Reserve proposal at Mill Green and Hawks Valley</td>
</tr>
<tr>
<td>NEW-C10- Land off Eastern Way Local Plan 1997 New Housing Site HP1.6, HP1.7 and New Employment Sites EP1.4</td>
<td>399,739 310,042 399,238 310,049 399,450 310,523</td>
<td>Addition</td>
<td>New Housing Site Local Plan allocations HP1.6, HP1.7 and New Employment Site EP1.4 developed alongside new public open space and landscaping as per planning permission reference CH/03/0860, CH/04/0142, CH/04/0766 and CH/05/0892. Also reflects Local Nature Reserve proposal at Mill Green and Hawks Valley. Changes at rear of Wren's Nest, along Hawks Green Lane, Pheasant and Nightjar Way, Hobby Way/Lichfield Road</td>
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<td>Site Reference</td>
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<tr>
<td><strong>NEW-C10-</strong> Green Space Network at Newhall Farm</td>
<td>399,739 310,042</td>
<td>Removal</td>
<td>Green Space Network mapping errors corrected- car park and pub occupy space as per planning permission 326/83</td>
</tr>
<tr>
<td><strong>NEW-C11-</strong> Green Space Network at Avon Road, Cannock</td>
<td>397,979 309,629 397,979 309,629 397,998 309893</td>
<td>Removal/Addition</td>
<td>Area developed by ASDA store and Youth Centre. Green Space Network altered as per planning permission reference CH/00/0260 and CH/03/0436. Park provided as part of development added into Green Space Network.</td>
</tr>
<tr>
<td><strong>NEW-C12-</strong> Land at Meadowsweet Way, Heath Hayes</td>
<td>401,252 311,677</td>
<td>Addition</td>
<td>Area of recreational open space provided as part of housing developments. Green Space Network added as per planning permission references CH/96/0045 and CH/98/0464</td>
</tr>
<tr>
<td><strong>NEW-C13-</strong> Land at Keys Park Road</td>
<td>401,457 311,607</td>
<td>Addition</td>
<td>Area of recreational open space provided as part of housing developments. Green Space Network added as per planning permission references CH/96/0045 and CH/98/0464</td>
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<tr>
<td><strong>NEW-C14-</strong> Land at Barnway Local Plan 1997 New Housing Site HP1.5 allocation</td>
<td>401,738 311,756</td>
<td>Addition</td>
<td>Area of recreational open space provided as part of housing development. Green Space Network added as per planning permission reference CH/02/0042</td>
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<tr>
<td><strong>NEW- C15</strong>-Bellway Development at Watling Street, Cannock</td>
<td>397,981 308,454</td>
<td><strong>Addition</strong></td>
<td>Public open space completed as part of new housing development. Green Space Network added as per planning permission reference CH/08/0455</td>
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<tr>
<td><strong>NEW- C16</strong>-Cannock Chase High School</td>
<td>398,422 310,852</td>
<td><strong>Removal/Addition</strong></td>
<td>Altered boundaries as per planning permission for housing and nursery development planning permission references CH/99/0134 and CH/00/0503</td>
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<tr>
<td><strong>NEW-C17</strong>-Green Space Network between Cannock Road, Winchester Road and Stafford Lane</td>
<td>399,666 311,822</td>
<td><strong>Removal/Addition</strong></td>
<td>Altered boundaries as per residential development at Highfield Court planning permission reference CH/88/484. Green Space Network mapping errors corrected at rear of Herondale, Bedford Place, 44-46 Stafford Road and between Cumberland Road-Curlew Hill to exclude properties and include footpath.</td>
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<td><strong>NEW-C18</strong>-Mill Green</td>
<td>399,000 310,272</td>
<td><strong>Addition/Removal</strong></td>
<td>Public House Car Park removed.</td>
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<tr>
<td><strong>NEW-C19</strong>-Cannock Cemetery</td>
<td>398,314 311,358</td>
<td><strong>Addition</strong></td>
<td>Altered to follow boundary of Cannock Cemetery to correct 1997 Local Plan mapping error</td>
</tr>
<tr>
<td><strong>NEW- C20</strong>-Land at Keys Park Road Local Plan 1997 Proposed Open Space for Leisure and Recreation TRP3 (iii) and New Housing Site HP1.4</td>
<td>401,201 311,188</td>
<td><strong>Addition</strong></td>
<td>Altered to account for development of New Housing Site Local Plan Allocation HP1.4 as per planning permission reference CH/96/0045 and CH/98/0465</td>
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<tr>
<td>NEW-C20-</td>
<td>401,201 311,188</td>
<td>Addition</td>
<td>Altered to account for development of New Housing Site Local Plan Allocation HP1.3 as per planning permission reference CH/96/0400, CH/97/0147 and CH/98/0307</td>
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<tr>
<td>Land at Keys Park Road Local Plan 1997 Proposed Open Space for Leisure and Recreation TRP3 (iii) and New Housing Site HP1.3</td>
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<tr>
<td>NEW-C20-</td>
<td>401,201 311,188</td>
<td>Removal</td>
<td>Area granted planning permission for residential use as it is a paved/concreted former clubhouse/car park. Green Space Network altered as per planning permission reference CH/07/0846.</td>
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<tr>
<td>Green Space Network at Arthur Street</td>
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<tr>
<td>NEW-C21-</td>
<td>400,700 311,426</td>
<td>Addition</td>
<td>Altered to account for development of New Employment Site Local Plan Allocation EP1.2 planning permission reference CH/98/0625, CH/99/0034, CH/00/0575, CH/02/0148, CH/04/0235, CH/05/0136</td>
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<tr>
<td>Land at Keys Park Road Local Plan 1997 Proposed Open Space for Leisure and Recreation TRP3 (iii) and New Employment Sites EP1.2</td>
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<tr>
<td>NEW-C22</td>
<td>400,908 310,855</td>
<td>Addition</td>
<td>Area developed for residential. Green Space Network added as per planning permission reference CH/98/0465</td>
</tr>
<tr>
<td>Land at Sweet Briar Way, Heath Hayes</td>
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## Rugeley and Brereton Site Reference

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<tr>
<td><strong>NEW-R1</strong> - Land at Lower Birches Way Local Plan 1997 New Housing Site HP1.2</td>
<td>403,621 316,981</td>
<td>Addition</td>
<td>Area of recreational open space provided as part of housing development of Local Plan allocation HP1.2. Planning permission reference CH/00/657</td>
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<tr>
<td><strong>NEW-R2</strong> - Land at Burnthill Way Local Plan 1997 New Housing Site HP1.1</td>
<td>403,763 317,178</td>
<td>Addition</td>
<td>Area of recreational open space provided as part of housing development of Local Plan allocation HP1.1. Planning permission reference CH/00/0399, CH/01/0424. Public Open Space to west of development already designated Green Belt, therefore not designated as Green Space Network.</td>
</tr>
<tr>
<td><strong>NEW-R3</strong> - Green Space Network at Sandy Lane, Rugeley</td>
<td>404,343 317,528</td>
<td>Removal</td>
<td>Area developed by Rugeley Health Centre. Planning permission reference CH/03/0861. Amended to follow line of car park hard standing areas.</td>
</tr>
<tr>
<td><strong>NEW-R4</strong> - Land to rear of Bonney Drive, Rugeley</td>
<td>403,973 318,704</td>
<td>Addition</td>
<td>Area of recreational open space provided as part of housing development. Planning permission reference CH/02/0515</td>
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<tr>
<td><strong>NEW-R5</strong> - Land at Jeffery Close/Wolsley Road, Rugeley</td>
<td>403,708 319,352</td>
<td>Addition</td>
<td>Area laid out as recreational space and games area, planning permission reference CH/05/0034</td>
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<td>Site Reference</td>
<td>Grid Reference</td>
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<td>Reason for Removal/Addition/Adjustment</td>
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<tr>
<td>NEW-R6- Playing Fields at Market Street, Rugeley</td>
<td>404,580 318,462</td>
<td>Removal</td>
<td>Area of Green Space Network developed by retail store and car parking. Green Space Network amended as per planning permission reference CH/99/0250. Boundary altered to include bowling green and to follow residential property boundary line.</td>
</tr>
<tr>
<td>NEW-R7- Plovers Rise, Rugeley</td>
<td>403,904 318,811</td>
<td>Removal</td>
<td>Area of Green Space Network developed by residential use. Green Space Network amended as per planning permission reference CH/97/0238</td>
</tr>
<tr>
<td>NEW- R8- Green Space Network between Power Station Road and A51</td>
<td>404,786 318,914 404,664 318,828 404,935 318,580 405,567 318,094</td>
<td>Removal</td>
<td>Altered to account for extensions of factories to rear of new bypass and for the development of the Rugeley bypass, planning permission reference CH/97/0209, CH/02/0465 and CH/06/0142</td>
</tr>
<tr>
<td>NEW-R9 Local Plan New Employment Site EP2 allocation- Former Lea Hall Colliery site</td>
<td>405,739 317,227</td>
<td>Addition</td>
<td>Local Plan New Employment Site partly developed and with planning permission. Addition to Green Space Network as per planning permission reference CH/95/0498, CH/99/0647 and CH/07/0246. Land due to come into Council ownership as footpath.</td>
</tr>
<tr>
<td>NEW-R10 Playing fields to rear of Queensway</td>
<td>404,404 316,814</td>
<td>Addition</td>
<td>Addition to encompass playing field as per PPG17 assessment boundaries and residential developments, planning permission reference CH/07/0253</td>
</tr>
<tr>
<td>Site Reference</td>
<td>Grid Reference</td>
<td>Removal/Addition</td>
<td>Reason for Removal/Addition/Adjustment</td>
</tr>
<tr>
<td>-----------------------</td>
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<td>-------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>NEW-R11</strong> Former</td>
<td>405,323</td>
<td>Removal</td>
<td>Adjustment to field boundary adjoining Church View/Cedar Tree Hotel Car Park as per planning permission reference CH/11/0246.</td>
</tr>
<tr>
<td>Playing field at</td>
<td>316220</td>
<td></td>
<td></td>
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<tr>
<td>Nursery Fields</td>
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<tr>
<td>Primary School</td>
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### Annex 2- Potential guidance for development management

<table>
<thead>
<tr>
<th>Principle/Objective</th>
<th>Developments to consider/include:</th>
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</thead>
<tbody>
<tr>
<td>Protect, conserve, enhance and expand natural assets (biodiversity and geodiversity)</td>
<td>- Impact upon protected sites and species and how could enhance biodiversity e.g. providing open space on site as natural habitats, providing wildlife corridors through the sites and green roofs on buildings to contribute to local biodiversity action plan targets.</td>
</tr>
<tr>
<td>Reduce the causes and impacts of climate change</td>
<td>- Incorporate landscaping measures to mitigate and adapt to climate change e.g. use of trees to provide shaded areas and contributing to expansion and enhancements of the ‘green space network’ within the urban areas. Seek to reduce surface water run-off to ‘Greenfield’ levels via applications of green roofs and SUDs.</td>
</tr>
<tr>
<td>Conserve, strengthen and enhance landscape character, including both natural assets and the heritage value of landscapes</td>
<td>- Consider local landscape character and historic environment assets and how green infrastructure provision, location and design of the development can contribute to the particular objectives of the area e.g. sites at urban edges could consider ‘buffer’ areas of woodland to mitigate impacts upon the rural landscapes whilst sites within urban areas should consider the impact upon the local ‘green space network’ and how they can contribute to its expansion or enhancement. Sites within Conservation Areas should consider the role of the existing green infrastructure and how the development can contribute to its enhancement.</td>
</tr>
<tr>
<td>Provide high quality environments that offer opportunities for recreation, improved health standards and contribute to the local economy</td>
<td>- Meeting PPG17 targets e.g. all dwellings to be within 480 metres of a semi-natural site of at least ‘good quality’. Incorporating appropriate landscaping to enhance the attractiveness of the developments character and its durability (see ‘reduce the causes and impacts of climate change’).</td>
</tr>
<tr>
<td>Provide sustainable transport opportunities</td>
<td>- Incorporating and linking to opportunities for safe walking and cycling routes, both within the development and to other areas</td>
</tr>
<tr>
<td>Protect and manage the water environment, including flood risk</td>
<td>- Promoting the appropriate location of development and the incorporation of SUDS or other flood risk and pollution mitigation techniques. Protect key areas already performing this function i.e. parts of the Green Space Network/Green Belt.</td>
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</table>

This guidance could inform the development of a Supplementary Planning Document which could then be kept up to date in line with best practice.
### Annex 3- Green Infrastructure Comments and Council Responses (June 2010 Pre-Publication Consultation)

<table>
<thead>
<tr>
<th>Respondent</th>
<th>Respondent Comments</th>
<th>Council’s Response</th>
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<tbody>
<tr>
<td>St Modwen Developments</td>
<td>In general, St Modwen welcomes the production of a Green Infrastructure background paper which provides additional evidence base work in support of the Core Strategy.</td>
<td>Welcome support. The Visitor Impact Management Strategy was considered in the background paper but had been omitted from the list of documents considered. This will be added and references to it kept under review as the Cannock Chase SAC work continues.</td>
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<td></td>
<td>1.2 It should be noted that the Cannock Chase Visitor Mitigation Strategy was not one of the key local assessments used in producing the background paper. Given the importance of the Cannock Chase SAC, the issues and mitigation measures raised with Visitor Strategy should be considered through an addendum to the Green Infrastructure report.</td>
<td>Noted that the land west of Pye Green Road can add to the green space network as this is promoted in the Core Strategy.</td>
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<td></td>
<td>Map 6 The production of the Green Space network plan is welcome. Development of the land WPGR can actively contribute towards the enlargement and connectivity of this network.</td>
<td>In relation to page 41, the SAC is part of the AONB that is considered a priority area for green infrastructure. This is not contrary to the HRA because it being a priority area means it is not one for recreation use alone- it identifies it as being an area in need of conservation and enhancement of the green infrastructure assets i.e. the protection and improvement of the SAC. This is recognised in section 5.1.4 of the draft assessment.</td>
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<td></td>
<td>Map 8 The production of the historic assets and environment sensitivity plan is welcome. In particular, it indicates the low sensitivity of the land WPGR in comparison to other locations including land to the east of Cannock/Heath Hayes and south of Norton Canes which is assessed as being Moderate sensitivity.</td>
<td>In relation to the provision of SANGS- sections 4.4. and 5.1.5 do highlight the need for joint working but further references will be made to add clarity.</td>
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<td>Page 41 The document appears to consider the Cannock Chase SAC and the possible impacts of recreation upon it. However the document identifies part of the SAC as a priority area for green infrastructure (see red areas on Map 14 on page 41). This perhaps is in contradiction of the HRA and visitor impact strategy produced by Footprint Ecology.</td>
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<td></td>
<td>5.1.1 On map 14 the document identifies an ‘opportunity site’ within site (Site F). Para 5.1.1 states: “There are some site-specific opportunities for enhanced Welcome support. The Visitor Impact Management Strategy was considered in the background paper but had been omitted from the list of documents considered. This will be added and references to it kept under review as the Cannock Chase SAC work continues.</td>
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larger-scale green infrastructure provision such as the future need to restore the currently operational Poplars Landfill (Site D) alongside potential new large development sites, such as land west of Pye Green Road (Site F) which could subsequently act as SANGS to reduce recreational pressure upon Cannock Chase SAC. This could also protect and enhance the edge of the sensitive landscape character of the AONB."

St Modwen is broadly supportive of appropriate mitigation measures, however, the scale and type of SANGs provided would need to be discussed and agreed on a proportional district and sub-regional basis. The latter is not reflected in the GI report, which only appears to indicate the need for District-wide mitigation measures.

<table>
<thead>
<tr>
<th>English Heritage</th>
<th>Similarly we welcome the approach of the Green Infrastructure Background Paper and its incorporation of the results of the Historic Environment Assessment. This approach exemplifies an integrated approach to green infrastructure and its multi-functional basis.</th>
<th>Support welcomed</th>
</tr>
</thead>
</table>
| Environment Agency | We consider green infrastructure to be a powerful tool to help improve environmental quality, protect people from flooding and mitigate the impacts of climate change. We look forward to working with you in the future and providing more detailed comments and input as the green infrastructure plan develops. Overall the paper identified many of the issues and specific opportunities for green infrastructure in the Cannock District. However we consider the paper does not cover sufficiently issues we consider to be vital to the delivery of a green infrastructure plan. These include:-  
• issues around the water environment particularly in terms of the Water Framework Directive.  
• the quality and quantity of water courses and how green infrastructure can help improve these | Support welcomed for approach. An additional section will be added to deal with water environment issues and flooding separate to climate change. References in relation to Rugeley de-culverting and the importance of climate change mitigation will be altered. |
Issues around environmental quality and resource availability would fit into Section 4 of the paper but the coverage in our opinion is very minimal. Water quality and flood risk are key issues for green infrastructure, but in this report they are contained largely within the climate change section. These are significant issues which should each be allocated a section in the document. The climate change section should refer to water quality and flooding issues in terms of the increasing risks associated with climate change.

Water Quantity and Quality
We consider a new section in the report should cover water quality issues including the use of green infrastructure to support the delivery of the River Basin Management Plans (RBMP) as part of the Water Framework Directive. The omission of the RBMP from the report is significant, as local authorities have a duty to deliver a range of RBMP actions and green infrastructure is a very useful tool in reducing urban diffuse pollution. It has been recognised that SuDs can help manage surface water anywhere and should now be referred to as Sustainable Drainage System SuDs rather than Sustainable Urban Drainage Systems.

Sustainable Urban Drainage Systems.
The report does not refer to Environment Agency Catchments Abstraction Management plans. These plans identify local water resources issues in rivers and where rivers are over abstracted. Green infrastructure could play a part in helping to recharge rivers or improve water quality for future abstraction.
<table>
<thead>
<tr>
<th>Environmental infrastructure</th>
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<tr>
<td>We consider green infrastructure should look beyond just green space and consider the full range of environmental infrastructure. Grey infrastructure used for drainage, water supply and waste water should be considered as part of the green infrastructure strategy if it is to achieve the best outcomes for the environment and people. Water company investment plans should also be considered to see if there are opportunities for joint working and investment in common aims such as reducing surface water run off.</td>
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<tr>
<th>Flood Risk</th>
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<tr>
<td>Flood risk is covered quite well in the section on climate change which refers to the Level 1 and 2 SFRAs. However it is wrong to have this information in the climate change section as flooding is a natural process and has not just happened as part of a changing climate. This is why we recommend flood risk be given a separate section in the document. The 'Flood and Water Management Bill' now requires all local authorities to produce a ‘surface water management plan’ (SWMP). We understand that a Level 1 SWMP is currently being undertaken with a Level 2 plan planned for the future. When complete, these plans should be used to inform the green infrastructure plan. The Trent Catchments Flood Risk Management Plan (CFMP) when published later in this year should also be used to inform the plan. The SFRA Level 2 for Rugeley suggested there is limited scope for de-culverting in the town centre. There may however be opportunities for outside the main town centre and on other watercourses which should be reviewed as part of this background report.</td>
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<table>
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<tr>
<th>Climate change</th>
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<tbody>
<tr>
<td>We agree broadly with this section that identifies SuDs and flood storage areas as ways in which we can prevent flood now and help adapt to a changing climate. However we do not agree with the statement in the document that the carbon mitigation aspect of green infrastructure is more important than the</td>
</tr>
<tr>
<td>Staffordshire Council</td>
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5.1.1 We support the assertion in the document that green space is especially needed in urban areas, although space is often limited. The Environment Agency has carried out work that shows that the economically disadvantaged live in the worst natural environment and have significant worse mental and physical health than those in richer greener areas.