Staffordshire Moorlands Local Plan

Green Infrastructure Strategy

May 2018

STAFFORDSHIRE moorlands DISTRICT COUNCIL

ACHIEVING · EXCELLENCE

Introduction

1 Introduction

1.1 Green infrastructure (GI) can play a key role in helping to achieve the economic and sustainable vision set out in the emerging Staffordshire Moorlands Local Plan.

1.2 The National Planning Policy Framework[1] defines Green infrastructure as:

> "A network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities".

1.3 For the purposes of the GI strategy, green space is taken to include rivers, canals, standing waters, and other water courses.

1.4 A commitment to green infrastructure planning was made in the Staffordshire Moorlands District Council Core Strategy[2], adopted March 2014.

1.5 Green infrastructure planning involves the provision of strategically planned networks designed to link existing (and proposed) green spaces with green corridors running through towns, villages and rural areas. Through the maintenance, enhancement and extension of these networks, multi-functional benefits can be realised for local communities, businesses, visitors and the environment.

1.6 The preparation of this strategic network has involved collaboration with a number of external partners. Appropriate strategies, plans and programmes of these partners, other local partnerships and organisations, will be necessary to help maintain existing green infrastructure, promote solutions to remedy deficiencies, and create new opportunities.

1.7 The planning system provides the opportunity to deliver green infrastructure that will provide benefits far beyond just the allocation and provision of open space. Green infrastructure encompasses many cross-cutting issues that through the Local Plan will help to deliver high quality development in a high quality environment. GI planning and the delivery of a strategic network will also help to safeguard and deliver landscape and townscape character and distinctiveness, biodiversity, water quality and flood management considerations, whilst helping to address health, recreation, climate change adaptation and mitigation, and other issues.

1.8 Green Infrastructure also has a role to play in economic regeneration and sustainable growth. Provision of GI makes a valuable contribution to the 'liveability' of an area helping to create places where people choose to live and work, helping to attract and retain both people and businesses. Strategic development of green infrastructure will also contribute towards the District's sustainable tourism offer, enhancing the area's overall image as an attractive destination.

1 National Planning Policy Framework; Department for Communities and Local Government; March 2012
2 http://www.staffsmoorlands.gov.uk/article/775/Core-Strategy

Caldon Canal

1.9 The Green Infrastructure Strategy reflects and helps put into practice numerous other strategies, plans and guidance. A brief summary of some of the key national and local ones is set out below.

National Context

The Natural Choice: Securing the Value of Nature

1.10 The Government's White Paper, The Natural Choice: Securing the Value of Nature (2011), stresses the social, economic and environmental benefits of the natural environment. The paper highlights the important role green infrastructure plays to provide habitats and complete linkages to the national ecological network. The importance of green infrastructure for managing environmental risks such as flooding and heat waves, thus helping to combat climate change, are also identified.

1.11 The paper is partly based on the **UK National Ecosystem Assessment** which shows the social and economic benefits provided by the wildlife assets within the natural environment. The assessment identifies a 30% decline in the country's ecosystem functions along with associated reductions in both the quantity and quality of green spaces in urban areas. To help rectify these issues, the paper supports the establishment of green infrastructure partnerships and support for Local Nature Partnerships. The creation of Nature Improvement Areas tasked at reversing the decline and fragmentation of wildlife habitats is also set out in the paper.

Biodiversity 2020: A Strategy for England's Wildlife & Ecosystem Services

1.12 The Government's Biodiversity 2020: A Strategy for England's Wildlife & Ecosystem Services (2011) builds on the Natural Environment White Paper and provides a comprehensive picture on how the government is implementing its international and European Union commitments. It sets out the strategic direction for biodiversity policy over the next decade.

1.13 The **Geodiversity Charter for England 2014 and UK Geodiversity Action Plan** provides guidance on protecting, managing, enhancing and creating geodiveristy assets.

Healthy Lives, Healthy People: Our Strategy for Public Health in England

1.14 The Government White Paper, Healthy Lives, Healthy People: Our Strategy for Public Health in England (2010) sets out the long term vision for the future of public health in England, including the links between environmental quality and a healthy population. The quality of the environment around us also affects any community. Pollution, air quality, noise, the availability of green and open spaces, transport, housing, access to good-quality food and social isolation all influence the health and wellbeing of the local population. Climate change represents a challenge in terms of long-term health services planning and emergency preparedness. Improving the environment in which people live can make healthy lifestyles easier. When the immediate environment is unattractive, it is difficult to make physical activity and contact with nature part of everyday life.

National Planning Policy Framework

1.15 The National Planning Policy Framework sets out the Government's planning policies for England and how they should be applied. It includes the core land use planning principles that should underpin both plan-making and development management decisions. National policies require an approach that ensures new development protects, restores, maintains, creates, enhances and extends green infrastructure and improves connectivity within the network. National policy also expects the natural environment to function as an integrated network of habitats, and seeks to protect and enhance the quality, character and amenity value of the countryside and urban areas as a whole, recognising the limitations of the environment to accept further development without irreversible damage, and encourages sustainable development.

Ecosystems Services

1.16 An ecosystems approach is a way of looking at the natural environment throughout the decision making process. Carrying out economic valuation of ecosystem services helps incorporate the value of the natural environment into a decision making process. Ecosystems services, such as tourism, air quality and people's health and mental well-being will all benefit from protection and investment in our natural environment.

1.17 Addressing climate change is another area where ecosystem services can be valuable. Carbon rich soils, such as those that are peaty or heathy and habitats like ponds, flower-rich grassland and mixed, diverse structural woodlands are very good carbon stores. Protecting and enhancing these soils and the habitats on them can play an important role in trapping carbon and helping to mitigate the effects of climate change.

Environmental Stewardship

1.18 Farming is important for the economy of Staffordshire Moorlands, the District is an important centre for the livestock and dairy sectors. This GI strategy recognises the way in which farming and nature can influence each other.

- Farming has contributed over the centuries to creating and maintaining a unique countryside. Agricultural land management has been a positive force for the development of the rich variety of landscapes and habitats, including a mosaic of woodlands, wetlands, and extensive tracts of an open countryside.
- Agricultural businesses routinely invest in landscape management and enhancement works for example hedging, tree planting, cutting and grazing.
- The ecological integrity and the scenic value of landscapes make rural areas attractive for the establishment of enterprises, for places to live, and for the tourist and recreation businesses.

1.19 Farmers and landowners own and manage many of the areas considered to be key Green Infrastructure assets. The links between the richness of the natural environment and farming practices are complex. Many valuable habitats are maintained by agriculture, and a wide range of wild species rely on this for their survival. But inappropriate land use can also have an adverse impact on natural resources, like pollution of soil, water and air; fragmentation of habitats, or loss of wildlife.

Regional context

Staffordshire Local Nature Partnership

1.20 Local Nature Partnerships (LNPs) are partnerships of a broad range of local organisations, businesses and people who aim to help bring about improvements in their local natural environment. Staffordshire LNP coordinates a number of strategic initiatives in the area, many of which include the development of green infrastructure and ecological networks as part of their key aims.

South West Peak Landscape Partnership

1.21 The South West Peak Landscape Partnership is a group of organisations working to restore, protect, and improve the landscape of the South West Peak. With the Peak District National Park Authority as lead partner, and with the support of the Heritage Lottery Fund, the scheme works with local communities to build stronger connections with the landscape and with each other. The Partnership aims to enhance ecosystem services (the benefits we all get from the natural environment) and support sustainable farming in the area.

Local context

Staffordshire Moorlands District Council Corporate Plan 2017 - 2019

1.22 The Corporate Plan sets out to achieve excellence in the delivery of high quality services that meet the needs and aspirations of our communities. The first aim is to to help create a safer and healthier environment for our communities to live and work and the fourth is to to protect and improve the environment.

Staffordshire Moorlands Local Plan

1.23 This report to identify a strategic green infrastructure network is being prepared alongside the emerging Local Plan. The Local Plan provides a framework for delivering development for the period 2016 to 2031. It sets out the spatial strategy, strategic and development management policies and land use designations for the District. The Local Plan influences how and where the Staffordshire Moorlands will develop in the future. It sets out what the District Council would like to achieve in each of the main towns and the rural areas outside the Peak District National Park, including the provision of green infrastructure and ecological networks.

Churnet Valley Living Landscape Partnership

1.24 The Churnet Valley Living Landscape Partnership (CVLLP) of twenty organisations, led by Staffordshire Wildlife Trust, works at a landscape scale, conserving and enhancing the wildlife and built heritage of the Churnet Valley and supports the many local people and organisations who look after the Churnet Valley. Much of the work of the CVLLP has been undertaken with the help of volunteers and many of the projects undertaken support the provision and improvement of green infrastructure.

SMDC Tree Strategy, March 2016

1.25 The strategy directs the long term management of trees and woodlands in the Staffordshire Moorlands for which the Council has duties and responsibilities. Its objective is to manage trees in Staffordshire Moorlands to create a sustainable, robust tree population that contributes to the quality of the local and global environment.

Staffordshire Moorlands District Council Open Space Study Standards Paper; October 2017

1.26 The Standards Paper identifies the deficiencies and surpluses in existing and future open space provision. It also helps inform an approach to securing open space facilities through new housing development and negotiations with developers for contributions towards open space. Provision standards focusing on quantity, quality and accessibility are set within the document to help inform these processes.

Staffordshire Moorlands District Council Infrastructure Delivery Plan Final Report; February 2018

1.27 The Infrastructure Delivery Plan brings together data on the infrastructure necessary to support delivery of the planned growth set out in the emerging SMDC Local Plan. This includes consideration of current provision and new requirements alongside projected costs and potential funding mechanisms. The IDP examines the quality and capacity of a number of different types of infrastructure including green infrastructure.

Methodology

2 Methodology

2.1 This document is the culmination of a period of detailed research examining the existing green infrastructure assets in the District, coupled with a reflective analysis on the priorities for green infrastructure. It sets out the vision for green infrastructure in the district, a spatial framework showing the broad geographical areas where green infrastructure investment is most needed, and delivery priorities.

2.2 This document has been prepared in agreement with a group of partner organisations operating as a Steering Group for the preparation of a Strategic Green Infrastructure Network. The Council would like to thank the following organisations for their involvement in the project, and where applicable, for data sharing:

- Staffordshire County Council
- Peak District National Park Authority
- Staffordshire Local Nature Partnership
- Staffordshire Wildlife Trust
- Environment Agency
- Natural England
- RSPB
- Woodland Trust
- Forestry Commission

2.3 The approach taken has involved several work streams:

- Understanding the context for green infrastructure in the District, including the plans and strategies of other relevant organisations.
- Understanding the green infrastructure resource: a quantitative audit of green infrastructure assets.
- Preparing a resource of evidence base maps.
- Considering the functions of, and priorities for, green infrastructure.
- Identifying and mapping of strategic corridors.

Review of existing strategies

2.4 The Strategic Network of Green Infrastructure in Staffordshire Moorlands will complement and support a range of plans and strategies for the District. A number of key strategies have been reviewed and taken into account in the preparation of this GI network, these include:

- Staffordshire Moorlands District Council Core Strategy; March 2014
- Churnet Valley Masterplan Supplementary Planning Document (SPD); March 2014
- Churnet Valley Landscape Ecology Pilot reports
- Staffordshire Rights of Way Improvement Plan; Staffordshire County Council
- The State of Staffordshire's Nature Report 2016; Staffordshire Wildlife Trust

Evidence base

2.5 Maps included at Appendix A show the existing, known, strategic GI assets that form the "backbone" or underlying framework for the District's Strategic GI Network. The mapping is based on the Council's datasets, enhanced where appropriate by relevant additional datasets identified in consultation with partner organisations, for example Historic Environment Character Assessments. The evidence base maps were prepared by mapping these datasets using Geographical Information Systems (GIS).

2.6 It should be noted that the maps show the boundary of Staffordshire Moorlands District outside the Peak District National Park - as this is the area for which the District Council is the Local Planning Authority.

Limitations

2.7 There are at present data gaps in terms of habitat survey coverage, with around 52% of the district overall lacking data, mainly in western and southern parts of the district (as illustrated on Map A.10 in Appendix A). Due to this, it is anticipated that there may be priority habitats and areas of Local Wildlife Site value yet to be identified.

2.8 Existing Local Wildlife Sites may also require updates to their status or boundaries as they are periodically re-assessed, to reflect changes in habitat quality and the assessment criteria.

2.9 Where there are data gaps or limitations, for example gaps in detailed habitat network modelling, these may be addressed as part of the implementation plan.

Identification of strategic corridors

2.10 A review of the evidence base maps was undertaken against the functions of the District's GI assets identified and described by the vision proposed in the District's Core Strategy. The outputs from this work are included in Section 6. For each of the three main towns (Leek, Biddulph, Cheadle) and the Strategic Site at Blythe Vale, the maps of existing assets were used to prepare further maps illustrating:

- Key green travel routes
- Ecological corridors
- Water management corridors

2.11 These maps were then combined to identify and describe eleven strategic corridors / areas across the District that together comprise the District's strategic GI network. This network of corridors / areas is illustrated in Section 5.

Supporting adjoining green and blue infrastructure strategies

2.12 The District's landscapes, habitats and public rights of way do not stop at the Council's Plan Area boundary and it is important that this strategy responds to, and influences, the approach to the green and blue infrastructure of the surrounding area.

2.13 Other relevant strategies include:

- Peak District National Park Authority Trails Management Plan - Five-year plan for the Tissington, High Peak, Monsal and Thornhill Trails: 2013–2018.
- The Green Infrastructure Framework for North East Wales, Cheshire and Wirral; 2011.
- Cheshire East Green Space Strategy; 2013.
- Newcastle under Lyme Green Infrastructure Strategy.
- Stoke-on-Trent City Council and Newcastle-under-Lyme Borough Council Joint Local Plan Issues Consultation: Natural and Rural Environment Technical Paper; February 2016.
- A Green Infrastructure Strategy for Stafford: The Strategic Plan; Stafford Borough Council; November 2009.

2.14 Potential for a joint working initiative with Staffordshire County Council and East Staffordshire Borough Council regarding grassland habitat connectivity and footpaths in the Cauldon and Weaver Hills area has been identified.

2.15 Better connections and linkages to and within the Peak District National Park is also to be sought. There may be opportunities to improve connectivity with the upland habitats and foothills in the south west part of the Peak District National Park, through joint working initiatives with the South West Peak Landscape Partnership.

Churnet Valley

Vision

3 Vision

Context

3.1 The context for the Green Infrastructure Strategy has been established in the adopted SMDC Core Strategy and is set out in Policy C3 Green Infrastructure.

3.2 This policy in the Council's adopted Core Strategy states that the Council will, through partnership working with local communities, organisations, landowners and developers, develop an integrated network of high quality and multi-functional green infrastructure that will:

- Support and improve the provision of open space, sport and recreational facilities for local communities and enhance the settings of neighbourhoods;
- Link existing and potential sites of nature conservation value and historic landscape features, create new wildlife habitats, increase biodiversity, and increase tree cover where it is appropriate to the landscape;
- Enhance the natural, man-made and cultural features that are crucial to the local landscape and create opportunities for the restoration of degraded landscapes and the enhancement of the urban fringe;
- Mitigate the negative effects of climate change and maximise potential climate change benefits including effective flood risk and waterways management;
- Create appropriate access for a wide range of users to enjoy the countryside, including improved linkages to and provision of formal and informal recreation opportunities and accessible woodland areas, encouraging walking, cycling and horse riding;
- Contribute to the diversification of the local economy and tourist development through the enhancement of existing, and provision of new facilities.

Vision

3.3 The vision for the GI Strategy is:

To develop by 2031 a network of green corridors and green spaces in the Staffordshire Moorlands that:

- **Supports access and green travel** – by creating appropriate access for a wide range of users to enjoy the countryside, including creating improved linkages to services and facilities, as well as formal and informal recreation opportunities.
- **Promotes health and well-being** – by supporting the provision and improvement of open space, sport and recreational facilities to: facilitate opportunities for walking, cycling and horse riding; support people's interaction with nature; and to encourage young children into green spaces.

- **Develops ecological networks** – by identifying opportunities for more, bigger, better and joined up sites of nature conservation, geological and historic landscape value and historic landscape features, by the creation of new wildlife habitats and increasing biodiversity, providing buffering and enhancement of existing sites and creating links between them.
- **Improves flood and water management** – mitigating the effects of climate change including through using green infrastructure for effective flood risk and waterways management.
- **Unlocks economic development potential** – by contributing to the diversification of the local economy through the enhancement of existing, and provision of new tourist facilities; supporting new opportunities for rural businesses such as the provision of wood fuel through habitat management and creating and improving green travel links to areas of employment and the visitor economy infrastructure.
- **Values ecosystem services** - by contributing to air quality improvements, supporting mental and physical wellbeing, climate change adaptation, carbon sequestration and benefiting crop pollination by protecting and enhancing habitats of pollinator species.

Aims

3.4 The aims of the GI Strategy are to:

1. Provide a wide variety of parks, wild areas and open spaces to meet the needs of both nature and people.
2. Create, improve and protect green travel links that enable people to access a range of jobs, services, facilities and recreation opportunities using sustainable transport options.
3. Create, improve and protect biodiversity and the ecological networks that provide the opportunity for species to move within the landscape.
4. Improve flood and water management including by contributing to maintaining waterways and managing surface water flow.
5. Protect and enhance the distinctive character of the District's towns and villages together with their landscape settings.
6. Protect and enhance historic landscape character and heritage assets.
7. Protect and enhance the ecosystem services our green infrastructure provides such as soil conservation, water management, air quality and crop pollination to ensure a healthy and resilient natural environment.
8. Promote the sustainable economic growth of the District.

9. Provide a clear framework for funding biodiversity enhancements appropriate to the size, scale and nature of a development.

10. Facilitate partnership working and improve access to resources through relevant funding regimes enabling green infrastructure to be funded on a similar basis to other local infrastructure.

Benefits

3.5 The benefits resulting from the GI Strategy are expected to be:

1. Help to promote the District as a high quality place to live, work, invest and visit.

2. Contribution to the sense of community and place.

3. Provision of opportunities to protect and enhance landscape (including historic landscape) other natural assets and the setting of the National Park.

4. Contribution to the delivery of the Staffordshire and UK Biodiversity Action Plans.

5. Enhanced opportunities for exercise, sport, active recreation and consequently improved health and well-being.

6. Enhanced opportunities for community involvement.

7. Support for good design and high quality developments including with habitat corridors and designed access to biodiversity along the edge of settlements.

8. Provision of enhanced opportunities to connect communities and neighbourhoods.

9. Contribution to climate change adaptation through opportunities for improved flood-risk management, maintaining waterways, managing surface water flow and aiding species movement.

10. Recognition for, and value given to, Ecosystem Services provided by the green infrastructure network.

11. Opportunities to enhance the District's sustainable tourism offer, particularly in the rural areas.

12. Contribution to a healthy and diverse natural environment that is essential to food security, sustainable livelihoods, increased resistance to natural disasters and ability to recover from them, support for secure and sustainable food production and other long-term benefits from agriculture.

Overview of key assets

4 Overview of key assets

4.1 The schematic diagram on the following page illustrates the relationship between the District, the location of its key GI assets and the wider geographical area.

4.2 This relationship has been used to help inform the GI priorities and proposals set out in Section 6.

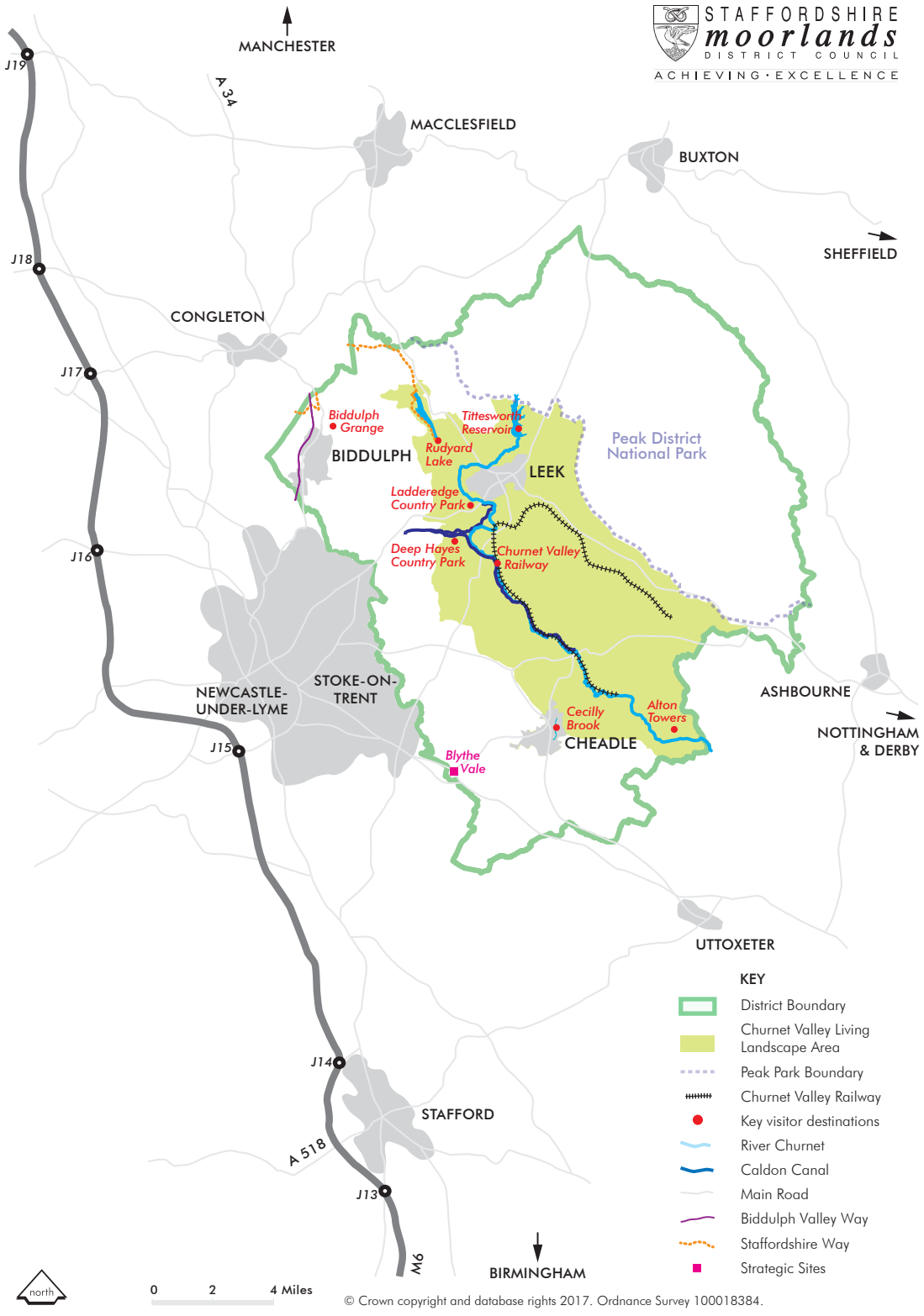
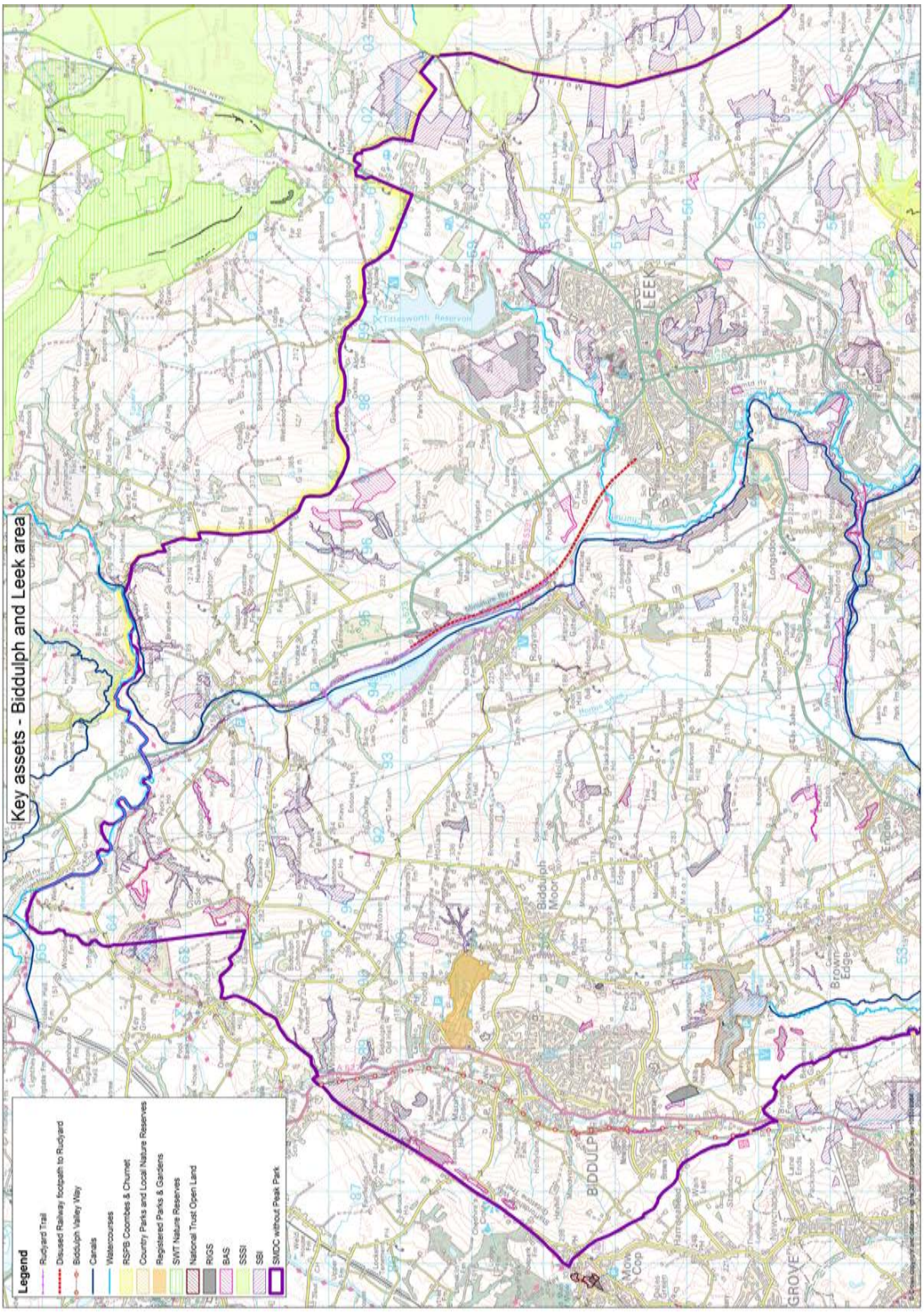
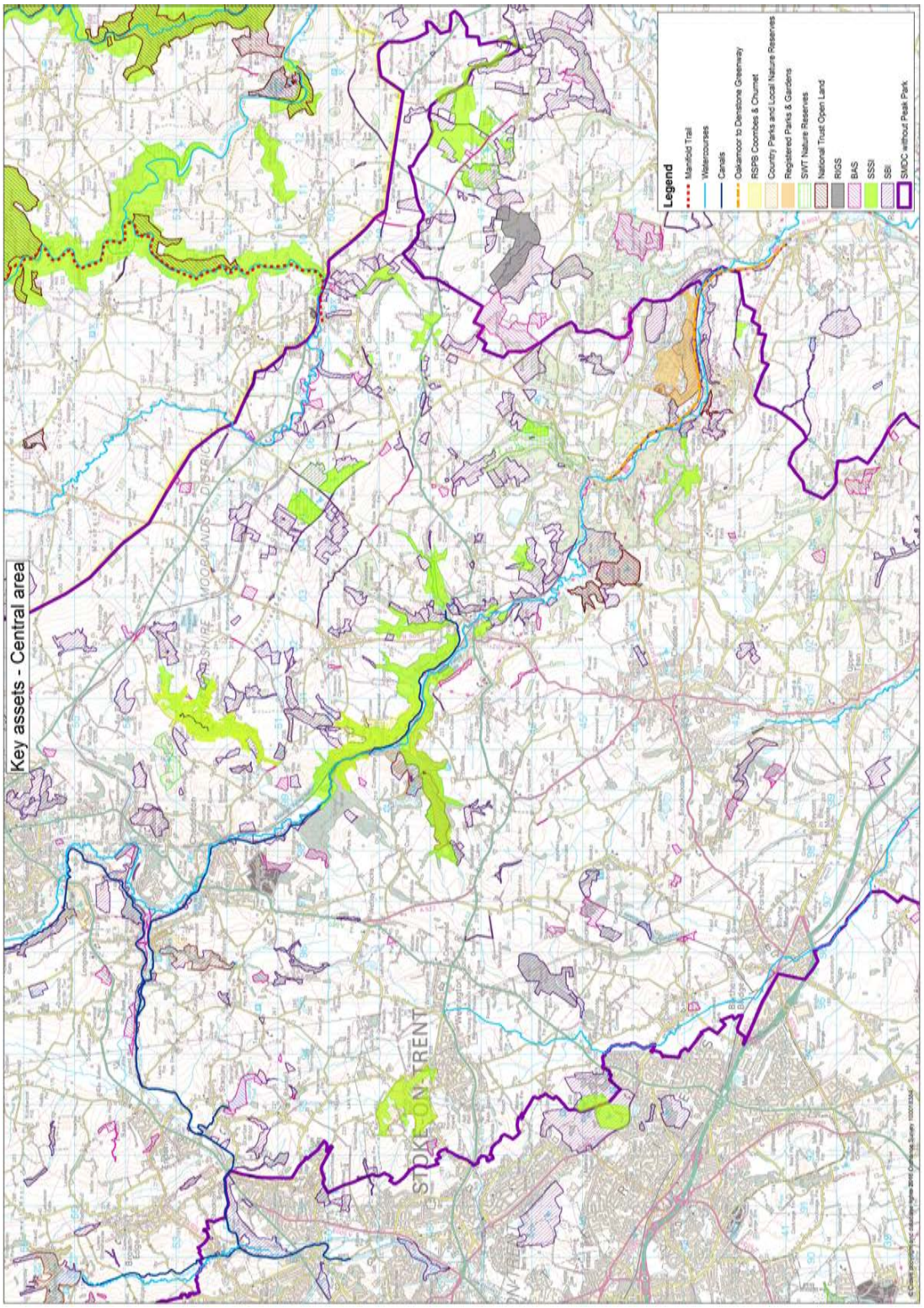


Figure 4.1 Location of the District and its key GI assets

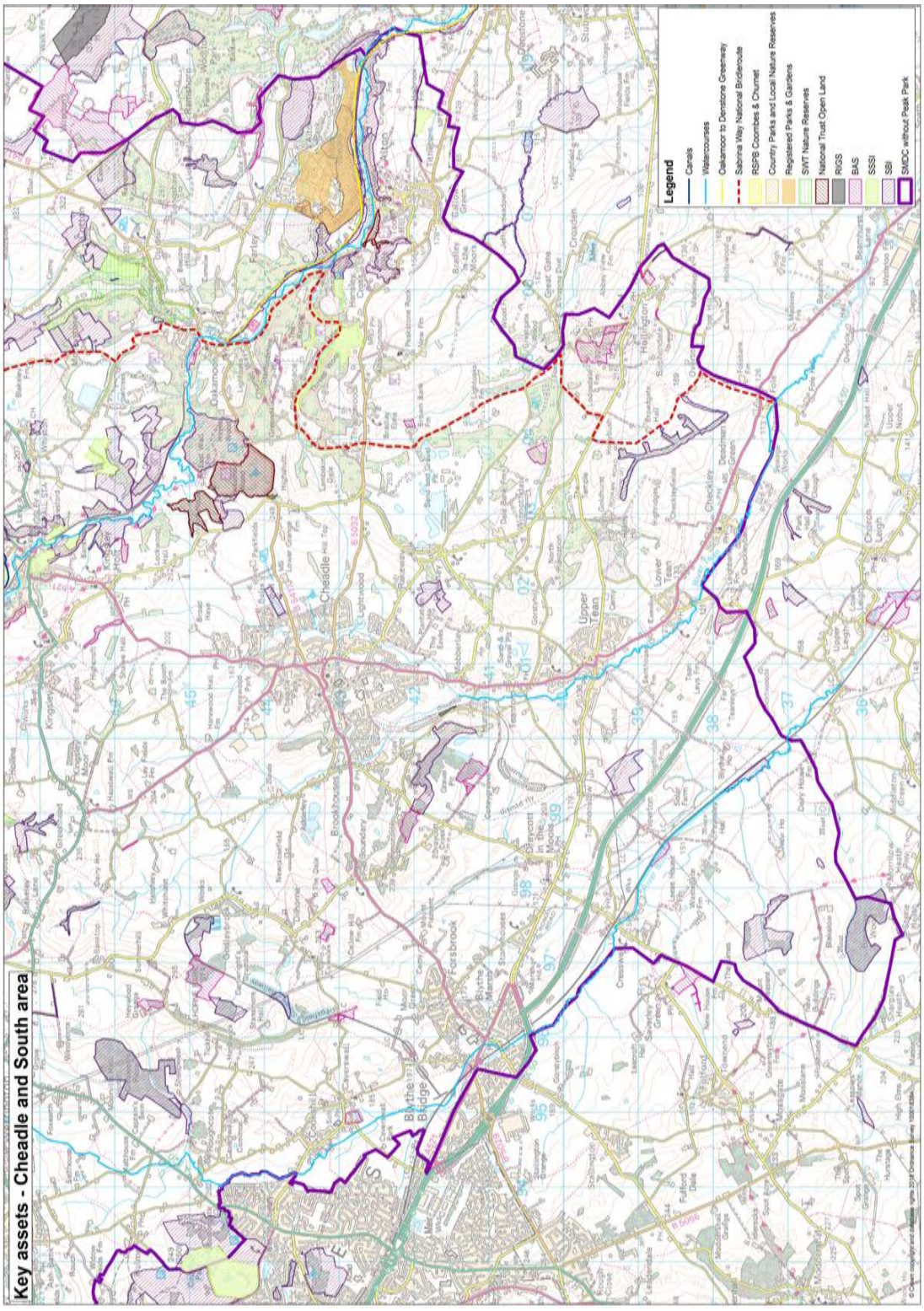
4.3 The following maps illustrate the key GI features identified from the review of individual evidence base maps provided in Appendix A. This overview map combines the key elements of the evidence base into a single map that is presented below in three parts to aid viewing and assessment of coverage. By offering a comprehensive picture of the distribution of GI assets, the overview map helps identify areas of deficiency, supports assessment of ecosystems provision and enables identification of priorities and multi-functionality.



Map 4.1 Overview of key assets: Biddulph and Leek area



Picture 4.1 Overview of key assets - central area



Picture 4.2 Overview of key assets - Cheadle and south

Existing provision and new opportunities

5 Existing provision and new opportunities

5.1 A range of existing evidence base data has been assembled to support the GI strategy. A series of 15 maps have been prepared to illustrate and consider the known distribution of current GI assets by type. The maps - included at Appendix A are:

1. Green space within or near built areas
2. Large-scale, linear infrastructure features with potential for connectivity for biodiversity enhancement
3. Green travel links
4. Blue Infrastructure, flood attenuation and water management
5. Main landscape character types
6. Landscape setting and Green Belt
7. Historic Landscapes
8. Historic Environment
9. Location and extent of known internationally, nationally and locally designated sites
10. Extent of mapped habitat surveys and known priority habitats
11. Known Phase 1 Survey habitats by type
12. Distribution of known priority habitat types
13. Extent of mapped woodland and known accessible wodland
14. Extent of known irreplaceable natural habitat
15. Zone identified as being important for willow tit, based on existing records

5.2 An account of the analysis of the evidence base is given below. In each case, existing provision and the opportunities provided by the GI strategy for new or improved provision are set out.

5.3 As noted at paragraph 2.7 it is recognised that there are limitations to the data currently available to the Council, with gaps in the coverage of some datasets. Thus the following sections are based on best available knowledge at the time.

5.4 Analysis of the currently available evidence base has demonstrated the following:

Green space within or near built areas

5.5 A map of the distribution of mapped green space within or near built areas across the District is included as Map A.1 in Appendix A. For the purposes of the GI Strategy, this green space is considered to include the Green Infrastructure assets of Country Parks,

registered parks and gardens, Nature Reserves, children's play areas, outdoor sports pitches and other public open space. Green space within or near built areas can play a key role in the delivery of local open space to residents.

5.6 Country parks provide a gateway to the countryside and access to these sites is a key issue. There are three country parks: Greenway Bank, Biddulph Grange (both near Biddulph) and Ladderedge Country Park near Leek. Links to country parks from settlements across the District - through the provision of appropriate cycle paths and foot paths - should be considered a priority.

5.7 Analysis of the location of formal parks shows that the distribution is uneven – with four of the five parks situated in Leek, the remaining park being situated in Cheadle. Memorial Recreation Ground in Cheadle provides a wide range of facilities including children's and young people's provision and sports provision. Increasing access to Memorial Recreation Ground should be considered a priority. Dorset Drive is a large amenity green space (1.4 ha) located within Biddulph and has the potential to become a formal park. Dorset Drive (west and east) are proposed for designation as Local Green Space in the emerging SMDC Local Plan. The GI strategy provides an opportunity to upgrade and increase access to this provision.

5.8 The Strategy provides new opportunities to:

- Provide a wide variety of parks, wild areas and open spaces to meet the needs of both nature and people.
- Provide accessible green space in line with recommendations made in the Council's Open Space Study Standards Paper (October 2017).
- Protect existing green and open spaces used and valued by communities, including designated Local Green Spaces, parks, play and recreation areas and sports pitches.
- Improve and create green travel links between towns and villages to local areas of recreation and open space.

Large-scale, linear infrastructure features with potential for connectivity for biodiversity enhancement

5.9 A map of the distribution of linear infrastructure features across the District is included as Map A.2 in Appendix A. For the purposes of the GI Strategy, these features are considered to include the Green Infrastructure assets of long distance footpaths and trails, canals, watercourses and disused railways. These features provide linear connectivity throughout the area and offer significant opportunities to provide ecological connectivity if managed appropriately.

5.10 Ecological corridors can act as a means of linking isolated nature-rich sites and habitats, allowing the movement of animals and plants through otherwise unsuitable areas and making these populations more resilient. Connected habitats provide a greater habitat area. Larger habitats are often subject to fewer impacts and can support greater species diversity. Corridors such as hedgerows and field margins are a characteristic part of the agricultural landscape, and are also important for cultural and archaeological reasons.

5.11 Large scale linear features such as canals, watercourses, railway banks and disused railways can be important as habitats in their own right, and depending on their management, can be important for a large number of animals and plants including priority species. For example recent survey work in the Churnet Vallley has found that the scrub and wet woodland habitats along canals, rivers and railways are very important for the UK BAP priority species willow tit. The population of this rapidly declining woodland bird is closely linked to such linear features which provide connectivity between suitable woodland sites.

5.12 Road Corridors can also make a contribution to the GI network. Roadside verges can be some of the last vestiges of once flower rich fields and road verge management can be designed appropriately to optimise the biodiversity value of road verges as refuges and corridors for wildlife.

5.13 The District contains a wide variety of rivers, canals and towpaths that form the basis of the blue corridor element of the District's green infrastructure. The Caldon Canal runs from Stoke-on-Trent through Stockton Brook and Endon to the Churnet Valley.

5.14 The former Stoke-on-Trent to Leek railway line is now disused but until 1988 was used by BR freight trains to reach the quarries at both Cauldon Lowe and Oakamoor. The line is made up of two sections: the first section is the remains of the former Biddulph Valley Line and the second is the former line to Leek from Milton Junction, passing through the villages of Milton, Stockton Brook and Endon before meeting the Churnet Valley Line at Leek Brook Junction.

5.15 Long distance footpaths and trails including those that use former railway lines) are considered in the next section (Green Travel links).

5.16 The GI strategy provides opportunities to:

- Identify protect and enhance ecological networks that provide the opportunity for species to move within the landscape.
- Promote the establishment of wider vegetation corridors along watercourses.
- Link established linear features, such as disused railway lines, roads or canal and river banks to nearby habitats and open spaces, to create ecological corridors and facilitate the movement of wildlife.
- Enable connected habitats to provide a greater habitat area. Larger habitats are often subject to fewer impacts and can support greater species diversity.
- Support the re-instatement of disused railway lines to improve green travel links where appropriate.

Green Travel Links

5.17 A map of the distribution of Green Travel Links across the District is included as Map A.3 in Appendix A. For the purposes of the GI Strategy, Green Travel Links are considered to include the Green Infrastructure assets of footpaths, cycle ways, promoted walks and trails such as the Biddulph Valley Way.

5.18 The rural nature of Staffordshire Moorlands lends itself to the provision of linear corridors which link open spaces (and settlements) together. Green travel links can be particularly valuable in towns, facilitating links between open spaces and local residents.

5.19 The strategy looks to improve existing connections, and make new connections, in particular between educational facilities, workplaces, hospitals and care homes and the green infrastructure network as this can provide valuable opportunities to help support people's health and well-being. Green corridors also provide valuable linkages between the towns and outlying rural settlements.

5.20 The abundance of open countryside provides significant opportunities for a dense Public Rights Of Way (PROW) network across the District - Staffordshire Moorlands has a network of 600 miles of PROW[3]. Key routes in the District include the Staffordshire Moorlands Walks (a series of self-guided walks - route descriptions available from the SMDC web-site), Biddulph Valley Way, Manifold Valley Walks and County Park trails.

5.21 The Staffordshire Way is a long distance footpath established by Staffordshire County Council. It is the most established multi-user route in the area, running parallel to the River Churnet from Rudyard Lake in the north-west to Alton in the south-east, and connecting to the Leek to Rushton Spencer Greenway and the Oakamoor to Denstone Greenway. These two Greenways follow the track bed of the former Churnet Valley Railway. Greenways are generally for shared use by walkers, horse riders, and cyclists.

5.22 There are also a number of strategic cycle routes throughout the District. Specific routes include the Manifold Trail and Biddulph and Leek to Rudyard Lake. The Manifold Trail is a high quality site shared by walkers and cyclists and stretches for nearly nine miles through the Manifold, Hamps Valley, and Waterhouses. The Staffordshire Moorlands link consists of 23km connection from Stoke-on-Trent to the Manifold Trail and the Roaches via a segregated cycle route between Stockton Brook and Cheddleton (utilising the Caldon Canal towpath) combined with an on-road route from Cheddleton to the Manifold Trail. The District also includes a number of routes suitable for wheelchair users / pushchairs, including the Rudyard Trail.

5.23 Staffordshire has one horse riding route of strategic significance - the Sabrina Way. This route is part of the National Bridleroute Network and whilst primarily designed for horse riders, can be used by walkers and cyclists also. The Way runs through the south east of the District, from Waterhouses to Oakamoor and Checkley.

5.24 However the evidence base has demonstrated that whilst the network available to walkers is good and evenly spread, the percentage of the network which is available to horse riders and cyclists is particularly low. Furthermore, the bridleway network is fragmented making the establishment of off-road circular routes difficult. Vulnerable users, such as horse riders and cyclists can be forced onto unsuitable roads.

5.25 It should be noted that where work is undertaken to provide or improve green travel links, care should be taken to avoid disturbance to sensitive wildlife and damage to heritage assets (e.g. of disused railways and plate-ways).

5.26 The GI strategy provides opportunities to:

3 https://www.staffordshire.gov.uk/environment/eLand/RightsofWay/home.aspx

- Recognise and value existing greenways through settlements such as the Biddulph Valley Way.
- Support the delivery of a network of well connected pathways providing routes for walkers, cyclists and horse riders.
- Identify opportunities to improve existing connections, and make new connections, in particular between educational facilities, workplaces, hospitals and care homes and the green / blue infrastructure network to help support people's health and well-being.
- Seek opportunities to deliver connections within the GI network that help support access for those in early years education to their immediate natural environment.
- Work with the Churnet Valley Living Landscape Partnership (CVLLP) to enhance opportunities for walking, cycling and horse riding in the Churnet Valley through creating and enhancing linkages between existing routes and through upgrading routes and creating new routes.
- Extend footpath links along the Uttoxeter Canal, including at the Bolton Copperworks site.
- Improve access to the countryside for walking by improving existing rights of way which occupy historic routeways such as the Churnet Valley plateways.
- To address gaps in the network for cyclists and horse riders by establishing new horse riding/cycling routes within the district;
- Improve links between Peak District National Park and Churnet Valley for walkers, cyclists and horse riders.
- Extend the network of off-road paths around Leek for walkers, cyclists and horse riders with links to Rudyard and Tittesworth to the north and strengthen links to the country parks – Ladderedge and Deep Hayes.
- Extend green infrastructure within Leek to improve access to green space within the town and out to the surrounding countryside, including enhancing the role of Brough Park.
- Seek opportunities to create walking and cycling routes between Cornhill, Leek and Ladderedge Country Park and Birchall Playing Fields.
- Strengthen sustainable transport links between Leek town centre and Cornhill and to other visitor attractions in the Churnet Valley.
- Create links between the Consall Hall Gardens, the adjacent Consall Nature Park, the Staffordshire Way and Consall Forge (Consall Railway Station and the Caldon Canal).
- Establish at least one circular route for less agile people.
- Improve sustainable transport connections from Cheadle town centre to other visitor attractions in the Churnet Valley.

- Extend green infrastructure with access to green space within Cheadle town and to the surrounding countryside, extending the network of off-road paths for walkers, cyclists and horse riders

- Enhance and develop pathways along rivers and canals, and promote additional links to provide access to them from as wide an area as possible, while avoiding disturbance to sensitive wildlife.

Blue Infrastructure, flood attenuation and water management

5.27 A map of the distribution of rivers, and areas at risk of flooding, is included as Map A.4 in Appendix A. For the purposes of the GI Strategy, blue infrastructure assets (including for flood attenuation and water management) are considered to include principal rivers and streams and flood zones 2 and 3 (the areas that could be affected by flooding from a river with a flood that has a 1% (1 in 100) or greater chance of happening each year [flood zone 3] or areas likely to be affected by a major flood, with up to a 0.1% (1 in 1000) chance of occurring each year [flood zone 2]. Map A.4 also shows the Environment Agency zones identifying potential and priority areas for new floodplain woodland, to help reduce downstream flood risk.

5.28 During heavy rainfall, flooding from sewers or highway drains may occur if the rainfall event exceeds the design capacity of the drainage system, the system becomes blocked and/or the system cannot discharge due to high water levels in receiving watercourses. Sewer and highway flooding typically results in localised short term flooding. There are a number of areas within the Moorlands where the steep topography, combined with low permeability soils, can exacerbate surface water flood risk. Areas shown to be at most risk from surface water flooding are largely associated with the fluvial floodplains and coincide with reservoirs[4].

Blue Infrastructure

5.29 There are four main rivers running north-south across the District providing an extensive network of blue infrastructure contributing to a distinctive landscape and benefits for people and wildlife, but with an associated risk of flooding.

5.30 The River Churnet rises in the Peak District National Park, flowing south through the District around Leek. Catchment land use is largely low grade agriculture or pasture, however the Churnet flows through significant areas of woodland, much of which is designated SSSI. Major tributaries include Endon Brook and Combes Brook. South of Cheddleton, the river is canalised for approximately 1.6km as the Caldon Canal, before returning to natural river channel, flowing south out of the District and joining the River Dove.

5.31 The River Tean rises to the east of Stoke on Trent and flows south east out of the District, before joining the River Dove north of Uttoxeter in East Staffordshire. The catchment is largely rural, except for the town of Cheadle. The Cecilly Brook is a major tributary.

5.32 The River Blithe catchment drains the most southerly region of the District, rising to the south of Stoke-on-Trent and flowing south east out of the District and ultimately draining into the River Dove, south of Uttoxeter. Land use is largely mixed arable farming and grassland. Fors Brook is a major tributary.

4 Staffordshire Moorlands Level 1 Strategic Flood Risk Assessment Update; October 2015

5.33 Biddulph Brook and its associated catchment drains a small area to the far west of the District, around the town of Biddulph, ultimately draining to the River Dane east of Congleton.

5.34 The River Dane is a tributary of the River Weaver that originates in the Peak District and forms the border between first Cheshire and Derbyshire on the west and east, and then between Cheshire and Staffordshire, flowing through Rushton Spencer.

5.35 In addition the District has a significant length of ordinary watercourses including:

- Biddulph Brook
- Black Brook
- Blake Brook
- Broadgate Hall Brook
- Combes Brook
- Cotton Brook
- Dingle Brook
- Ellis Hill Brook
- Hoo Brook
- Horton Brook
- Oakenclough
- Rad Brook
- Ravensclough Brook
- River Dove
- River Hamps
- River Manifold
- Shirley Brook
- Warilow Brook
- Warslow Brook

5.36 Where possible, opportunities will be sought to undertake river restoration and enhance natural river corridors as part of a new development in line with the Humber River Basin Management Plan (Water Framework Directive). All development should be set back from all rivers and streams with an undeveloped buffer corridor in order to provide biodiversity migration routes, make space for water and provide additional capacity in view of climate

change demands. New developments should be designed to view watercourses as aesthetically valuable greenspaces which add value to the development by providing attractive areas for people to view nature.

5.37 As a result of the topography and hydrology of the District, a number of lakes and reservoirs have been built or impounded for the supply of drinking water and industry. These lakes and reservoirs include:

- Hales Hall Pool
- Ladderedge Storage Reservoir
- Knypersley Reservoir
- Rudyard Lake / Reservoir
- Serpentine
- Stanley Pool
- Tittesworth Reservoir

5.38 The Caldon Canal runs from Stoke-on-Trent to Leek and to Froghall where there is a link to the Uttoxeter Canal, currently being restored.

5.39 The canal enters the District at Endon. There are lock flights at Stockton Brook and Hazlehurst, where the canal divides with one lock-free arm leading to Leek via a short tunnel and ends at the feeder stream from Rudyard Lake, whilst the other descends the Churnet Valley via eight more locks to Froghall. The towpath has recently been upgraded to link Stoke-on-Trent to the Peak National Park. The Staffordshire Moorlands link is part of an overall £5m Pedal Peak project which is a Staffordshire County Council / Canal and River Trust initiative.

5.40 The GI strategy provides opportunities to:

- Wherever possible avoid development in medium and high flood risk areas (Flood Zones 2 and 3).
- Wherever possible ensure new developments contribute to managing wider flood risk, for example through use of sustainable drainage schemes (SuDS) and use of low-lying ground in waterside areas for recreation, amenity and supporting wildlife.
- Identify, with partners, problem areas where retro-fitting of SuDS and other enhancement measures could be used to help solve existing issues.
- Identify opportunities to improve access to, and along, watercourse corridors.
- Help make space for water by undertaking river corridor restoration and enhancement as part of a development where a site contains a main river or ordinary watercourse, site layout should also enable retention of a river corridor including its floodplain.

- Help ensure that development is set back from rivers and streams, with an undeveloped buffer corridor in order to provide biodiversity migration routes, make space for water and provide additional capacity in view of climate change demands.
- Encourage natural flood management techniques throughout catchments, for example slowing the movement of flood water by planting floodplain or riverside woodland, or the introduction of natural woody debris into streams and watercourses, to increase resistance to floodwater flow.
- Identify opportunities for planning and managing woodlands in association with streams, rivers and other water bodies to provide and link habitats.

Main landscape character types

5.41 A map of the District's Landscape Character types is included as Map A.5 in Appendix A. The District includes high quality landscape, including parts of the Peak District National Park. Staffordshire Moorlands falls within 4 Joint Character Areas[(5)]:

- 64 Potteries and Churnet Valley
- 52 White Peak
- 53 South West Peak
- 68 Needwood Claylands

5.42 The majority and central area of the district falls into the Potteries and Churnet Valley. The South West Peak and the White Peak joint character areas extend from the Peak Park area into the eastern edge of the District.

5.43 Further Landscape Character Assessment has been undertaken to identify the specific landscape character types that are found in Staffordshire Moorlands and that fall within the wider Character Areas. Where new development is considered, appropriate consideration should be given to the features of the landscape character type and to the more immediate landscape setting. The landscape character types in the District are as follows:

- Ancient plateau farmlands
- Ancient slope and valley farmlands
- Settled plateau farmland slopes
- Settled plateau farmlands
- Gritstone uplands
- Dissected sandstone cloughs and valleys
- Dissected sandstone highland fringe

5 https://www.staffordshire.gov.uk/environment/eLand/planners-developers/landscape/NaturalEnvironmentLandscapeCharacterTypes.aspx

- Dissected sandstone uplands
- Gritstone highland fringe
- Limestone highland fringe

5.44 Development should be informed by and be sympathetic to landscape character and quality and should contribute, as appropriate, to the regeneration, restoration, enhancement, maintenance or active conservation of the landscape likely to be affected.

5.45 Sustainable agriculture is crucial for the development of rural economies as well as the rural landscape. Farmers are often considered the custodians of nature - their livelihoods depending on the well-being of their natural surroundings - as well as high quality natural environments providing multiple benefits that support sustainable agriculture, healthy and diversified food production and thriving farm businesses.

5.46 The GI strategy provides opportunities to enhance the natural, man-made and cultural features that are crucial to the local landscape and create opportunities for the restoration of degraded landscapes and the enhancement of the urban fringe.

Landscape Setting and Green Belt

5.47 A map showing the Green Belt boundary and sensitive landscapes surrounding the main settlements is included as Map A.6 in Appendix A. The Green Belt within Staffordshire Moorlands District[6]:

- Limits the encroachment of the Stoke-on-Trent conurbation into Staffordshire Moorlands District.
- Maintains the rural character and settlement pattern of the District, particularly in the proximity of the conurbation.
- Limits sprawl along the main transport corridors through the eastern part of the District, thereby helping to maintain the identity of settlements situated along these routes.
- Contains growth of the principal settlements of Leek, Biddulph and Cheadle, thereby maintaining their relative compactness and rural setting.

5.48 Locally, the function of the Green Belt largely mirrors its strategic role, helping to provide the countryside context for the District's villages and towns.

5.49 Map A.6 also illustrates judgements made, based on fieldwork, about landscape quality and landscape sensitivity. The map shows what is considered to be the important landscape setting to settlements based on a further development of information gathered under the Landscape Character study to provide a more in depth assessment identifying the distinctive qualities of the individual settlements[7].

6 http://www.staffsmoorlands.gov.uk/media/975/Green-Belt-Review-Study/pdf/GREEN_BELT_REVIEW_FINAL_REDUCED.pdf
7 Landscape and Settlement Character Assessment of Staffordshire Moorlands; 2008; Wardell Armstrong

5.50 The evidence shows the importance of the Churnet Valley for its high natural, cultural and landscape character sensitivity. Churnet Valley has its own strategy driven by the Churnet Valley Living Landscape Partnership. The strategy aims to reflect the existing habitat network mapping undertaken for the Churnet Valley and seeks to deliver the aims of the Churnet Valley Masterplan Supplementary Planning Document[8], conserving and enhancing the area for its historic interest, recreation, education and nature conservation value, seeking to enhance and create further biodiversity as well as opportunities for walking, cycling and horse riding.

5.51 The GI strategy provides opportunities to conserve and enhance the Churnet Valley area for its historic interest, recreation, education and nature conservation value.

Historic Landscapes

5.52 A map showing historic landscapes across the District is included as Map A.7 in Appendix A.

5.53 The Staffordshire Moorlands are defined by their historic landscape character whose integrity survives particularly well across District which is predominantly rural comprising well preserved ancient field systems and a predominantly dispersed settlement pattern of small farmsteads and cottages[9]. The evidence shows that the District is dominated by the broad Historic Landscape Character type of 'Fieldscapes' which covers over 77% of the area. Woodland also makes a significant contribution to the historic landscape covering 8% of the District, the majority of it being located in steep-sided valleys, of which the prime example is the Churnet Valley.

5.54 Whilst the Broad Type 'Industrial & Extractive' only covers 2% of the area of the District this mostly relates to several large sites of over 50ha. Map A.7 reveals concentrations at Cauldon in the east of the District, to the north east of Oakamoor and to the south of Cheadle; all of these sites related to extant quarries. Around Leek the larger industrial sites are mostly industrial estates.

5.55 The GI strategy provides opportunities to conserve the fabric of the historic landscape of the Staffordshire Moorlands, including field boundaries, the dispersed settlement pattern and narrow winding lanes between settlements.

Historic Environment

5.56 A map showing elements of the historic environment across the District is included as Map A.8 in Appendix A. For the purposes of the GI Strategy, the historic environment is considered to include the Green Infrastructure assets of historic farmsteads, historic buildings, scheduled monuments and structures and registered parks and gardens.

5.57 The District contains a high number of designated and non-designated historic assets. There are 979 Listed Buildings, 117 Scheduled Monuments and fourteen Conservation Areas lying within the Staffordshire Moorlands District, outside of the Peak National Park. There are two Grade I Registered parks and gardens in the District: Alton Towers and Biddulph Grange; both of which are open to the public (charges may be payable).

8 http://www.staffsmoorlands.gov.uk/article/1360/Churnet-Valley-Masterplan
9 Historic Environment Character Assessment: Staffordshire Moorlands; Staffordshire County Council; August 2010

5.58 There are many other currently non-designated heritage assets including buildings, monuments, non-designated archaeology and historic landscape character, as well as places or sites which are not of national importance but are valuable to the local environment and merit protection. There are currently two heritage assets on the Local Heritage Register: Pickwood Recreation Ground, Leek and the Hollybush Pub, Brown Edge.

5.59 The GI strategy provides opportunities to recognise the importance and the diversity of the historic built environment and its contribution to the local distinctiveness of the Staffordshire Moorlands, ensuring that designated and non-designated historic assets and their settings are protected and enhanced wherever possible and opportunities to support investment in heritage at risk identified.

Location and extent of known internationally, nationally and locally designated sites

5.60 A map illustrating the distribution of known designated biodiversity and geodiversity sites across the District is included as Map A.9 in Appendix A. For the purposes of the GI Strategy, these are considered to include the Green Infrastructure assets of statutorily designated sites such as Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), Ramsar sites, National Nature Reserves (NNR), Local Nature Reserves (LNR) and Sites of Special Scientific Interest (SSSIs), along with non-statutorily protected sites including Sites of Biological Interest and Biodiversity Alert Sites (known collectively as Local Wildlife Sites) and Regionally Important Geological Sites (RIGs).

5.61 The sites shown on map A.9 are those designated at present, but numbers and boundaries of sites are subject to change with review, particularly Local Wildlife Sites and RIGs where not all sites of value have yet been identified comprehensively.

5.62 The District is rich in biodiversity and geodiversity. Geodiversity is a term that can be broadly defined as encompassing the variety of rocks, fossils and minerals and natural landscape forming processes on the earth. This is taken to include all geomorphological features and landscapes resulting from weathering and transportation of soils and rocks[10].

5.63 Staffordshire Moorlands District has the largest total area of designated sites of all districts in Staffordshire and has the second highest percentage coverage (13%) after Cannock Chase District.

Area of District (Ha)	Area SSSI (Ha)	Area SBI (Ha)	Area BAS (Ha)	Area designated	% designated
57,584.98	4,984.74	2,171.9	305.907	7,462.55	12.96[1]

Table 5.1 Percentage of district covered by each type of site

1. Staffordhire Ecological Record, 2016

5.64 Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) are sites of European importance designated under the The Conservation of Habitats and Species Regulations 2010 that implement the EC Habitats Directive. All sites designated under this European legislation are already SSSIs. Within the District (but not the Local Plan area) are the following European sites:

10 Staffordshire Geodiversity Action Plan; Staffordshire Ecological Record

- South Pennine Moors (SAC)
- Peak District Dales (SAC)
- Peak District Moors (South Pennine Moors Phase 1) SPA

5.65 The Peak District Moors (South Pennine Moors Phase 1) SPA is noted for the breeding of five species of birds – golden plover, merlin, peregrine falcon, short eared owl and dunlin. All of these apart from the peregrine are ground nesting birds which are potentially vulnerable to disturbance from walkers and cyclists[11].

5.66 Sites of Special Scientific Interest (SSSIs) are the finest sites for wildlife and natural features, supporting many characteristic, rare and endangered species, habitats and natural features. The purpose of SSSIs is to safeguard for present and future generations a series of sites that are individually of high natural heritage importance. Large interconnected areas of SSSI are concentrated throughout the Churnet Valley. The District includes 23 SSSIs as follows:

- Bath Pasture SSSI
- Brownend Quarry SSSI (within Peak Park, but not the Local Plan area)
- Caldon Dales SSSI
- Caldon Low SSSI
- Cauldon Railway Cutting SSSI
- Churnet Valley SSSI
- Colshaw Pastures SSSI (within Peak Park, but not the Local Plan area)
- Combes Valley SSSI
- Dimmings Dale & The Ranger SSSI
- Dove Valley and Biggin Dale SSSI (within Peak Park, but not Local Plan area)
- Ecton Copper Mines SSSI (within Peak Park, but not Local Plan area)
- Froghall Meadow and Pastures SSSI
- Hamps and Manifold Valleys SSSI (within Peak Park, but not Local Plan area)
- Hulme Quarry SSSI
- Leek Moors SSSI (within Peak Park, but not Local Plan area)
- Moss Carr SSSI (within Peak Park, but not Local Plan area)

11 Churnet Valley Masterplan: Habitats Regulations Assessment Screening Report Update; Staffordshire Moorlands District Council;November 2013

- Rue Hill SSSI
- Saltersford Lane Meadows SSSI
- Stanton Pastures & Cuckoocliff Valley SSSI
- Swineholes Wood and Blackheath SSSI
- Thorncliffe Moor SSSI
- Wetley Moor SSSI
- Whiston Eaves SSSI

5.67 Section 41 (S41) of The Natural Environment and Rural Communities (NERC) Act 2006 requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the NERC Act, to have regard to the conservation of biodiversity in England, when carrying out their normal functions. Fifty-six habitats of principal importance are included on the S41 list. These are all the habitats in England that were identified as requiring action in the UK Biodiversity Action Plan (UK BAP) and continue to be regarded as conservation priorities in the subsequent UK Post-2010 Biodiversity Framework. Within Staffordshire Moorlands district these include:

- Broadleaved, mixed and yew woodland
- Neutral grassland
- Acid grassland
- Improved grassland
- Dwarf shrub heath
- Rivers and streams

5.68 There are currently 352 Local Wildlife Sites (LWS) covering nearly 2,500 hectares within the Staffordshire Moorlands District (including that part of the district within the Peak District National Park); however the total number of sites changes periodically as sites are re-surveyed and new sites are found. Sites of Biological Importance (SBI) are of county value and Biodiversity Alert Sites (BAS) are sites of district importance.

5.69 Some Local Wildlife Sites may be of SSSI "quality", as SSSIs are only a sample of the best habitat in the country; LWS cover all the "best of the rest". They come in all shapes and sizes, from small wildflower meadows and secluded ponds to ancient woodlands. Most are owned by private individuals. LWS play a critical conservation role by providing wildlife refuges, protecting threatened species and habitats, and acting as links and corridors between nationally designated sites such as SSSIs. While they are not legally protected, they are a material consideration within planning policy.

5.70 Key sites in relation to the emerging GI network include:

- Alton Park SBI and Abbey Wood SBI - at Alton Towers.
- Ashbourne Hey SBI, near Moneystone Quarry - area of high quality grassland.
- Biddulph Valley Way (Whitemoor) LNR - The Way provides access directly or visually to areas with historical or natural history interest. Whitemore Wood has a diverse springtime flora whilst Bailey's Bank Wood (accessed by courtesy of the Woodland Trust) contains the remains of the medieval Biddulph Castle.
- Brough Park Fields LNR - The grassland areas are of such quality that together they are designated as a County SBI.
- Brown End Quarry: A former limestone quarry now managed as a geological nature reserve near Waterhouses.
- Cecilly Brook LNR - The Reserve follows a 1.25 km stretch of Cecilly Brook through Cheadle and is one of the most important sites for water voles in Staffordshire. Ancient flower rich meadows occur at Thorley Drive adjacent to Cecilly Brook and are of county importance for their flora.
- Churnet Valley Railway SBI - The former railway line, and in parts the route of the former Uttoxeter Canal, which now acts as a greenway from Oakamoor to beyond the District boundary.
- Consall - Variety of habitats, woodland and grassland. There are 3 different nature trails with increasing difficulty which highlight the flora and fauna found here.
- Dale Sprink Pastures SBI - Consall Hall Gardens.
- Froghall Bridge SBI - near Bolton Copperworks, Froghall.
- Hales Hall Pool LNR - plants of the poolside include the Greater Tussock Sedge and Lesser Reedmace.
- Harston Wood: A flower filled ancient woodland in the Churnet Valley.
- Hawksmoor Nature Reserve is a National Trust woodland just outside Oakamoor.
- Heathy Gore SBI at Moneystone Quarry
- Hoften's Cross Meadows SBI - A wide range of herbs and grasses can be found on the site; the most important area is down the banks by the stream where the flora is particularly rich and varied.
- Ipstones Edge: A mixture of heathland, moorland and woodland near Ipstones.
- Ladderedge Country Park LNR - Unimproved grassland meadows. A breeding population of great crested newts have been located in one of the ponds.
- Marshes Hill Common LNR - A six hectare remnant of a once extensive heathland.
- Rod Wood: A 40 acre nature reserve near Cheddleton which consists of some of the finest wildflower meadows in the county.

- Soils Wood SBI - adjacent to the railway line at Leekbrook.
- Side Farm Meadows: 10 acres of attractive wildflower meadows and a waterfall near Oakamoor.
- Weag's Barn: Picturesque meadows and woodland near Waterhouses.

5.71 Coombes Valley is an RSPB Reserve near Bradnop, Leek. There are short and long trails that explore the valley.

5.72 The evidence shows that much of the Plan Area's biodiversity and geodiversity is focused along the Churnet Valley. The Churnet Valley is the subject of a number of separate studies, including a Churnet Valley Landscape Ecology Pilot: Habitat Networks Modelling study funded by Natural England. The Council adopted a Churnet Valley Masterplan SPD in March 2014. To support this work, a Biodiversity Opportunity Map of the district was prepared - shown in Appendix B.

5.73 New development where appropriate should promote the maintenance, enhancement, restoration and re-creation of biodiversity in line with the objectives for the relevant Biodiversity Opportunity Zone set out in Appendix B.

5.74 The GI strategy provides opportunities to:

- Target biodiversity enhancement in line with the objectives identified for existing Biodiversity Opportunity Zones.
- Prepare settlement specific biodiversity opportunity maps - mapping existing biodiversity, high quality habitat, the opportunity for species to move within the landscape and identifying specific opportunities to develop biodiversity across the Plan Area.
- Support an increase in priority species and habitats in and around new developments.
- Improve, manage and create a rich mosaic of woodland and grassland habitats, including ancient and semi-natural woodland, wet woodland and scrub; neutral, acid and calcareous grassland; wetland and riparian habitats and other habitats of conservation importance.
- Improve, manage and create woodland that supports vulnerable bird species, in particular ancient and semi-natural woodland that are of high landscape importance and are also very important for their bird assemblages including redstart, pied flycatcher and wood warbler; also wet woodland and scrub which are important for willow tit.
- Protect, enhance and support biodiversity gain in the Churnet Valley, in line with the Churnet Valley Masterplan and Biodiversity Opportunity Map.
- Support high quality local environments that help under-pin sustainable agriculture by enabling appropriate nutrient cycling, pollination of crops, pest control, availability of water and flood control, as well as soil protection.

- Focus recreational activities in areas away from the European sites, attracting and holding people to areas outside the SPA in line with the findings of the HRA of the Local Plan and to help protect the population density of upland waders and other populations of key SPA species such as golden plover.
- Improve the aquatic environment through buffering and appropriate management and restoration.
- Protect, conserve and enhance the natural environment of Cecilly Brook and Hales Hall Pool Local Nature Reserves in Cheadle, to help strengthen the population of water voles.

Extent of mapped habitat surveys and known priority habitats

5.75 A map of the extent of surveyed habitats across the District is included as Map A.10 in Appendix A. For the purposes of the GI Strategy, mapped habitats are used to portray natural open spaces and include the Green Infrastructure assets of Phase 1 habitats (broad habitat types in accordance with Joint Nature Conservation Committee (JNCC) classification guidance[12] eg Woodland and scrub; Grassland and marsh; Heathland; as well as Biodiversity Action Plan and priority habitats - more specific habitat types identified as being the most threatened and requiring conservation action eg calcareous grassland; broad-leaved woodlands. Natural green space is an important and valued element of the District's Green Infrastructure, any natural green space within settlement boundaries provides a gateway to the wider countryside.

5.76 Evidence Base Map A.10 illustrates the abundance of natural green space in the District and other supporting evidence for the Local Plan [13]has identified natural and semi-natural green space as an important part of Staffordshire Moorlands, providing good access to the countryside and wildlife. Over two thirds (68%) of natural and semi-natural provision was rated by the 2017 KKP Open Space Study as high quality. Four sites in particular were found to have increased in quality since the previous (2009) study:

5.77 Bailey's Wood, Biddulph

5.78 Cecilly Brook, Cheadle

5.79 Crabtree Avenue, Biddulph

5.80 Ladderedge Country Park, Leek

5.81 Whilst there is a reasonably good spread of natural and semi-natural greenspace identified across Staffordshire Moorlands, the study demonstrated that there are large parts of the district deficient in terms of accessibility to natural greenspace - in particular the more urban areas.

5.82 The GI Strategy provides opportunities to support access to the countryside from towns and villages, through improving and creating green travel links.

12 http://jncc.defra.gov.uk/page-4258
13 Staffordshire Moorlands District Council Open Space Study Update Report; Knight, Kavanagh & Page Ltd; August 2017

Known Phase 1 Survey habitat types

5.83 A map illustrating the distribution of known Phase 1 survey habitat types across the District is included as Map A.11 in Appendix A. The Phase 1 Habitat Classification and associated field survey technique provide a standardised system to record semi-natural vegetation and other wildlife habitats [(14)].

5.84 The Phase 1 classification comprises ten (A-J) broad high level categories as follows:

- A: Woodland and scrub
- B: Grassland and marsh
- C: Tall herb and fen
- D: Heathland
- E: Mire
- F: Swamp, marginal and inundation
- G: Open water
- H: Coastland
- I: Exposure and waste
- J: Miscellaneous

5.85 The evidence shows that the predominant habitat type across the Plan Area is improved grassland.

5.86 The GI strategy provides opportunities to

- Ensure no net loss of biodiversity within developments and aim for net biodiversity gain.
- Reduce habitat fragmentation and increase connectivity by linking, buffering and expanding existing sites of importance.
- Protect and improve existing sites - including by working with partners to secure and maintain appropriate conservation management.
- Work with the County Council to implement a long term strategy for mitigation, conservation and enhancement of the grassland resource and for mitigation of landscape impacts of quarrying, for example around Caldon Lowe.
- Recognise the value of ecosystem services - the District's habitats play an important role in providing valuable ecosystem services, especially carbon storage, water quality and flood prevention.

14 http://jncc.defra.gov.uk/page-4258

Known Priority Habitats by type

5.87 A map illustrating the distribution of known priority habitats across the District by type is included as Map A.12 in Appendix A. There is a need to protect and maintain natural and semi-natural habitats of nature conservation value outside of statutory designated sites to sustain the variety of important habitats and species within the county and the District. The Churnet Valley area supports examples of nationally important grassland types.

5.88 Managing priority habitats will support the habitat needs for many of the priority species associated with this area. Ancient and semi-natural woodland are important for their bird assemblages including redstart, pied flycatcher and wood warbler and wet woodland and scrub are important for willow tit. Map A.15 shows the zone identified as being important for willow tit, based on existing records. Woodland is also important for invertebrates including the argent & sable moth. Priority habitat moorland and grassland mosaics support the priority bird species curlew, snipe and lapwing and the priority habitat of rivers and streams can support water voles, another priority species for conservation action. Cecilly Brook, Cheadle holds a strong, isolated population of water voles.

5.89 Priority habitats defined as NERC Act S41[15] habitats of principal importance and local BAP habitats identified in the Plan Area include:

- Ponds
- Rivers
- Hedgerows
- Reedbeds
- Lowland mixed deciduous woodland
- Upland oakwood
- Wet woodland
- Lowland calcareous grassland
- Lowland meadows
- Purple moor-grass and rush pastures
- Lowland heathland
- Upland heathland
- Wood-pasture and parkland
- Eutrophic standing waters
- Open mosaic habitats on previously developed land

15 The Natural Environment and Rural Communities (NERC) Act 2006 - Section 41 requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England.

5.90 The GI strategy provides opportunities to:

- Create strategically placed stepping stone habitats to facilitate the movement of priority species across the landscape.
- Enhance and expand areas of woodland, grassland and wetland habitat mosaics, incorporating measures to:

  Enhance and expand areas of heathland and blanket bog in situations where this will reduce soil erosion and benefit biodiversity, carbon storage, flood risk management and water quality. And / or;

  Enhance existing woodlands and expand woodland cover in locations where well managed woodland can benefit landscape character, biodiversity, water quality and flood risk, in addition to wider climate change, economic and social benefits - key locations include: the Churnet Valley and the wider River Churnet catchment.
- Connect and expand areas of existing good quality grassland, for example the species-rich grassland around Leek and in other locations where this will benefit biodiversity, water quality and flood risk management.
- Increase the area of priority habitats - including by identifying opportunities for habitat creation as part of quarry restoration.

Woodland

5.91 A map illustrating the distribution of mapped woodland across the District is included as Map A.13 in Appendix A. The evidence shows the predominant areas of woodland being along the Churnet Valley.

5.92 Woodland cover exceeds 3,000ha in the Churnet Valley, a large proportion of which is of ancient origin. Woodland birds such as redstart, pied flycatcher and wood warbler, and invertebrates including the argent & sable moth are found throughout[16]. Other important areas of woodland in the District include:

- Coombes and Churnet Valley RSPB woodland - A steep-sided wooded valley of mature oak with rocky streams and ponds with spring woodland flowers and flower meadows.
- Consall Nature Park, Consall Forge, Wetley Rocks.
- Cotton Dell Nature Reserve with ancient woodlands and flower rich grassland.
- Brough Park Fields, Leek - A network of woodland north of leek to Tittesworth Reservoir including Abbey Woodland and small pockets of woodland such as at Brough Park Fields Local Nature Reserve.
- Ladderedge Country Park, Leek. Large country park with pastureland and small patches of woodland.

16 The State of Staffordshire's Nature; Staffordshire Wildlife Trust; 2016

- Areas of woodland at the northern end of the Biddulph Valley Way - Whitemoor SBI is connected to woodlands along Congleton Edge plus other woodlands in the vicinity such as woodland at Biddulph Grange Country Park.
- Greenway Bank Country Park - formal gardens leading into extensive areas of quiet woodland around the Serpentine Pool.
- Deep Hayes Country Park - A park with industrial heritage, Deep Hayes is now an area of woodland and meadows with a series of pools and pathways.
- Chain of woodland south-east of Cheadle stretching to Hollinsclough along the border with East Staffordshire.

5.93 The GI strategy provides opportunities to:

- Manage and retain the woodland edge to development sites.
- Identify opportunities to support sustainable woodland management across the Churnet Valley, for example by promoting the local economy through support for rural businesses associated with woodland habitat management.
- Improve, manage and create a rich mosaic of woodland and other habitats of conservation importance.
- Support woodland planting to buffer and link existing woodlands and other semi-natural open habitats within priority woodland habitat networks to promote biodiversity.
- Improve, manage and create woodland that supports vulnerable bird species, in particular ancient and semi-natural woodland that are important for their bird assemblages including redstart, pied flycatcher and wood warbler; also wet woodland and scrub which are important for willow tit.
- Restore ancient and semi-natural woodland sites and wet woodland.
- Support landscape scale woodland and grassland mosaic restoration and creation where appropriate, particularly in the Churnet Valley.
- Support woodland planting along river corridors and flood plains where appropriate to assist in flood risk management and to support movement of species such as willow tit.
- Support woodland planting designed to increase infiltration and interception of rain into the ground, reduce erosion, or slow the flow in the catchment.
- Support woodland planting designed to reduce and intercept diffuse pollution from agriculture to improve water quality.

Areas of known irreplaceable natural habitat

5.94 A map illustrating the known distribution of irreplaceable natural habitat across the District is included as Map A.14 in Appendix A. It should be noted that not all veteran trees have been recorded, and that most ancient woodlands under 2 hectares in size are not included on the national register. Hence it is likely that more ancient woodland may be present than is currently shown.

5.95 Trees and woodland classed as "ancient" or "veteran" are irreplaceable. Ancient woodland takes hundreds of years to establish and is considered important for its wildlife, soils, recreation, cultural value, history and contribution to landscapes. "Ancient woodland" is considered to be any wooded area that has been wooded continuously since at least 1600 AD. It includes:

- "ancient semi-natural woodland" - mainly made up of trees and shrubs native to the site, usually arising from natural regeneration;
- "plantations on ancient woodland sites" - areas of ancient woodland where the former native tree cover has been felled and replaced by planted trees, usually of species not native to the site.

5.96 "Veteran trees" are trees which, because of their age, size or condition are of cultural, historical, landscape and nature conservation value. They can be found as individuals or groups within ancient wood pastures, historic parkland, hedgerows, orchards, parks or other areas.

5.97 The NPPF[17] states that planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss.

5.98 The GI strategy provides opportunities to:

- Protect, connect and enhance irreplaceable natural habitats, particularly ancient woodlands and veteran trees.

5.99 The new opportunities identified by type of GI asset and described above can be grouped under the following six headings set out in the summary box below. This has helped to define the vision set out in section 3.

The GI Strategy provides opportunities to:

1. Provide a wide variety of parks, wild areas and open spaces to meet the needs of both nature and people.

17 https://www.gov.uk/guidance/national-planning-policy-framework/11-conserving-and-enhancing-the-natural-environment

2. Create, improve and protect green travel links that enable people to access a range of jobs, services, facilities and recreation opportunities using sustainable transport options.

3. Create, improve and protect biodiversity and the ecological networks that provide the opportunity for species to move within the landscape.

4. Improve flood and water management.

5. Protect and enhance the distinctive character of the District's towns and villages together with their landscape settings.

6. Promote the sustainable economic growth of the District.

7. Enhance the profitability of farm businesses and provide extra sources of income for rural communities.

8. Understand and protect ecosystem services provided by GI.

Churnet Valley

GI priorities and proposals

6 GI priorities and proposals

Key elements of the strategy

6.1 The outputs of the GIS mapping exercise and an analysis of other plans and strategies, together with an assessment of proposals in the emerging Local Plan, have formed the basis for the development of a strategic green infrastructure network for the Staffordshire Moorlands.

6.2 Although this GI network is based on an analysis and understanding of existing assets and potential opportunities, at this stage it is principally intended as a strategic framework within which proposals for the protection, enhancement and delivery of green infrastructure should be brought forward. Further work to develop specific proposals and to implement the strategy is detailed in section 8.

6.3 It should be noted that the location of a development site within or close to an identified corridor forming part of the strategic network is not in itself a barrier to development. However the priorities and proposals set out in this chapter for each of the strategic corridors / areas will provide a steer as to the habitat protection, restoration or green infrastructure enhancement and creation actions that should be considered and contributed to through land management or financial contribution - as part of any development proposal.

6.4 The corridors described and shown in the maps included within this report are considered to have permeable edges. The boundaries drawn for the strategic corridors should be considered to act as a guideline only. Main arteries only can be shown on the maps and these relate to the availability of existing mapping and current information. There may be other areas for habitat creation, restoration, buffering or linking outside the illustrated boundaries. Where a site may be in close proximity to part of the shown strategic GI network, the priorities and objectives of that corridor should still be considered applicable.

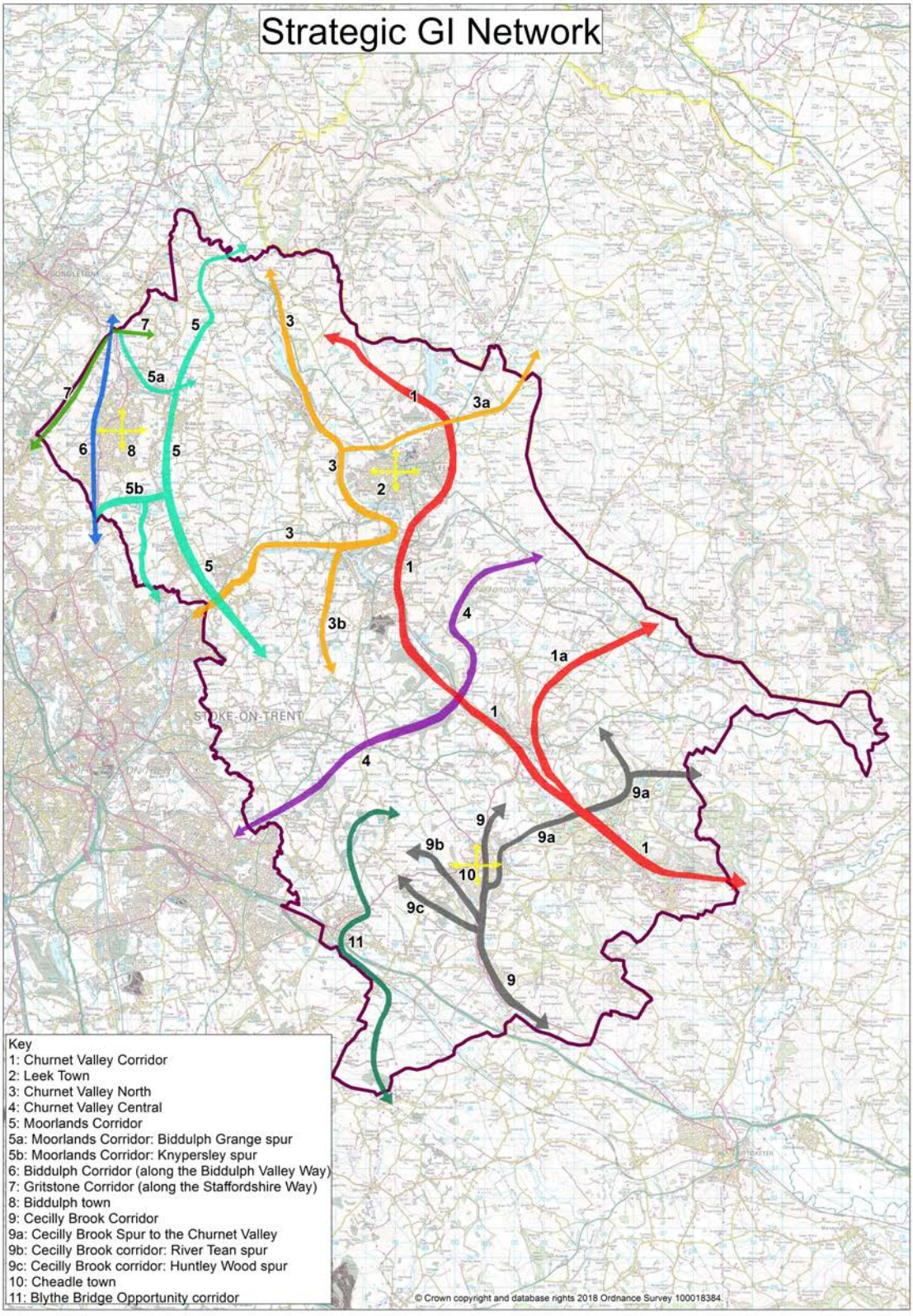
6.5 This section identifies and describes the component elements of the strategic green infrastructure network, and sets out key priorities and actions for each part of the identified network.

6.6 Although action should be promoted in all parts of the network, some priorities will be necessary to achieve the vision for the sustainable development of the district as set out in the emerging Staffordshire Moorlands Local Plan. Three principles are proposed to support the identification of priority actions for the strategic Green Infrastructure Network for the Staffordshire Moorlands:

- Protecting and, where appropriate, enhancing the critical elements of the existing green infrastructure resource within the district's towns and villages, including the historic environment.

- Developing and extending where necessary the existing elements of green infrastructure to create a multi-functional network that links existing and proposed green spaces.

- Preparing additional biodiversity opportunity maps where appropriate - to map existing biodiversity, high quality habitat, the opportunity for species to move within the landscape and to identify specific opportunities to develop biodiversity across the Plan Area, particularly in and around new developments and in line with the existing district-wide Biodiversity Opportunity map.



Map 6.1 Strategic GI Network

Description of the Green Infrastructure Network at a strategic level

6.7 The GI network comprises eleven strategic corridors / areas. These are illustrated in the Strategic GI Network map on the previous page and are described below. The proposed priorities and actions for each of these corridors / areas are also set out.

6.8 Whilst illustrated as a linear network for simplicity of representation, it is acknowledged that strategic green infrastructure is in fact a complex network of habitat patches and linear sites.

1: Churnet Valley Corridor

Fairboroughs - Leek - Cheddleton - Consall - Kingsley Holt - Oakamoor - Alton

6.9 At the heart of the Staffordshire Moorlands Green Infrastructure Network, the Churnet Valley Corridor runs the length of the District and is subject to its own Masterplan SPD and habitat network modelling. From wooded valleys at its heart, to the River Churnet which flows through the valley from higher land north of Tittesworth Reservoir, through Leek, Cheddleton, Froghall, Oakamoor and Alton, joining the River Dove beyond Rocester; it is an area of high landscape value, with many sites of nature conservation and geological interest. The corridor includes a vast array of heritage features with ancient monuments, former plateways, a castle and a registered park and garden. The Churnet Valley is home to a large number of well-established tourist, leisure and visitor attractions, including the Churnet Valley Railway, the Caldon Canal and the Alton Towers Resort. The whole of the corridor forms a strategic wildlife corridor with scope for linking habitats, especially woodland and species rich grassland mosaics, as well as enhancing opportunities for walking, cycling and horse riding.

Proposed priorities and actions are to:

Conserve and enhance the Churnet Valley area for its historic interest, recreation, education and nature conservation value; in particular to:

- Help deliver the aims and objectives of the Churnet Valley Masterplan.
- Assist with the delivery of the Churnet Valley Living Landscape Partnership (CVLLP) ambition to support and develop a linear route along the River Churnet from Rudyard to Denstone as a multi-user trail that is well connected to other green infrastructure.
- Work with the CVLLP and individual conservation organisations, to protect, enhance and support biodiversity gain in the Churnet Valley, in line with the Churnet Valley Masterplan and Biodiversity Opportunity Map.
- Identify opportunities to direct additional investment to build on relevant project work carried out under existing Churnet Valley Living Landscape Partnership initiatives.
- Protect and improve existing sites of ecological value - including by working with partners to secure and maintain appropriate conservation management.
- Reduce habitat fragmentation and increase connectivity by linking, buffering and expanding existing sites of importance supporting a mosaic of woodland, grassland and wetland habitats.

- Support landscape scale creation and restoration of a woodland and grassland habitat mosaic where appropriate.
- Enhance and expand areas of unimproved grassland particularly in situations where this will reduce soil erosion and benefit habitat connectivity, landscape character, biodiversity, flood risk management and water quality.
- Enhance existing woodlands and expand woodland cover in locations where well managed woodland can benefit landscape character, biodiversity, water quality and flood risk.
- Where appropriate, investigate opportunities to restore ancient and semi-natural woodland sites and wet woodland and scrub.
- Investigate opportunities for utilising natural ways to reduce flood risk, provide temporary storage and improve water quality, while creating wetland habitats for wildlife.
- Support the development and expansion of high quality, well-connected routes to aid sustainable tourism in the Churnet Valley for walkers, cyclists and horse riders.
- Enhance and develop pathways along rivers and canals, and promote additional links to provide access to them from as wide an area as possible.
- Link established linear routes, such as disused railway lines, roads or canal and river banks to nearby habitats and open spaces.
- Create and improve links within and between towns and villages to local areas of recreation and open space.
- Create and improve links to the countryside from towns and villages, including by improving existing rights of way which occupy historic routeways such as the Churnet Valley plateways.
- Conserve and enhance the setting of heritage assets by supporting access to and enjoyment of historic landscapes and heritage assets for recreation, education, and lifelong learning and strengthen or restore historic links between heritage assets using green infrastructure.

6.10 The Churnet Valley corridor is considered to have a spur:

1a: Churnet Valley: Winkhill Spur

Oakamoor - Kingsley & Froghall Station - Blackbank Wood - Winkhill

6.11 The sensitivity of the landscape, biodiversity and heritage issues are major factors of this spur and the key focus should be on conserving and enhancing the landscape and biodiversity of the area.

Proposed priorities and actions are to:

To work with the Churnet Valley Living Landscape Partnership (CVLLP) to deliver the aims and objectives of the Partnership and of the Churnet Valley Masterplan; in particular to:

- Work with the Churnet Valley Living Landscape Partnership (CVLLP) to protect, enhance and support biodiversity gain in the Churnet Valley, in line with the Churnet Valley Masterplan and Biodiversity Opportunity Map.
- Protect and improve existing sites of ecological value - including by working with partners to secure and maintain appropriate conservation management.
- Reduce habitat fragmentation and increase connectivity by linking, buffering and expanding existing sites of importance.
- Support the delivery of a network of well-connected pathways providing routes for walkers, cyclists and horse riders.
- Focus recreational activities in areas away from the European sites, attracting and holding people to areas outside the SPA in line with the findings of the HRA of the Local Plan and to help protect the population density of upland waders and other populations of key SPA species such as golden plover.
- Conserve and enhance the setting of heritage assets by supporting access to and enjoyment of historic landscapes and heritage assets for recreation, education, and lifelong learning and strengthen or restore historic links between heritage assets using green infrastructure.

2: Leek town

6.12 Leek is the largest settlement in the District with a well established range of facilities and services and plays a key role as market town for a wide catchment area, particularly to the north of the District. It is a significant gateway into the Churnet Valley and the Peak District National Park from the north and west. The strategy can be used to help promote Leek's special character and heritage and strengthen its role as a visitor destination. There is scope for developing a series of green radial routes linking the town with surrounding countryside.

Proposed priorities and actions are to:

Protect and extend green infrastructure within Leek to improve access to green spaces and woodland within the town and links out to the surrounding countryside, in particular to:

- Protect existing green and open spaces used and valued by communities, including designated Local Green Spaces, parks, play and recreation areas and sports pitches.
- Investigate opportunities to protect and enhance the "green wedges" into the town of Ball Haye Green in the north and Ladydale in the south.
- Provide accessible green space in line with recommendations made in the Council's Open Space Study Standards Paper (October 2017).
- Maintain and upgrade the existing network of off-road paths, including the Staffordshire Moorlands promoted walks network (identified and described on the Council's web-site).

- Investigate opportunities to create walking and cycling routes between Leek town centre, Cornhill, and key green space in the town including Ladderedge Country Park, Brough Park and Birchall Playing Fields.
- Consider opportunities for the disused railway footpath to Rudyard.
- Extend the network of off-road paths around Leek for walkers, cyclists and horse riders with links to Rudyard and Tittesworth to the north and strengthened links to the country parks – Ladderedge and Deep Hayes to the south as well as to visitor attractions in the Churnet Valley.
- Investigate opportunities for providing new and improving existing footpaths providing access into the countryside within new developments on the urban fringe.
- Investigate opportunities for linking strategic corridors 1, 3a, and 3 creating a "Leek loop" wildlife corridor and walking route.
- Investigate opportunities to extend the network of footpaths and cycle routes to improve accessibility to areas of employment including Cornhill.
- Investigate opportunities to improve and create pedestrian and cycle links between the town centre and education sites including Westwood College, Leek High School and Churnet View Middle School.
- Investigate opportunities to link the schools and other areas of the town to nearby wild spaces.
- Investigate opportunities to protect, improve, buffer and connect existing sites of ecological value, including Ladydale SBI, Ballington Wood SBI, Ladderedge Country Park LNR and Brough Park Fields LNR - including by working with partners to secure and maintain appropriate conservation management.
- Investigate opportunities to protect, improve, buffer and connect the complex of Local Wildlife Sites in the Abbey Green area.
- Investigate opportunities for habitat creation or restoration as part of new developments, including looking at establishing or improving wildlife corridors extending into the countryside.
- Investigate opportunities for the conservation or expansion of the populations of key species including great crested newt, otter, brown trout, polecat, grass snake, hedgehog and priority bird species such as barn owl and bullfinch.
- Consider opportunities to contribute to existing Staffordshire Wildlife Trust or other appropriate projects taking place in the area, including through the Churnet Valley Living Landscape initiative.
- Wherever possible ensure new developments contribute to managing wider flood risk, for example through use of sustainable drainage schemes and use of low-lying ground in waterside areas for recreation, amenity and supporting wildlife.

- Help make space for water by undertaking river corridor restoration and enhancement as part of a development where a site contains a main river or ordinary watercourse, including de-culverting and restoration of any watercourses that have been degraded.
- Investigate opportunities for utilising natural ways to reduce flood risk, provide temporary storage and improve water quality, while creating wetland habitats for wildlife.
- Investigate opportunities to restore degraded landscapes and enhance the urban fringe / edge of settlement.
- Conserve and enhance the setting of heritage assets by supporting access to and enjoyment of historic landscapes and heritage assets for recreation, education, and lifelong learning and strengthen or restore historic links between heritage assets using green infrastructure.

3: Churnet Valley North

Rushton Spencer - Rudyard - Longsdon - Horse Bridge - Endon - Stockton Brook

6.13 Part of the Churnet Valley area with its Masterplan SPD and habitat network modelling, this distinct blue corridor includes a key recreational hub in the north of the Churnet Valley dominated by Rudyard Lake which lends itself to a range of leisure and recreational activities for countryside users and families. The Lake serves a wide area to the north of the County and into Cheshire with potential for stronger links to Leek. The corridor follows the river Churnet to Ladderedge and Deep Hayes Country Parks, picking up Endon Brook and the Caldon Canal to Endon, Stockton Brook and over the border into Stoke-on-Trent, linking with the River Trent / Caldon Canal corridor within the City. There is scope for woodland planting to link habitats and manage water flow along the floodplains.

Proposed priorities and actions are to:

Work with the Churnet Valley Living Landscape Partnership (CVLLP) to deliver the aims and objectives of the Partnership and of the Churnet Valley Masterplan; in particular to:

- Assist with the delivery of the Churnet Valley Living Landscape Partnership (CVLLP) ambition to support and develop a linear route along the River Churnet from Rudyard to Denstone as a multi-user trail that is well connected to other green infrastructure.
- Work with the Churnet Valley Living Landscape Partnership (CVLLP) to protect, enhance and support biodiversity gain in the Churnet Valley, in line with the Churnet Valley Masterplan and Biodiversity Opportunity Map.
- Protect and improve existing sites of ecological value - including by working with partners to secure and maintain appropriate conservation management.
- Reduce habitat fragmentation and increase connectivity by linking, buffering and expanding existing sites of importance supporting a mosaic of woodland, grassland and wetland habitats.
- Connect and expand areas of existing good quality grassland, for example the species-rich grassland around Leek and in other locations where this will benefit biodiversity, water quality and flood risk management.

- Support woodland planting to buffer and link existing woodlands and other semi natural open habitats within priority woodland habitat networks to promote biodiversity.
- Investigate potential to improve, manage and create woodland that supports vulnerable bird species, in particular ancient and semi-natural woodland and wet woodland and scrub that are of high landscape importance and are also very important for their bird assemblages.
- Investigate potential for new floodplain woodland to manage flood water and provide wildlife habitat including for willow tit.
- Investigate opportunities for utilising natural ways to reduce flood risk, provide temporary storage and improve water quality, while creating wetland habitats for wildlife.
- Support the delivery of a network of well-connected pathways providing routes for walkers, cyclists and horse riders.
- Cooperate with Stoke-on-Trent City Council in relation to Caldon Canal towpath improvements to help create an extended cycling and walking network in line with the City of Stoke-on-Trent Green Space Strategy, March 2014

6.14 The Churnet Valley North corridor is considered to have two spurs, 3a and 3b:

3a: Churnet Valley North: Thorncliffe Spur

Longsdon Grange - Ball Hayes Green - Upper Tittesworth - Thorncliffe; along the river through Brough Park Field LNR to Tittesworth Reservoir and beyond.

Proposed priorities and actions are to:

Work with the Churnet Valley Living Landscape Partnership (CVLLP) to deliver the aims and objectives of the Partnership and of the Churnet Valley Masterplan; in particular to:

- Work with the Churnet Valley Living Landscape Partnership (CVLLP) to protect, enhance and support biodiversity gain in the Churnet Valley, in line with the Churnet Valley Masterplan and Biodiversity Opportunity Map.
- Protect and improve existing sites of ecological value - including by working with partners to secure and maintain appropriate conservation management.
- Reduce habitat fragmentation and increase connectivity by linking, buffering and expanding existing sites of importance supporting a mosaic of woodland, grassland and wetland habitats.
- Investigate potential for new floodplain woodland to manage flood water and provide wildlife habitat including for willow tit.
- Investigate opportunities for utilising natural ways to reduce flood risk, provide temporary storage and improve water quality, while creating wetland habitats for wildlife.
- Support woodland planting to buffer and link existing woodlands and other semi natural open habitats within priority woodland habitat networks to promote biodiversity.

- Improve, manage and create woodland that supports vulnerable bird species, in particular ancient and semi-natural woodland that are of high landscape importance and are also very important for their bird assemblages including pied flycatcher, redstart and wood warbler; and wet woodland and scrub habitats for willow tit.
- Where appropriate, investigate opportunities to restore ancient and semi-natural woodland sites and wet woodland.
- Focus recreational activities in areas away from the European sites, attracting and holding people to areas outside the SPA in line with the findings of the HRA of the Local Plan and to help protect the population density of upland waders and other populations of key SPA species such as golden plover.
- Support the delivery of a network of well-connected pathways providing routes for walkers, cyclists and horse riders.

3b: Churnet Valley North: Rownall Spur

Horse Bridge - Rownall; linking woodland through Deep Hayes Country Park to Rownall.

Proposed priorities and actions are to:

Work with the Churnet Valley Living Landscape Partnership (CVLLP) to deliver the aims and objectives of the Partnership and of the Churnet Valley Masterplan; in particular to:

- Work with the Churnet Valley Living Landscape Partnership (CVLLP) to protect, enhance and support biodiversity gain in the Churnet Valley, in line with the Churnet Valley Masterplan and Biodiversity Opportunity Map.
- Protect and improve existing sites of ecological value - including by working with partners to secure and maintain appropriate conservation management.
- Reduce habitat fragmentation and increase connectivity by linking, buffering and expanding existing sites of importance supporting a mosaic of woodland, grassland and wetland habitats.
- Support woodland planting to buffer and link existing woodlands and other semi natural open habitats within priority woodland habitat networks to promote biodiversity.
- Improve, manage and create woodland that supports vulnerable bird species, in particular ancient and semi-natural woodland that are of high landscape importance and are also very important for their bird assemblages including pied flycatcher, redstart and wood warbler; and wet woodland and scrub habitats for willow tit.
- Investigate potential for new floodplain woodland to manage flood water and provide wildlife habitat including the willow tit.
- Investigate opportunities for utilising natural ways to reduce flood risk, provide temporary storage and improve water quality, while creating wetland habitats for wildlife.
- Support the delivery of a network of well-connected pathways providing routes for walkers, cyclists and horse riders.

4: Churnet Valley Central

Park Hall Country Park - Consall - Apesford

6.15 Part of the Churnet Valley area with its Masterplan SPD and specific habitat network modelling, this woodland corridor is an area of high landscape value and a strategic wildlife corridor potentially linking Park Hall Country Park, Caverswall Common and Creswell's Piece to Consall Wood and Nature Park through the Combes Valley to further woodland at Apesford. There is scope to increase connectivity of habitats by linking, buffering and expanding existing sites of importance. Park Hall Country Park is one of the Stoke-on-Trent's most important natural sites. Straddling the City and District boundaries at the western edge of this corridor, the site was declared as Stoke-on-Trent's only National Nature Reserve in 2002; the sandstone canyons are a Site of Special Scientific Interest for their geology.

Proposed priorities and actions are to:

Work with the Churnet Valley Living Landscape Partnership (CVLLP) to deliver the aims and objectives of the Partnership and of the Churnet Valley Masterplan; in particular to:

- Work with the Churnet Valley Living Landscape Partnership (CVLLP) to protect, enhance and support biodiversity gain in the Churnet Valley, in line with the Churnet Valley Masterplan and Biodiversity Opportunity Map.
- Protect and improve existing sites of ecological value - including by working with partners to secure and maintain appropriate conservation management.
- Enhance links to Park Hall Country Park - one of the city of Stoke-on-Trent's most important natural sites.
- Reduce habitat fragmentation and increase connectivity by linking, buffering and expanding existing sites of importance supporting a mosaic of woodland, grassland and wetland habitats.
- Support woodland planting to buffer and link existing woodlands and other semi natural open habitats within priority woodland habitat networks to promote biodiversity.
- Improve, manage and create woodland that supports vulnerable bird species, in particular ancient and semi-natural woodland that are of high landscape importance and are also very important for their bird assemblages including pied flycatcher, redstart and wood warbler; and wet woodland and scrub habitats for willow tit.
- Support the delivery of a network of well-connected pathways providing routes for walkers, cyclists and horse riders.

5: Biddulph Moor Corridor

Raven's Clough - Biddulph Moor - Cowall - Brown Edge - Stanley Moor - Bagnall

6.16 A potential wildlife corridor linking a series of key habitats (in particular heathland and woodland) and villages to the east of Biddulph. From Ravensclough Wood to the north, the corridor runs south via Lask Edge to Heath Hay and Biddulph Moor, continuing through Knypersley Park and Marshes Hill Common Local Nature Reserve to Brown Edge. The

corridor continues through Tinster Wood, Stockton Brook and Stanley Moor finally linking to the village of Bagnall. There is scope to extend and improve green infrastructure within the corridor to help support the delivery of a network of well-connected pathways providing routes for walkers, cyclists and horse riders and a functional mosaic of woodland and heathland habitats.

Proposed priorities and actions are to:

Extend and improve green infrastructure within the corridor to help support the delivery of a network of well-connected pathways providing routes for walkers, cyclists and horse riders and a functional mosaic of woodland, grassland, heathland and riparian habitats that offer a safe haven for wildlife, support biodiversity, slow the flow of flood water, improve water quality and help to absorb and store carbon. In particular to:

- Investigate opportunities for providing new and improving existing footpaths providing access into the countryside and to provide or improve links to and from surrounding settlements creating a sustainable transport network.
- Investigate opportunities to enable safe walking and cycling routes to key destinations in the villages, including primary schools.
- Investigate opportunities for new developments to contribute to managing wider flood risk, for example through use of sustainable drainage schemes and use of low-lying ground in waterside areas for recreation, amenity and supporting wildlife.
- Help make space for water by undertaking river corridor restoration and enhancement as part of a development where a site contains a main river or ordinary watercourse.
- Investigate opportunities for utilising natural ways to reduce flood risk, provide temporary storage and improve water quality, while creating wetland habitats for wildlife.
- Investigate opportunities for habitat creation within new developments including looking at establishing or improving wildlife corridors extending into the countryside.
- Protect and improve existing sites of ecological value - including by working with partners to secure and maintain appropriate conservation management.
- Reduce habitat fragmentation and increase connectivity by linking, buffering and expanding existing sites of importance, in particular the chain of heathland habitats stretching from Brown Edge to Wetley Moor.

6.17 The Biddulph Moor corridor is considered to have two spurs, 5a and 5b:

5a: Biddulph Moor Corridor: Grange Spur

Initially following Biddulph Brook and linking the Local Nature Reserve at Whitemoor via Biddulph Old Hall to Biddulph Grange Country Park and continuing to "The Sprink" at Heath Hay.

Proposed priorities and actions are to:

Extend and improve green infrastructure within the corridor to help support the delivery of a network of well-connected pathways providing routes for walkers, cyclists and horse riders and a functional mosaic of woodland, grassland and riparian habitats that offer a safe haven for wildlife, support biodiversity, slow the flow of flood water, improve water quality and help to absorb and store carbon. In particular to:

- Investigate opportunities for providing new and improving existing footpaths providing access into the countryside and to provide or improve links to and from surrounding settlements creating a sustainable transport network.
- Investigate opportunities to enable safe walking and cycling routes to key destinations in the villages, including primary schools.
- Investigate opportunities for new developments to contribute to managing wider flood risk, for example through use of sustainable drainage schemes and use of low-lying ground in waterside areas for recreation, amenity and supporting wildlife.
- Help make space for water by undertaking river corridor restoration and enhancement as part of a development where a site contains a main river or ordinary watercourse.
- Investigate opportunities for utilising natural ways to reduce flood risk, provide temporary storage and improve water quality, while creating wetland habitats for wildlife.
- Investigate opportunities for habitat creation within new developments including looking at establishing or improving wildlife corridors extending into the countryside.
- Improve the management of woodland to support vulnerable bird species such as pied flycatcher and wood warbler.
- Protect and improve existing sites of ecological value - including by working with partners to secure and maintain appropriate conservation management.
- Reduce habitat fragmentation and increase connectivity by linking, buffering and expanding existing sites of importance.

5b: Biddulph Moor Corridor: Knypersley Spur

This spur links the main corridor to the Biddulph Valley Way at Brindley Ford via Knypersley Reservoir and the Greenway Bank Country Park. The corridor includes the Head of Trent corridor which runs from Knypersley Reservoir into the City of Stoke-on-Trent.

Proposed priorities and actions are to:

Extend and improve green infrastructure within the corridor to help support the delivery of a network of well-connected pathways providing routes for walkers, cyclists and horse riders and a functional mosaic of woodland, grassland and riparian habitats that offer a safe haven for wildlife, support biodiversity, slow the flow of flood water, improve water quality and help to absorb and store carbon. In particular to:

- Investigate opportunities for providing new and improving existing footpaths providing access into the countryside and to provide or improve links to and from surrounding settlements creating a sustainable transport network.
- Investigate opportunities to enable safe walking and cycling routes to key destinations in the villages, including primary schools.
- Investigate opportunities for new developments to contribute to managing wider flood risk, for example through use of sustainable drainage schemes and use of low-lying ground in waterside areas for recreation, amenity and supporting wildlife.
- Help make space for water by undertaking river corridor restoration and enhancement as part of a development where a site contains a main river or ordinary watercourse.
- Investigate opportunities for habitat creation within new developments including looking at establishing or improving wildlife corridors extending into the countryside.
- Investigate opportunities for utilising natural ways to reduce flood risk, provide temporary storage and improve water quality, while creating wetland habitats for wildlife.
- Protect and improve existing sites of ecological value - including by working with partners to secure and maintain appropriate conservation management.
- Reduce habitat fragmentation and increase connectivity by linking, buffering and expanding existing sites of importance.

6: Biddulph corridor (along the Biddulph Valley Way)

Whitemoor - Brindley Ford

6.18 This is a major green network component and route of the former Biddulph Valley Railway Line. It is suitable for walkers, cyclists and horseriders. Originally a branch of the North Staffordshire Railway, the path has a mixture of embankments, cuttings, small copses, hedgerows and ditches. The Whitemoor Local Nature Reserve at the northern end of Biddulph Valley Way is a Staffordshire Site of Biological Importance due to its woodland wildlife. At the southern end, the corridor could link beyond the district boundary to the heritage country park at the site of the former Chatterley Whitfield Colliery. There is scope for increasing connections from the corridor to Biddulph town centre.

Proposed priorities and actions are to:

Protect and improve the Biddulph Valley Way as an established greenway through the settlement, to increase its use and enjoyment by people for health and recreation and to enhance its function as a wildlife corridor. In particular to:

- Investigate scope for improving and maintaining the Biddulph Valley Way and for increasing the connections to the Way from the town centre.
- Investigate opportunities for improved linkages between Biddulph and Congleton and Biddulph and Stoke and Newcastle, using the Biddulph Valley Way.

- Improve links to Biddulph Grange Country Park and Greenway Bank Country Park from the corridor and the town centre.
- Investigate scope for establishing network connections between strategic corridors 5a, 5, 5b, 6 and 7 creating a Biddulph circular for walking routes and as a wildlife corridor.
- Investigate opportunities to protect and improve existing sites of ecological value, including the Biddulph Valley Way LNR - including by working with partners to secure and maintain appropriate conservation management.
- Investigate opportunities to reduce habitat fragmentation and increase connectivity by linking, buffering and expanding existing sites of importance, helping to create and improve wildlife corridors extending into the surrounding countryside.
- Investigate opportunities to support woodland planting to buffer and link existing woodlands and other semi natural open habitats within priority woodland habitat networks to promote biodiversity.
- Investigate opportunities for utilising natural ways to reduce flood risk, provide temporary storage and improve water quality, while creating wetland habitats for wildlife.

7: Gritstone Corridor (along the Staffordshire Way)

Whitemoor - Mow Cop

6.19 The Staffordshire Way is a long distance footpath which has been established by Staffordshire County Council. It spans the length of the County for 92 miles from Mow Cop to Kinver Edge. The start of the Way is shared with the Gritstone Trail, following the gritstone ridge of Congleton Edge, part of the boundary between the Pennines and the Cheshire Plain. This corridor extends to link Congleton Edge via the north of the Biddulph Valley Way Local Nature Reserve at Whitemoor to Bands Wood.

Proposed priorities and actions are to:

Protect and improve the Staffordshire Way as an established greenway, to increase its use and enjoyment by people for health and recreation and to enhance its function as a wildlife corridor. In particular to:

- Investigate scope for improving and maintaining the Staffordshire Way and for increasing the connections to the Biddulph Valley Way and to Biddulph town centre.
- Investigate scope for establishing network connections between strategic corridors 5a, 5, 5b, 6 and 7 creating a Biddulph circular for wildlife corridors and walking routes.
- Investigate opportunities to reduce habitat fragmentation and increase connectivity by linking, buffering and expanding existing sites of importance, helping to create and improve wildlife corridors extending into the surrounding countryside.
- Investigate opportunities to support woodland planting to buffer and link existing woodlands and other semi natural open habitats to promote biodiversity.

8: Biddulph town

6.20 Biddulph is the second largest settlement in the District. It has suffered from economic decline and includes the Biddulph East Ward, an area of high deprivation. Implementation of the Biddulph Town Centre Area Action Plan has lead to a number of recent improvements to the town centre. The proposed strategy for Biddulph set out in the emerging Local Plan seeks to further enhance its role as a significant service centre and a market town. Biddulph Town Council is preparing a Neighbourhood Plan for the parish. The neighbourhood planning process allows for the provision of locally specific detail around the provision of GI.

6.21 The Biddulph Town strategic area presents opportunities for a network of vital green / blue infrastructure connections, utilising water courses and retained woodland. The corridor running along Biddulph Brook from Hawthorn Grove to the Leisure Centre is especially important, as are key sites along Biddulph Brook which connect to the Biddulph Valley Way.

6.22 There is scope to use the GI strategy to help improve the image and identity of Biddulph and strengthen its role as a visitor destination, including by improving and creating green spaces within the town and strengthening and promoting links between the town and countryside, in particular with the Biddulph Valley Way, Biddulph Grange Garden and the Country Parks.

Proposed priorities and actions are to:

Protect and extend green infrastructure within Biddulph to improve access to green spaces within the town and links out to the surrounding countryside, in particular to:

- Protect existing green and open spaces used and valued by communities, including designated Local Green Spaces, parks, play and recreation areas and sports pitches.
- Provide accessible green space in line with recommendations made in the Council's Open Space Study Standards Paper (October 2017).
- Protect and enhance the Biddulph Valley Way.
- Extend the network of connections to the Biddulph Valley Way and Staffordshire Way.
- Seek opportunities to create walking and cycling routes between Biddulph town centre and green space within the town including Biddulph Grange and Greenway Bank Country Park.
- Extend the network of off-road paths around Biddulph for walkers, cyclists and horse riders with links to the surrounding countryside and visitor attractions in the Churnet Valley.
- Investigate opportunities for improved linkages between Biddulph and Congleton and Biddulph and Stoke and Newcastle.
- Improve links to Biddulph Grange Country Park and Greenway Bank Country Park from the corridor and the town centre.
- Investigate scope for establishing network connections between strategic corridors 5a, 5, 5b, 6 and 7 creating a Biddulph circular for wildlife corridors and walking routes.

- Investigate opportunities for providing new and improving existing footpaths providing access into the countryside within new developments on the urban fringe.
- Investigate potential for improving connectivity to centres of employment such as Victoria Business Park, Land off Tunstall Road and Wharf Road Strategic Development Area).
- Protect, improve, buffer and link existing sites of ecological value - including by working with partners to secure and maintain appropriate conservation management.
- Investigate opportunities for the conservation or expansion of the populations of key species including bats and hedgehog and priority bird species such as barn owl, kingfisher, dipper, lapwing, wood warbler and pied flycatcher.
- Consider opportunities to contribute to existing Staffordshire Wildlife Trust or other appropriate projects taking place in the area.
- Wherever possible ensure new developments contribute to managing wider flood risk, for example through use of sustainable drainage schemes and use of low-lying ground in waterside areas for recreation, amenity and supporting wildlife.
- Seek opportunities for new development to achieve reductions to wider flood risk issues where possible, e.g. larger developments may be able to make provisions for flow balancing within new attenuation SuDS features with biodiversity built into their design as part of a land management scheme.
- Help make space for water by undertaking river corridor restoration and enhancement as part of a development where a site contains a main river or ordinary watercourse, including de-culverting and restoration of any watercourses that have been degraded.
- Investigate opportunities for utilising natural ways to reduce flood risk, provide temporary storage and improve water quality, while creating wetland habitats for wildlife.
- Support woodland planting along river corridors where appropriate to assist in flood management and to support movement of species such as willow tit.
- Investigate opportunities for habitat creation and restoration within new developments including looking at establishing or improving wildlife corridors extending into the countryside.
- Support woodland planting designed to increase infiltration of heavy rain into the ground, reduce erosion, or slow the flow of floodwaters on floodplains.
- Creating opportunities for the restoration of degraded landscapes and the enhancement of the urban fringe /settlement edge.
- Conserve and enhance the setting of heritage assets by supporting access to and enjoyment of historic landscapes and heritage assets for recreation, education, and lifelong learning and strengthen or restore historic links between heritage assets using green infrastructure.

9: Cecilly Brook Corridor

Checkley - Upper Tean - Mobberley - Cecilly Brook - Cheadle Park - Broad Haye

6.23 A key blue corridor principally following the River Tean and Cecilly Brook to the east of Cheadle, this is a strategic wildlife corridor running from Checkley in the south of the district via Upper Tean and Mobberley Brook to follow the route of Cecilly Brook, finally running north via Cheadle Park towards Broad Haye. The corridor is key to help strengthen the population of water voles in Cecilly Brook.

Proposed priorities and actions are to:

Protect, conserve and enhance the natural environment of Cecilly Brook for sense of place, nature experience, health and recreation, biodiversity and flood risk management. In particular to:

- Protect, conserve and enhance the natural environment of Cecilly Brook and Hales Hall Pool local nature reserves in Cheadle, including to help strengthen the population of water voles.
- Investigate opportunities to protect and improve existing sites of ecological value, including the Cecilly Brook and Hales Hall Pool local nature reserves - including by working with partners to secure and maintain appropriate conservation management.
- Promote the establishment of a wider vegetation corridor along the watercourse.
- Investigate opportunities to reduce habitat fragmentation and increase connectivity by linking, buffering and expanding existing sites of importance, helping to create and improve wildlife corridors extending into the surrounding countryside.
- Investigate opportunities to support woodland planting along the river corridor where appropriate to assist in flood management and to support movement of species such as willow tit.
- Investigate opportunities for utilising natural ways to reduce flood risk, provide temporary storage and improve water quality, while creating wetland habitats for wildlife.
- Investigate opportunities to improve the network of footpath and cycle route connections between Cheadle town and the Nature Reserves at Cecilly Brook and Hales Hall Pool.

6.24 The Cecilly Brook corridor is considered to have three spurs: 9a, 9b and 9c.

9a: Cecilly Brook Spur to the Churnet Valley

Lightwood - Hales Hall Pool - Oakamoor - Moneystone - Upper Cotton / Ramshorn Common

6.25 From Lightwood, this spur takes the route of Cecilly Brook and Cecilly Brook Local Nature Reserve via Hales Hall Pool Local Nature Reserve linking to Hawksmoor Wood and the Churnet Valley, branching north to Moneystone and continuing east to Ramshorn Common.

Proposed priorities and actions are to:

Extend and improve green infrastructure within the corridor to help support the delivery of a network of well-connected pathways providing routes for walkers, cyclists and horse riders and a functional mosaic of woodland, grassland and other habitats that offer a safe haven for wildlife, support biodiversity and help to absorb and store carbon. In particular to:

- Investigate opportunities to improve pedestrian and cycle links to Hawksmoor Wood and into the Churnet Valley from the corridor and Cheadle town centre.
- Investigate opportunities to reduce habitat fragmentation and increase connectivity by linking, buffering and expanding existing sites of ecological value, helping to create and improve a wildlife corridor extending into the Churnet Valley.
- Investigate opportunities to support woodland planting to buffer and link existing woodlands and other semi natural open habitats to promote biodiversity.

9b: Cecilly Brook corridor: River Tean spur

Mobberley - Brookhouses - Newclosefield

6.26 The spur runs from Mobberley and continues along the River Tean via Brookhouses to Newclosefield. There is scope along the corridor for woodland planting to help manage water flow in the floodplain.

Proposed priorities and actions are to:

Extend and improve green infrastructure within the corridor to help support the delivery of a network of well-connected pathways providing routes for walkers, cyclists and horse riders and a functional mosaic of woodland, grassland, riparian and other habitats that offer a safe haven for wildlife, support biodiversity and help to absorb and store carbon. In particular to:

- Investigate opportunities to reduce habitat fragmentation and increase connectivity by linking, buffering and expanding existing sites of ecological value, helping to create and improve wildlife corridors extending into the surrounding countryside.
- Promote the establishment of a wider vegetation corridor along the watercourse.
- Investigate potential for new floodplain woodland to manage flood water and provide wildlife habitat including for willow tit.
- Investigate opportunities for utilising natural ways to reduce flood risk, provide temporary storage and improve water quality, while creating wetland habitats for wildlife.
- Investigate opportunities to improve pedestrian and cycle links along the River Tean and connecting Cheadle town with surrounding villages to the west.

9c: Cecilly Brook corridor: Huntley Wood spur

Mobberley - Boundary

6.27 Spur linking the corridor to priority woodland habitats through Huntley Wood SBI and beyond.

Proposed priorities and actions are to:

Extend and improve green infrastructure within the corridor to help support the delivery of a network of well-connected pathways providing routes for walkers, cyclists and horse riders and a functional mosaic of woodland, grassland, riparian and other habitats that offer a safe haven for wildlife, support biodiversity and help to absorb and store carbon. In particular to:

- Investigate opportunities to reduce habitat fragmentation and increase connectivity by linking, buffering and expanding existing sites of ecological value, helping to create and improve wildlife corridors extending into the surrounding countryside.
- Support woodland planting to buffer and link existing woodlands and other semi-natural open habitats to promote biodiversity.
- Investigate opportunities to improve pedestrian and cycle links to Huntley Wood from Cheadle town centre.

10: Cheadle town

6.28 Cheadle is the smallest of the District's market towns and has suffered from under-investment in its infrastructure and town centre and a lack of housing opportunities. The Spatial Strategy in the emerging Local Plan identifies the town as an area for significant growth in order to expand its role as a service centre and market town. There is scope to improve pedestrian and cycle links across the town and into the countryside.

Proposed priorities and actions are to:

Protect and extend green infrastructure within Cheadle to improve access to green spaces within the town and links out to the surrounding countryside, in particular to:

- Protect existing green and open spaces used and valued by communities, including designated Local Green Spaces, parks, play and recreation areas and sports pitches.
- Provide accessible green space in line with recommendations made in the Council's Open Space Study Standards Paper (October 2017).
- Seek opportunities to create and improve a network of walking and cycling routes linking Cheadle town centre and green space within and around the town, including Cheadle Park; Cecilly Brook and Hales Hall Pool Local Nature Reserves and Huntley Wood.
- Extend the network of off-road paths around Cheadle for walkers, cyclists and horse riders with links to the surrounding countryside and visitor attractions in the Churnet Valley.
- Investigate potential for improving connectivity to centres of employment such as JCB, Brookhouses and land off New Haden Road.
- Protect, improve, buffer and link existing sites of ecological value - including by working with partners to secure and maintain appropriate conservation management.

- Consider opportunities to contribute to existing Staffordshire Wildlife Trust or other appropriate projects taking place in the area.
- Investigate opportunities for habitat creation and restoration within new developments, including looking at establishing or improving wildlife corridors extending into the countryside.
- Investigate opportunities for the conservation or expansion of the populations of key species including water voles, bullhead, brown trout, bats, hedgehog and priority bird species.
- Wherever possible ensure new developments contribute to managing wider flood risk, for example through use of sustainable drainage schemes and use of low-lying ground in waterside areas for recreation, amenity and supporting wildlife.
- Investigate opportunities for utilising natural ways to reduce flood risk, provide temporary storage and improve water quality, while creating wetland habitats for wildlife.
- Help make space for water by undertaking river corridor restoration and enhancement as part of a development where a site contains a main river or ordinary watercourse, including de-culverting and restoration of any watercourses that have been degraded.
- Seek opportunities for the restoration of degraded landscapes and the enhancement of the urban fringe / settlement edge.
- Conserve and enhance the setting of heritage assets by supporting access to and enjoyment of historic landscapes and heritage assets for recreation, education, and lifelong learning and strengthen or restore historic links between heritage assets using green infrastructure.

11: Blythe Bridge Opportunity corridor

Bromley Wood - Cresswell - Forsbrook - Dilhorne Park Station - Godleybrook

6.29 The emerging Local Plan proposes development of a site at the junction of the A50 with the Blythe Bridge bypass for a mix of uses. The Local Plan considers the site may have a role to play in supporting the emerging Northern Gateway regeneration initiative. This initiative spans Cheshire and North Staffordshire and seeks to maximise the regeneration benefits of HS2 related investment in the vicinity of Crewe. The Blythe Bridge Opportunity corridor is potentially a corridor linking the Bromley Wood and Hose Wood SBIs in the south with Cresswell and the proposed development site through to Forsbrook, and running north along the Foxfield Steam Railway linking Little Eaves Farm SBI with important habitats at Dilhorne Park and Godley Brook. The potential corridor has scope to create and contribute to significant GI networks for people and wildlife as part of any development at Blythe Vale.

Proposed priorities and actions are to:

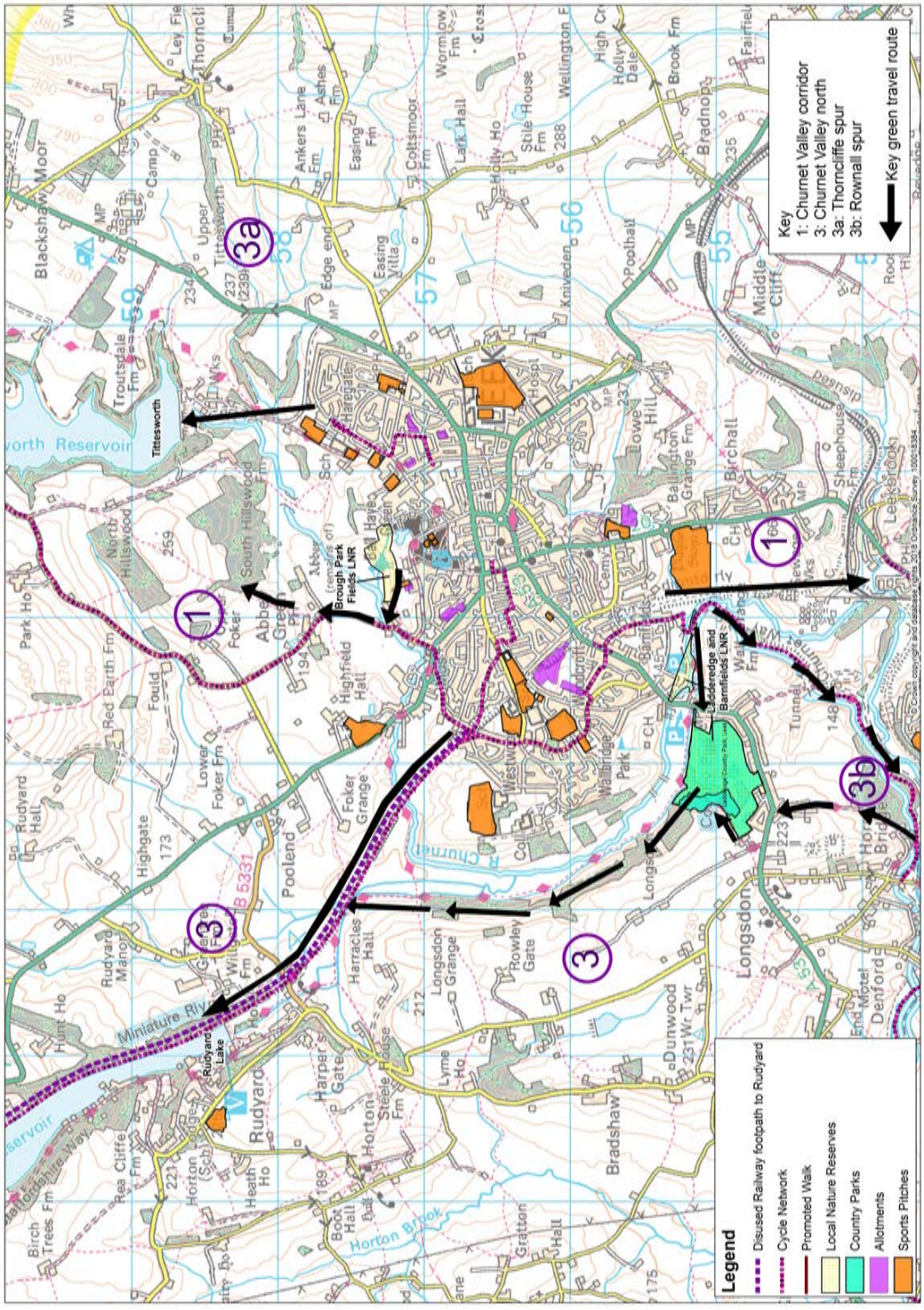
Protect and extend green infrastructure within the corridor to improve access to surrounding settlements and links out to the surrounding countryside, in particular to:

- Contribute to the strategic Green Infrastructure supporting the emerging Northern Gateway initiative.

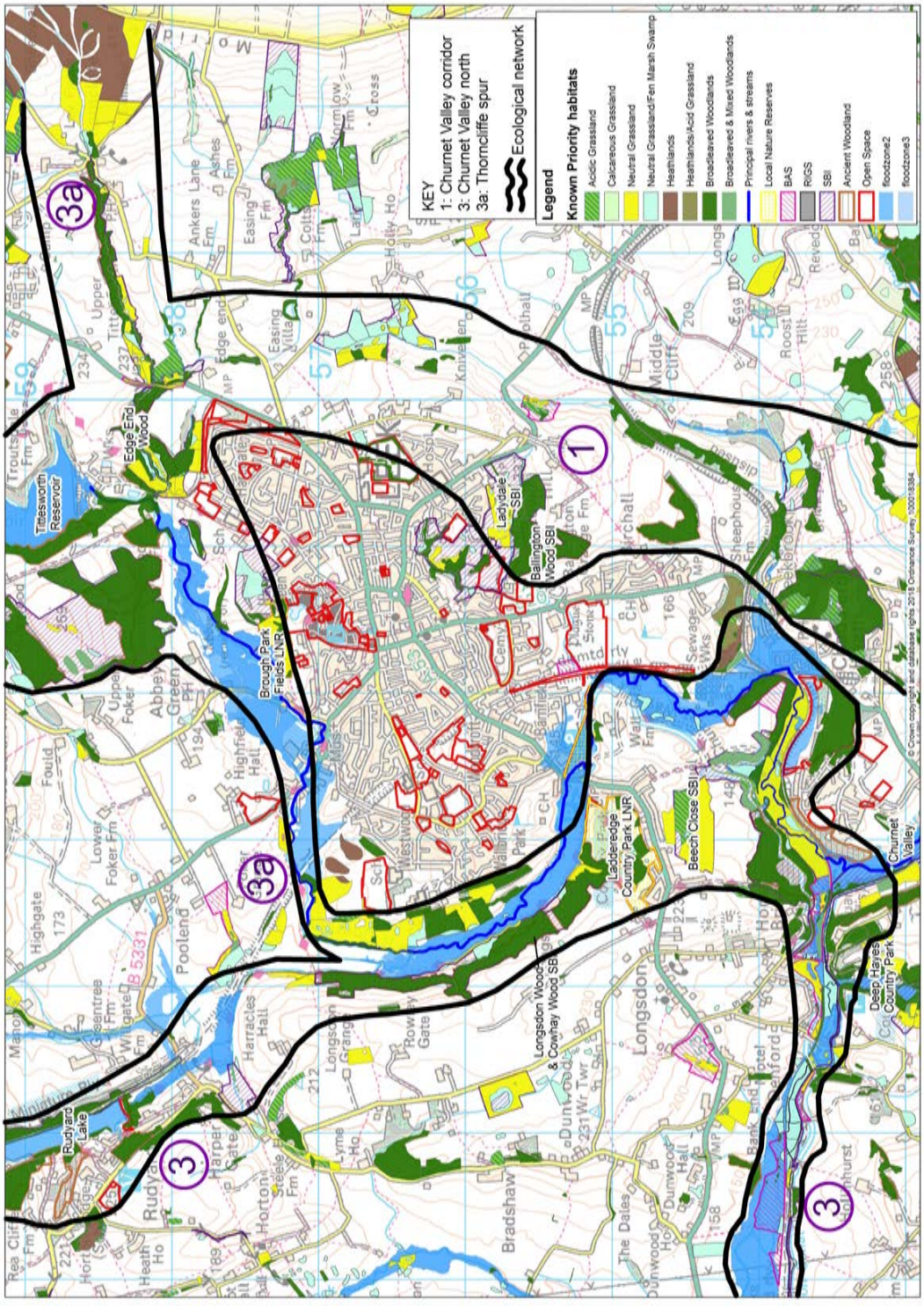
- Extend the network of off-road paths around the proposed allocation of a Strategic Site at Blythe Vale for walkers, cyclists and horse riders with links to the surrounding settlements and countryside.
- Investigate opportunities for delivering connectivity to new centres of employment brought forward at the site via a network of footpaths and cycle ways.
- Provide accessible green space in line with recommendations made in the Council's Open Space Study Standards Paper (October 2017).
- Investigate opportunities for habitat creation and restoration within new developments including looking at establishing wildlife corridors extending into the countryside.
- Investigate opportunities for the conservation or expansion of the populations of key species including otter, great crested newts, bats and priority bird species.
- Consider opportunities to contribute to any existing Staffordshire Wildlife Trust or other appropriate projects taking place in the area.
- Wherever possible ensure new developments contribute to managing wider flood risk, for example through use of sustainable drainage schemes and use of low-lying ground in waterside areas for recreation, amenity and supporting wildlife.
- Help make space for water by undertaking river corridor restoration and enhancement as part of a development where a site contains a main river or ordinary watercourse, including de-culverting and restoration of any watercourses that have been degraded.

Strategic GI Network settlement maps

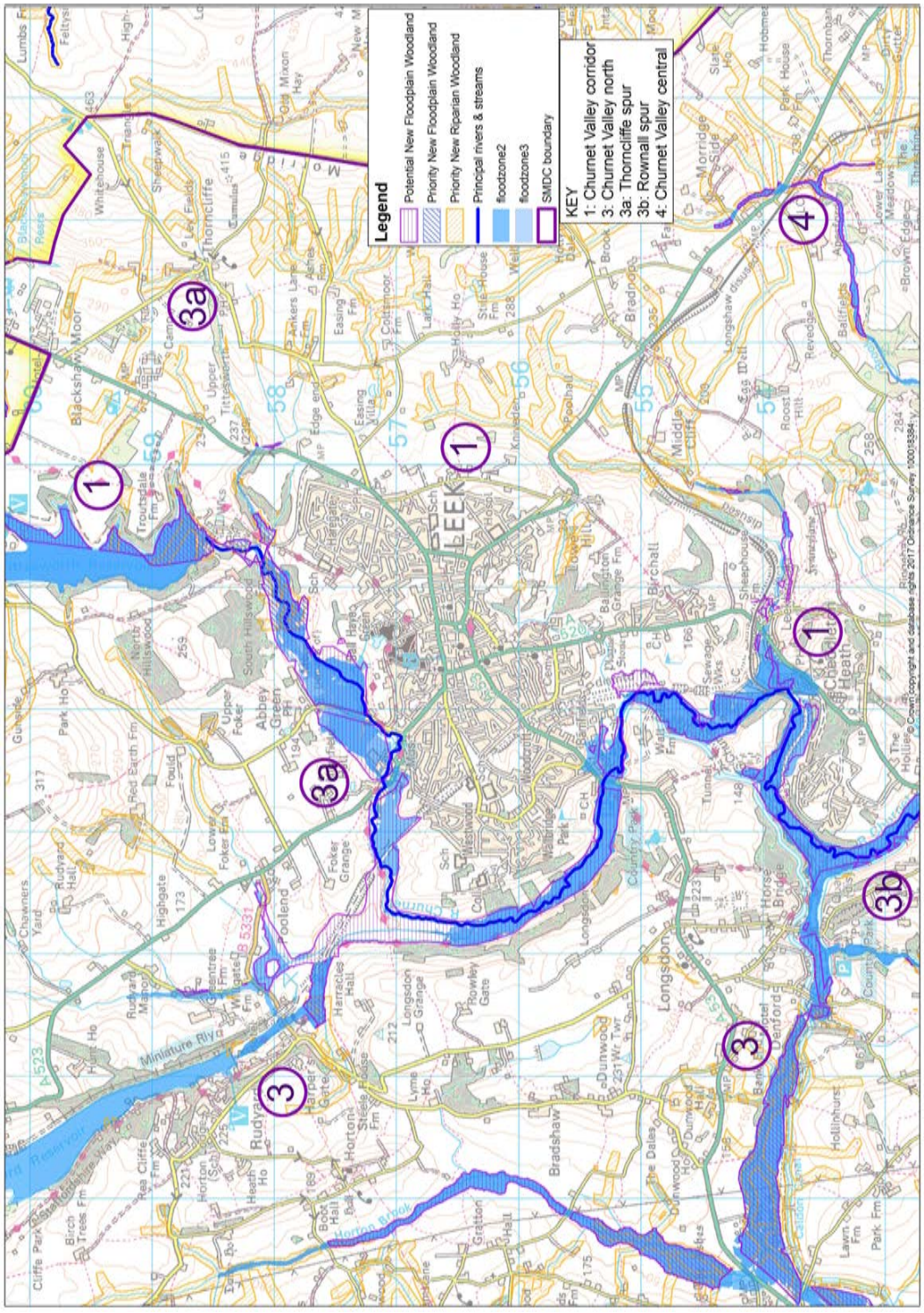
7 Strategic GI Network settlement maps



Map 7.1 Green Travel corridors in and around Leek

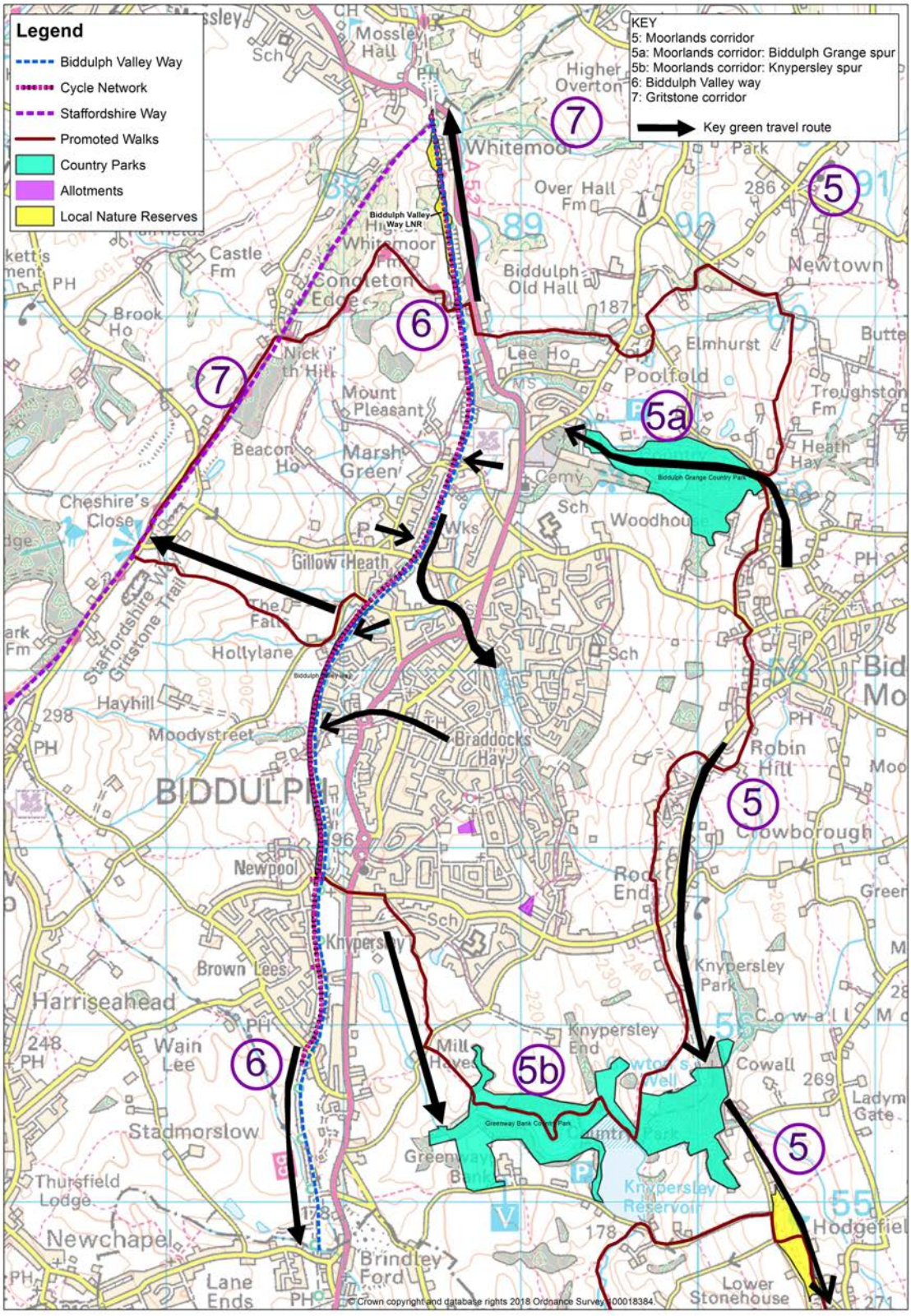


Map 7.2 Ecological corridors in and around Leek

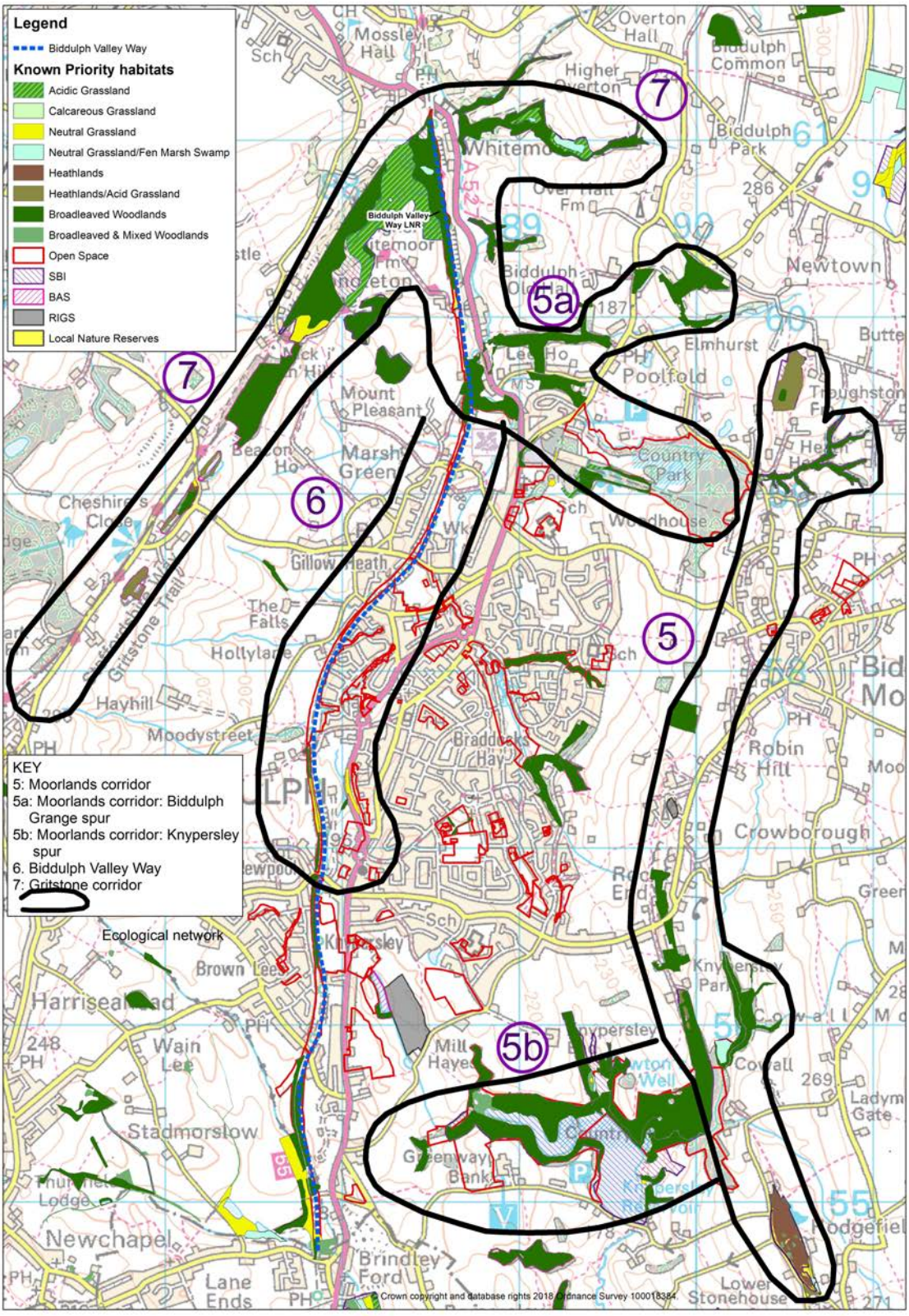


Map 7.3 Water management corridors in and around Leek

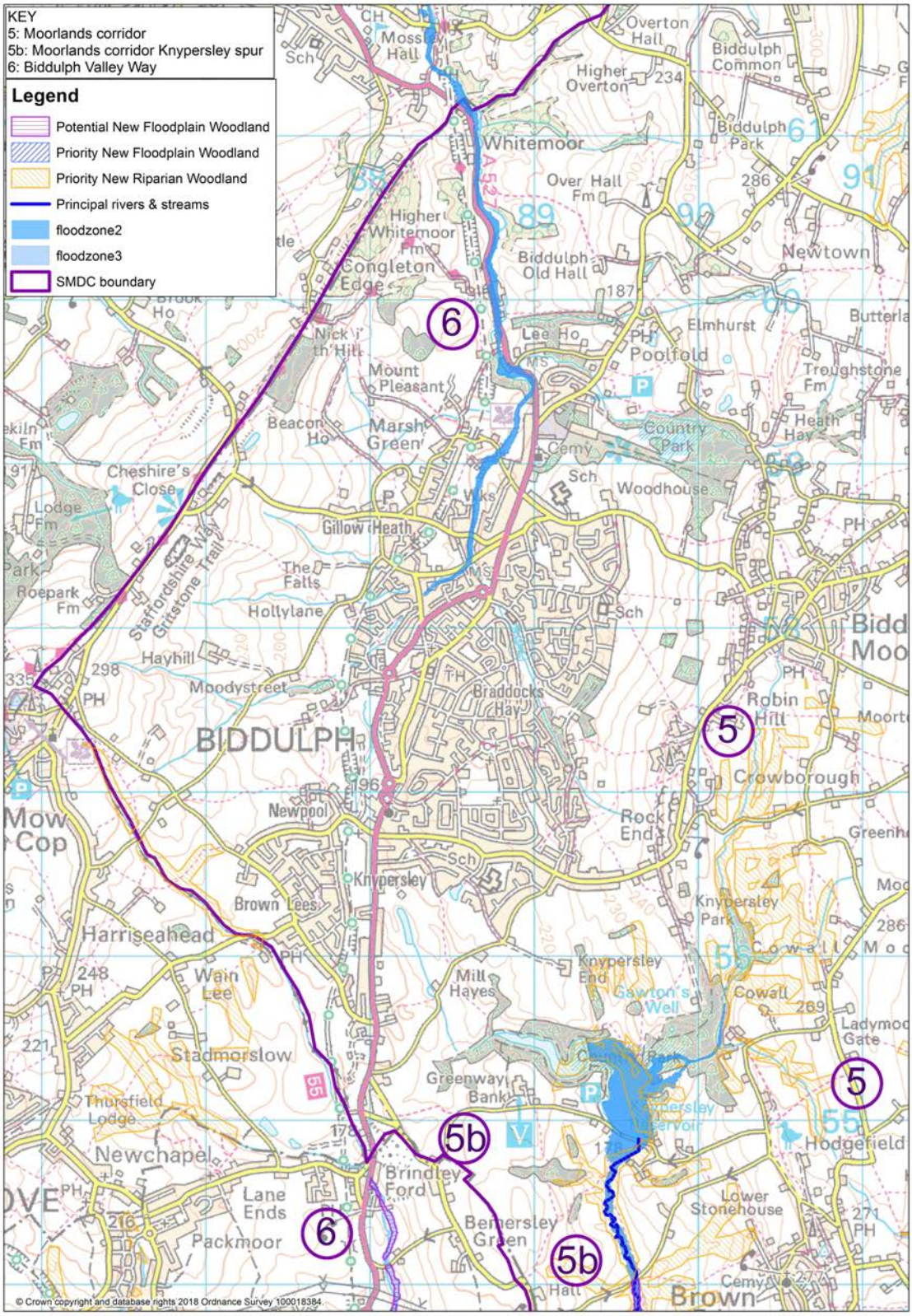
7.2 Biddulph



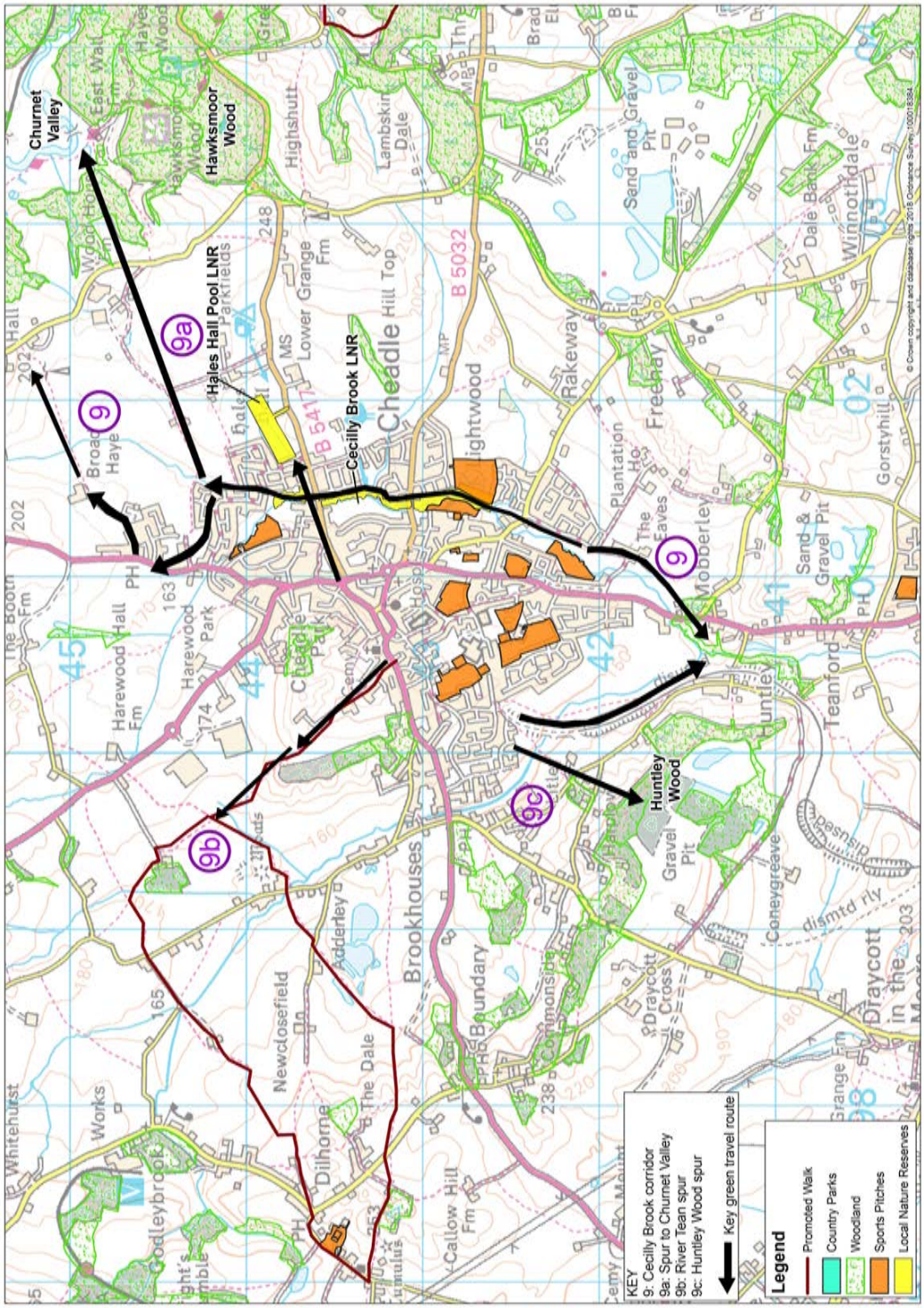
Map 7.4 Green Travel corridors in and around Biddulph



Map 7.5 Ecological corridors in and around Biddulph

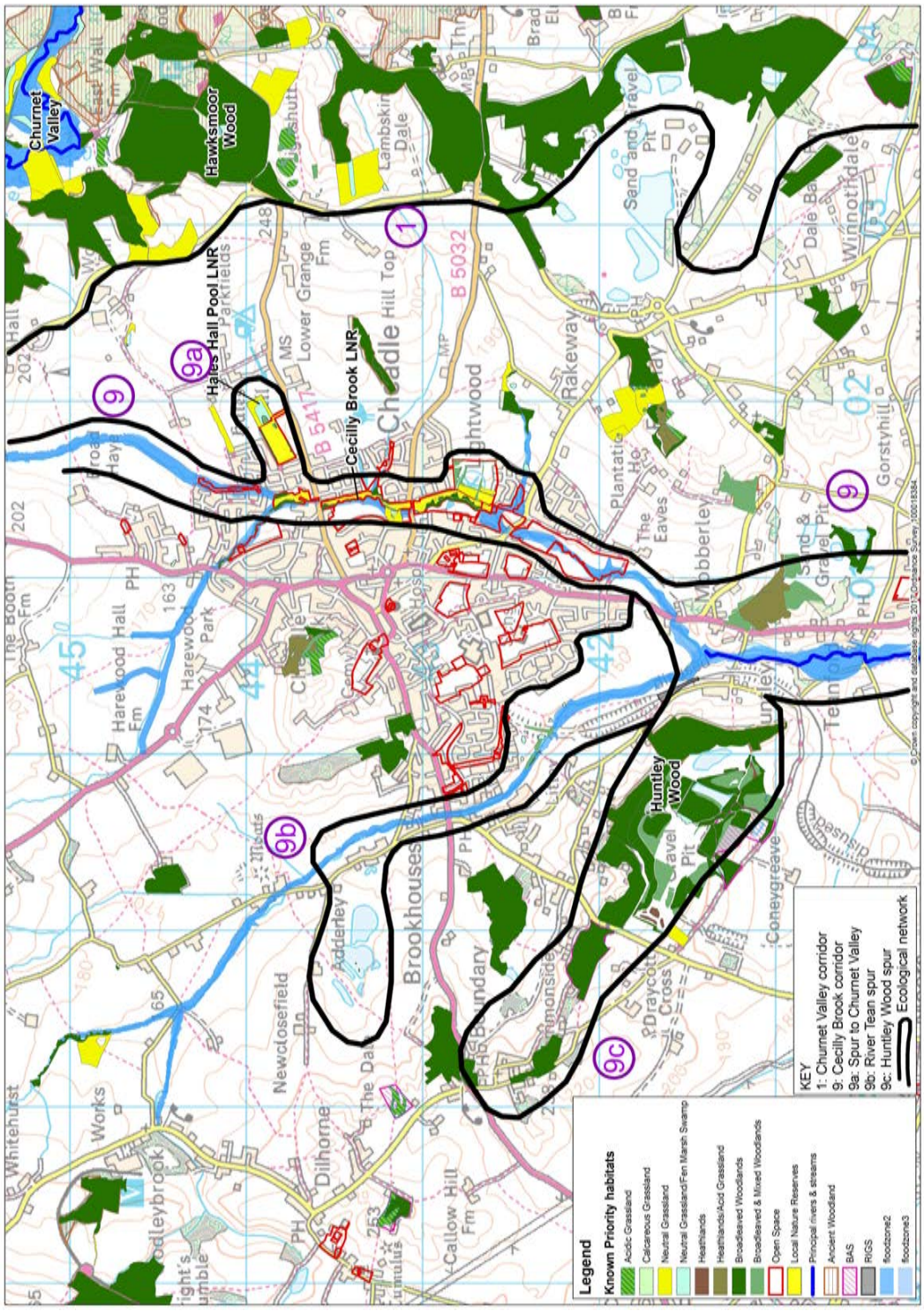


Map 7.6 Water management corridors in and around Biddulph

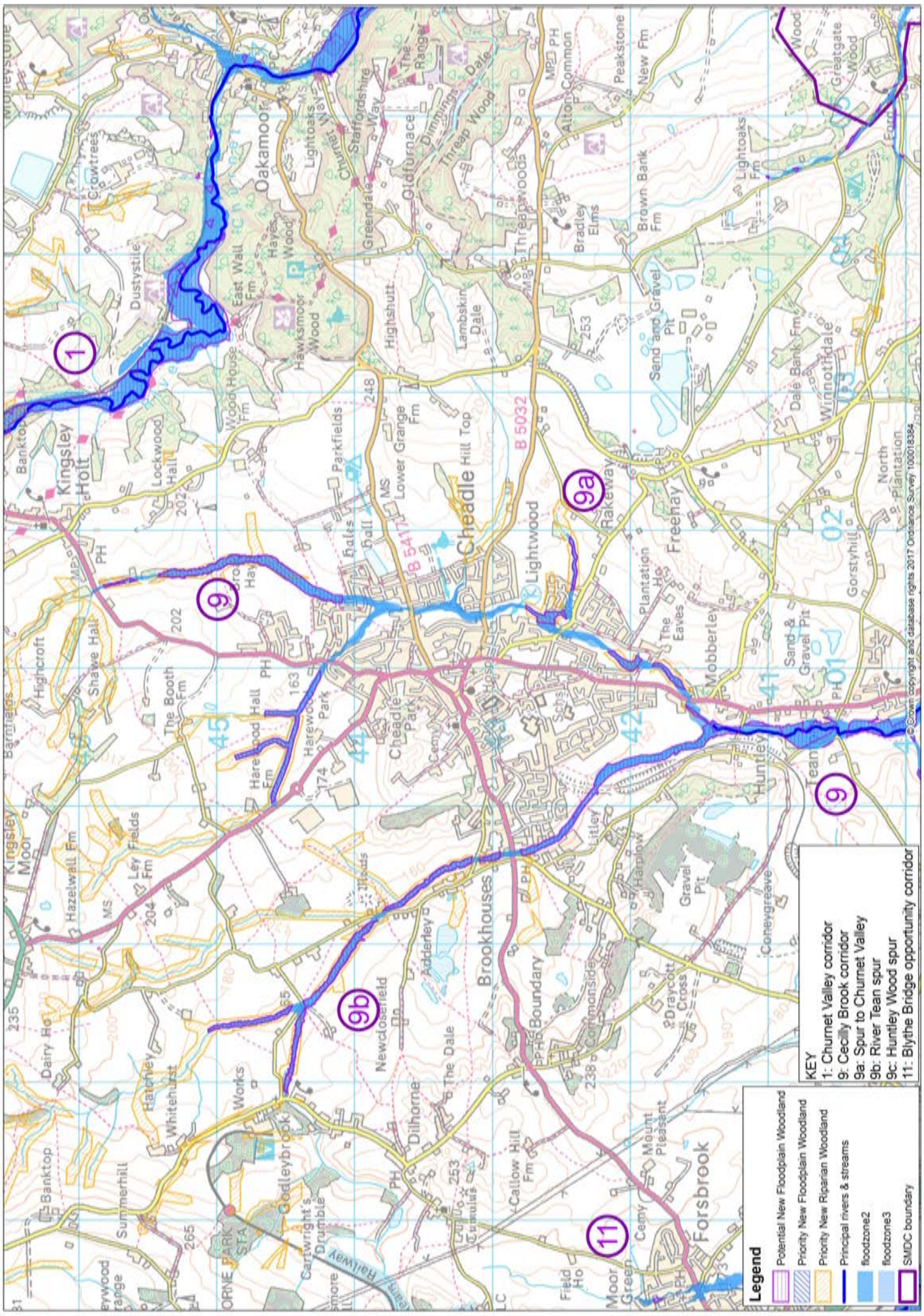


Map 7.7 Green Travel corridors in and around Cheadle

7.3 Cheadle

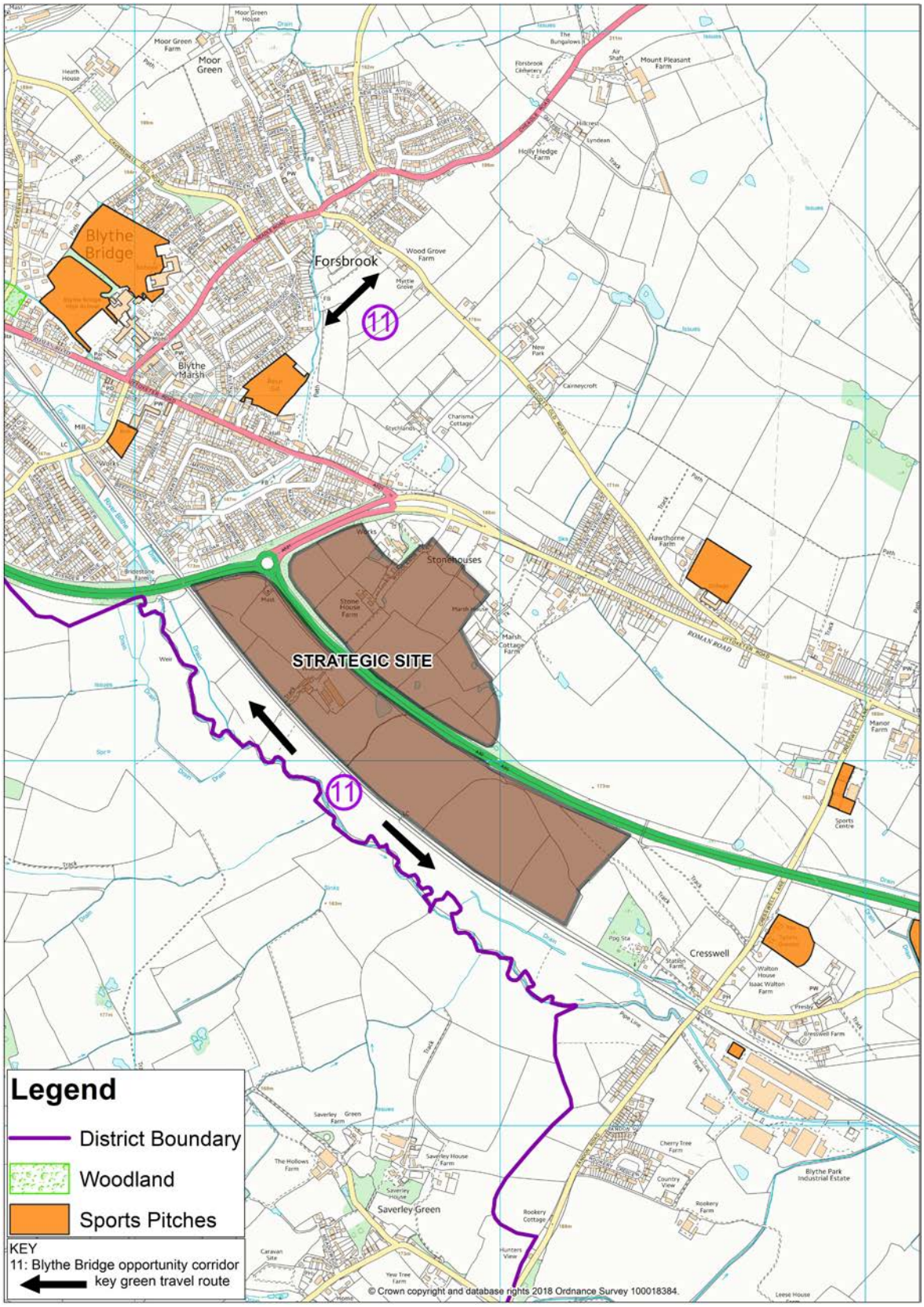


Map 7.8 Ecological corridors in and around Cheadle

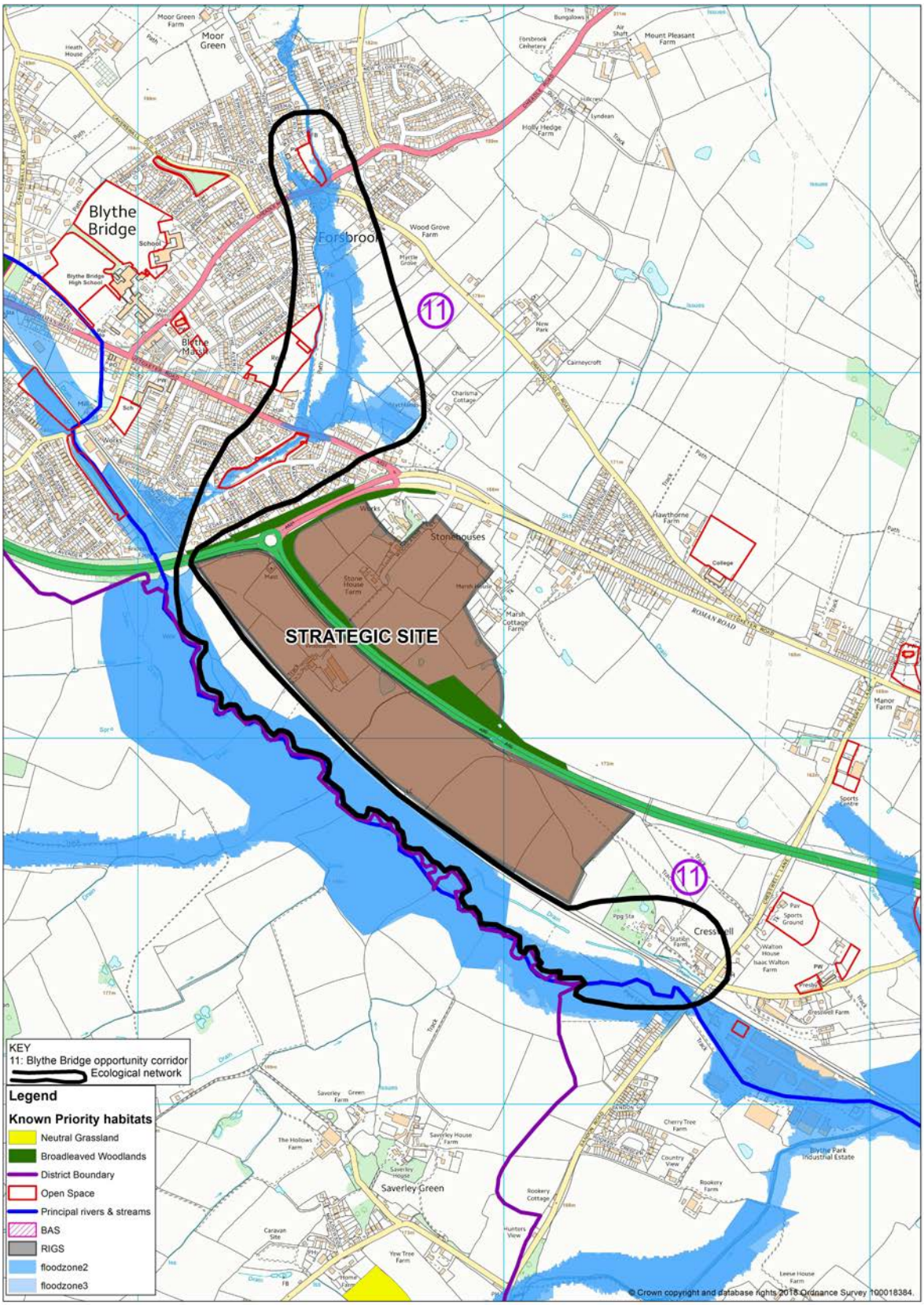


Map 7.9 Water management corridors in and around Cheadle

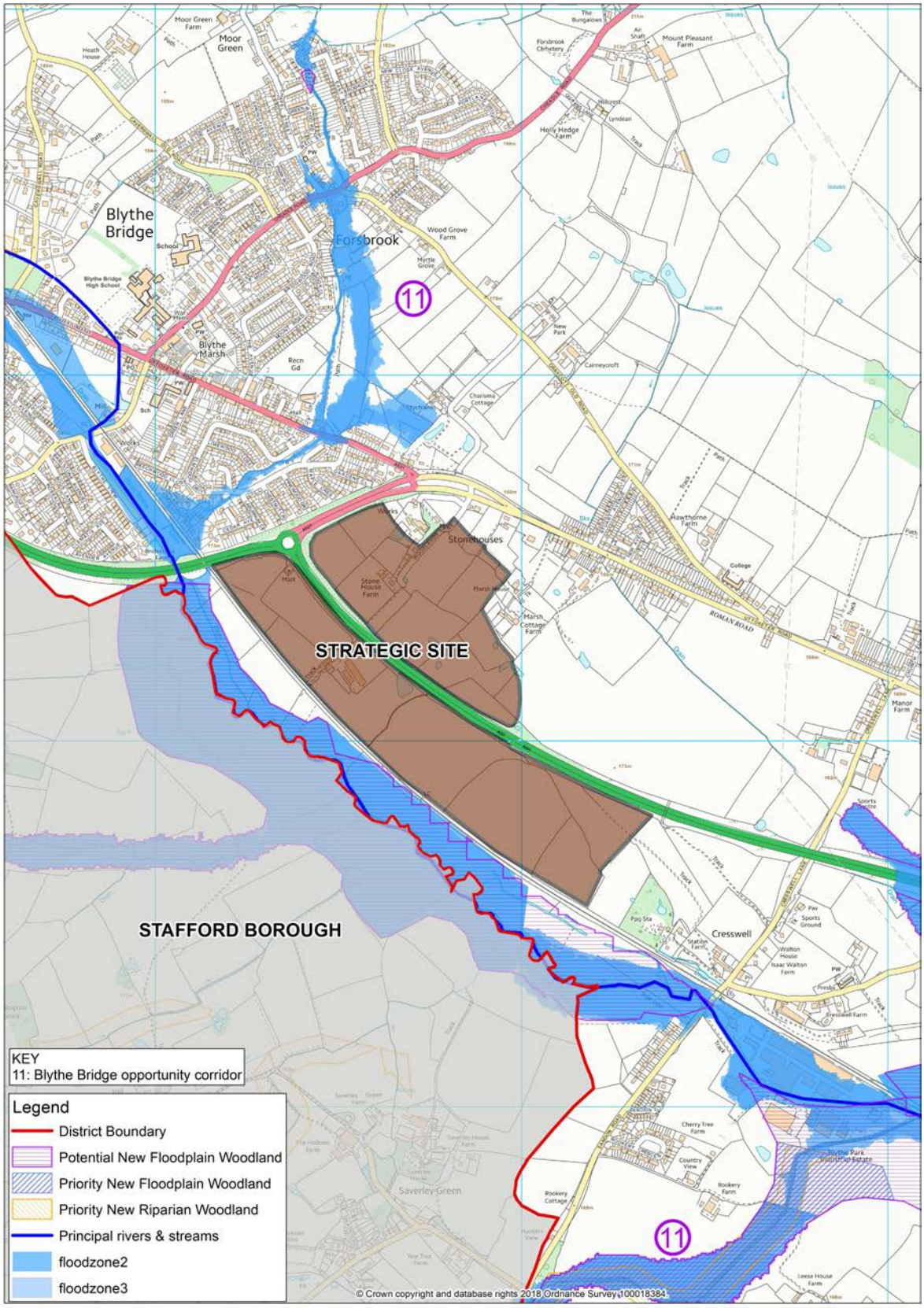
7.4 Strategic site at Blythe Vale



Map 7.10 Green Travel corridor opportunities



Map 7.11 Opportunities to support ecological network development



Map 7.12 Water management corridor

Implementation

8 Implementation

8.1 The proposed priorities and actions for the strategic network set out in section 6 will be used to:

- Form part of the evidence base for Local Plan policies including Strategic Development Site policies.
- Inform the Local Plan Infrastructure Delivery Plan.
- Assist with development management decisions.
- Inform design and contributions required from new developments.
- Guide use of any CIL monies and other developer contributions.
- Help identify potential sites for any biodiversity off-setting and opportunities to conserve and enhance the setting of heritage assets.
- Identify and inform any future partnership projects.
- Identify and plan specific projects through grant funding opportunities / neighbourhood plan proposals.
- Support broader ecological networks, for example through the Local Nature Partnership and Duty to Cooperate with the strategies of neighbouring authorities.
- Create significant corridors and larger scale features outside the boundary of the strategy.
- Support and encourage community engagement and participation around GI assets.

8.2 A Delivery Plan will be prepared setting a delivery framework for the Green Infrastructure Strategy. The Delivery Plan will show how the key partners and agencies involved will support the delivery of green infrastructure and contribute to the aims of the Strategy. The Plan will include a series of delivery and action plans for key projects - to be developed as the focus of the next phase of this work.

8.3 The Delivery Plan will:

- Summarise the principal existing and planned green infrastructure projects and initiatives.
- Identify gaps and new opportunities.
- Consider the scope for fostering links between developers and organisations, voluntary and statutory, that can help deliver strategic biodiversity gains through appropriate offsetting initiatives.
- Provide an indicative timescale for implementation.
- Identify potential funding sources, including a consideration of the role of section 106 agreements.

- Consider the recommendation made by the SMDC Open Space Study Standards Paper; KKP; October 2017 to collect developer contributions in the form of a set fee per new household for natural and semi-natural provision to help fund the priorities and opportunities set out in this document.

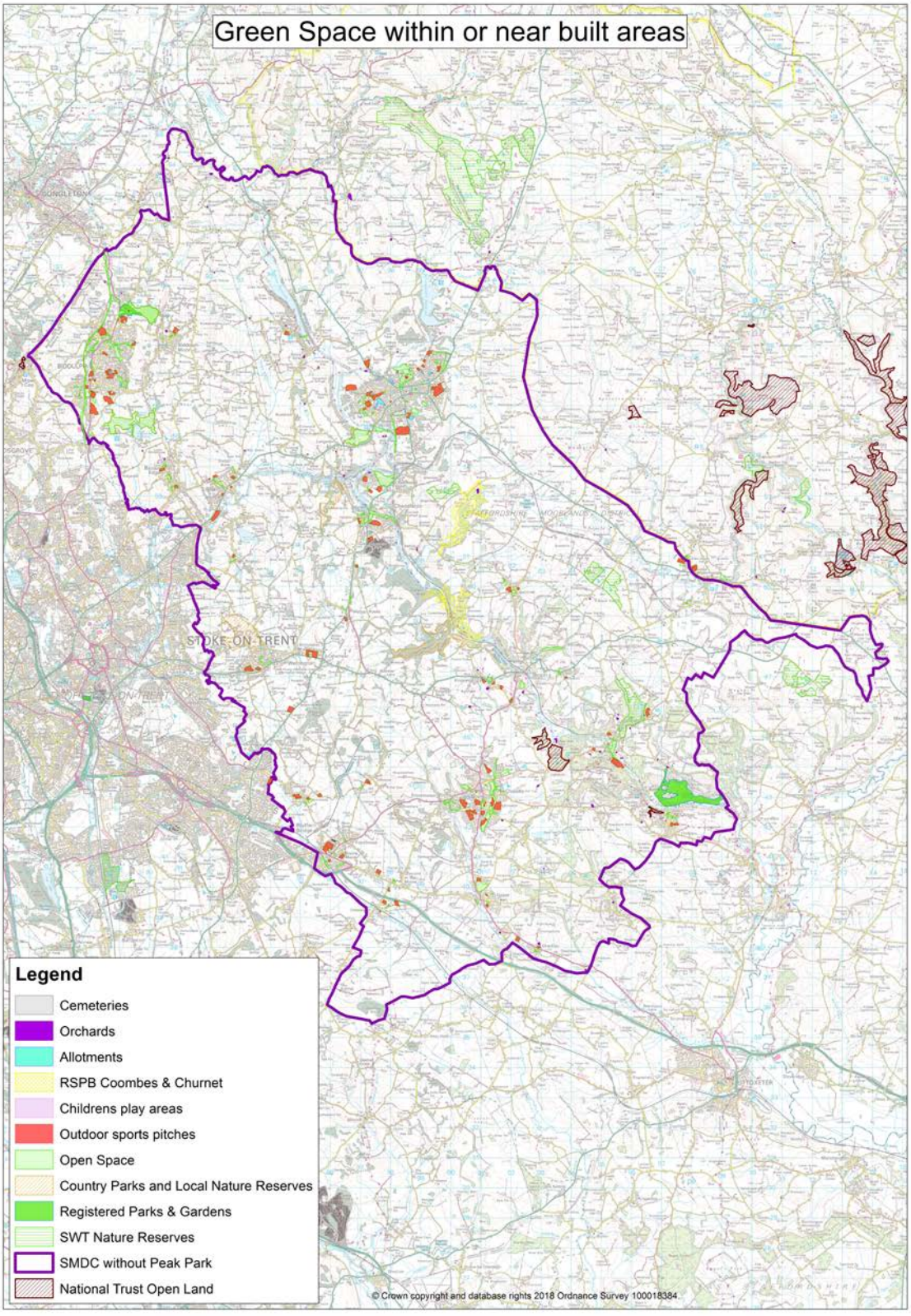
- Consider the recommendations set out in the SMDC Infrastructure Delivery Plan (IDP) Final Report; ARUP; February 2018 identifying the infrastructure needed to achieve the existing and emerging spatial aims within the Staffordshire Moorlands Local Plan and in particular the references within the IDP to this document.

- Set out arrangements for monitoring progress and reviewing priorities.

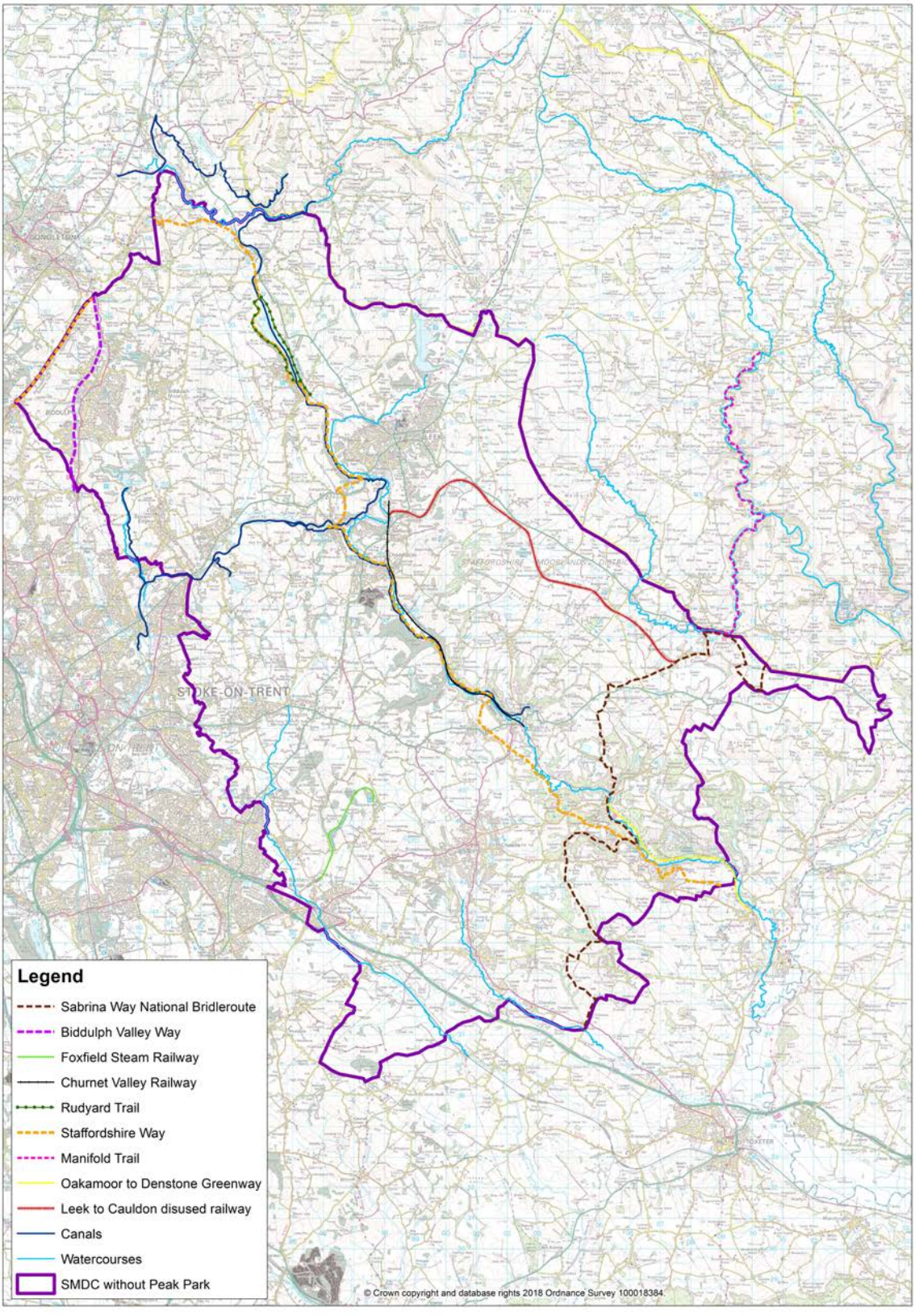
8.4 Currently there are eight Parish / Town Councils in the Staffordshire Moorlands Local Plan area working on the preparation of a Neighbourhood Development Plan. These Neighbourhood Plans can be used to complement the Strategic Network by adding locally specific detail relating to green infrastructure in each of the Neighbourhood Areas and by forming part of the Delivery Plan as appropriate.

Maps of GI assets by type

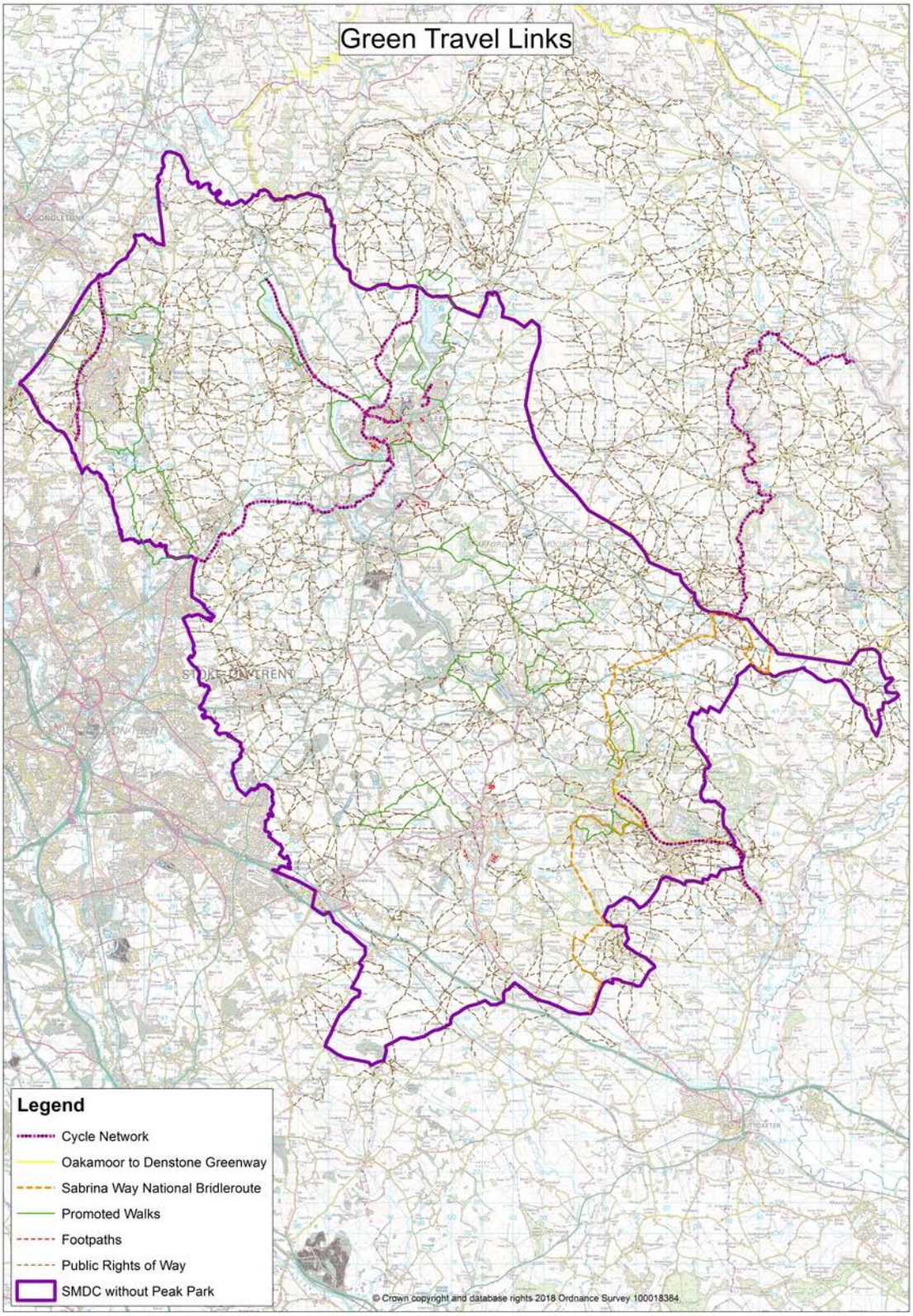
Appendix A Maps of GI assets by type



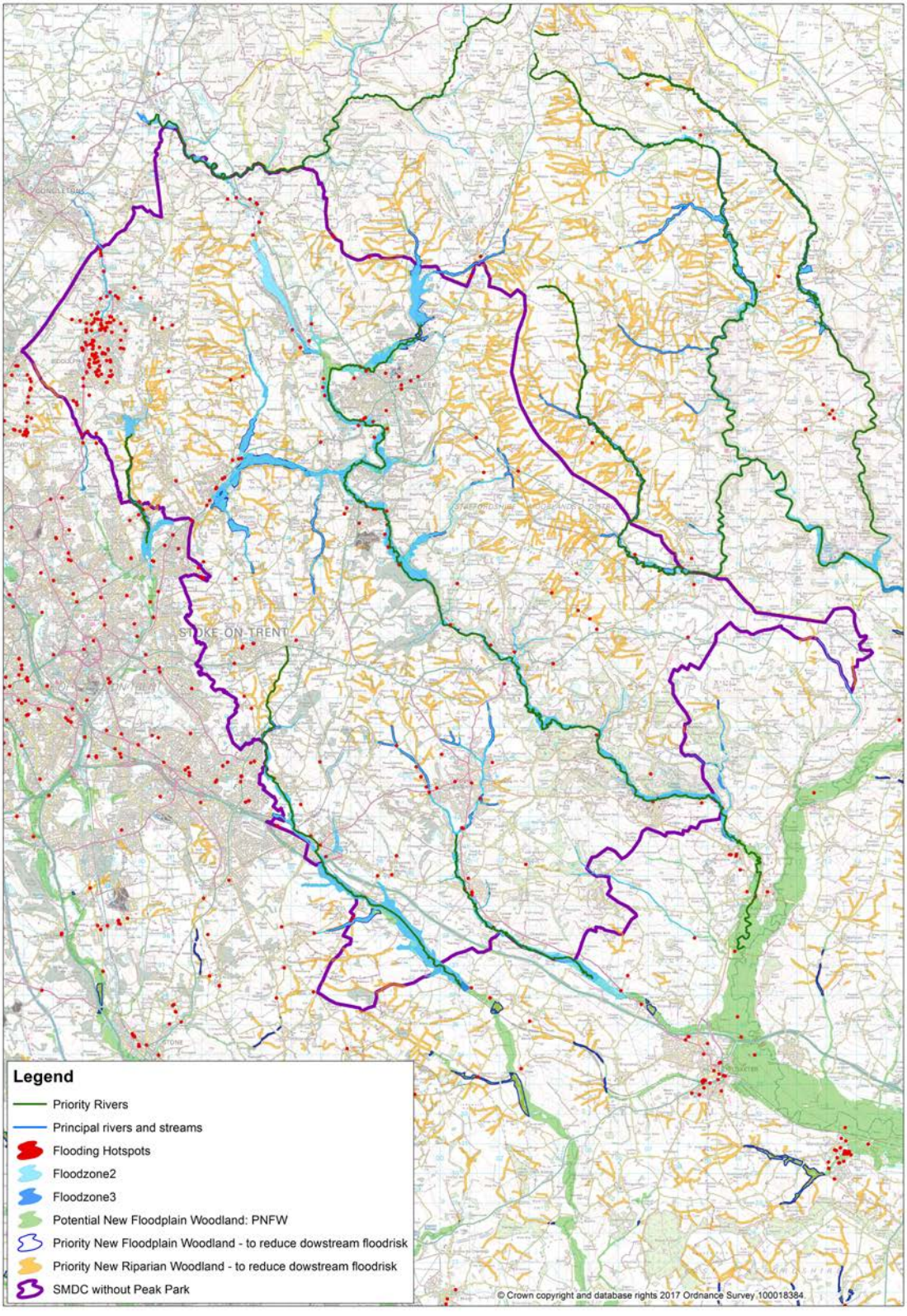
Map A.1 Green space within or near built areas



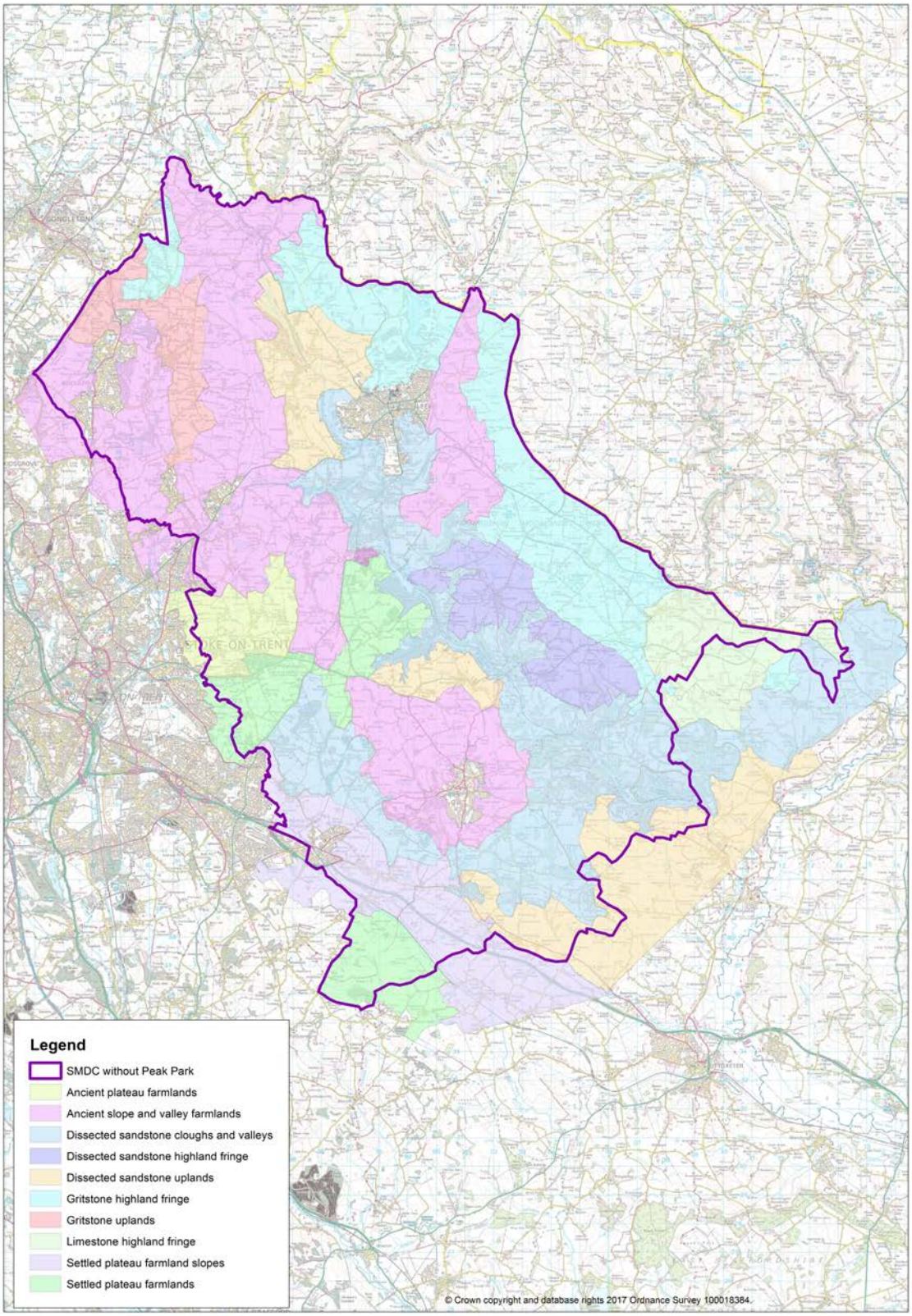
Map A.2 Large-scale, linear infrastructure features with potential for connectivity for biodiversity enhancement



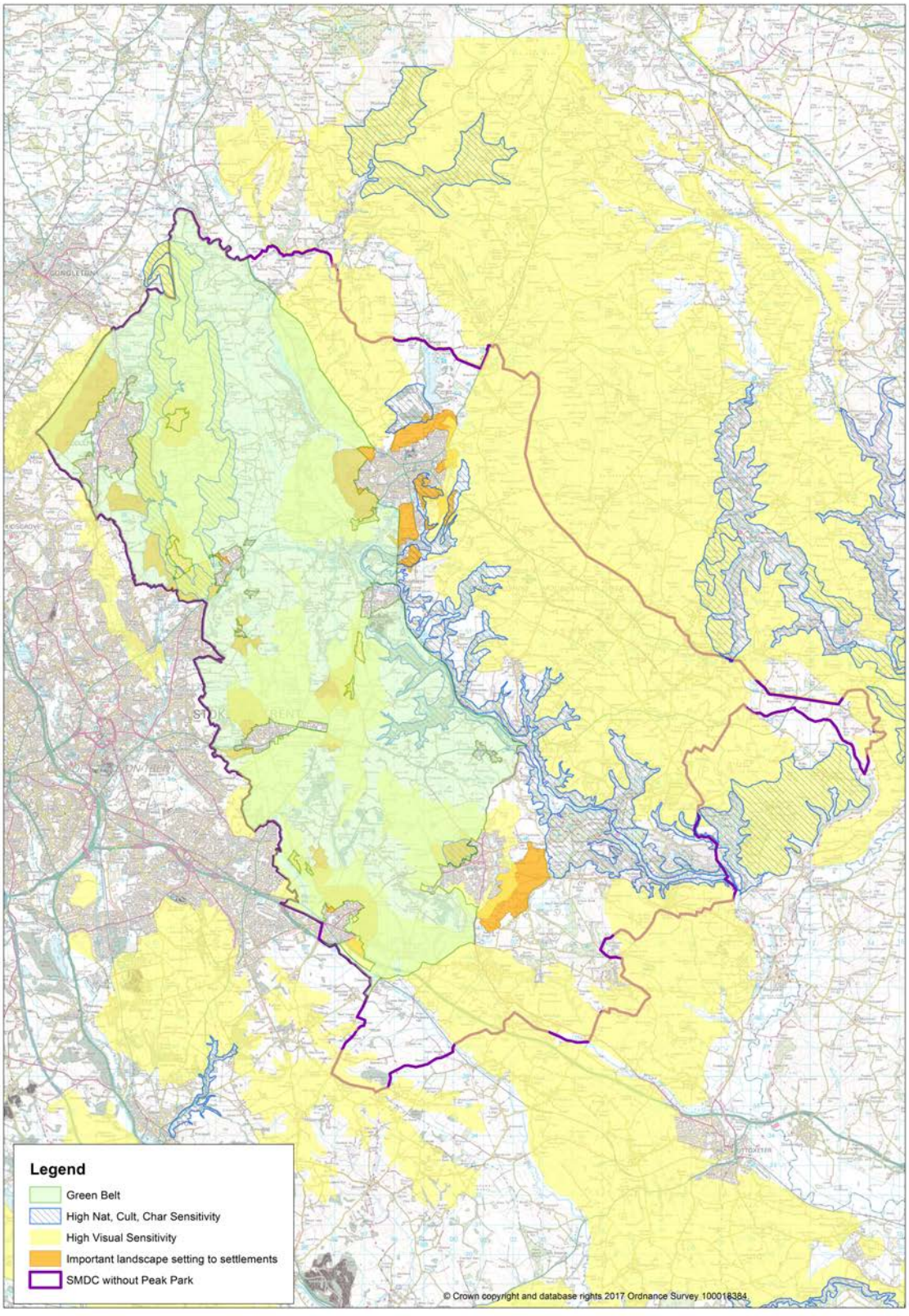
Map A.3 Green Travel Links



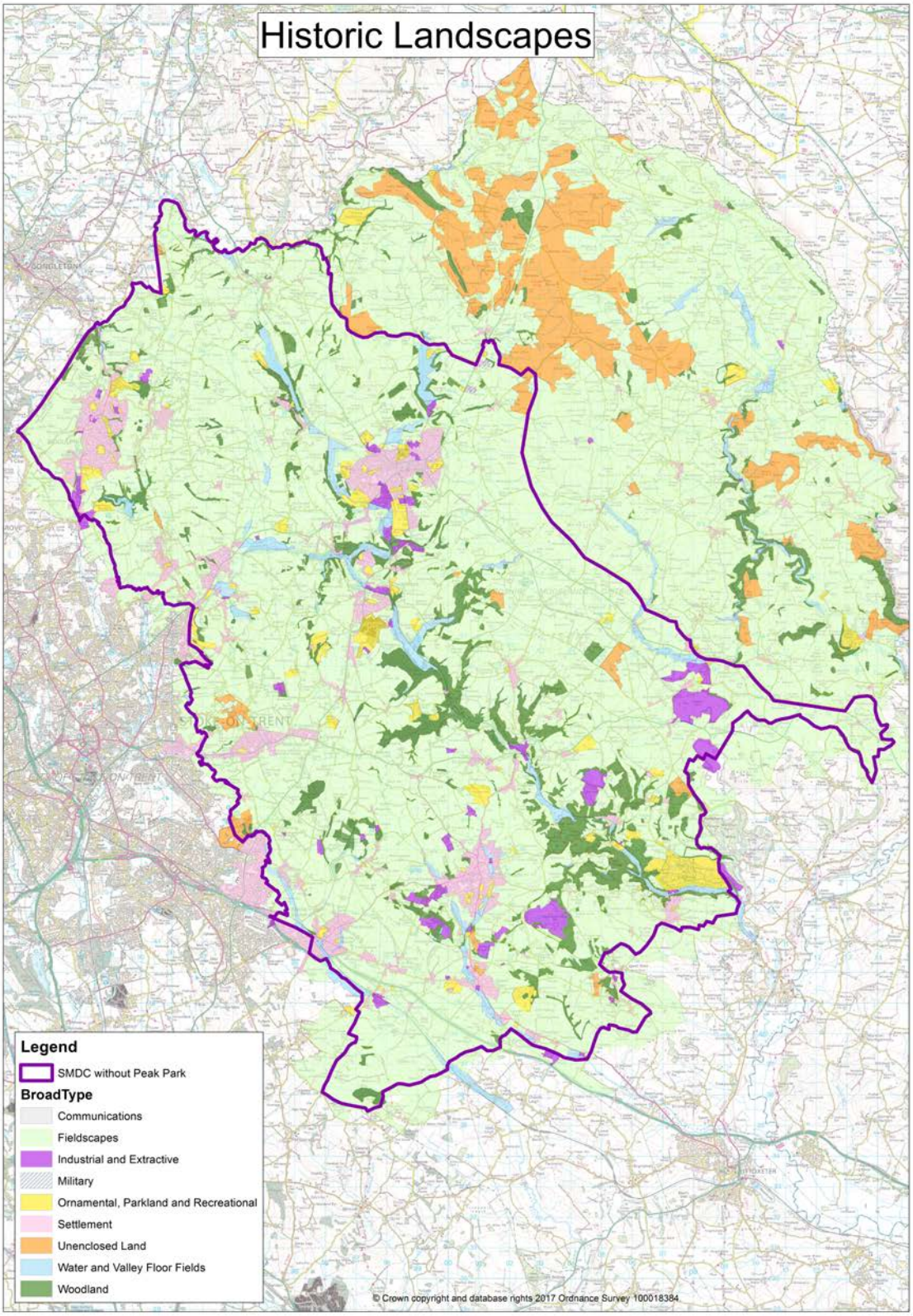
Map A.4 Flood attenuation and water management



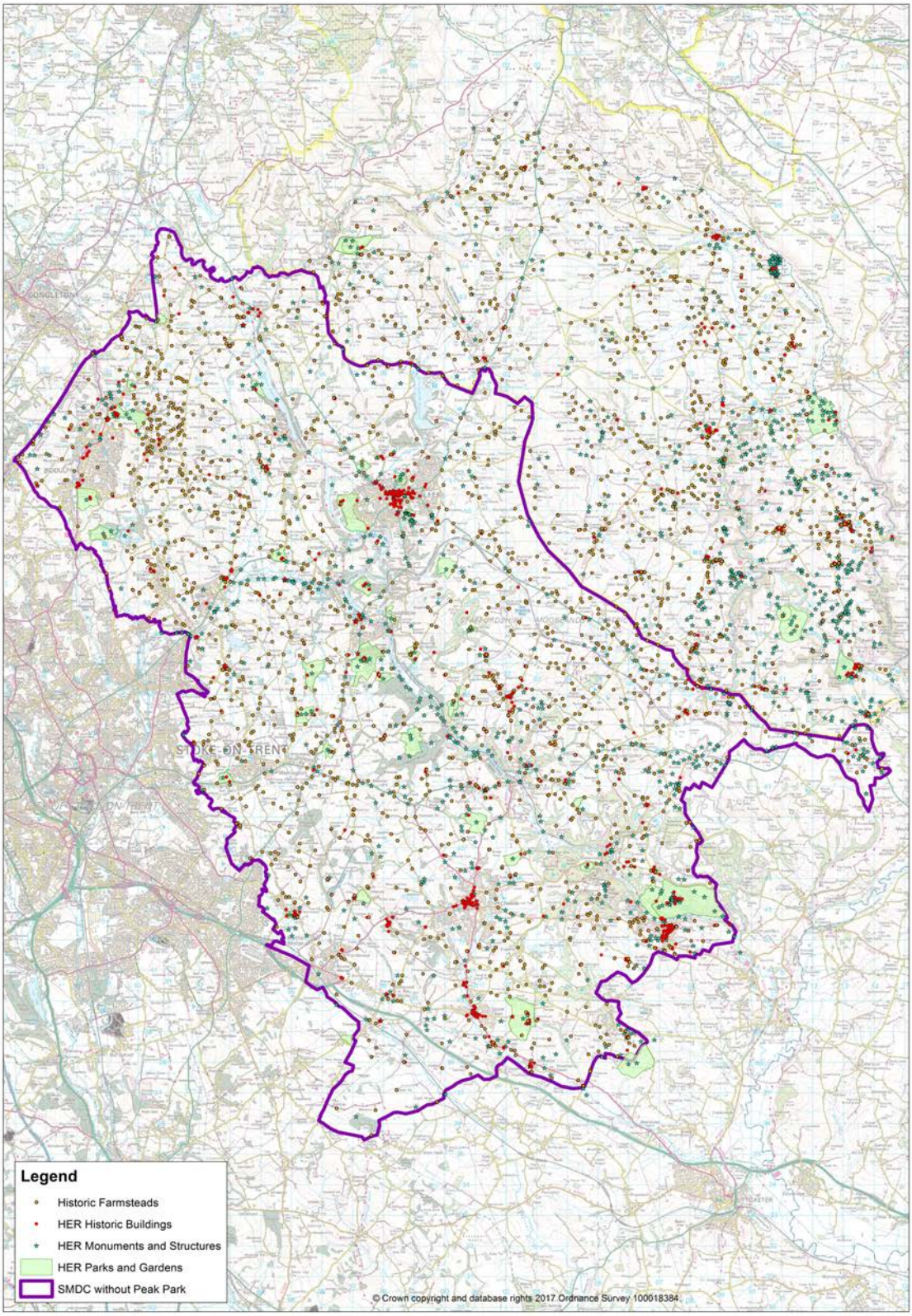
Map A.5 Main Landscape Character Types



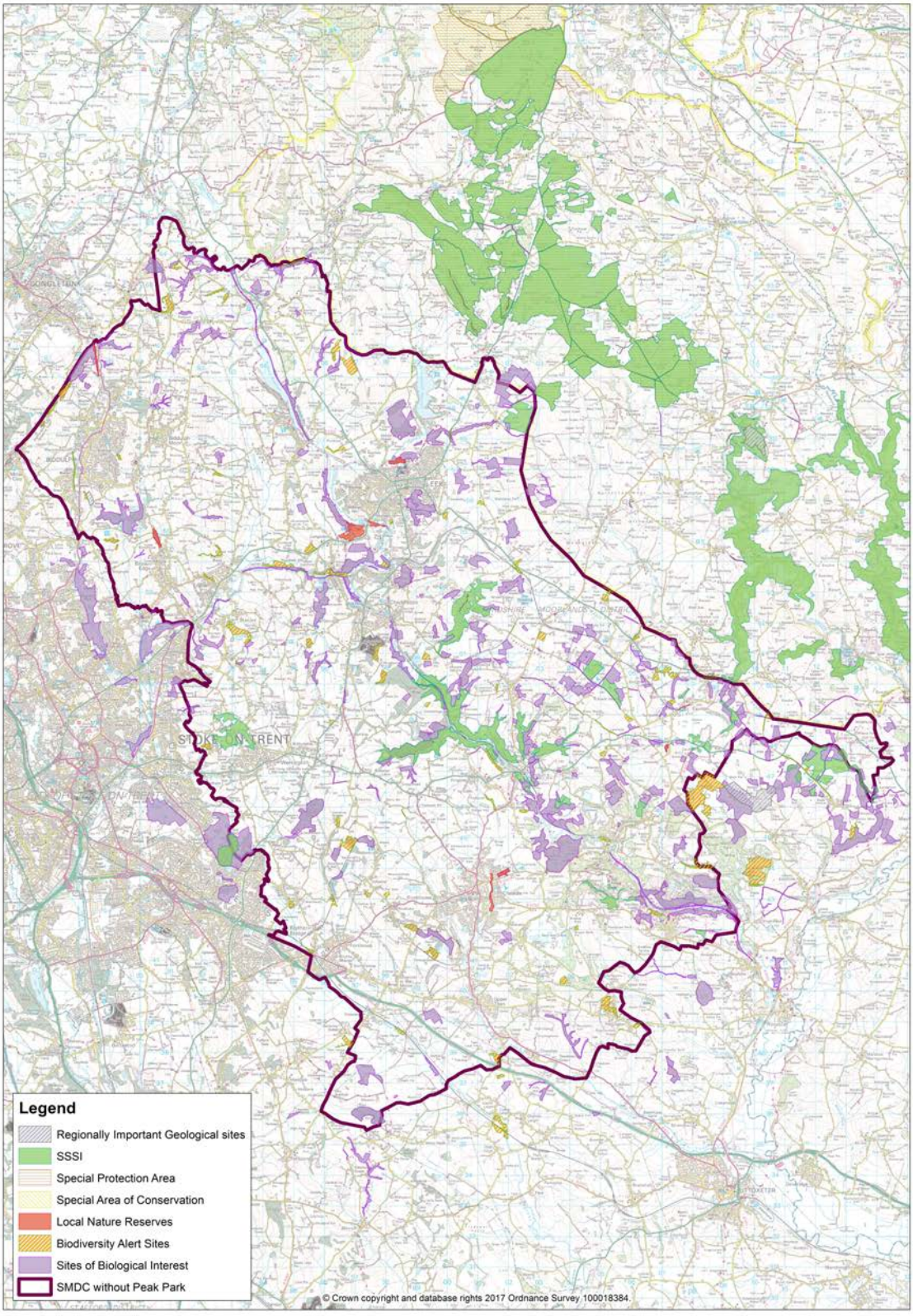
Map A.6 Landscape setting and Green Belt



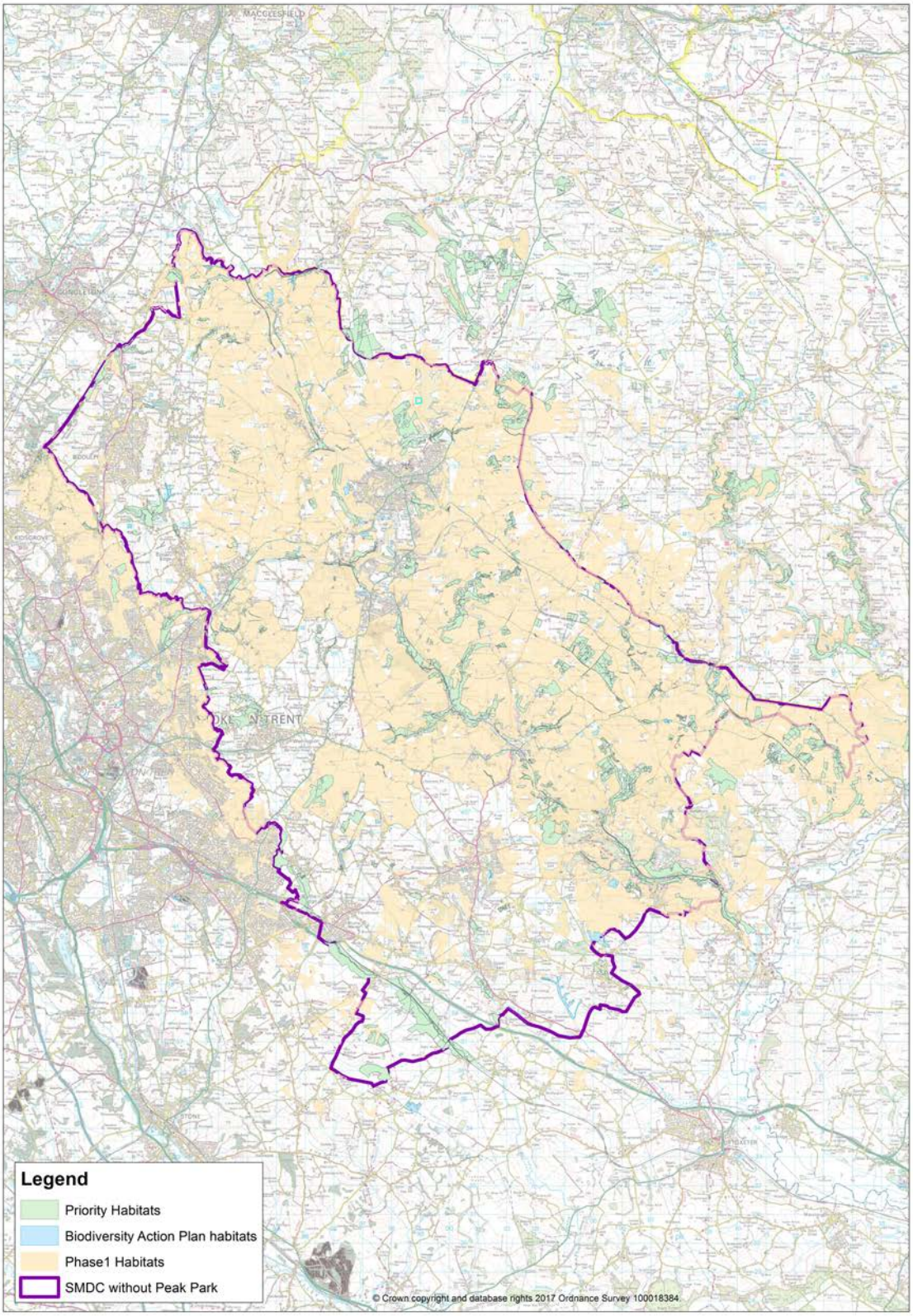
Map A.7 Historic Landscapes



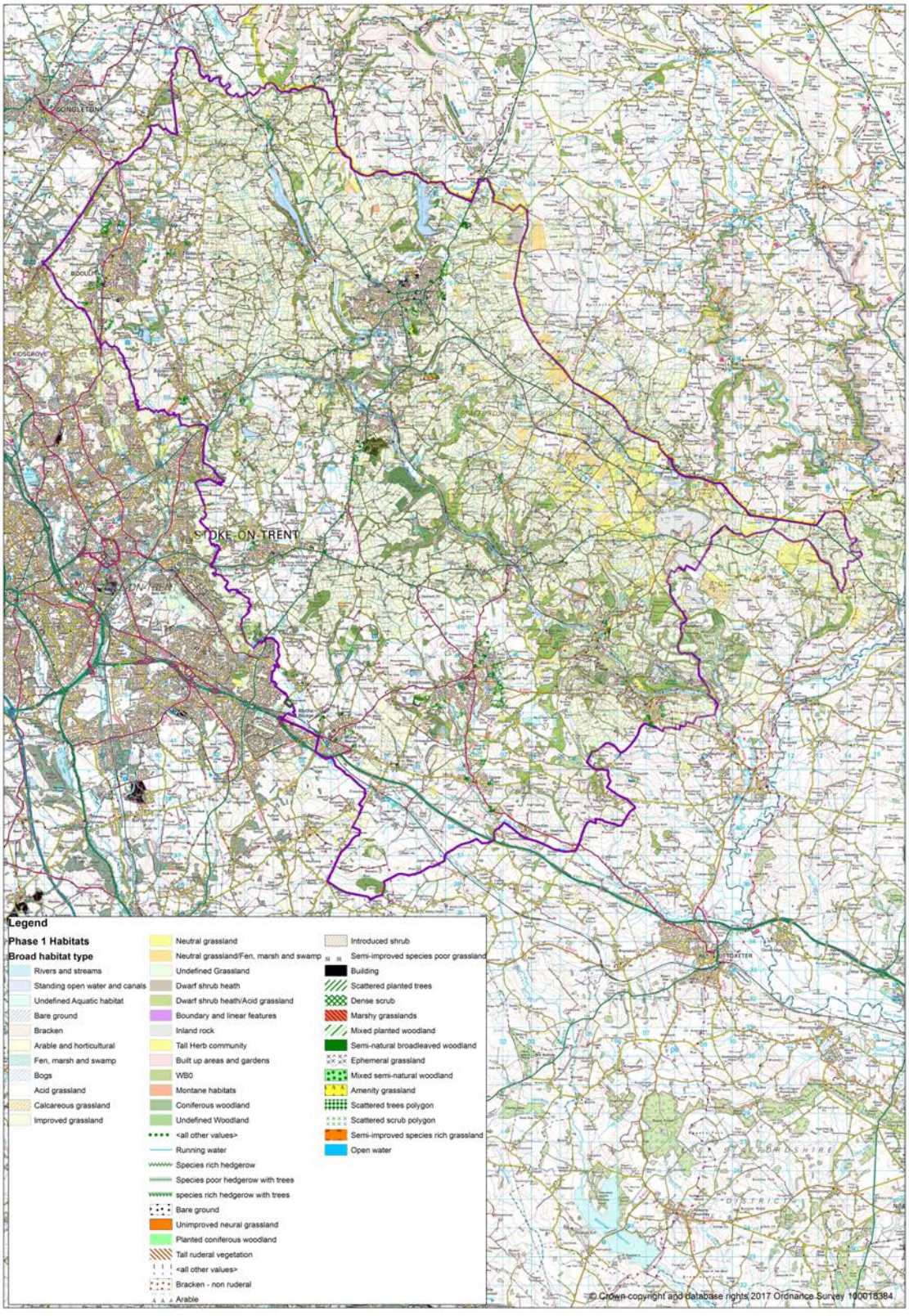
Map A.8 Historic Environment



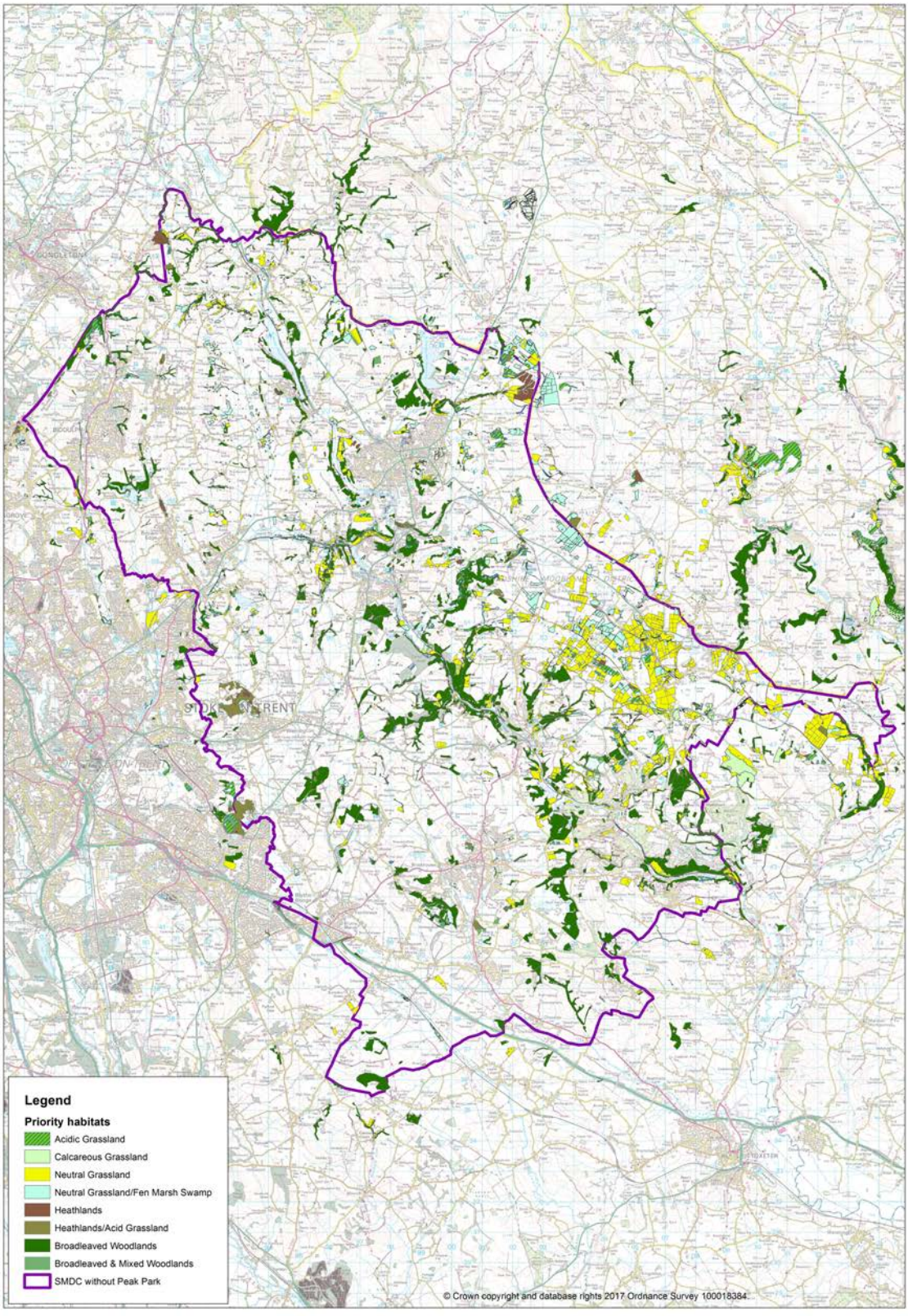
Map A.9 Internationally, nationally and locally designated sites



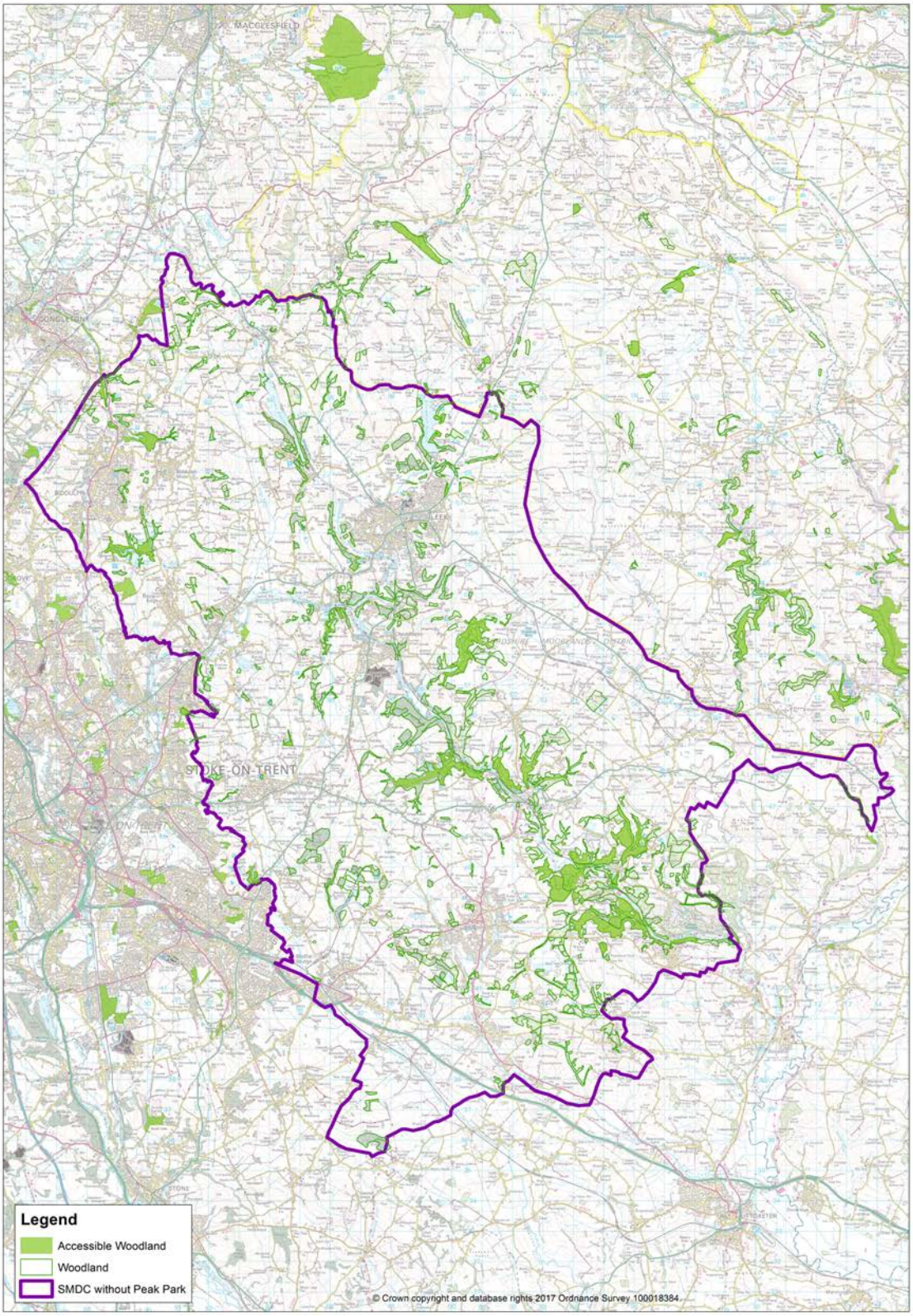
Map A.10 Extent of mapped habitat surveys and known priority habitats



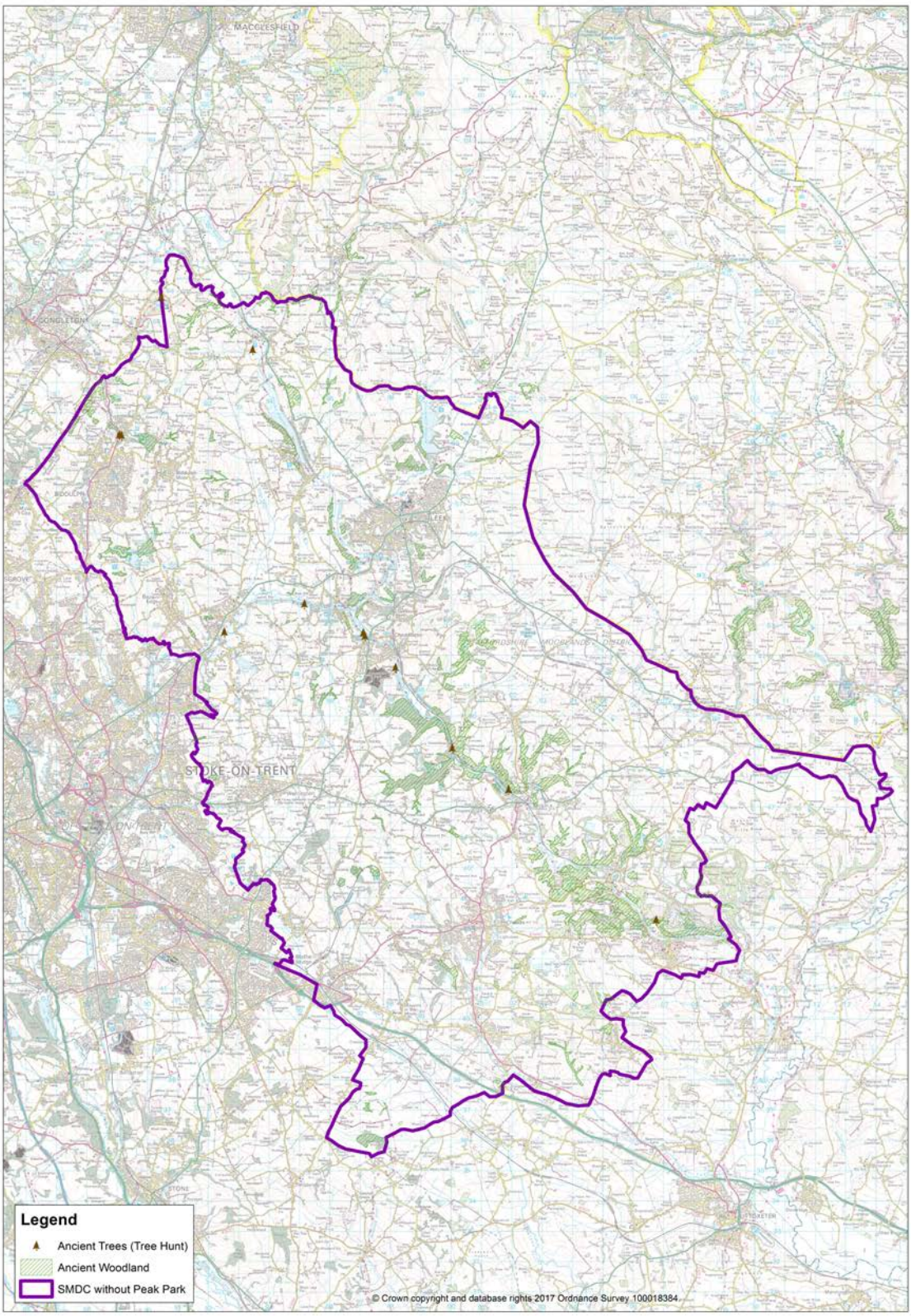
Map A.11 Known Phase 1 Survey habitats by type



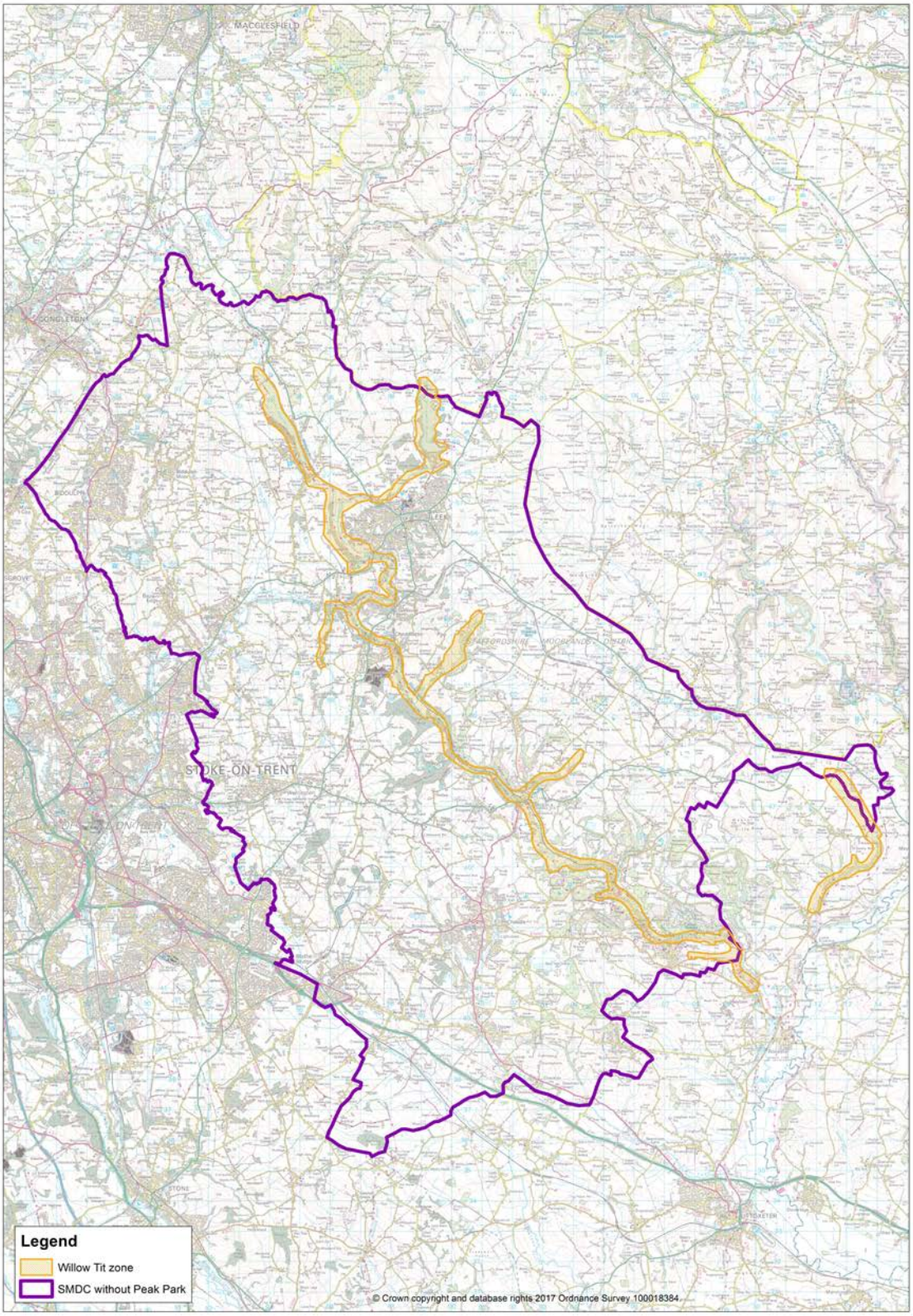
Map A.12 Distribution of known priority habitat types



Map A.13 Extent of mapped woodland and known accessible woodland



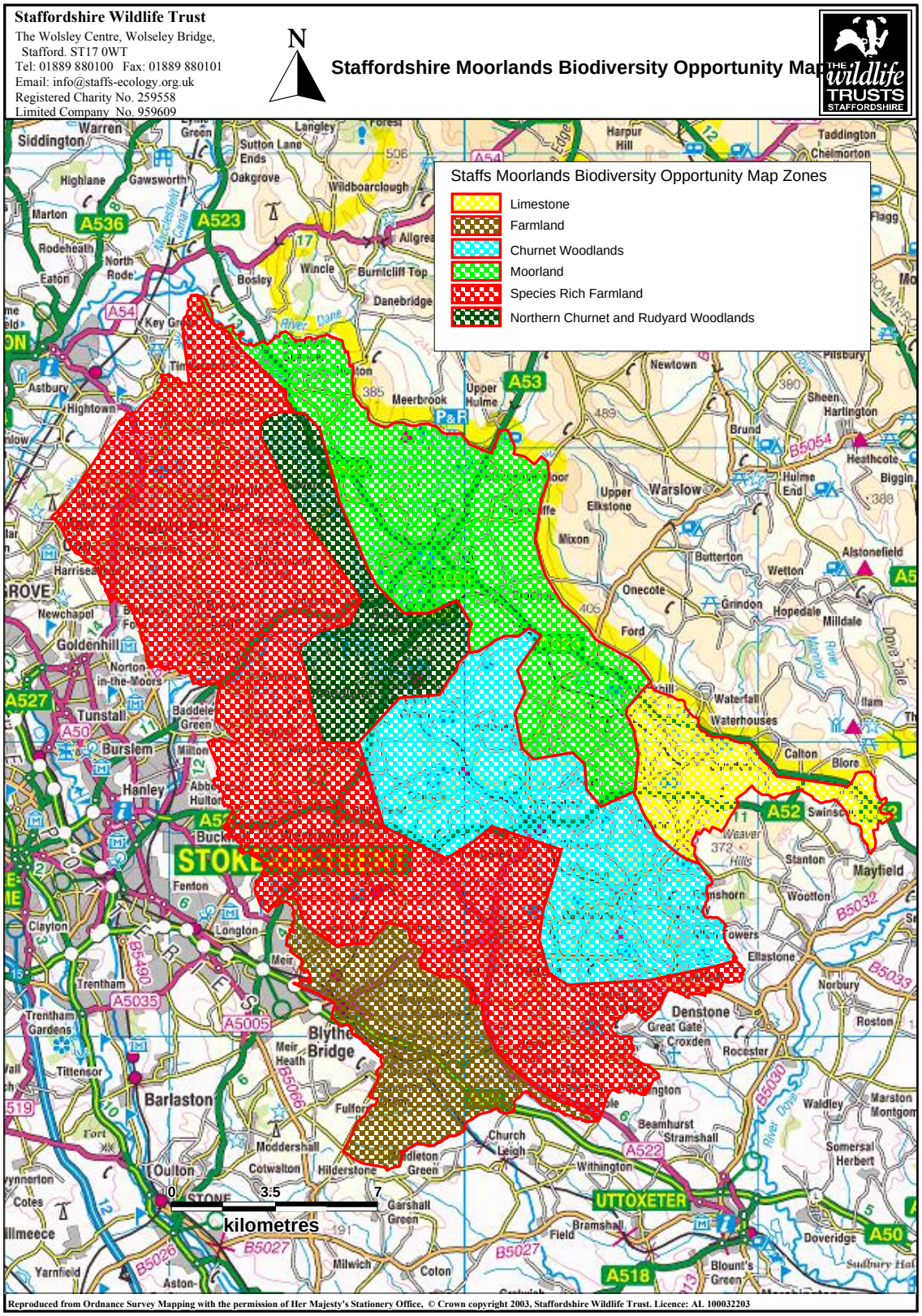
Map A.14 Extent of known irreplaceable natural habitat



Map A.15 Zone identified as being important for willow tit, based on existing records

Staffordshire Moorlands Biodiversity Opportunity Map

Appendix B Staffordshire Moorlands Biodiversity Opportunity Map



Map B.1 Biodiversity Opportunity Map

B.1 The zones indicated on the Biodiversity Opportunity map are described below with associated objectives for each.

1 Limestone

B.2 The Limestone zone broadly covers the Staffordshire area of the White Peak National Character Area (NCA). The geology of the area is Carboniferous limestone and is largely identified as limestone grasslands, with the west of the area described as wet heath, moor or boglands. The area has a distinctive character is due to its limestone geology and topography, which has a main plateau area which is incised by steep-sided dales. Agriculture is mainly pastoral, with limestone walls as the dominant field boundary type.

Objectives

- The primary habitat objective within the area is the maintenance, restoration and expansion of species-rich grasslands, particularly calcareous grassland.
- The other objective in the area is to increase connectivity of semi-natural habitats to create larger habitat complexes using priority habitats where possible. New hedgerows, field margins and woodland extension will be key to achieving this objective.

2 Churnet Woodlands

B.3 The Churnet Woodlands lie entirely within the Potteries and Churnet Valley NCA. The area is transitional between upland and lowland and contains a wide range of habitats, including heathland and grassland. The area has been preserved from more significant agricultural intensification by its rolling landscape of upland pasture hills cut by steep-sided, wooded valleys locally known as cloughs. The two largest designated sites within the zone are the Churnet Valley SSSI and Coombes Valley SSSI.

B.4 The area comprises upland areas described as upland pasture within the wet heath, moor or boglands or as dry moor, both of which are dissected by incised wooded valleys. The south of the area is described as free draining farmland. The upland pasture comprises an extensive area of predominantly grassland containing a mosaic of acidic/neutral and marshy grassland.

Objectives

- The primary habitat objective within the area is the maintenance, restoration and expansion of native woodland. There are however also other important habitats within the area, so the placement of new woodland needs to consider existing and surrounding habitats, particularly grasslands.

3 Moorland / Moorland Fringe

B.5 This zone lies almost exclusively within the Southwest Peak NCA. The area is a mosaic of closely related landform and vegetation patterns. These include extensive tracts of heather-dominated upland heathland and cotton-grass blanket bog with wooded cloughs.

Objectives

- The primary habitat objective within the area is the maintenance, restoration and expansion of the upland mosaic of upland heathland, blanket bog, purple moor-grass and rush pasture and lowland meadow. This area contains 100% of the Staffordshire resource of Blanket Bog.

4 Farmland

B.6 The Farmland predominantly lies within the Staffordshire Plain NCA. Much of the land is now intensive agriculture and there are many expanding towns with infrastructure development demands. There is one unifying factor across this zone and that is the degree and extent of habitat and landscape through human management.

Objectives

- The primary objective for the Farmland zone is to reduce fragmentation of existing semi-natural habitats by linking sites through the creation of habitat corridors and networks using priority habitats where possible. Hedgerows, arable field margins and rivers are priorities in achieving this objective, however opportunities to create wetland, grassland and woodland mosaics will also need to be taken to diversify the area. Grasslands are particularly important, with an emphasis on lowland meadow and coastal floodplain grazing marsh.

5 Species-rich Farmland

B.7 The Species-rich Farmland zone covers the majority of the west of the district. Much of this rural area abuts the major conurbation of Stoke-on-Trent. It is contained almost entirely within the Potteries and Churnet Valley NCA.

B.8 The area has something of a north-south divide, with the north dominated with wet heath, moor and boglands and some dry heathland areas. The south has a prevalence of free-draining farmlands, with a proportion of dry heathland and some areas of wet heath, moor & boglands. Washland areas are important on the southern fringe of the zone along the River Dove and also in the northeast associated with the Churnet.

Objectives

- The primary habitat objectives within the area are the maintenance, restoration and expansion of species-rich grasslands, particularly lowland meadows and also upland and lowland heathland.

- The other objective in the area is to increase connectivity of semi-natural habitats to create larger habitat complexes using priority habitats where appropriate.

6 Northern Churnet and Rudyard Woodlands

B.9 The Northern Churnet and Rudyard Woodlands comprises an area immediately south/south - west of Leek extending northwards to Rudyard and contained within the Potteries and Churnet Valley NCA. The area consists of wooded valleys, moorland fringe, and upland pasture. Primarily set in valleys the woodland blocks are scattered and

fragmented. The two largest woodland blocks are Deep Hayes Country Park SBI and Longsdon Wood and Cowhay Wood SBI. Man-made reservoirs occur in two of the valley bottoms at Deep Hayes and Rudyard. On the surrounding plateaus there are scattered heathland patches within a network of improved pasture enclosed by dry stone walls and hedgerows. Small patches of species rich grassland occur mostly associated with the fragmented woodland areas.

Objectives

- Maintain, enhance and expand the native woodland resource to reduce fragmentation of isolated woodland patches. The creation of native woodland needs to consider the presence of other habitats, in particular the presence of remnant heathland patches and small areas of species rich grassland.

- Increase the connectivity of semi-natural habitats in association with the woodland resource to create larger habitat mosaics of woodland, heathland and species rich grassland.

- Maintain and expand remnant patches of heathland within the upland pasture.