Stroud District Open Space and Green Infrastructure Study

STROUD DISTRICT COUNCIL
www.stroud.gov.uk

Main Report
(Part 1 of 2)

Final June 2019

ethos Environmental Planning

Leisure and the Environment play · recreation · community

belap bennett leisure & planning

Stroud Open Space and Green Infrastructure Study

Contents

Glossary of Terms

Term		Meaning
AONB		Area of Outstanding Natural Beauty
ANGSt		Accessible Natural Green Space Standard
BwN		Building with Nature (a GI standard for developments)
CIL		Community Infrastructure Levy
FIT		Fields In Trust (originally known as the 'National Playing Fields Association')
GCER		Gloucestershire Centre for Environmental Records
GI		Green Infrastructure
GIS		Geographic Information Systems
GLNP		Gloucestershire Local Nature Partnership
HRA		Habitats Regulations Assessment
IMD		Index of Multiple Deprivation
KWS		Key Wildlife Site[1]
LCA		Landscape Character Assessment
LAP		Local Area for Play
LEAP		Local Equipped Area for Play
LNR		Local Nature Reserve
MUGA		Multi Use Games Area
NCA		National Character Assessment
NCN		National Cycle Network
NE		Natural England
NEAP		Neighbourhood Equipped Play Area
NEWP		Natural Environment White Paper
NGB		National Governing Body
NIA		Nature Improvement Area
NNR		National Nature Reserve
NPPF		National Planning Policy Framework
ONS		Office for National Statistics
PPG17		Planning Policy Guidance Note 17
PROW		Public Right of Way
SAC		Special Area of Conservation
SDC		Stroud District Council
SNA		Strategic Nature Area
SPA		Special Protection Area
SPD		Supplementary Planning Document
SSSI		Site of Special Scientific Interest
PPS		Playing Pitch Strategy
Ramsar		The Convention on Wetlands, an intergovernmental treaty that provides the framework for international cooperation for the conservation and wise use of wetlands and their resources.
RSuDs		Rural Sustainable Drainage Project

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[1] Name may change to Local Wildlife Site (LWS) to accord with NPPF terminology.

1.0   INTRODUCTION

1.1   Background

Access to high quality open spaces and opportunities for sport and recreation can make an important contribution to the health and wellbeing of communities. The National Planning Policy Framework (NPPF) requires local planning authorities to set out policies to help enable communities to access high quality open spaces and opportunities for sport and recreation. These policies must be based on a thorough understanding of the local needs for such facilities and opportunities available for new provision.

The NPPF also requires that plans and planning policies should take a proactive approach to mitigating and adapting to climate change and should protect and enhance the natural environment, biodiversity and geodiversity, including through providing for measurable net gains for biodiversity, based on the Defra metric. Local planning authorities should set out a strategic approach in their Local Plans, to maintaining and enhancing networks of habitats and green infrastructure.

Ethos Environmental Planning Ltd (in conjunction with Leisure and the Environment, and belap) were commissioned by Stroud District Council to undertake an Open Space, Green Infrastructure, Sport and Recreation Study (including Playing Pitches, Outdoor Sport and Indoor Sport). The Study responds to national policy requirements and will inform the preparation of the Council's Local Plan Review (2020 - 2040).

1.2   The Open Space, Green Infrastructure, Sport and Recreation Study

The Study examines existing and projected needs for open space, green infrastructure, sport and recreation provision, using a variety of data sources, together with independent investigation, stakeholder and community consultation and surveys. Analysis of the data gathered and the reporting of findings has followed appropriate national guidance.

In brief, the scope of the Study covers:

- Publicly accessible open space, including amenity and natural space, parks and recreation grounds, play space, allotments;
- Green and Blue Infrastructure, which includes private space as part of the strategic network, as well as the public assets, it goes beyond the site specific, considering also the big picture;
- Outdoor sports space; and
- Indoor/Built sports facilities.

1.3   How does this Report relate to the overall Open Space, Green Infrastructure, Sport and Recreation Study?

This Open Space and Green Infrastructure Study has been undertaken by Ethos Environmental Planning to inform and support the preparation of the Council's Local Plan Review and the

Council's decision-making process in relation to open space and Green Infrastructure (GI) provision up to 2040 (The plan period is 2020 – 2040). It is one of six reports provided as part of the overall Study.

The six reports are the:

- Executive Summary;
- Stroud Community and Stakeholder Consultation Report;
- Stroud Open Space and Green Infrastructure Study (part 1 and 2);
- Stroud Playing Pitch Strategy Needs Assessment;
- Stroud Playing Pitch Strategy - Strategy and Action Plans (part 1 and 2); and
- Stroud Indoor Sports Facilities Needs Assessment.

The Study has been carried out in-line with the National Planning Policy Framework (NPPF). The Study has primarily been affected by the omission of Planning Policy Guidance Note 17 (PPG 17) from the national policy framework. Whilst the government has not published anything specifically to replace this document (it does signpost the Sport England guidance for sports facilities assessments[2]), there is however, still a clear reference made in the new guidance to the principles and ideology established within PPG17. As such the underlying principles of this study have been informed by the former guidance provided in '*Planning Policy Guidance Note 17: Planning for Open Space, Sport and Recreation*', and its Companion Guide '*Assessing Needs and Opportunities*', which is a tried and tested methodology and takes a consistent approach with many other local authorities.

Although four separate reports and being provided (due to practicality/usability and differences in methodologies which are clearly explained in each report), the overall Study provides a coherent and joined up approach to policy recommendations around open space, GI and indoor and outdoor sports provision. A separate Executive Summary has been provided which provides an overview and brings all aspects of the Study together.

1.4   The Local Plan

The existing Local Plan (2006-2031) adopted in November 2015, is currently under review. Until such time as the new local plan (2020-2040) takes its place it contains the Council's adopted planning policy. The Local Plan Review will shape where new development will go for Stroud District.

The District Council started the process of reviewing the current Local Plan in 2017. Following consultation, and committee resolution the Council's preferred strategy for meeting development needs over the next 20 years includes the following:

Town Centres: Preferred Strategy will seek to deliver:

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[2] http://planningguidance.planningportal.gov.uk/blog/guidance/open-space-sports-and-recreation-facilities-public-rights-of-way-and-local-green-space/open-space-sports-and-recreation-facilities

- Stroud town centre: walking and cycling links to and from the Stroudwater Canal and the wider Stroud valleys network
- Nailsworth town centre: improved walking and cycling links to the wider Stroud valleys network
- Dursley town centre: improved walking and cycling links connecting with Cam and Uley
- Wotton-under-Edge town centre: the Greenway cycle and walking route, subject to further feasibility work
- Stonehouse town centre: better cycling and walking links with and signage to/from the Stroudwater canal and to the wider Stroud valleys network.

Local Housing Need: The Preferred Strategy will seek to deliver: at least 638 new homes per year for a twenty-year period, on a mix of brownfield and greenfield allocated housing sites of varying sizes to ensure delivery is maintained throughout the plan period.

Local Green Spaces and Community Facilities: the Preferred Strategy will seek to deliver:

- A full audit of accessible open spaces across the District and their primary purpose
- A mapped GI network, linking urban areas to the wider countryside, identifying important habitats, landscape features, river and green corridors and ecological networks
- A set of standards for local open space, sport and recreation facility provision to assess the adequacy of provision
- A full assessment of existing local open space, sport and recreation facility provision and identification of surpluses and deficiencies based on quality, quantity and accessibility
- Site opportunities to address shortfalls in local open space, sport, recreation and community facility provision
- Opportunities to address gaps in the GI network and enhance the network function
- Restoration of the derelict canal between Stonehouse and Saul Junction, reconnecting Stroudwater Navigation to the Gloucester & Sharpness Canal, including creating 30 hectares of biodiverse habitat and canal towpath
- Improvements to the Stonehouse to Nailsworth cycleway, including biodiversity improvement and resurfacing work; creation of the Cam, Dursley and Uley Greenway and potential to deliver a Wotton under Edge, Kingswood and Charfield Greenway
- Support for the identification of local green spaces through Neighbourhood Development Plans and the protection of community facilities through existing Assets of Community Value legislation
- Opportunities to address identified community needs in association with new development through the Community Infrastructure Levy (CIL) and s106 agreements
- Support for the planned provision of community facilities alongside housing growth through master planning of strategic and other major developments
- Continued protection of identified areas of biodiversity, landscape, and heritage importance
- A mitigation strategy for the Cotswold Beechwoods SAC to assess and address recreational pressures including from growth within Gloucester.

Growth strategy: the preferred growth strategy will distribute at least 5,700 additional dwellings and sufficient new employment land to meet needs for the next twenty years.
The strategy will concentrate housing growth at the main towns of Cam and Dursley, Stonehouse and Stroud, where there is best access to services, facilities, jobs and infrastructure.

Housing and employment growth will also be centred at two new settlements at Sharpness and at Wisloe within the Severn Vale (A38/M5 corridor) where there is the potential to create new sustainable communities along garden village principles. Further strategic employment growth will also be concentrated at accessible locations within the A38/M5 corridor.

In order to meet wider development needs and to support and improve existing services and facilities at smaller towns and larger villages, lesser levels of growth will be delivered at the local service centres of Berkeley, Minchinhampton, Nailsworth and Painswick.

Limited further growth will be delivered at the villages of Brimscombe, Chalford, Kings Stanley, Kingswood, Leonard Stanley, Manor Village and Thrupp which have a range of local facilities and which benefit from good transport links, or which have the potential to develop better transport links, to strategic facilities at the nearby towns of Stroud and at Wotton-under-Edge, where growth potential is limited by environmental constraints.

Further infill development to maximise the use of brownfield land will be supported at these and other settlements within settlement development limits. Some limited development immediately adjoining settlement development limits will be allowed to meet specific identified local development needs (i.e. exception sites for first time buyers, self-build and custom build housing, rural exception sites) subject to being able to overcome environmental constraints.

Further detail regarding relevant policy within the existing Local Plan (2006-2031) is included in section 3.2.2.7 of this report.

1.5   Purpose of this Report

The aims of the study are to provide a robust assessment of needs and provision (in terms of quantity, quality and accessibility) of open spaces in order to establish local provision standards and create an up-to-date evidence base which can be used to inform the Local Plan Review. The standards will be used to assess proposals for open spaces during the Local Plan period, recognising the need for improving the quality of existing open spaces in addition to requiring new provision, set within a Green Infrastructure network.

The study will provide the council with up to date information on open space and green infrastructure location, coverage and provision. It will provide a comprehensive assessment of the current level of provision of the different types of open space.

The brief for the study highlights that the overarching intent of the audit and assessment is to provide a robust evidence base, enabling a coherent strategy approach to policy and development management recommendations that follow five themes:

1. Protect the existing open space network;
2. Enhance and improve the accessibility and quality of existing provision;
3. Provide new open space to expand the network strategically;
4. Create multifunctional strategic hubs of open space; and
5. Work together to protect, deliver and effectively manage open space, GI, sport and recreation provision across the District.

The study will provide the following key outputs:

- a full audit of all accessible open spaces across the district categorised by their primary purpose in line with any typologies identified. This data to be provided in the form of GIS layers and linked Access database.
- Production of a GI mapped network in the form of a GIS layer and linked Access database encompassing urban areas and in the countryside extensive habitats, major landscape features such as river corridors and flood meadows landscapes, and the identification of wide green corridors and ecological networks.
- Production of local provision standard recommendations in accordance with relevant guidance and local needs.
- Application of such proposed provision standards enabling the identification of surpluses and deficiencies based on quality, quantity and accessibility.
- Application of Green Infrastructure networks enabling the identification of any gaps in said network, the potential to protect key network areas and enhance the network function.
- A review of current Local Plan policy including recommendations to address the key findings and drive future development management decisions and policy as part of the Review. This will include the potential for Green Infrastructure as well as Local Green Space policies that could accord with the NPPF.
- An Executive Summary of the results of all the Study key findings, conclusions and recommendations for publication.

1.6   Structure of the Report

The Open Space and Green Infrastructure (GI) Study is presented in two key parts.

Part 1: Main Report follows the five key stages as summarised below:

- Step 1 – Identifying Local Needs
- Step 2 – Audit of Existing Open Space and GI Assets

- Step 3 – Setting Local Standards (for open space only, although key principles for GI have been set)
- Step 4 – Applying Local Standards and Analysis of the GI Network
- Step 5 – Drafting Policy and Management Recommendations

Part 2: Area Profiles - Analysis by sub area for 8 clusters. These are based on Parishes and are in accordance with the current Local Plan (see section 1.7.2).

For each of the sub areas, the following information is provided:

- A description of the area;
- Maps showing the provision of open space and GI;
- Quantitative analysis of provision of open space and GI;
- Analysis of access to open space and GI;
- Summary of quality issues for open space and GI;
- Analysis of future need for open space and GI, including existing key GI corridors and opportunities for enhancing connectivity for people and wildlife; and
- Summary of open space and GI priorities for the area.

The area profiles are intended to be a starting point to inform other strategies and plans, including neighbourhood plans, planning policies, development control policies, parks and open spaces service and action plans.

The area profiles will be presented as part 2 of the overall Open Space and Green Infrastructure Study. Part 1 will form an overview of open space and GI at a more strategic level and set out details of the wider open space and GI study. However, it is intended that parts 1 and 2 of the report would be considered together in decision making.

1.7   The Study Area

1.7.1   Overview of Stroud District

The District of Stroud is located in the county of Gloucestershire and covers an area of approximately 45,325 hectares (about 175 square miles). Stroud lies about 20 miles north of Bristol and immediately south of Gloucester and Cheltenham. Gloucestershire sits at the periphery of England's south west and has close links with the Midlands, as well as south Wales.

Stroud's natural environment is one of its greatest assets and includes some of Europe and the UK's most significant sites, which are protected by national policy and statutory legislation. Much of the eastern half of the District falls into the Cotswold Area of Outstanding Natural Beauty (AONB), which covers just over 50% of the District's total land area. The western half of the District, characterised by the low lying landscape of the Severn Vale, is bounded by the Severn Estuary and includes extensive areas of land liable to flooding which extend eastwards along the river corridors within the incised river valleys along the Cotswolds escarpment. The District contains internationally important wildlife sites at the Severn

Estuary, at Rodborough Common (south of Stroud) and at Cotswolds Beech woods straddling the north eastern boundaries of the District.

The District has a rich built heritage, including 42 conservation areas in a wide variety of towns and villages. Amongst these is the unique and very large Industrial Heritage Conservation Area, which extends through the Stroud Valleys, in recognition of the area's important industrial legacy – including historic mill buildings and canal- and river-related structures.

The main town, Stroud, acts as the focal point of the wider functional urban area within the Stroud Valleys. The Valleys are home to some 49,000 people (just over 40% of the District's population), including just under 6,000 in the town of Nailsworth. Towards the south of the District lie the towns of Cam and Dursley (population approximately 15,000), which jointly act as a focus for the South Vale area. Stonehouse (just under 8,000 people) lies just outside the topographical Stroud Valleys (3.5 miles west of Stroud), but the town functions as part of this urban area. To the north of the District, Hardwicke (just under 4,000 people) forms part of the Gloucester urban fringe area. The remaining countryside areas of the District are mainly used for agriculture and contain a large number of smaller towns, villages and hamlets.

1.7.2   Administrative Boundaries

In order to analyse the current provision and future requirements for open space across the District, Parishes have been used as the geographical areas (as shown in figure 1). These boundaries are the basis for collating census data across the council area. Of particular relevance to this study are population statistics (ONS 2017 mid year estimates), which have been used as the basis for much of the current and future assessment of need for open space.

Figure 1 also shows how the Parishes have been grouped into sub areas/clusters (in accordance with the Local Plan). These clusters form the basis of the analysis of open space and GI in part 2 of the Open Space and Green Infrastructure Study. There are 52 Parishes located within the Study Area, which have been grouped into 8 clusters generally comprising a market town and rural hinterland and sharing some common issues in that locality.

Stroud District shares boundaries with Cotswold District, Gloucester City, Tewkesbury Borough, Forest of Dean (albeit in riparian terms) and the unitary authority of South Gloucestershire. To the west is the Forest of Dean, which sits on the opposite bank of the River Severn estuary. Cross-border issues are considered within the Community and Stakeholder Consultation Report (2018). Cross-border issues are most relevant to large natural green spaces/GI and outdoor/indoor sports space and biodiversity.

Figure 1   Parishes and Clusters included within Stroud District
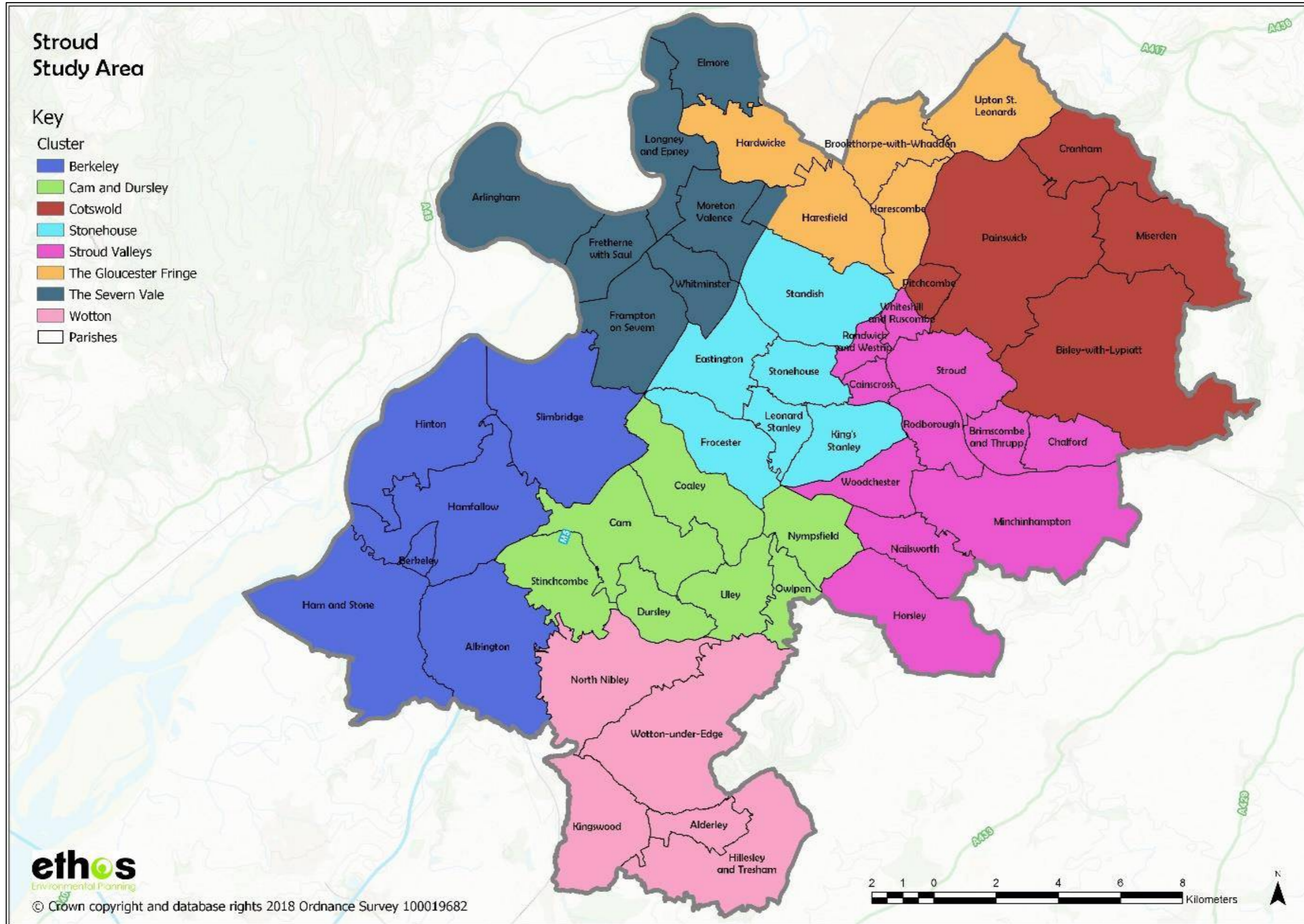
1.7.3 Population Statistics

The total population of Stroud District (based on the ONS 2017 mid year estimate) is 118,544. Table 1 below shows the breakdown by Parish.

Table 1   Parish population statistics (ONS 2017 mid year estimates)

Parish	Population
Alderley	329
Alkington	729
Arlingham	484
Berkeley	2044
Bisley-with-Lypiatt	2349
Brimscombe and Thrupp	1826
Brookthorpe-with-Whaddon	396
Cainscross	6993
Cam	8458
Chalford	6078
Coaley	788
Cranham	478
Dursley	7424
Eastington	1622
Elmore	197
Frampton on Severn	1401
Fretherne with Saul	739
Frocester	146
Ham and Stone	777
Hamfallow	1038
Hardwicke	5113
Harescombe	243
Haresfield	410
Hillesley and Tresham	308
Hinton	1349
Horsley	776
King's Stanley	2496
Kingswood	1469
Leonard Stanley	1544
Longney and Epney	281
Minchinhampton	5436
Miserden	455
Moreton Valence	162
Nailsworth	5760
North Nibley	901
Nympsfield	414
Owlpen	414
Painswick	3039
Pitchcombe	237

Parish	Population
Randwick and Westrip	1470
Rodborough	5285
Slimbridge	1209
Standish	251
Stinchcombe	491
Stonehouse	8074
Stroud	13709
Uley	1170
Upton St. Leonards	2851
Whiteshill and Ruscombe	1126
Whitminster	846
Woodchester	1207
Wotton-under-Edge	5752

1.8   Health and Deprivation Context

1.8.1   Introduction

Public Health England have published the 2017 Health Profile for Stroud District[3]. In summary, the health of people in Stroud is generally better than the England average. Stroud is one of the 20% least deprived districts/unitary authorities in England, however about 11% (2,200) of children live in low income families. Life expectancy for men is higher than the England average.

In Year 6, 15.1% (163) of children are classified as obese, better than the average for England.

1.8.2   Index of Multiple Deprivation (IMD) Analysis

The Indices of Deprivation 2015 provide a set of relative measures of deprivation for small areas (Lower-layer Super Output Areas) across England, based on seven different domains of deprivation:

- Income Deprivation
- Employment Deprivation
- Education, Skills and Training Deprivation
- Health Deprivation and Disability
- Crime
- Barriers to Housing and Services
- Living Environment Deprivation

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[3] https://www.stroud.gov.uk/media/558502/stroud-health-profile-july-2017.pdf

Each of these domains is based on a basket of indicators. As far as is possible, each indicator is based on data from the most recent time point available; in practice, most indicators in the Indices of Deprivation 2015 relate to the tax year 2012/13.

The Index of Multiple Deprivation (IMD) combines information from the seven domains to produce an overall relative measure of deprivation.

Figure 2 below shows the IMD rank for each LSOA within the District, where 1 is most deprived and 10 is least deprived.

Figure 2   IMD ranks in Stroud Study Area (by LSOA)
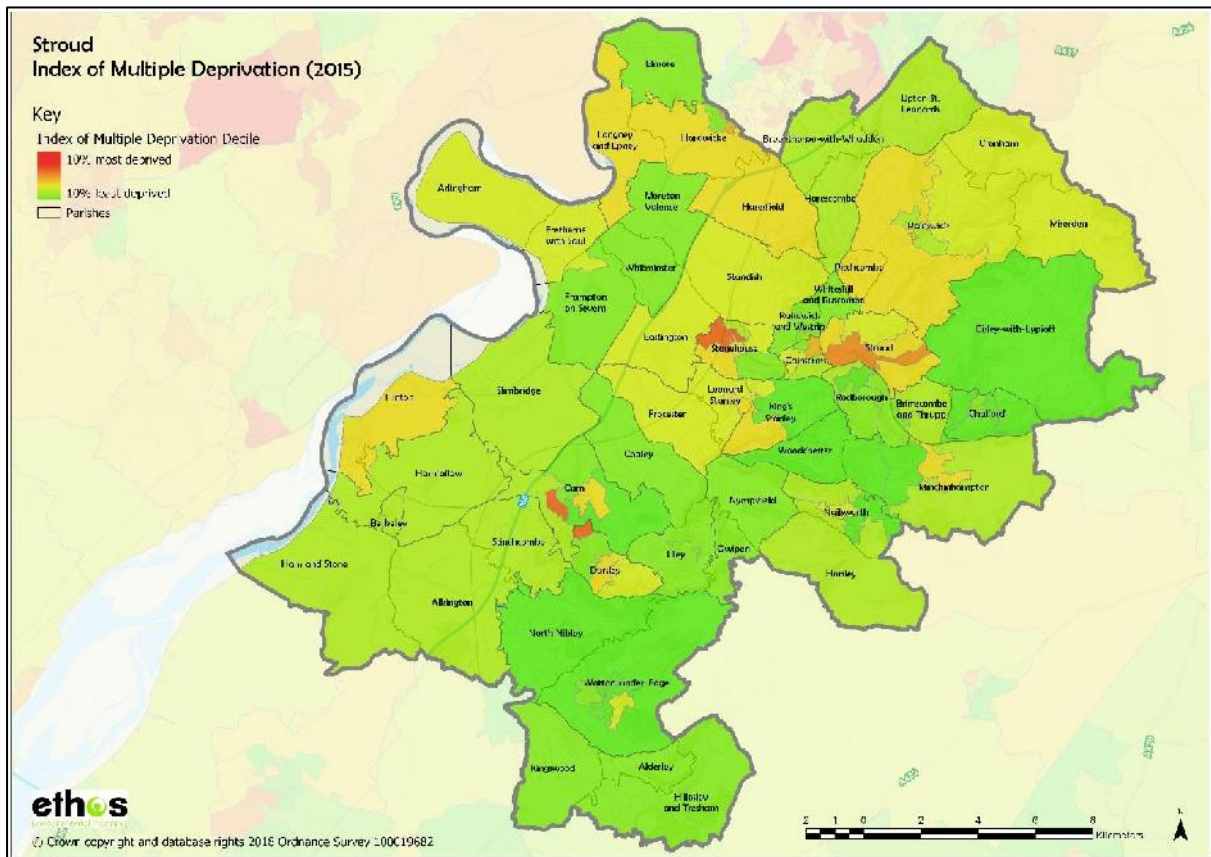
As can be seen from figure 2, levels of deprivation are generally low across the District, with the highest levels of deprivation occurring in small pockets around Stonehouse, Stroud, Cam and Dursley.
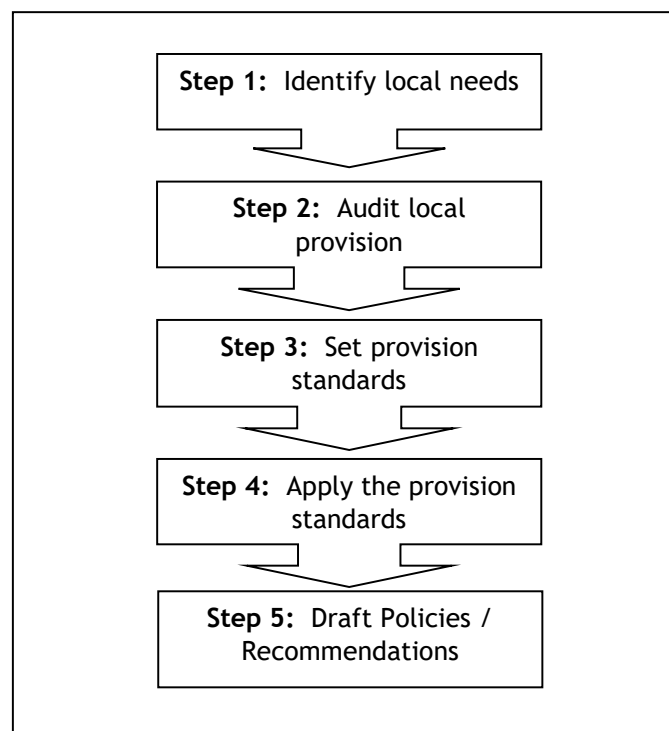
2.0   METHODOLOGY

2.1   General

Open Space

The starting point for this Study has been the guidance in Section 8 of the NPPF (Promoting healthy and safe communities), which adheres to but has superseded PPG17. The policy gives clear recommendations for the protection of and appropriate provision for open space, however it does not provide any detailed guidance on how to conduct an open space assessment.   It is therefore both logical and acceptable to reference the guidance for assessment provided in the former PPG17 and its Companion Guide. PPG17 placed a requirement on local authorities to undertake assessments and audits of open space, sports and recreational facilities in order to:

- identify the needs of the population;
- identify the potential for increased use;
- establish an effective strategy for open space/sports/recreational facilities at the local level.

The Companion Guide to PPG17 recommended an overall approach to this kind of study as summarised below:

Figure 3   Summary of methodology

Step 1: Identify local needs

Step 2: Audit local provision

Step 3: Set provision standards

Step 4: Apply the provision standards

Step 5: Draft Policies / Recommendations

Within this overall approach the Companion Guide suggests a range of methods and techniques that might be adopted in helping the assessment process. Where appropriate,

these methods and techniques have been employed within this study and are explained at the relevant point in the report. In addition, they are summarised in the paragraphs below.

Section 5 of the NPPF (Conserving and enhancing the natural environment) sets out guidance which has been adhered to where appropriate.

Green Infrastructure

There are currently no agreed national standards for assessing GI provision. For the purpose of this Study, the approach adopted broadly followed the PPG17 steps identified above, and included:

- Audit of provision: Mapping of key GI assets grouped into three themes: Wellbeing, Water and Wildlife.
- Identification of the benefits of GI and setting key principles for GI
- Analysis of the GI network:
  - Connectivity - Identification of key GI corridors and opportunities for addressing gaps in the network for both biodiversity/wildlife and access for people (desktop analysis). The identification of key GI corridors and opportunities draws on desktop analysis of the physical assets and gaps between assets, quality data, and also through existing plans and strategies, the Gloucestershire Local Nature Partnership (GLNP) Strategic GI, Strategic Nature Areas and Nature Improvement Areas, and national datasets e.g. Natural England's National Habitat Network Restoration dataset.
  - Quality - Opportunities for quality improvements to enhance functionality of the GI network, based on open space quality audits and available information such as SSSI condition monitoring.
  - Access – as assessment of the access to GI, using open space access standards and Natural England Access Network Mapping data.
- Draft policies and recommendations

The Natural England's Green Infrastructure Guidance[4] , the Strategic Framework for GI in the County (see section 3.2.2.3) and Building with Nature (see section 3.3.2), all provides a context for the Study. Section 3 of this report provides an overview of relevant plans and policies.

2.2   Identifying Local Need (Step 1)

The Community and Stakeholder Consultation Report (2018) examines identified local need for various types of open space, GI, sports and recreational opportunities. It has drawn upon a range of survey and analytical techniques as well as a detailed review of existing consultation data and other relevant documentation. The report details the community consultation and research process that has been undertaken as part of the study as well as the main findings. The findings of this assessment are summarised in this document.

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[4] http://publications.naturalengland.org.uk/publication/35033

2.3   Audit of Existing Open Space and Green Infrastructure Assets (Step 2)

2.3.1   Defining open space and Green Infrastructure

Open space

For the purposes of this study, open space is defined as those green spaces having recreational value and being freely accessible to the public (the exception to this is allotments, which are generally not freely accessible, but are an important component of open space provision). The open space typologies included within this study are explained in more detail in section 5.1 of this report.

Green Infrastructure

The National Planning Policy Framework defines green infrastructure (GI) 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.*

Within their Green Infrastructure Guidance, Natural England define GI as follows:

'Green Infrastructure is a strategically planned and delivered network comprising the broadest range of high quality green spaces and other environmental features[5]. It should be designed and managed as a multifunctional resource capable of delivering those ecological services and quality of life benefits required by the communities it serves and needed to underpin sustainability. Its design and management should also respect and enhance the character and distinctiveness of an area with regard to habitats and landscape types.

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

Examples of green (and blue) infrastructure in Stroud include rivers; cemeteries; canals; sports pitches; orchards; green roofs; parks; open fields and woodland. Green infrastructure can be considered at a range of scales, from international, such as the Severn Estuary or the Cotswolds Beechwoods SAC to the local, such as a pond or a meadow created within a new housing development.

The GI that has been audited/mapped as part of this Study is set out in section 5.2 of this report.

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[5] It is important to note that this definition also includes blue infrastructure e.g. rivers, lakes, canals.

2.3.2   Defining the scope of the audit

In order to build up an accurate picture of the current open space, play and GI provision in Stroud District, an initial desktop audit of the open space and GI asset was carried out, this included:

- analysis of existing GIS data held by Stroud District Council;
- use of national datasets e.g. DEFRA and Natural England datasets;
- desktop mapping of open space from aerial photography;
- questionnaires to Town and Parish councils;
- liaison with council officers.

Following this, site visits were undertaken by Ethos at 172 open spaces and 132 outdoor play spaces to assess the quality of sites[6]. The quality audit drew on criteria set out in the 'Green Flag Award[7]' and also the Building with Nature Benchmark[8]. This is explained in more detail in Section 7.5 of this report.

The audits were undertaken using a standardised methodology and consistent approach (explained in more detail in section 7.5). However, audits of this nature can only ever be a snap-shot in time and their main purpose is to provide a consistent and objective assessment of a site's existing quality and GI value rather than a full asset audit. Clearly, local communities may have aspirations which are not identified in the quality audit, but it is hoped that these can be explored further through site management plans and Neighbourhood/Parish plans as appropriate.

2.3.3   Approach to mapping

Open Space

As part of the audit process, sites were mapped into their different functions/typologies using a multi-functional approach to mapping, as demonstrated in figure 4 below.

Where open spaces cross Parish boundaries, in order to calculate the quantity of open space by Parish (and avoid double counting), these have been split using the Parish boundary, to ensure that the figures by Parish are as accurate as possible.

Only open spaces within the District have been mapped i.e. although cross-border use of open space has been noted and considered (within the Community and Stakeholder Consultation Report 2018), open spaces falling outside of the District have not been mapped.

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[6] A total of 350 sites were visited, which included checking the typology and access of sites where the desktop audit revealed uncertainty.

[7] http://www.greenflagaward.org.uk/judges/judging-criteria

[8] Building with Nature sets a new standard for green infrastructure. It brings together existing guidance and good practice to recognise high quality green infrastructure at all stages of the development process including policy, planning, design, delivery, and long-term management and maintenance.

It should be noted that the typologies mapping is as accurate as possible (as of February 2019) as was signed off by the Council following cross checking with the council's GIS layers, desktop mapping, consultation with town/parish councils and site visits.

The mapping will be kept up to date by SDC e.g. as new open space is provided through future development. This will enable the council to maintain an up-to-date analysis of open space provision against the standards set.

Figure 4   Multi-functional mapping of open space
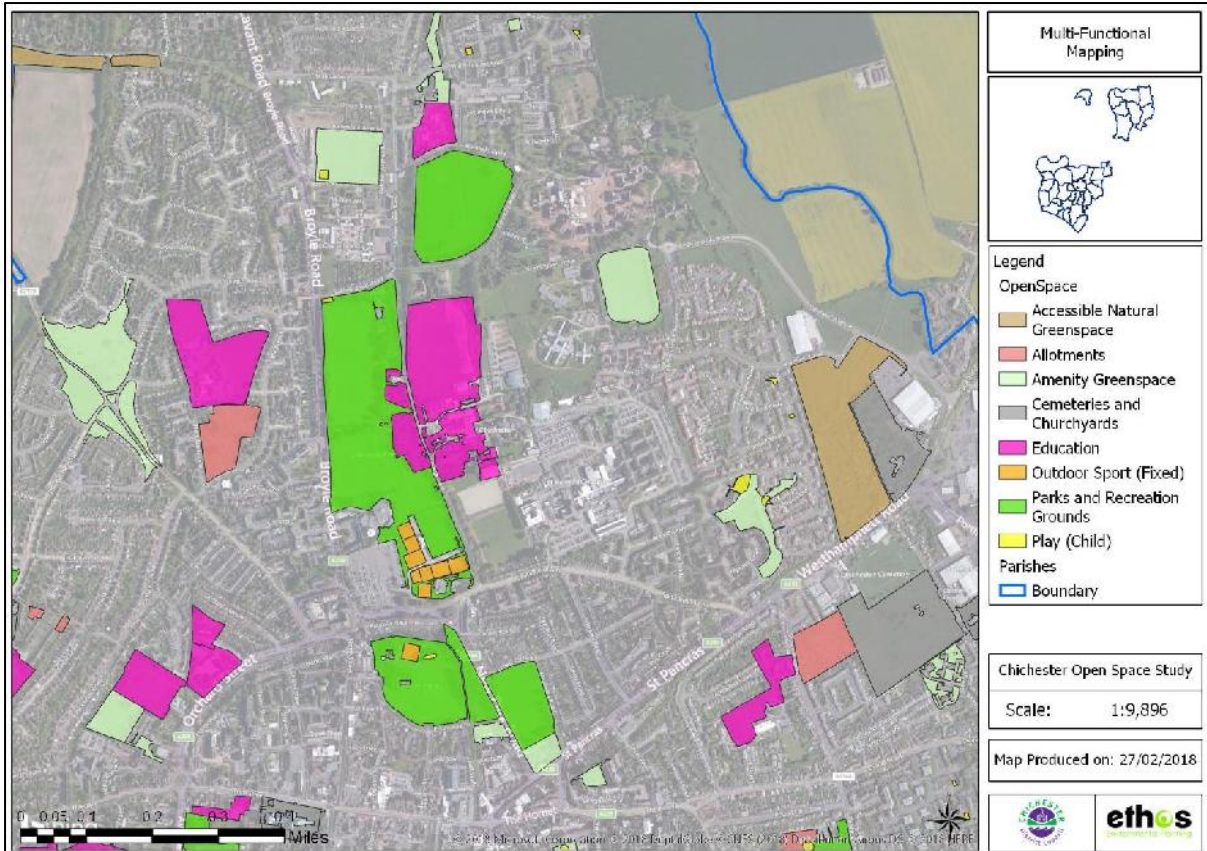
Green Infrastructure

Given that the vast majority of the District is rural and therefore can be considered as green (or blue) infrastructure, the mapping of GI in the District has focused on areas of high quality GI (e.g. statutory and non-statutory designated sites) and connectivity (rivers, major footpaths/cycleways, etc.). Maps/datasets have been grouped into the following themes, in accordance with Building with Nature[9]:

- Wellbeing;
- Water; and
- Wildlife.

The GI mapping goes beyond the site specific and considers landscape scale and strategic links, and considers GI and links within the surrounding area e.g. the Gloucestershire Local Nature Partnership (GLNP) County GI Strategy.

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[9] See section 3.3 and https://www.buildingwithnature.org.uk/

2.4   Set and Apply Provision Standards (Steps 3 and 4)

Local provision standards have been set for open space[10], with three components, embracing:

- quantity;
- accessibility;
- quality.

Quantity

The GIS database and mapping has been used to assess the existing provision of open space across the study area. The existing levels of provision are considered alongside findings of previous studies, the local needs assessment and consideration of existing and national standards or benchmarks. The key to developing robust local quantity standards is that they are locally derived, based on evidence and most importantly achievable. Typically, standards are expressed as hectares per 1000 people. The recommended standards are then used to assess the supply of each type of open space across the study area.

Access

Evidence from previous studies, the community and stakeholder consultation (needs assessment) and consideration of national benchmarks are used to develop access standards for open space. A series of maps assessing access for different typologies are presented in the report.

Quality

Quality standards have been developed drawing on previous studies, national benchmarks and good practice, evidence from the needs assessment and the findings of the quality audits. The quality standards also include recommended policies to guide the provision of new open space through development in the future.

2.5   Drafting Policy Recommendations (Step 5)

This section outlines higher level strategic options which may be applicable at Parish, Cluster/Sub Area and District/Study Area level. The strategic options address five key areas:

1. Existing open space and GI to be protected;
2. Existing open space and GI to be enhanced;
3. Opportunities for re-location/re-designation of open space (including the potential for strategic hubs of open space);
4. Identification of areas for new provision; and
5. Facilities that may be surplus to requirement

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[10] There are currently no agreed national standards for assessing GI provision, however, key GI corridors, gaps in connectivity and the protection and enhancement of GI has been considered by cluster/sub area in part 2 of this report. An overview of the GI network at the District level is provided in section 5.3 of this report.

The recommendations will enable the Council and its partners to work together to protect, deliver and effectively manage open space and GI provision across the District.

3.0   CONTEXT

3.1   Introduction

The PPG17 Companion Guide identified the importance of understanding the implications of existing strategies on the Study. Specifically, before initiating local consultation, there should be a review of existing national, regional Local Plans and strategies, and an assessment of the implementation and effectiveness of existing planning policies and provision standards.

This section sets out a brief review of the most relevant national and local policies and strategies related to the Study, which have been considered in developing the methodology and findings of the Study. Policies and strategies are subject to regular change, therefore the summary provided in this section was correct at the time of writing. Stroud District Council reserve the right to change and update this section as policies change.

This section also provides an overview of some of the key GI projects and partnerships, and concludes by highlighting the importance and benefits of good quality, multifunctional open space and GI.

3.2   Strategic Context

3.2.1 National Strategic Context

3.2.1.1   National Planning Policy Framework (NPPF) (February 2019) and National Planning Practice Guidance (NPPG).

NPPG is a web-based resource which brings together guidance on various planning topics in one place. It largely draws on the government's planning policies within the NPPF.

The NPPF sets out the Government's planning policies for England and how they should be applied. The NPPF must be adhered to in the preparation of local and neighbourhood plans, and is a material consideration in planning decisions. The NPPF contains the following references that relate to green infrastructure and open spaces:

- **Para 7** - The purpose of the planning system is to contribute to the achievement of sustainable development. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs.
- **Para 96** - Access to a network of high quality open spaces and opportunities for sport and physical activity is important for the health and well-being of communities. Planning policies should be based on robust and up-to-date assessments of the need for open space, sport and recreation facilities (including quantitative or qualitative deficits or surpluses) and opportunities for new provision. Information gained from the assessments should be used to determine what open space, sport and recreational provision is needed, which plans should then seek to accommodate.

- Existing open space, sports and recreational buildings and land, including playing fields, should not be built on unless:

  a) an assessment has been undertaken which has clearly shown the open space, buildings or land to be surplus to requirements; or

  b) the loss resulting from the proposed development would be replaced by equivalent or better provision in terms of quantity and quality in a suitable location; or

  c) the development is for alternative sports and recreational provision, the benefits of which clearly outweigh the loss of the current or former use.

- **Para 98** - Planning policies and decisions should protect and enhance public rights of way and access, including taking opportunities to provide better facilities for users, for example by adding links to existing rights of way networks including National Trails

- **Para 149 -** Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures. Policies should support appropriate measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure

- **Para 170 -** Planning policies and decisions should contribute to and enhance the natural and local environment.

The concept of green infrastructure (GI) is now firmly embedded in national policy with the NPPF requiring local planning authorities to set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure, and providing net gains for biodiversity[11]. It 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'*.

The District has a wide range of existing GI assets such as open spaces, parks and gardens, allotments, woodlands, street trees, fields, hedgerows, lakes, ponds, meadows and grassland playing fields, as well as footpaths, cycleways and waterways. However, the concept of GI looks beyond existing designations, seeking opportunities to increase function and connectivity of assets to maximise the benefits for the community.

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[11] Following the government's consultation on mandating biodiversity net gain in development, the Chancellor confirmed in the Spring Statement (March 2019) that the government will use the forthcoming Environment Bill to mandate biodiversity net gain.

3.2.1.2   The Natural Environment White Paper (NEWP) The Natural Choice: securing the value of nature (2011)

The White Paper[12] recognised that a healthy natural environment is the foundation of sustained economic growth, prospering communities and personal wellbeing. It sets out how the value of nature can be mainstreamed across our society by facilitating local action; strengthening the connections between people and nature; creating a green economy and showing leadership in the EU and internationally.

3.2.1.3   Biodiversity 2020: A strategy for England's wildlife and ecosystem services, (August 2011)

This biodiversity strategy for England builds on the Natural Environment White Paper and sets out the strategic direction for national biodiversity policy to implement international and EU commitments.

The vision for England is: 'By 2050 our land and seas will be rich in wildlife, our biodiversity will be valued, conserved, restored, managed sustainably and be more resilient and able to adapt to climate change, providing essential services and delivering benefits for everyone'.

The mission of this strategy is to 'halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people'. The Strategy contains four outcomes to be achieved by the end of 2020. These are:

Habitats and ecosystems on land (including freshwater environments)
By 2020 we will have put in place measures so that biodiversity is maintained and enhanced, further degradation has been halted and where possible, restoration is underway helping to deliver more resilient and coherent ecological networks as well as healthy and well-functioning ecosystems which can deliver multiple benefits for wildlife and people too.

Marine habitats, ecosystems and fisheries
By 2020 we will have put in place measures so that biodiversity is maintained, further degradation has been halted and where possible, restoration is underway, helping deliver good environmental status and our vision of clean, healthy, safe productive and biologically diverse oceans and seas.

Species
By 2020, we will see an overall improvement in the status of our wildlife and will have prevented further human-induced extinctions of known threatened species.

People
By 2020, significantly more people will be engaged in biodiversity issues, aware of its value and taking positive action.

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[12] http://www.official-documents.gov.uk/document/cm80/8082/8082.pdf

3.2.1.4　　　　A Green Future: Our 25 Year Plan to Improve the Environment (2018)

This DEFRA 25 Year Environment Plan sets out government action to help the natural world regain and retain good health. It aims to deliver cleaner air and water in our cities and rural landscapes, protect threatened species and provide richer wildlife habitats. It calls for an approach to agriculture, forestry, land use and fishing that puts the environment first.

The 25-year goals are:

1. Clean air.
2. Clean and plentiful water.
3. Thriving plants and wildlife.
4. A reduced risk of harm from environmental hazards such as flooding and drought.
5. Using resources from nature more sustainably and efficiently.
6. Enhanced beauty, heritage and engagement with the natural environment.

In addition, pressures on the environment will be managed by:

7. Mitigating and adapting to climate change.
8. Minimising waste.
9. Managing exposure to chemicals.
10. Enhancing biosecurity.

Actions/policies are identified around six key areas: Using and managing land sustainably; Recovering nature and enhancing the beauty of landscapes; Connecting people with the environment to improve health and wellbeing; Increasing resource efficiency, and reducing pollution and waste; Securing clean, productive and biologically diverse seas and oceans; Protecting and improving the global environment.

The Plan sits alongside two other important government strategies. The Industrial Strategy sets out how productivity will be boosted across the UK through five foundations – ideas, people, infrastructure, business, environment, and places. Clean Growth is one of the four Grand Challenges laid out in the strategy that will put the UK at the forefront of industries of the future, ensuring that it takes advantage of transformational global trends. The Clean Growth Strategy sets out the UK's reaffirmed ambition to promote the ambitious economic and environmental policies to mitigate climate change and deliver clean, green growth.

3.2.1.5　　　　Sporting Future - A New Strategy for an Active Nation (December 2015)

This cross-government strategy seeks to address flat-lining levels of sport participation and high levels of inactivity in this country. Through this strategy, government is redefining what success in sport means, with a new focus on five key outcomes: physical wellbeing, mental wellbeing, individual development, social and community development and economic development. In future, funding decisions will be made on the basis of the outcomes that sport and physical activity can deliver.

It is government's ambition that all relevant departments work closer together to create a more physically active nation, where children and young people enjoy the best sporting opportunities available and people of all ages and backgrounds can enjoy the many benefits that sport and physical activity bring, at every stage in their lives.

Government is reaffirming its commitment to Olympic and Paralympic success but also extending that ambition to non-Olympic sports where it will support success through grassroots investment in those sports, and by sharing UK Sport's knowledge and expertise. The strategy outlines what is expected of the sector to deliver this vision, and how the government will support it in getting there.

Public investment into community sport is to reach children as young as five as part of a ground-breaking new strategy. The move will see Sport England's remit changed from investing in sport for those aged 14 and over to supporting people from five years old right through to pensioners, in a bid to create a more active nation.

Investment will be targeted at sport projects that have a meaningful, measurable impact on how they are improving people's lives – from helping young people gain skills to get into work, to tackling social inclusion and improving physical and mental health.

Funding will also be targeted at groups who have low participation rates to encourage those who do not take part in sport and physical activity to get involved. This includes supporting women, disabled people, those in lower socio-economic groups and older people.

3.2.1.6　　　Sport England Strategy – 'Towards an Active Nation' (2016-2021)

In response to the Government's strategy, Sport England's new strategy vision is that that everyone in England, regardless of age, background or ability, feels able to take part in sport or activity. Sport England's new vision and its supporting aims will therefore contribute to achieving the government's. Key features of the new Strategy are:

- Dedicated funding to get children and young people active from the age of five, including a new fund for family based activities and offering training to at least two teachers in every secondary school in England to help them better meet the needs of all children, irrespective of their level of sporting ability.
- Working with the sport sector to put customers at the heart of everything they do, and using the principles of behaviour change to inform their work.
- Piloting new ways of working locally by investing in up to 10 places in England – a mix of urban and rural areas.
- Investing up to £30m in a new volunteering strategy, enabling more people to get the benefits of volunteering and attracting a new, more diverse range of volunteers.
- Helping sport keep pace with the digital expectations of customers – making it as easy to book a badminton court as a hotel room.
- Working closely with governing bodies of sport and others who support people who already play regularly, to help them become more efficient, sustainable and diversify their sources of funding.

3.2.2 Regional and Local Context

3.2.2.1 The Gloucestershire 2050 Vision

A project to develop a vision for Gloucestershire in 2050 arose from a number of developments and discussions in 2016. Under the guidance of an Expert Advisory Group (which consisted of a cross-section of all stakeholders in Gloucestershire) an initial Vision was developed.

Separate to this process, the University, with the County Council, enrolled on Leading Places in 2016, a programme developed in partnership between the Local Government Association, the Higher Education Funding Council for England, and Universities UK. The Gloucestershire Leading Places project focused on how to improve the long-term, strategic leadership of the county, most specially to ensure that Gloucestershire fulfils its potential for economic and social development.

The two projects came together around a central theme of enabling decision makers and advocates to step outside of the status quo, current development plans, short-term political pressures, frameworks, and initiatives, to consider where Gloucestershire needs to be in 2050.

The intention of Gloucestershire Vision 2050 is to set ideas that collectively can transform the county for tomorrow while embracing, retaining, and nurturing the values and assets that are the central strengths of Gloucestershire today.

Leadership Gloucestershire has endorsed the following Vision for Gloucestershire 2050:

Gloucestershire: a great place to live, work and do business, with a thriving future.

And the following eight ambitions:

a) An inclusive county: we will ensure that the economic and social benefits of growth are felt by all.
b) A magnet county: we will see a growing working age population, by keeping and attracting more 18-40 year olds with high level qualifications, who want to live and work in the county.
c) An innovative county: we will see more businesses starting up, growing, and investing in research and innovation.
d) A skilled county: we will see more people with high-level skills and jobs in skilled occupations.
e) A prosperous county: we will see rising productivity and household income, offering higher living standards.
f) A healthy, happy and safe county: we will ensure people have a good work/life balance and see improved health and wellbeing.
g) A connected county: we will see improved transport and internet connections so that people and businesses can connect with each other more easily.

h) A sustainable county: we will see more efficient use of resources and more use of sustainable energy

Six major projects/ideas have been identified which could help to deliver the ambitions, as follows:

- Super City – Gloucestershire and Cheltenham could grow and regenerate by developing a third centre connecting the two communities to create a 'super city'.
- Cyber Park – The development of a National Cyber Security Park, dedicated to cyber-related business and education development, is integral for the Super City.
- Regional Parks – The Forest of Dean and the Severn Vale are two of the county's main assets, as well as the world renowned Cotswolds Area of Outstanding National Beauty (AONB). We think they should be designated as Regional Parks, creating a wetland area for flood management and investing in facilities.
- Lydney-Sharpness – A new multi-purpose crossing between Lydney and Sharpness will create a single 'destination' with development potential for both, reflecting their individual cultures, landscapes, and heritage.
- Cotswold Airport – An airport that can accommodate more air travel could be central to the county's economic success – facilitating higher value tourism, enhances transport links, or as a base for drone technology.
- Cotswold Waterpark – Cotswold Water Park could become a major tourism destination by redesigning the lake system, maintaining and expanding the range of leisure uses, and developing a 5-star hotel.

3.2.2.2 The Future for Nature 2019 – 2022 – Gloucestershire Local Nature Partnership (GLNP)

This 3 year Strategy for the GLNP is designed to provide a top-level set of priorities for the group to promote and, with its constituent partners, to take action to deliver in order to conserve and enhance the county's biodiversity, whilst supporting the growth and health of its people and economy.

GLNP Mission: Championing the essential role of Gloucestershire's natural environment in sustaining a vibrant, healthy, prosperous economy and society.

GLNP Vision: A healthy and valued natural environment, sustaining the economy and well-being of Gloucestershire.

The GLNP sets three core strategic themes:

- Creating space to thrive – seeking to raise nature's profile in order for people to thrive;
- Creating pace to grow – aspiring to protect, increase and enhance nature – not only for wildlife, but also for the benefit of business and communities; and
- Creating space to lead – building a strong voice for nature through a resilient and effective Partnership.

Each theme has it's own aspirations and objectives and will be delivered through an annual work plan that is co-created with Partners and achieved through collaboration.

3.2.2.3   A Strategic Framework for Green Infrastructure in Gloucestershire (2015) – Gloucestershire Local Nature Partnership (Currently under review, as of March 2019)

The purpose of the framework is to provide a starting point for more detailed GI work, to ensure a co-ordinated approach to and a shared vision for GI across the county and beyond. The strategic framework for green infrastructure has been endorsed by the Board of the GLNP and has the widespread support of the partner organisations within the GLNP (which includes Stroud District Council).

It sets out the definition of GI and the many social, economic and environmental benefits of GI. It identifies the strategic GI of Gloucestershire (in a series of maps and overall schematic map) showing a vision for the strategic green infrastructure of the county – both existing and where it needs to be created or enhanced, and sets out the priorities for delivering GI.

The vision, which is underpinned by a number of strategic principles set out within this strategic framework (set out below) are key considerations for this study.

<u>Vision</u>

That Gloucestershire's green infrastructure is enhanced, extended, promoted and managed to maximise its contribution to our high quality natural and historic environment, our health and well-being, our economy, our resilience to climate change and to a better quality of life for all.

And that sustainable economic growth in the county is strengthened by giving green infrastructure the same consideration as other key county-wide infrastructure issues.

<u>Strategic Principles</u>

A wide range of evidence, including government guidance, policies, research, and local information, as well as professional expertise has been used to develop the following strategic principles for green infrastructure in the county.

- Ensure that there is functional and well-connected strategic green infrastructure across the county. Gaps or missing links in Gloucestershire's strategic green infrastructure on the ground, (as revealed by the Local Nature Partnership's schematic map and more detailed local analysis) should be addressed.
- Maximise opportunities to improve both strategic green infrastructure and more local green infrastructure, whenever change is being considered – from individual development proposals and open space improvements to landscape scale environmental projects and flood alleviation schemes.
- Continue to work in partnership, involving the Voluntary and Community Sector, local authorities, government organisations, commercial interests (including the development industry) and local communities across Gloucestershire to promote and enhance green infrastructure. The Local Nature Partnership and GFirst LEP

(Gloucestershire's Local Enterprise Partnership) should act as the focus for that co-ordinated effort.

- Ensure that the multifunctional benefits of green infrastructure are understood by all stakeholders in the county and that all these benefits are considered when delivering Green infrastructure improvements and change.
- Ensure that green infrastructure principles are embedded in policies that guide change in the county, for example local plans; water catchment plans; economic plans etc
- Work with partners outside the county to ensure that the strategic green infrastructure of Gloucestershire links across administrative boundaries
- Secure funding to deliver improvements to strategic green infrastructure and for individual green infrastructure projects, for example through grant bids; section106 agreements; CIL and by embedding green infrastructure principles in all development and land management initiatives.
- Record, store and evaluate data that will add to our understanding of the role and importance of green infrastructure in the county, to enable an evaluation of different green infrastructure initiatives and to ensure that the green infrastructure evidence base is appropriate, robust and up-to-date

The benefits of GI

The key environmental and social benefits have been highlighted as:

- Ensuring a more attractive place for people to live, work and visit
- Giving opportunities for outdoor relaxation, play and access to nature
- Improving health and well-being
- lowering stress levels and providing opportunities for exercise
- Helping climate change adaptation, for example by flood alleviation and cooling urban heat islands
- Improving air and water quality
- Giving space for habitats and providing wildlife corridors and linkages
- Providing sustainable transport routes – for cycling and walking
- Enabling local food production - in allotments, gardens and through agriculture

And the key economic benefits as:

- Attracting inward investment - a more attractive area to business investors and potential residents
- Attracting increased visitor spend - a more attractive area for tourists and visitors
- Generating employment - attracting new businesses and residents to the area, increasing office occupancy rates and increasing the number of jobs in the area
- Saving environmental costs - improving air quality, reducing the urban heat island effect, filtering diffuse pollution, helping to manage flood risk and storing water during droughts
- Providing health benefits - impacts on health through improved air quality and surroundings which encourage activity and improve mental health and wellbeing

- Promoting food production - enabling increased productivity

Identifying the strategic green infrastructure of Gloucestershire

An evidence base has been used to produce a series of maps showing the key areas of existing and potential GI in the county. This has informed the development of a schematic map (below) showing a vision for the strategic GI of the county, both existing and where it needs to be created or enhanced, focusing on:

- Those areas with the highest concentration of environmental assets;
- Key linkages between urban and rural areas;
- Main water courses, catchments and flood plains;
- Significant landscape scale biodiversity and community projects;
- Important sustainable transport routes (cycling and walking); and
- Key urban settlements and areas identified for large scale new development.

The map is a schematic approach and should not imply that other areas of the county do not have significant GI attributes and benefits.

Figure 5   Schematic diagram of strategic GI for Gloucestershire
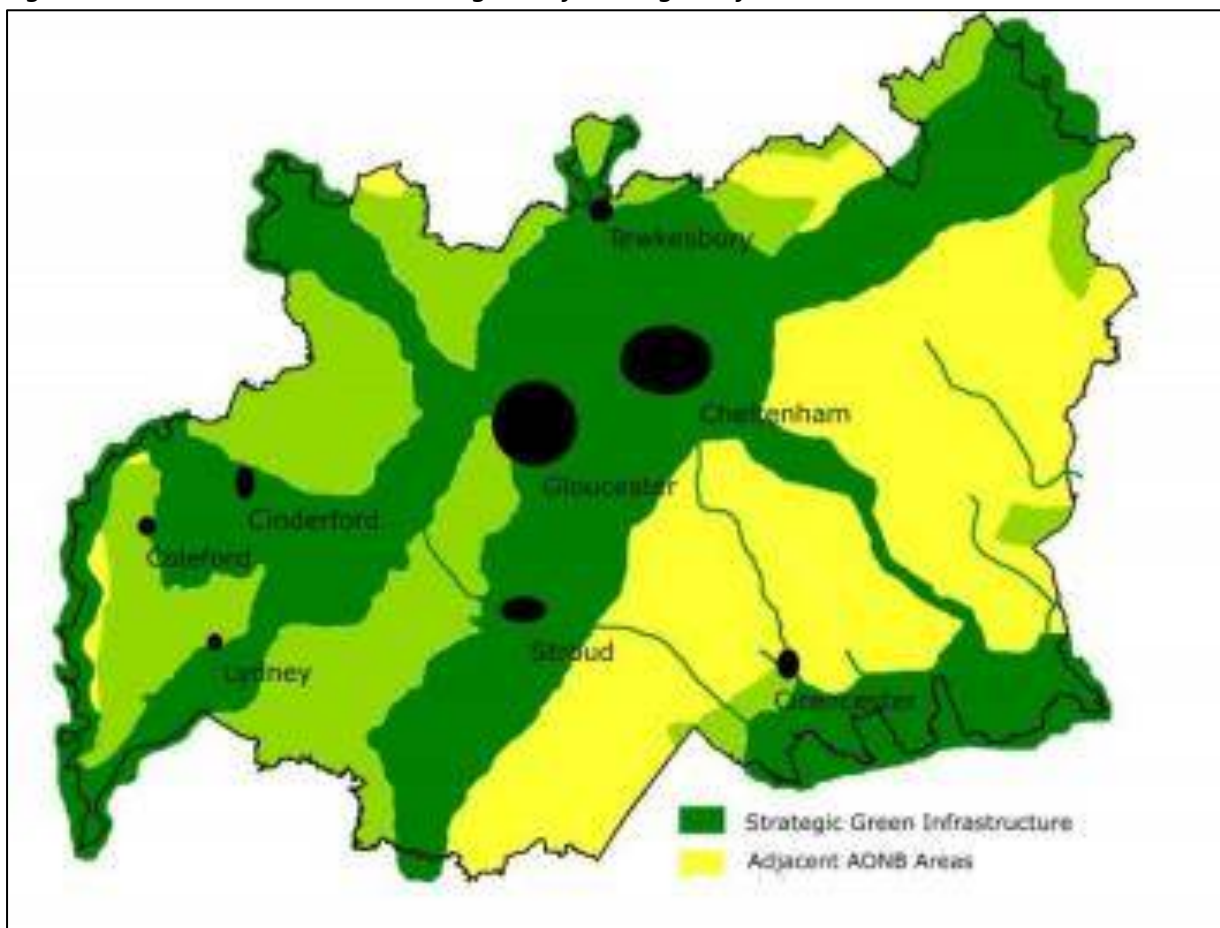
3.2.2.4   Gloucestershire Health and Wellbeing Strategy 2012-2032 (Fit for the Future)

The Gloucestershire Shadow Health and Wellbeing Board (GSHWB) was established in December 2011 and brings together key partners from health and social care. The Board met in shadow form until April 2013, when it became a statutory body.

The Board's vision is: 'Working Together to Live Well and Stay Well' The aim of the vision is 'To improve the health of all Gloucestershire residents and protect the most vulnerable' by 'working with our communities to co-produce health, wellbeing and resilience'

The strategy focuses on strengthening health and wellbeing and preventing ill health in Gloucestershire. It is underpinned by the following principles:

- Supporting communities to take an active role in improving health
- Encouraging people to adopt healthy lifestyles to stop problems from developing
- Taking early action to tackle symptoms or risks
- Helping people to take more responsibility for their health
- Helping people to recover quickly from illness and return home to their normal lives
- Supporting individuals or communities where life expectancy is lower than the county average or where quality of life is poor.

3.2.2.5   The Cotswolds AONB Management Plan (2018-2023)

The Cotswolds Conservation Board has a statutory duty to prepare and review a management plan for the Cotswolds AONB at five-yearly intervals. The Board adopted the current Cotswolds AONB Management Plan 2018-2023 in September 2018.

The Management Plan has two primary purposes:

1. To conserve and enhance the natural beauty of the Cotswolds AONB.
2. To increase the understanding and enjoyment of the special qualities of the Cotswolds AONB.

Special Qualities of the Cotswolds AONB

The special qualities of the Cotswolds AONB are the key attributes for which for which the AONB is considered to be important. Perhaps the special quality that is most unique to the Cotswolds AONB is the unifying character of the limestone geology, including its visible presence in the landscape and its use as a building material. Other special qualities of the AONB include its: internationally important, flower-rich grasslands and ancient, broadleaved woodlands; escarpment; dry stone walls; river valleys; high wolds; tranquillity and dark skies; vernacular architecture and distinctive settlements; accessible landscape offering quiet recreation; and significant archaeological, prehistoric, historic and cultural associations.

Vision: By 2043, the Cotswolds AONB will be:

- A distinctive, unique, accessible living landscape treasured for its diversity which is recognised by all for its wide open views, dry stone walls, intimate valleys, flower rich grasslands, ancient woodlands, dark skies, tranquillity, archaeology, historic and cultural heritage and distinctive Cotswold stone architecture.
- A thriving collaborative, pioneering, proactive place, sustained by the passions of residents, visitors and businesses alike, where communities and businesses value its special qualities.

Key issues:

- Erosion of the natural beauty and special qualities of the Cotswolds AONB.
- Lack of a consistent approach across the whole of the Cotswolds AONB.
- Lack of understanding of the benefits of the AONB designation.

Ambitions:

- To promote the Cotswolds AONB as the Walking and Exploring Capital of England.
- To secure the local design and delivery of a Cotswolds AONB package of agri-environment payments for public goods and services and rural development support.
- To ensure that communities and businesses within and around the Cotswolds AONB identify and celebrate being part of a nationally recognised landscape.
- To promote the case for the Cotswolds being designated as England's next National Park.

The management plan breaks the vision down into 14 outcomes which relate to the two primary purposes. These include Climate Change, Biodiversity, Access and Recreation and Health and Wellbeing.

It contains a number of policies, which are grouped by each of the outcomes. They are principles for how the AONB should be managed and provide a framework for all who have a role to play in the management of the AONB, facilitating a consistent approach across the whole of the Cotswolds AONB.

3.2.2.6   Stroud District Council Corporate Delivery Plan 2018-2022

The Council's vision is 'Leading a community that is making Stroud district a better place to live, work and visit for everyone'.

The plan seeks to demonstrate how this will be achieved around key priorities:

Economy: Help create a sustainable and vibrant economy that works for all

Affordable Housing: Provide affordable, energy efficient homes for our diverse and changing population

Environment: Help the community minimise it's carbon footprint, adapt to climate change and recycle more

Health and Wellbeing: Promote the health and well being of our communities and work with others to deliver the public health agenda

Delivery: Provide value for money to out taxpayers and high quality services to our customers

The Environment and Health and Wellbeing Priorities are most relevant to this study. Some of the They Key Actions for 2018/19 are:

- Implement our cycling and walking plan focused on Saul – Stonehouse – Stroud – Bimscombe, Stroud – Nailsworth and Cam – Dursley – Uley
- Agree a long term investment and management plan for Stratford Park with partners and contractors
- Deliver new 'walking sports' and 'healthy lifestyle' programmes.

3.2.2.7   Stroud District Local Plan (November 2015)

At the centre of the Local Plan is a Development Strategy, which provides an overview of the District and how it should evolve during the plan period (up to 2031). This Strategy establishes broad principles about acceptable levels of development in both the towns and the countryside, creating a policy framework that sets the scene for a wide range of planning decisions in the future. Crucially, it determines how, where and when various kinds of development will be distributed around the District, including the provision of new homes and employment land. The Development Strategy is articulated through a number of "Core Policies".

The Local Plan also includes more detailed "Delivery Policies" for managing and directing development, as well as specific site allocations, area designations, protections and planning controls. These will act together to put the Development Strategy into practice and to help achieve an overall vision for how our District should evolve between now and 2031.

District wide vision up to 2031

Stroud District sits at the south-western edge of the Cotswolds Area of Outstanding Natural Beauty and extends westward across the Severn Vale, which is bordered by a rich estuarine landscape. This Vision draws upon our special environmental, social and economic qualities. Our rural District is living, modern and innovative. We have responded to climate change through our Local Plan core policies and actions. These contribute to reducing our CO_2 emissions and adapting our lifestyles to live within our environmental limits.

Our District supports a network of market towns, well connected to their rural hinterlands and wider regional centres. Each contributes to our sustainable and thriving local economy. We capitalise on our heritage, skills, and knowledge – exploiting our unique assets to nurture growth in green technologies and creative industries. We are adaptable and able to respond to changing needs and modern lifestyles.

We enjoy a high quality of life within our vibrant and diverse communities, which have a strong sense of their own identity and local distinctiveness – from Wotton-under-Edge in the south, to Stroud Town in the centre and Upton St. Leonards in the north. They are all safe and secure places, where vulnerable people are supported.

Every day we see the richness, diversity and beauty of our District. We nurture our historic and cultural heritage, from our arts and crafts, through to the Cotswold Canals and our wool and cloth mills.

Strategic Objectives

Six principal objectives (under three topic areas) have been identified for the Local Plan. These objectives provide a more tangible and measurable way of taking forward the overall vision for the District, and have helped assess the relative merits of potential locations for strategic growth.

<u>Homes and communities:</u>

Strategic Objective SO1: Accessible communities
Maintaining and improving accessibility to services and amenities for our communities, with:
- Healthcare for all residents
- Affordable and decent housing for local needs
- Active social, leisure and recreation opportunities
- Youth and adult learning opportunities

<u>Economy and infrastructure:</u>

Strategic Objective SO2: Local economy and jobs
Providing for a strong, diverse, vibrant local economy that enables balanced economic growth, coupled with enhanced job opportunities across the District

Strategic Objective SO3: Town centres and rural hinterlands
Improving the safety, vitality and viability of our town centres, which link to and support the needs of their rural hinterlands

Strategic Objective SO4: Transport and travel
Promoting healthier alternatives to the use of the private car and seeking to reduce CO_2 emissions by using new technologies, active travel and/or smarter choices, working towards a more integrated transport system to improve access to local goods and services

<u>Our environment and surroundings:</u>

Strategic Objective SO5: Climate Change and environmental limits

Promoting a development strategy that mitigates global warming, adapts to climate change and respects our environmental limits by:

- Securing energy efficiency through building design
- Maximising the re-use of buildings and recycling of building materials
- Minimising the amount of waste produced and seeking to recover energy
- Promoting the use of appropriately located brownfield land
- Supporting a pattern of development that facilitates the use of sustainable modes of transport
- Minimising and mitigating against future flood risks, recycling water resources and protecting and enhancing the quality of our District's surface and groundwater resources

Strategic Objective SO6: Our District's distinctive qualities
Conserving and enhancing Stroud District's distinctive qualities, based on landscape, townscape and biodiversity.

The Local Plan includes a suite of policies relating to green infrastructure, open space, biodiversity and sustainable development, reflecting the importance of Stroud's natural environment asset, and the need to protect and enhance the provision of, access to and quality of open space and GI. An overview of the key policies relating to this study are noted below[13]:

Core Policy CP8: New housing development

Residential development proposals will need to:

1. Be built at an appropriate density that is acceptable in townscape, local environment, character and amenity terms
2. Have a layout that supports accessibility by bus, bicycle and foot to shopping and employment opportunities, key services and community facilities or contribute towards provision of new sustainable transport infrastructure to serve the area
3. Have a layout, access, parking, landscaping and community facilities that are appropriate to the site and its surroundings
4. Use sustainable construction techniques and provide renewable or low carbon energy sources in association with the proposed development and
5. Enable provision of infrastructure in ways consistent with cutting greenhouse gas emissions and adapting to climate change and its consequences.

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[13] It is noted that there are other policies relating to open space and GI, such as CP14 High Quality Sustainable Development, ES6 Providing for Biodiversity and Geodiversity, ES7 Landscape Character, ES8 Trees and Hedgerows, reflecting an integrated approach.

Major residential development proposals will be expected to enhance biodiversity on site and, where appropriate, through a network of multifunctional green spaces, which support the natural and ecological processes.

Delivery Policy ES4: Water resources, quality and flood risk

Development will:

1. Conserve and enhance the ecological flood storage value of the water environment, including watercourse corridors
2. Open up any culverted watercourse where safe and practicable to create an asset of community value
3. Improve water efficiency through incorporating appropriate water conservation techniques including rainwater harvesting and grey water recycling
4. Discharge surface run-off, not collected for use, to one or more of the following, listed in order of priority:
      a. discharge into the ground (infiltration); or, where not reasonably practicable
      b. discharge into a surface water body; or, where not reasonably practicable
      c. discharge to a surface water sewer, highway drain, or other drainage system; or, where not reasonably practicable
      d. discharge to a combined sewer
6. Connect to the main foul sewer network where possible
7. Use the natural environment including woods and trees to deliver sustainable water issue solutions.

Delivery Policy ES11: Maintaining, restoring and regenerating the District's Canals

The Council will encourage the restoration of and other necessary functional improvements to the District's canals. It will seek to improve access to and along the canals to encourage use for transport and for leisure / recreational purposes.

Development on the route of, or adjacent to, the Stroudwater Navigation, the Thames and Severn Canal or the Gloucester & Sharpness Canal must not prevent the improvement, reconstruction, restoration or continued use of the canals or towpaths.

All developments adjacent to the canals must respect their character, setting, biodiversity and historic value as well as have regard to improving and enhancing views along and from the canals. Environmental improvements to any canal's appearance will include enhancement of its historic and biodiversity value.

Delivery Policy ES12: Better design of places

The District Council will require the layout and design of new development to create well designed, socially integrated, high quality successful places, where people enjoy living and

working, with legible and well planned routes, blocks and spaces, integrated residential, commercial and community activity, safe attractive public spaces and pedestrian/cycle routes without traffic conflict, secure private areas, better designed buildings and landscaped spaces.

All new development must be based on thorough site appraisal including reference to any Design Statements, Design Codes, Neighbourhood Plans, Secured by Design standards and be sensitive to its context as well as contributing to sustainable living.

'Design Quality', reflecting a thorough understanding of the site context, must be demonstrated as part of any proposal. The Council will require the submission of a Design and Access Statement which clearly demonstrates the design and suitability of the proposal in its local context where necessary.

Delivery Policy ES13: Protection of existing open space

Development proposals shall not involve the whole or partial loss of open space within settlements, or of outdoor recreation facilities, playing fields or allotments within or relating to settlements, unless:

1. a robust assessment of open space provision has identified a surplus in the catchment area to meet both current and future needs, and full consideration has been given to all functions that open space can perform
2. any replacement facility (or enhancement of the remainder of the existing site) provides a net benefit to the community in terms of the quality, availability and accessibility of open space or recreational opportunities.
There should be no harm to spaces which:
A. contribute to the distinctive form, character and setting of a settlement
B. create focal points within the built up area
C. provide the setting for important buildings or scheduled ancient monuments
D. form part of an area of value for wildlife, sport or recreation, including areas forming part of a 'green corridor'.

Local communities through Neighbourhood Plans shall designate Local Green Spaces which are of importance to them and are of particular local significance.

Delivery Policy ES14: Provision of semi-natural and natural green space with new residential development

Strategic and major residential development shall be accompanied with additional accessible natural green space, proportionate to the scale of development. This will be provided to achieve the following target rates:

- Provision of at least 2ha of accessible natural green space per 1,000 population

- Provision of at least one accessible 20 hectare site within two kilometres of home;
- Provision of one accessible 100 hectare site within five kilometres of home; and
- No person should live more than 300m (or 5 minutes walk) from their nearest area of natural green space of at least 2 hectares in size.

All strategic scale residential development will be expected to have a network of such spaces.

Delivery Policy ES15 Provision of outdoor play space

Proposals for new residential development shall provide appropriate public outdoor playing space, to achieve a standard of 2.4ha per 1000 population. The standard can be subdivided into the following categories:

- Youth and Adult Facilities including Multi Use Games Area at 1.6 ha per 1000 population
- Playing Pitches 1.2 ha per 1000 population (sitting within the Youth and Adult Facilities Standard)
- Equipped Play Space for Children and Young People at 0.2 – 0.3 ha per 1000 population
- Local Area of Play (LAP)/ Local Equipped Area for Play (LEAP)/ Neighbourhood Equipped Area for Play (NEAP) at 0.4 – 0.5 ha per 1000 population.

Public Open Space should be usable and easily accessible to the dwellings it is intended to serve by a good quality pedestrian and cycle route.

Site distance thresholds are set out in Supplementary Planning Guidance, 'Residential Development Outdoor Play Space Provision'.

3.2.2.8 Stroud Environment Strategy (Review 2018)

SDC adopted it's 20 year Environment Strategy in February 2007. The overarching focus was to help the community live within environmental limits.

A member led group was set up to review the strategy and the following recommendations were made (and backed up by public consultation), and the strategy is currently being reviewed and will be updated with the following:

To keep the strategy vision: "To lead a community that is willing and able to make the district a better place by:

- Tackling the consequences of already unavoidable climate change; and,
- Reducing the stress on resources and environmental systems – water, land and air – from the way we produce, consume and waste resources."

The following **updated priority areas** are recommended:

Priority 1 - A Circular Economy, Thriving now, thriving in the future; Financial prosperity today is no good if we use the resources our children will require tomorrow. We must consider the whole life costs of our purchases and not waste them. When we have finished with them we must repair, reuse and recycle and use them again. A sustainable economy should leave no trace.

Priority 2 - Climate Change, The biggest threat we face; Man made climate change is the biggest threat humanity faces. We must adapt and increase our resilience to changes in weather patterns. We therefore must take steps to prevent levels of CO2 rising, by using less energy and what we do use must be greener, cleaner and smarter.

Priority 3 - Protecting the Environment, Caring for our natural world; we are all the custodians of Stroud District, we are looking after it for future generations. It is our mission to hand it on to them in a better state than it was handed to us.

Priority 4 - Sustainable Communities, Planning today for a better tomorrow: We must continue to ensure that the communities we plan and build today will still be vibrant places where people can and want to live long now and in the future.

In addition, it was recommended that a separate **programme of initiatives and actions** that can be regularly monitored and updated are set. Some of the key actions in the draft work programme for 2018/19 include: implementing the cycling and walking plan, agreeing a long term investment and management plan for Stratford Park, and the Local Plan review.

3.2.2.9   Outdoor Playing Space – A Survey of Local Provision and Needs (September 2013)

This study analysed the level of provision of outdoor play space within Stroud district, in order to inform the local plan that was published in 2013.

The survey considered those elements of open space which are used for sport, recreation and children's play, whether in public or private ownership. It adopted the National Playing Field Association's (now rebranded as Fields In Trust, FIT) definition of outdoor playing space as described in their 'Six Acre Standard' document. Other elements of open space such as highway verges, woodlands, commons, ornamental parks and general amenity space within residential were not included within this survey.

Consultation was undertaken with parish and town councils, schools and sports clubs, but there was no general community consultation.

For the purposes of the 2013 local plan, Stroud District Council adopted the NPFA's 'Six Acre Standard' for outdoor playing space across Stroud District.

This standard recommends the following minimum provision of outdoor playing space:

- Total outdoor 2.4 Ha (6 ACRES) of play space per 1,000 population

This overall standard can be subdivided into the following categories:

- Youth/Adult 1.6 - 1.8 Ha (4 - 4.5 ACRES) per 1,000 population

Land for inclusion under this part of the standard comprises:

 - 'Facilities such as pitches, greens, courts, athletics tracks, and miscellaneous sites such as croquet lawns and training areas in the ownership of local government, whether at county, district or parish level…'

 - 'Facilities within the education sector which are as a matter of practice and policy, available for public use. The informal or unauthorised use by the public of such facilities does not qualify…'

 - 'Facilities within the voluntary, private, industrial and commercial sectors which serve the leisure time needs for outdoor sport of their members or the public.'

- Playing pitches 1.21 Ha (3 ACRES) per 1,000 population

- Within the Youth/Adult standard, a specific component involves the provision of playing pitches for Football, Rugby, Hockey and Cricket. (This standard was derived from the Sports Council's 'Playing Pitch Strategy')

- Equipped/designated 0.2 - 0.3 Ha (0.5 - 0.75 ACRES) children's play space per 1,000 population

 Land for inclusion under this part of the standard comprises:

- 'Outdoor equipped playgrounds with one or more items of permanently installed play equipment for children of whatever age.'

- 'Play facilities for children which offer specific opportunities for outdoor play, such as adventure playgrounds.'

The most significant observations from the analysis against the standards is that the provision for the smaller clusters, by population is generally either well catered for or is not too far away from the required provision. Whereas the larger clusters, by population, seem to show a significant under provision of facilities, most obviously Stroud valley cluster.

3.2.2.10 Stroud District Council Health and Wellbeing Plan 2013-2017

The health and wellbeing plan illustrates the way in which a whole range of council services contribute towards the health and wellbeing of local communities – from environmental health and sports development to healthy walks.

Stroud District Council's vision is to promote the health and wellbeing of our communities and work in partnership to deliver the public health agenda.

Examples of the council's work which contributes to the health and wellbeing agenda includes:

- The health and sport development team, works in partnership with Macmillan Cancer Support and the Ramblers Association. We train local volunteer walk leaders to deliver our health walks programme, with over 100 walkers a week.
- Stratford Park has been recognised as one of the best green spaces in the country, winning 10 national Green Flag awards in a row.
- Each year, inactivity in the Stroud district costs the NHS approximately £1.4 million. We work with our communities to reduce obesity and enable opportunities to move more and feel great. Every year our Healthy Lifestyle Scheme helps over 1,000 people to get back to work, to be more active and to feel better. Membership at our sports centres has shown a steady increase and it is estimated that people playing sport save healthcare costs of £1.7bn a year.

This Plan is currently (May 2019) being reviewed.

3.2.2.11 Sport, Health & Wellbeing Service – Annual report 2017/18

The report highlights how the service reduces health inequalities by:

- Providing targeted healthy lifestyles activities
- Mobilising community leaders and volunteers
- Maximising resources for our council and residents through strategic and enabling activities

Healthy Lifestyle Schemes are targeted health activities taking referrals directly from health professionals. The community classes extend NHS support, maintain recovery and aim to prevent relapse. Examples include:

- **Health Walks**, which is a nationally accredited scheme involving a team of 30 volunteers who lead a programme of walks across the district. The walks range from 30 to 60 minutes and are based on the national 'walking for health initiative'.
- **Walking Netball,** which is a sporting alternative for people wanting to be physically active without the intensity of the full game.
- **Couch to 5k,** is designed to get just about anyone off the couch and running 5km in nine weeks.

3.2.2.12 Draft Stroud District Cycling and Walking Infrastructure Plan (CWIP)

This draft plan reflects the principles of the government's 'Cycling and Walking Investment Strategy' published in April, 2017. It is a 'living' document and is subject to regular review. It is also consistent with the District Council's Local Plan, and the content of Gloucestershire's Local Transport Plan (2015-2031). All three documents promote the health, environmental and economic benefits of walking and cycling, both for utility and recreation purposes.

The focus of the CWIP is safe routes for cycling and walking from Saul to Stonehouse; Stonehouse to Stroud; Stroud to Brimscombe; Stroud to Nailsworth; and, between Cam & Dursley & Uley, with potential extension to Slimbridge. Routes will be multi user/shared, off road, as much as practicable, with newly built paths or improved surfacing, sign posting and lighting where required. Improvements to cycle parking at Cam and Dursley, Stonehouse and Stroud railway stations will be included.

Whilst the above routes are afforded priority there are also more rudimentary cycle routes across the district which the plan could consider in the future. There are also nascent plans for routes in Standish, linking Little Haresfield and Stonehouse and a route linking Wotton under Edge, Kingswood and Charfield. Potential improvements to NCN 41/45 around Frampton have also been raised.

The Plan's projects will be undertaken with a variety of partners and funding is required from multiple sources.

3.2.2.13   Habitats Regulations Assessment (HRA) Mitigation Strategies

Under the Habitats Directive, Stroud District Council has a duty to ensure that all the activities the Council regulates have no adverse effect on the integrity of any of the Natura 2000 sites. Together Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) make up the network of Natura 2000 sites. The effect of the Directive is to require the Council as local planning authority to ensure that no likely significant adverse effects arise from any proposed development scheme or Local Plan.

Habitat Regulation Assessments (HRA) have concluded that proposed residential growth identified in the Local Plan within the catchment of Rodborough Common SAC and Severn Estuary SAC/SPA/Ramsar could have a likely significant effect, in the absence of appropriate mitigation.

The Council has therefore worked in partnership with Natural England, landowners and other bodies to devise appropriate strategies for these two areas to avoid potential impacts.

The strategies allow the promoters of schemes for residential development within the identified catchment zone (3km for Rodborough Common and 7.7km for the Severn Estuary) to meet planning requirements by making a financial contribution per net additional dwelling to fund a project designed to avoid an increase in recreation impact or to mitigate the effects of increased recreational activity on the designated area. Alternatively, promoters of schemes can put forward their own bespoke mitigation measures to satisfy planning requirements.

The council have recently commissioned (May 2019) Footprint Ecology to undertake visitor surveys of Rodborough Common and Cotswold Beechwoods.

3.3   GI Projects and Partnerships

There are a variety of partnerships and projects within the County and District with a focus on GI, biodiversity and landscape scale conservation, management and sustainable use of the natural environment.

Some example of partnerships and projects within the District and County are provided below, and figure 6 shows the locations of a number of these projects (this map is not exhaustive and only provides some examples of existing projects. The LNP are also in the process of building an online project map).

3.3.1   Gloucestershire Local Nature Partnership

The partnership is formed of over 30 organisations from public, private and third sector bodies from across the county, all working together to recognise the importance of embedding nature's value in local decisions for the benefit of nature, people and the economy. The partnership is seen by Defra as a key figure in the local delivery of the Government's 25 Year Environment Plan.

The partnership have published A Prospectus for Nature, which outlines key areas for investment in the short to medium term which will pay dividends for years to come. The key areas identified are as follows:

- Restoring Gloucestershire's Natural Networks: the LNP will recognise and promote the development of ecological networks e.g. Strategic Nature Areas (SNAs) represented by the Gloucestershire Nature Map within new Nature Improvement Areas (NIAs) being developed by Partnerships across the county.

- Promoting Green Tourism – Game Changing Sites for Nature: Sites identified are The Forest of Dean, The Cotswold Water Park and The Severn Vale (where the opportunity to create a major wildlife corridor in conjunction with the restoration of the Cotswold Canals which will link the Severn Vale to Stroud and beyond has been identified).

- A Strategic Green Infrastructure For New Development: The LNP wishes to support and promote an exemplar development which enhances the natural environment and provides for human health and wellbeing.

- A New Regional Park: The identification of an area of floodplain between Gloucester and Tewkesbury as a Regional Park which connects the new urban communities with the Severn wash lands.

- Conservation-Grade Food and Drink from Gloucestershire: The LNP sees opportunities to develop the promotion and marketing of speciality food and drink on the basis of the high environmental credentials of its production which will result in truly sustainable management of some of our most important habitats.

- Promote Woodland Enterprises and Grow the Market for Sustainable Woodland Management Products: Over half of Gloucestershire woodlands are under managed.

Innovation in this sector could increase local employment in areas where unemployment is high and bring multiple benefits, by encouraging co-operative action by groups of farmers and owners of small woodlands to bring their woodlands into sustainable management, and to promote the use of home-grown wood as a source of renewable energy.

- **Improved Water Quality and Reduced Flood Risk:** The LNP will promote sustainable water resource management which in the longer term will be better for customers', businesses and the natural environment. A truly sustainable approach to flood management is extremely cost effective. By restoring the river catchment's natural capacity to cope with floods via its wetlands, floodplains and riverine woodlands, the risk of flooding to settlements downstream is lowered and the need for building costly concrete defences dramatically reduced.

- **Health and Wellbeing:** There are links between 26 of the Government's health outcome indicators and the natural environment, including: the provision of green open space; close encounters with nature and an improved sense of wellbeing; high quality and healthy local food; and reduced air pollution as a result of the greening of urban areas, including tree planting to help ameliorate summer temperatures.

Their vision is of a greener Gloucestershire. Where nature-based solutions are threaded through urban areas, providing a multi-functional approach to the design and management of urban infrastructure, open spaces and recreation grounds; where the benefits of nature create a more resilient county for both people and wildlife, not just to protect but to support growth, whether that is environmentally, socially or economically; where consideration is given to upstream and downstream solutions and services that nature provides; where environmental net gain is demonstrated through green infrastructure; and where this is brought about by numerous joined-up, local level initiatives across the county.

The LNP is currently undertaking mapping of a Gloucestershire Nature Recovery Network (NRN) in line with the DEFRA 25 year environment plan. The NRN will enable a strategic approach to be taken to the delivery of biodiversity restoration by combining the ecological network (core habitat plus restoration opportunities based upon ecological parameters), connectivity modelling (highlighting strongly connected and disconnected parts of the network) and consideration of constraints e.g. land allocations, land ownership, climate change. The NRN will also enable strategic targeting of biodiversity offsetting. The first draft of the NRN should be available by late summer 2019, it will be refined as more data becomes available.

The LNP are building an online project map that should be available by summer 2019.

3.3.2   Building with Nature Benchmark

Building with Nature has been developed as part of a Knowledge Transfer Partnership between Gloucestershire Wildlife Trust and the University of the West of England, Bristol.

Building with Nature sets a new standard for green infrastructure. It brings together existing guidance and good practice to recognise high quality green infrastructure at all stages of the development process including policy, planning, design, delivery, and long-term management and maintenance. It has been developed by practitioners and policy makers, academic experts and end users. Building with Nature supports the delivery of multifunctional green infrastructure; in recognition of the wide range of benefits it secures for people and wildlife.

Building with Nature standards draw together policy and practice guidance related to health and wellbeing, sustainable water management, ecology and biodiversity. Where existing guidance is not available, or inadequate, the benchmark is supplemented with robust findings from academic research.

There are 23 standards in total. There are five core standards, which together create a solid foundation for the delivery of high quality green infrastructure through planning and development. Then there are three thematic groups of standards: within each theme there are three standards at Achieved level (1-3) and three standards at Excellent level (4-6).

Core standards

1. Green infrastructure forms a multifunctional network, operating at a landscape scale.
2. Green infrastructure reflects and enhances the character of the local environment.
3. The type, quality and function of green infrastructure responds to the local policy context.
4. Green infrastructure is resilient to climate change and enhances environmental quality.
5. Provision is made for long-term management and maintenance of green infrastructure.

Wellbeing

1. Green infrastructure is accessible for all and is situated close to where people live.
2. All people are encouraged to use and enjoy green infrastructure.
3. Green infrastructure is designed to be accessible at all times of year.
4. Green infrastructure supports the reduction and/or prevention of health inequalities.
5. Green infrastructure promotes socially sustainable communities and community cohesion.
6. Green infrastructure is integral to the distinctiveness of place

Water

1. Green infrastructure is integral to sustainable drainage to manage water quantity.
2. Green infrastructure is used to improve water quality within the scheme.
3. Green infrastructure is integral to sustainable drainage to create better places for people and nature.

4. Green infrastructure is integral to water management to demonstrate innovation beyond the statutory minimum.
5. Green infrastructure allows more and better treatment stages to maximise water quality.
6. Green infrastructure is used to enhance local distinctiveness of the overall design.

Wildlife

1. Green infrastructure positively contributes to biodiversity targets and landscape-scale conservation priorities.
2. Green infrastructure creates linkages between habitats within the boundary of the scheme.
3. Green infrastructure positively contributes to the target conservation status of key species.
4. Green infrastructure includes features around and within the built environment.
5. Green infrastructure plays a role in restoring and sustaining wider ecological networks.
6. Green infrastructure secures biodiversity measures in all stages of implementation, and across multiple phases of development.

The District Council is supportive of this benchmark, and as part of this study, the three GI themes (wellbeing, water and wildlife) have been used as part of the open space quality audits (see section 7.5), and also within the general community consultation. The results from the community consultation clearly show that local residents strongly support provision of green infrastructure that promotes health and wellbeing; ensures effective water management and protects and enhances wildlife.

3.3.3   Gloucestershire Wildlife Trust - Living Landscapes

The aim is to increase species diversity and abundance through restoring, improving and connecting Gloucestershire's habitats, by working in partnership with local communities, landowners, schools and businesses, and at a landscape scale. The work is informed by Strategic Nature Areas and the Nature Recovery Network.

A living landscape is not just a big nature reserve, but a mosaic of reserves, farmland, amenity land and built-up areas managed in such a way that wildlife and people can share it and which continues to function ecologically. In Gloucestershire, three themes have been identified to direct the work of GWT and these underpin the landscape scale approach: Connections, Water and Soils.

3.3.4   Management of commons

Stroud District Council work with the National Trust to manage Rodborough Common, Selsey Common, Minchinhampton Common, Painswick Common and Cranham Common.

Rodborough Common is designated as a Special Area of Conservation (SAC). The Council has worked in partnership with the National Trust, Stroud Valleys Project, the Commons Graziers, Natural England and Gloucestershire Wildlife Trust to devise an agreed Interim Impact Avoidance Strategy for housing within an identified 3km catchment of the SAC.

3.3.5   Severn Vale Projects

Severn Estuary SAC/SPA/Ramsar – SDC has worked with a range of skateholders including Natural England, Wildfowl and Westlands Trust, Severn Estuary Partnership, ASERA and Severn Estuary Stakeholders to develop an understanding of recreational pressure and to develop appropriate mitigation proposals. A mitigation strategy was formally adopted in December 2017 which has identified a core catchment area of 7.7km.

Living Landscapes – lowland wet grassland (which includes other wetland habitats such as unimproved neutral grassland, fen and marsh, reedbed, wet woodland and saltmarsh) is one of the most important habitats in the Severn Vale. Increasing demand for food production has resulted in drainage of this valuable habitat over the decades. The long term aim is to restore up to 60% of the area to good quality wetland and semi-improved wildlife habitat.

3.3.6   Stroud Valleys Project

The aim is to protect and enhance the local environment by working with local communities to embrace sustainable development and biodiversity, and so to make Stroud and its surrounding area a better, healthier place in which to live for both present and future generations.

SVP is responsible for a number of sites that are important for local biodiversity. Current projects include habitat restoration and creation at various sites, wildlife surveys and wild classrooms.

3.3.7   Cotswold Canals Project

This is an award winning canal regeneration project (linking to the national network (Stonehouse to Saul)) with high levels of public support, over £113m private investment and, in three years alone, 48,000 hours of volunteer work.

3.3.8   Stroud Valleys flood management scheme/Rural Sustainable Drainage (RSuDS) project

The Stroud Rural SuDs project is an innovative Natural Flood Management project working to reduce flood risk and restore biodiversity throughout the catchment of the River Frome and all its tributaries.

The project aspires *'To create a river catchment where water management is fully integrated into land management practices. Where public bodies, private companies and local communities work together to manage water within the landscape, creating valuable habitat for wildlife and people, and limiting flood risk downstream'*.

3.3.9   Cycleway and Greenway Projects

A number of current projects are highlighted below, as identified within section 3.2.2.12 (Cycling and Walking Infrastructure Plan):

- **The Cam, Dursley and Uley Greenway** - The planned Cam, Dursley and Uley Greenway is an 8 km accessible greenway that will eventually link Uley, Dursley and Cam (as far as railway station) and the National Cycle Network in the Vale of Berkeley.
- **Wotton, Charfield & Kingswood Greenway Group –** working to promote and support the creation of a safe, traffic-free route.

Figure 6   Examples of GI Partnership projects in Stroud
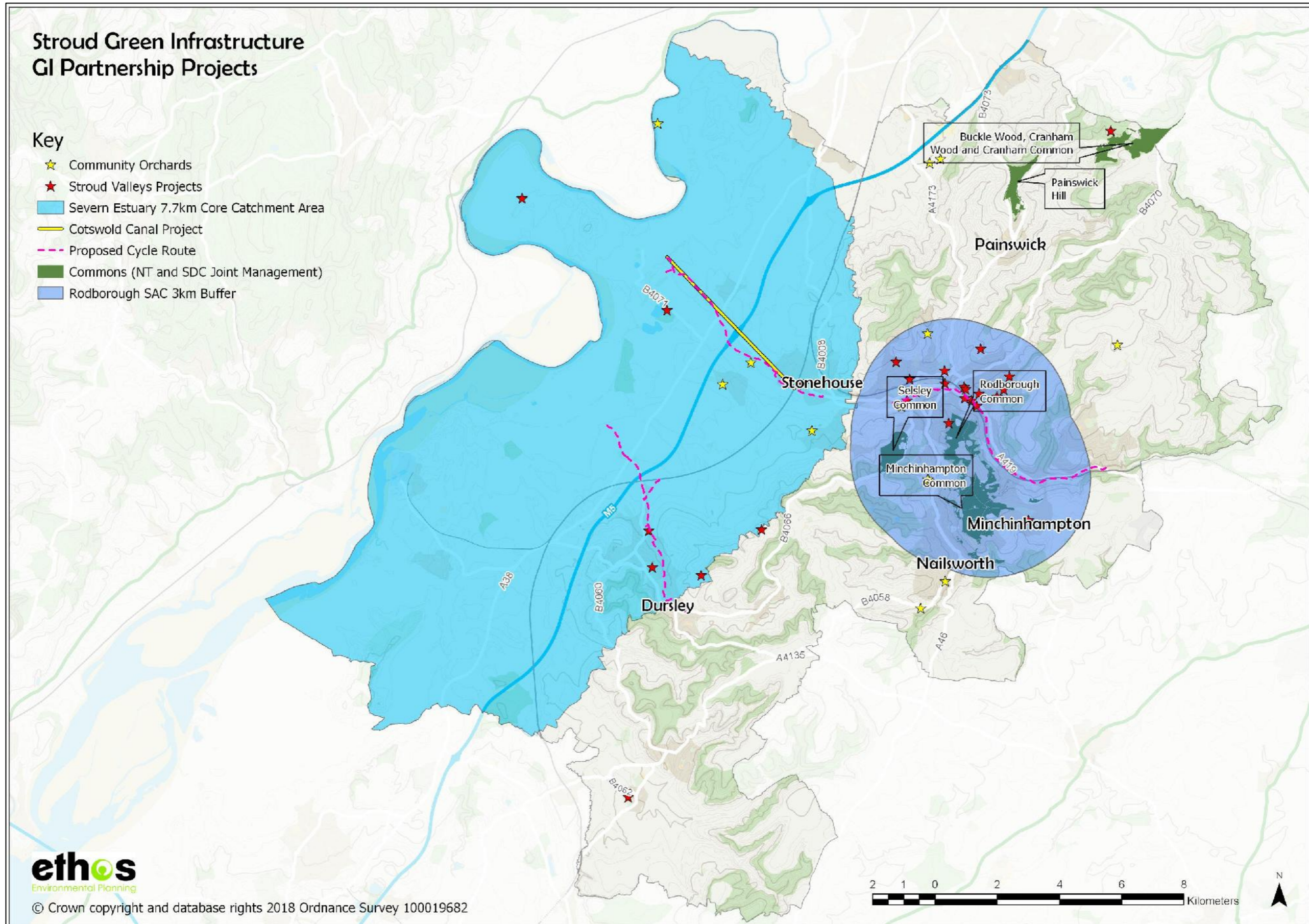
3.4   Conclusions – the importance and benefits of open space and GI

The policy and strategy review highlights the importance of, and also the range of benefits that high quality GI and open space can deliver simultaneously from the same area of land. As identified in the Strategic Framework for Green Infrastructure in Gloucestershire (2015), these benefits include:

- Providing a more attractive place for people to live, work and visit, which in turn will attract in inward investment e.g. through tourism;
- Providing opportunities for outdoor relaxation, informal recreation, sports, play, environmental learning and access to nature;
- Improving health and well-being – lowering stress levels, providing opportunities for exercise and improving air quality;
- Providing sustainable transport routes – for cycling, walking and horse-riding;
- Increasing connectivity between communities and helping to increase social cohesion e.g. through community events in parks;
- Helping climate change adaptation e.g. by flood alleviation and cooling urban heat islands;
- Improving air and water quality;
- Saving environmental costs such as improving air quality, reducing the urban heat island effect, filtering diffuse pollution, helping to manage flood risk, storing water during droughts, pollination;
- Enabling local food production - in allotments, gardens, community orchards and through agriculture;
- Providing space for the conservation and enhancement of biodiversity and providing wildlife corridors and linkages; and
- Protecting and enhancing historic and cultural features.

4.0   LOCAL NEEDS ASSESSMENT (STEP 1)

4.1   Introduction

The Community and Stakeholder Consultation Report (2018) examines local need for a wide range of different types of sport and recreational open space. It draws upon a range of survey and analytical techniques including a review of consultation findings from relevant studies, questionnaire surveys and one to one stakeholder interviews. The work was undertaken from April to August 2018.

Questionnaire surveys were undertaken looking at the adequacy of current provision in terms of the quantity, quality and access, in relation to the various typologies of open space, GI, sport and recreation facilities. The surveys were:

- A general household survey;
- A survey of Town and Parish councils; and
- Local groups and organisations' survey.

In addition to the above a series of one-to-one stakeholder interviews/surveys were undertaken with key stakeholders and strategic organisations.

The results of this consultation and other analyses has helped amongst other things to inform the local standards (section 6 of this Open Space and Green Infrastructure Study). Crucially it has also helped the study to understand local people's appreciation of open space, sport and recreation facilities, and the wider green infrastructure and the values attached by the community to the various forms of open spaces and facilities. This appreciation will have clear implications for the way in which GI, open space, sport and recreation facilities are considered in relation to the Local Plan and relevant services strategies.

The key findings from the Community and Stakeholder Consultation (2018) are summarised below under 4 sections:

- General community and public health consultation;
- Neighbouring local authorities; town and parish councils and council members;
- Green Infrastructure and open space; and
- Play and youth facilities.

4.2   General Community and Public Health Consultation – Key Findings

This section provides some key consultation findings in relation to open space and outdoor facilities from the Stroud District household survey and public health stakeholders.

4.2.1   Quantity

- A clear majority of households reported a general need for more facilities for teenagers across the district.
- A significant majority also note a need for more footpaths, bridleways and cyclepaths. In addition, there were notable majorities indicating a general shortfall of woodland, wildlife and nature reserve sites and facilities for water recreation.
- A large majority thought that overall there are enough outdoor bowling greens. Substantial majorities think that in general there are enough outdoor tennis courts, MUGAs, and playing pitches.

4.2.2   Quality

- For most kinds of outdoor facilities/open spaces a majority of households suggested that in general open spaces and outdoor facilities were of average or better quality (though the most common rating tended to be only "average").
- However, for some typologies there were notable levels of dissatisfaction with general levels of quality. Nearly one third of households highlighted the overall quality of outdoor facilities for teenagers as being either poor or very poor. The quality of artificial turf pitches and tennis/netball courts was rated as poor or worse by at least 20% of respondents.
- By contrast some kinds of facilities/open spaces were rated highly in terms of quality. These include: parks and recreation grounds; woodlands, wildlife areas and nature reserves; and footpaths, bridleways and cycle paths.
- Local residents strongly support provision of green infrastructure in line with Gloucestershire Wildlife Trust's Building with Nature quality standards i.e. open space that promotes health and wellbeing; ensures effective water management; and protects and enhances wildlife.

4.2.2   Access (Geographical)

In general, a majority of household respondents report that they would not normally travel more than 15 minutes to visit most kinds of open spaces and outdoor facilities. There is considerable variation however between the typologies. For example, 53% of households are prepared to travel 16 minutes or more to visit woodlands, wildlife areas and nature reserves (of which 29% would travel more than 20 minutes) and 53% of households are prepared to travel that long to visit water recreation facilities (14% of those would travel more than 20 minutes).

In contrast, for significant numbers of residents, facilities need to be much more locally accessible before they will be used (for example, play areas, parks and recreation grounds, and informal open space areas - for ball games, picnics, hobbies, dog walking etc).

- 62% of users would expect play areas to be within a 10 minute travel time, of which 30% would not wish to travel more than 5 minutes.
- 57% of users would expect local parks/recreation grounds to be within a 10 minute travel time, of which 30% would not wish to travel more than 5 minutes.

- 54% of users would expect allotments to be within a 10 minute travel time, of which 26% would not wish to travel more than 5 minutes.

For most typologies walking/cycling is the norm, most notably for facilities such as play areas; recreation grounds and parks; and teen facilities.

However, a small majority of respondent households would normally drive rather than walk to MUGAS; water recreation facilities; and tennis courts. Significant number would also drive to artificial turf pitches; outdoor bowling greens and woodlands, wildlife areas and nature reserves.

It is also notable that for some typologies cycling is a significant mode of travel e.g. MUGAs, artificial turf pitches, playing pitches, tennis courts and bowling greens.

Importance of footpath/cycle access

- 83% of households confirmed that they would be prepared to walk/cycle further if the quality of the route was improved. 84% also said that if the quality of the route was improved they would make the journey more often.

4.2.3 Priorities

- The category highlighted by the largest number of households as a high priority for potential improvement/new provision was better footpaths, bridleway and cyclepath provision; followed by woodlands, wildlife areas and nature reserves; and informal open space for ball games, picnics, dog walking etc.
- Other notable high priorities for improvement noted by significant numbers were water recreation facilities; facilities for teenagers; and allotments.
- Parks and recreation grounds and children's play areas also score quite highly as a priority need.

4.2.4 Public Health and other issues

- Stroud District Council fully recognises the value and importance of access to open space, outdoor recreation facilities and indoor leisure facilities, in relation to improving health and wellbeing and in relation to residents' quality of life.
- Health and wellbeing is a key priority in the District Council's 4 Year Corporate Delivery Plan (2018 – 2022). The Plan aims to "promote the health and wellbeing of our communities and work with others to deliver the public health agenda".
- The District Council is currently updating its Health and Wellbeing Plan which contributes to the delivery of the Gloucestershire Joint Health and Wellbeing Strategy. One of the elements of the plan is to implement schemes targeted at helping to reduce obesity/overweight levels.
- Examples of District Council health projects include: Active for Life; Healthy lifestyles scheme; Health Walks; and Cycling4Health.

- Gloucestershire County Council Public Health team produces a county-wide Health Inequalities Action Plan which the District Council's own plan supports. The importance of active lifestyles and open space, sport and recreation is noted.
- Some sectors of the community face particular barriers to access such as disabled people; children and young people; households in the more isolated rural areas and those in the more deprived wards of the study area

4.3 Neighbouring Local Authorities and Town/Parish Councils - Observations and key issues

4.3.1 Neighbouring Local Authorities – Cross-boundary Issues

Section 3.2 of the Community and Stakeholder Consultation Report (2018) briefly reviewed feedback from neighbouring Local Authorities in relation to the status of their open space strategies/associated studies and any cross-border issues of significance. The variety of documents and strategies in place (and their relevance to current planning policy) is considerable, embracing green infrastructure studies, open space strategies, and sport, recreation and play strategies. The approach adopted by each authority is very much locally derived and individual cross border and wider issues have been identified by the various local authority officers.

It is notable that many authorities are currently involved with commissioning new open space related studies or updating previous strategies that are out of date.

In relation to planning policy there is a strong degree of cooperation and joint working across authorities in Gloucestershire, particularly in relation to Green Infrastructure. There is also notably strong cross border and strategic communication in relation to biodiversity, natural green space, transport, drainage, economic and health and wellbeing issues.

4.3.2 Town/Parish Councils and Council members

Section 3.3 of the Community and Stakeholder Consultation Report (2018) provided findings from the town and Parish councils' survey undertaken for the study. 27 of the 52 local Town and Parish councils responded.

General Overview

- 22 of the 27 town/parish councils who responded were directly responsible for the management of various local spaces and outdoor facilities; and 9 managed some kind of indoor provision.
- 13 of the local councils noted that that there was a need for additional or improved open space, sport, play and recreation facilities within their town or parish; 7 reported there to be no need for improvements; and the remaining 7 were not sure.
- 8 of the parishes did not think there was scope for greater community use of outdoor sport and recreation spaces at local schools; and six were not sure. However, 13 of the parishes highlighted potential for community use or noted a need for improvements.

- In relation to potential improvements to community use of indoor facilities - 8 of the parishes did not think there was scope for greater community use; 11 were not sure; and 9 of the parishes highlighted potential for community use.
- The sectors most commonly highlighted as in need for improved provision were teenagers/young people and older residents.

Common areas of concern

For the town/ parish councils, the areas of most common concern are:

- The quality of existing play areas and insufficient areas for teenagers e.g. skateparks, shelters etc.
- Improvements to footpaths, bridleways and cycle paths.
- Improvements and new provision of village and community halls
- The need for additional tennis courts/MUGAs in some parishes

It was also notable that a significant number of parishes also highlighted a need for artificial turf pitches and allotments.

Quality factors - open space provision

The quality factors most commonly deemed to be of a high priority as regards recreational public open spaces are that:

- They should be easy to get to (and get around) for all members of the community.
- They should be safe and secure for those using them.
- Equipment and grounds should be of high quality and well maintained. They should be clean and free from litter and graffiti.

It is also thought important by many parish councils that recreational public open spaces should be multi-functional providing for all sectors of the community; and that there should be control of noise and unsocial behaviour.

Other aspects of quality specifically highlighted were:

- There should be attractive landscaping - hedging at the boundaries, trees including blossom trees.
- Protection of bio-diversity and natural surroundings as they promote well-being. There should be some open spaces where wildlife and biodiversity are prioritised over access by people.
- There should be a range of facilities offered in an area; not too many of one thing (eg play areas for all one age group and nothing for older people).

A clear majority of town and parish councils also strongly support the three elements of Gloucestershire Wildlife Trust's Building with Nature quality standards for GI That is, that that GI provision should promote health and wellbeing; ensure effective water management; and protect and enhance wildlife.

Detailed responses on open space typologies

Many of the parish councils provided detailed responses relating to aspects of quantity and quality of the various elements of open spaces surveyed. A number of District Council members also highlighted specific issues relating to their ward.

4.4   Green Infrastructure and Open Space - Key Findings

This section covers consultation responses and findings in relation to non-sporting recreational open spaces, including parks and recreation grounds, natural green spaces, water recreation, allotments and rights of way.

4.4.1   Strategy and policy

The Council's Key Corporate Objectives are summarised in the four-year Corporate Delivery Plan, embracing the Vision of "Leading a community that is making Stroud district a better place to live, work and visit for everyone", in this regard relevant Actions over 2018/22 relevant to this study are:

- Deliver new 'walking sports' and 'healthy lifestyle' programmes
- Introduce cost saving measures for grounds maintenance, building cleaning and waste collection
- Implement a cycling and walking plan focused on Saul – Stonehouse - Stroud - Brimscombe, Stroud - Nailsworth and Cam – Dursley – Uley
- Refurbish Stratford Park Lido and install solar panels to heat pool water
- Agree a long-term investment and management plan for Stratford Park with partners and contractors

The existing Stroud District Local Plan (2015) reflects Council corporate objectives, through its own stated strategic objectives, and especially with regard to its policies relating to the conservation and promotion of open space of all kinds. The current policies reflect the importance of open space opportunities to people, communities, and the environment. Policies promoting the provision of new open space are therefore based on guidance provided by Fields in Trust and Natural England.

The proposals contained in the Local Plan and the draft Cycling and Walking Infrastructure Plan show the importance attached to these modes of transport for both utility and recreation, as well as the health, environmental and economic benefits.

4.4.2   Quantity

Household Survey:

59% of respondents suggested that there were not enough Footpaths, Bridleways, and Cycleways; 56% suggested likewise for 'natural' areas such as woodlands and wildlife areas; with householders saying likewise for Informal/amenity space (51%); and, Allotments (49%). A very small percentage of returns suggested there was too much of any type of open space.

Key stakeholder and community groups:

With just a few local exceptions, the overall consensus seems to be that there are enough open spaces of most kinds, but with the exception of natural areas (including woodland) and designated wildlife sites. Safe cycleways were also considered to be in short supply by some key strategic organisations. A desire to see improvements to off-road horse-riding opportunities was expressed by equestrian interests.

4.4.3   Quality

Household survey:

For all kinds of outdoor facilities/open spaces the majority of households suggested that they were of average or better quality (though the most common rating tended to be "Average", or "Good"). Responses stating the quality of open space to be "Poor" or "Very Poor", were very much in the minority. However, existing District Council resources are having to be spread further, whilst officers spend more time reacting to increased levels of complaint.

Key stakeholders and community groups:

In contrast to the results of the household survey, the key stakeholders and community groups tended to offer more nuanced views. This was especially in the case of opportunities to create better multi-functional and bio-diverse open spaces, so as to enhance overall bio-diversity.

The importance of considering open space as part of a wider green and blue infrastructure has also been emphasised.

Individual threats to and pressures upon existing open space have also been highlighted (such as to Stratford Park, and large areas of environmentally sensitive common land). Quality is also deemed to be an important factor in the way in which the restored canal network is integrated with both the surrounding built and natural environment.

4.4.4   Access

Household survey:

Given the nature of open spaces considered in this section, it is unsurprising that access by foot is very much the usual mode of transport to reach such destinations. Accordingly, acceptable travel time is very much time-sensitive with, for many types of open space, the majority of households not being prepared to travel more than 15 minutes, at best.

The above summarises considerations that will contribute to the development of standards of provision for an open space typology. However, other points have been raised in the consultation that do not fit neatly under any particular theme considered, such as:

- The need to consider individual open space (including water) as part of a green and blue infrastructure.
- The role of the canal system and its treatment in respect of its relationship with the surrounding built and natural environment.
- The use of open space as part of sustainable drainage solutions.
- The reduction in Council maintenance budgets in respect of open space, and its implications.

4.5 Play Areas and Youth Facilities - Key Findings

The town and parish councils are the primary play space and youth facility providers in Stroud District. The District Council manage 31 play areas including Stratford Park.

4.5.1 Quantity

Stakeholder views

- A small number of town and parish councils report that there is not enough play provision in their parish but a higher proportion highlight a lack of youth facilities.
- The District Council Senior Youth Officer noted that there is a lack of appropriate outdoor space and facilities for teenagers/older youths to meet.
- Play Gloucestershire suggested that across the district there are not enough local/doorstep level spaces to play; and that there are not enough MUGAs for older children/young people. They added that "in Stroud, for example, Stratford Park is excellent but neighbourhood/doorstep space for local play is insufficient".
- The Door Youth Project thought that overall across the District there are not enough equipped play areas for younger children or facilities for teenagers such as skate parks, BMX facilities, MUGAs and youth shelters.
- The Youth Council respondents thought that overall there are enough outdoor play areas for younger children (under 13) in their local area; but opinion on whether there is enough outdoor provision for older children and young people was divided.

Residents survey

- A clear majority of respondents (63%) to the resident's survey believe that overall across Stroud District there is insufficient provision of youth facilities.
- The view on the quantity of play spaces is divided with around 50% suggesting a need for more across the District but a similar proportion believing that overall there are enough.

4.5.2 Quality

Stakeholder views

- A significant number of town/parish councils highlighted a need to improve the quality of local play space and youth facility provision.

- Play Gloucestershire noted that the quality of play spaces and outdoor youth facilities is very variable across the district; though overall the design quality across the district is not good. They added that "the play space at Saul Playing Field is a good example of a simple well-designed play space set well within the wider open space to maximise play value". In contrast "the play area at Mason Road Playing Field, Stroud only has a small fenced in play space with no integration with the wider green space and very little play value".
- Play Gloucestershire also noted the importance of ensuring play spaces and youth facilities include elements of risk and challenge to maintain interest. Also, that they need to be well designed specifically for the individual site and integrated with the wider open space within which they sit.
- The Door Youth Project thought that while in the main the quality of equipped play spaces for younger children tends to be fairly good, the quality of youth facilities is poor.
- The Youth Council respondents thought that in general outdoor play areas for younger children were well maintained and of reasonable quality. Opinion on the quality and maintenance of youth facilities was divided.

Residents survey

- The quality of youth facilities is not rated highly - 78% of respondent households say that they are at best adequate with 31% of those rating them as poor or very poor).
- In general resident have less concern with the quality of equipped play areas across the District (42% rated them as being good or very good in contrast to 9% rating them as poor or very poor).

4.5.3 Access

Stakeholder views

- Play Gloucestershire noted that in many parts of the district children have to walk too far to access local play space. As regards disability access design should ensure inclusion for varied ability levels. Also, it is important that paths both to the play space and within it are well surfaced to enable access to play equipment.
- Youth Council respondents indicated that they would walk or cycle a bit further than normal to somewhere that had more to do and was more interesting.

Residents survey

- 62% of users would expect play areas to be within a 10 minute travel time, of which 30% would not wish to travel more than 5 minutes.
- 88% of users would expect play areas to be within a 15 minute travel time. 33% of these would not wish to travel more than 10 minutes and 12% no more than 5 minutes.

4.5.4 Priorities for improvement

- The Senior Youth Officer, Play Gloucestershire and the Door Youth Project all suggested that the provision of additional MUGAs was a high priority along with more youth shelters/outdoor meeting places.
- Youth Council respondents noted Local Parks and recreation grounds as a high priority for improvement along with MUGAs, wheeled sports facilities and accessible wild natural green space areas.

4.5.5 Other Issues / General Observations

- The District Council Open Space officer noted that as budgets have reduced over recent years, maintenance of existing provision has been and continues to be a major challenge.
- A proposal for a new Pump Track in Stroud town was highlighted via the Youth Council respondents and also by the Pump Track group itself.
- The Open Space Officer also noted that there have been a number of objections to a proposed skateboard facility being relocated into Stratford Park from Brimscombe Business Park.
- The value of play in relation to improvements to children and young people's health and wellbeing was highlighted by a number of stakeholders.
- Stakeholders noted the need for well-designed play and youth facilities, the value of consultation with young people and the wider community in that process.
- The Senior Youth Officer noted that It is particularly important that young people are consulted and engaged at an early stage in relation to any play and youth facility developments or changes in their local area. The local youth forums could provide a mechanism for this. A specific process should be put in place through planning arrangements to ensure this happens.
- Some of the Youth Council respondents highlighted that they met in the town/village centre and "on the street" indicating the importance of considering the role of planning more widely in relation to the design of public open space.
- Play England provide useful guidance on play and spatial planning; play space design; and managing risk in play. Some of these could be adopted as guidance and Supplementary Planning Documents.

4.6 Concluding remarks

The survey work, stakeholder consultation, desk-based research and group sessions have highlighted a wide range of issues of value to the Green Infrastructure, Open Space, Sport and Recreation Study.

There is a strong degree of consistency across the various sources on key areas of local need and aspiration from which we can be confident that the findings are robust and reliable, providing a strong evidence base to be combined with the detailed facilities audit.

The findings and evidence highlighted in the Community and Stakeholder Consultation Report (2018) will feed into:

- the development of open space and GI policy statements; and
- the standards for typologies of open spaces (quantity, quality and access elements).
- Opportunities for open space GI improvements

The following themes and issues have been highlighted as being especially relevant and important in relation to open space and GI and will be carried forward as part of the policy recommendations within section 8 of this report. They have been categorised, wherever possible under the existing relevant local plan strategic objectives.

Table 2   Themes and issues identified in the consultation

Local Plan Strategic Objective	What the consultation has highlighted	Suggested Action and other comments
Strategic Objective SO1: Accessible communities. Maintaining and improving accessibility to services and amenities for our communities, with: *…….* - *Active social, leisure and recreation opportunities*	The importance of providing for additional teenage and youth provision.	Initially, specific recommendations for new and improved provision to be made in the GI/Open Space report. The report should also recommend any appropriate modifications to existing Local Plan policy.
	This importance of informal recreation provision. For example, the importance attached by the community to new and improved footpaths, bridleway and cyclepath provision; as well as woodlands, wildlife areas and nature reserves; and informal open space for ball games, picnics, dog walking etc	Initially, specific recommendations for new and improved provision to be made in the GI/Open Space report. The report should also recommend any appropriate modifications to existing Local Plan policy.
	General support for viewing 'open space' as multifunctional.	Initially, specific recommendations for new and improved provision to be made in the GI/Open Space report. The report should also recommend any appropriate modifications to existing Local Plan policy.
Strategic Objective SO3: Town centres and rural hinterlands. Improving the safety, vitality and viability of	The importance of recognising travel times as a factor influencing willingness to access and use facilities of many kinds.	In all three reports dealing with: - GI/Open Space; - Outdoor Sport; and, - Built/indoor facilities,

Local Plan Strategic Objective	What the consultation has highlighted	Suggested Action and other comments
our town centres, which link to and support the needs of their rural hinterlands	This is especially relevant given the geography of the District.	Recommendations should be made in respect of local clusters (as defined in the local plan), as appropriate. The potential for identifying 'hub venues' for providing certain key opportunities should also be considered.
Strategic Objective SO4: *Transport and travel. Promoting healthier alternatives to the use of the private car and seeking to reduce CO2 emissions by using new technologies, active travel and/or smarter choices, working towards a more integrated transport system to improve access to local goods and services*	Strong support across the community and with stakeholders for new and improved walking and cycling opportunities.	It is considered that the Local Plan is already especially strong in this respect, but the review should embrace the emerging Cycling and Walking Infrastructure Plan.
	The importance of recognising travel times as a factor influencing willingness to access and use facilities of many kinds. This is especially relevant given the geography of the District.	See points covered under Strategic Objective 3 In all three reports dealing with: • GI/Open Space; • Outdoor Sport; and, • Built/indoor facilities, Recommendations for local standards of provision should include guidance on appropriate travel time/distances, as well as transport mode.
Strategic Objective SO6: Our District's distinctive qualities. Conserving and enhancing Stroud District's distinctive qualities, based on landscape, townscape and biodiversity.	Support across the general community and stakeholders in respect of the need to create, sustain, and improve Green Infrastructure across the District.	GI/Open Space Study should consider existing treatment of GI in Local Plan and recommend fine-tuning of policy statements, if appropriate.
	A concern to protect the character of existing important open space. Important open space of all kinds needs to be protected from inappropriate (over) use and development. This principle applies to valued common land such as Minchinhampton and Rodborough Commons; and formal parks, such as Stratford Park.	GI/Open Space Study should consider existing treatment of Open Space in Local Plan and recommend fine-tuning of policy statements, if appropriate.

Local Plan Strategic Objective	What the consultation has highlighted	Suggested Action and other comments
	It could also be applied to the canal and waterways network, and especially in relation to the design of adjacent development.	
Other	The value of recognising and providing open space as part of a sustainable drainage solution, both within developments and in vulnerable valley areas.	GI/Open Space Study should consider existing treatment of Open Space in Local Plan and recommend fine-tuning of policy statements, if appropriate.
	Issues with respect to reduced Council maintenance budgets versus the need to maintain existing and improved open space.	GI/Open Space Study should consider existing treatment of Open Space in Local Plan and recommend fine-tuning of policy statements, if appropriate. This might include consideration of: • Mechanisms for on-going management and maintenance; • Cost-effective design and management principles. All technical studies will need to reflect on the role of CIL/Section 106 and how these methods of capturing developer contributions can best be used for the benefit of GI/OS/Recreation.

5.0   AUDIT OF EXISTING OPEN SPACE AND GI ASSETS

5.1   Open Space

General approach

This section sets out the open space typologies which have standards developed or have been included within the quantitative or access analysis. The typologies of open space have drawn on guidance provided within PPG17, and through discussions with the council. The agreed list of typologies are seen to be locally derived and appropriate for the type and range of open spaces that exist within the district.

Although sites have been categorised into different typologies, the multifunctionality of different types of open space is important to recognise e.g. amenity green space, natural green space, parks and recreation grounds and allotments may all provide numerous functions such as providing space for recreation, habitat for wildlife conservation, flood alleviation, improving air quality, and providing food growing opportunities, and forming part of the overall GI network. The intrinsic benefits and ecosystem services provided by open space and GI are numerous (as highlighted in section 3), such as providing an attractive landscape or improving health and wellbeing.

The following typologies have been set:

Table 3   Stroud District Typologies

Typologies mapped with standards	Typologies mapped but no standards[14]
- Allotments - Community orchards - Amenity Green Space (>0.15 ha) - Park and Recreation Grounds: - *Parks and Recreation Grounds* - *Outdoor Sports Space (Fixed)* - Play Space (Children) - Play Space (Youth) - Accessible Natural Green Space	- Education sites - Churchyards and Cemeteries - Outdoor Sports Space (Private)

Open Space Typologies with standards

5.1.1   Allotments

Allotments provide areas for people to grow their own produce and plants. It is important to be clear about what is meant by the term 'Allotment'. The Small Holdings and Allotments Act 1908 obliged local authorities to provide sufficient allotments and to let them to persons

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[14] An explanation for not developing standards for these typologies is outlined in the following sections

living in their areas where they considered there was a demand. The Allotment Act of 1922 defines the term 'allotment garden' as:

"an allotment not exceeding 40 poles[15] in extent which is wholly or mainly cultivated by the occupier for the production of vegetable or fruit crops for consumption by himself or his family"

The Allotments Act of 1925 gives protection to land acquired specifically for use as allotments, so called Statutory Allotment Sites, by the requirement for the need for the approval of Secretary of State in event of sale or disposal. Some allotment sites may not specifically have been acquired for this purpose. Such allotment sites are known as "temporary" (even if they have been in use for decades) and are not protected by the 1925 legislation.

No allotments were quality audited as part of this study, as access is generally restricted.

5.1.2   Community orchards

Community orchards are collections of fruit and/or nut trees which are managed by volunteers/community groups and may also provide access and space for community events, informal recreation and relaxation. They provide opportunity for the preservation of traditional skills such as grafting and cultivating local and unusual varieties of fruit trees, and contribute to priority habitat targets (traditional orchards) and provide important wildlife habitat, including for pollinators.

No community orchards were quality audited as part of this study, as access is generally restricted.

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[15] 40 Poles equals 1,210 square yards or 1,012 square metres. A Pole can also be known as a Rod or Perch

5.1.3   Amenity Green Space

The category is considered to include those spaces (minimum 0.15 ha in size) open to free and spontaneous use by the public, but neither laid out nor managed for a specific function such as a park, public playing field or recreation ground; nor managed as a natural or semi-natural habitat. These areas of open space will be of varied size, but are likely to share the following characteristics:

- Unlikely to be physically demarcated by walls or fences.
- Predominantly lain down to (mown) grass.
- Unlikely to have identifiable entrance points (unlike parks).
- They may have shrub and tree planting, and occasionally formal planted flower beds.
- They may occasionally have other recreational facilities and fixtures (such as play equipment or ball courts).

Examples might include both small and larger informal grassed areas in housing estates and general recreation spaces. They can serve a variety of functions dependent on their size, shape, location and topography. Some may be used for informal recreation activities, whilst others by themselves, or else collectively, contribute to the overall visual amenity of an area.

It should be noted that amenity green spaces smaller than 0.15 ha were not included within the analysis for this typology, as it is considered that these sites will have limited recreation function and therefore should not count towards open space provision (although they may have other functions such as visual amenity or biodiversity value).

All amenity green space above 0.15ha were visited/quality audited.

5.1.4   Park and Recreation Grounds

This typology brings together the function of Parks and Recreation Grounds and Outdoor Sports Space as identified in the former PPG17 typology. The distinction between the two typologies in the study area is blurred, with very few formal gardens and many parks and/or outdoor sports space having multi-functions used for both informal and formal recreation. The consultation undertaken indicated that people refer to their local park or rec, and communities do not make a distinction between outdoor sports space and parks and recreation grounds. Therefore, for the study an overarching typology for Park and Recreation Grounds has been used.

For the purpose of this study, a Park and Recreation Ground is defined as an open space that:

- Has at least two facilities e.g. a children's play area and tennis courts, or;
- Has provision for formal sport e.g. football or cricket pitch (informal football would be excluded); and
- Is managed by the Council, or Town/Parish Council.

Those outdoor sports grounds which are privately managed and have some level of public access e.g. can be used for dog walking have been mapped as Outdoor Sport (Private) and are included within the access analysis long with the Park and Recreation Ground typology. Those facilities that have strictly no public access (and are only available to clubs and members) are still mapped as Outdoor Sport (Private) but have been excluded from the access analysis.

The Parks and Recreation Ground typology comprises the general open space surrounding play areas, sports facilities etc. used for general recreation and includes those areas laid out as pitches (although the pitches themselves have not been mapped) which are accessible i.e. they can be walked over/used informally. Pitches which have no access e.g. they are fenced

off/open to members or clubs only have been mapped as Outdoor Sport (Private) and are not included within the quantity analysis for parks and recreation grounds.

The quantity analysis for Parks and Recreation Grounds also includes fixed outdoor sports space (comprising all other non-pitch based provision including tennis courts, outdoor gyms and bowling greens) which are publicly accessible/available to book. Those facilities that are managed by a club and are not freely accessible are mapped as Outdoor Sport (Private) and are not included within the quantity analysis.

The quantity figure for Parks and Recreation Grounds excludes the provision of children and youth play spaces which have a separate typology.

Parks and Recreation Grounds take on many forms, and may embrace a wide range of functions including:

- Play space of many kinds;
- Provision for a range of formal pitch and fixed sports;
- Informal recreation and sport;
- Providing attractive walks and cycle routes to work;
- Offering landscape and amenity features;
- Areas of formal planting;
- Providing areas for 'events';
- Providing habitats for wildlife;
- Dog walking.

When mapping this type of provision, a multi-functional approach to mapping has been adopted where play spaces, youth spaces and fixed outdoor sports facilities (e.g. tennis courts, bowling greens) are separately mapped. Individual playing pitches (e.g. football, rugby) are not separately mapped as the assessment of these facilities is included within the separate playing pitch study.

The recommended standards for this typology are intended to provide sufficient space for sports facilities, pitches and ancillary space e.g. footpaths, landscaping etc. The emerging Playing Pitch Strategy should be referred to for evidence relating to recommendations for playing pitch requirements and their provision[16]. The quantity standard is designed to be flexible so that the Council can make the case for what type of open space/facilities are required, this would be justified on the analysis of particular local circumstances and on a case-by-case basis.

All park and recreation grounds were subject to quality audits as part of the Open Space Study. Audits of pitches and outdoor sports facilities are covered within the PPS.

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[16] It should be noted that playing pitches are not only provided within parks and recreation grounds, and the parks and recreation grounds typology/standard therefore will only accommodate a proportion of the requirements for new pitches. The PPS calculations do not include those pitches/facilities which fall within parks and recreation grounds, in order to avoid double counting.

5.1.5   Play Space (Children and Youth)

It is important to establish the scope of the Study in terms of this type of open space. Children and young people will play/'hang out' in almost all publicly accessible "space" ranging from the street, town centres and squares, parks, playing fields, "amenity" grassed areas etc. as well as the more recognisable play and youth facility areas such as equipped playgrounds, youth shelters, BMX and skateboard parks and Multi Use Games Areas (MUGAs) etc. Clearly many of the other types of open space covered by this Study will therefore provide informal play opportunities.

To a child, the whole world is a potential playground: where an adult sees a low wall, a railing, kerb or street bench, a child might see a mini adventure playground or a challenging skateboard obstacle. Play should not be restricted to designated 'reservations' and planning and urban design principles should reflect these considerations.

The study has recorded the following:

- **Children's Play Space –** Areas of play that cater for the needs of children up to and around 12 years. Play Areas are an essential way of creating safe but adventurous places for children of varying ages to play and learn. The emphasis in play area management is shifting away from straightforward and formal equipment such as slides and swings towards creating areas where imagination and natural learning can flourish through the use of landscaping and natural building materials and the creation of areas that need exploring.

- **Youth Play Space** - informal recreation opportunities for, broadly, the 13 to 16/17 age group, and which might include facilities like skateboard parks, basketball courts and 'free access' Multi Use Games Areas (MUGAs). In practice, there will always be some blurring around the edges in terms of younger children using equipment aimed for youths and vice versa.

All children's and youth play spaces were quality audited.

5.1.6   Accessible Natural Green Space

For the purpose of the open space element of the study, accessible natural green space covers a variety of spaces including meadows, woodland, copses, river valleys and lakes all of which share a trait of having natural characteristics and biodiversity value and are also partly or wholly accessible for informal recreation.

The nature of the geography of Stroud means there are large tracts of open countryside, much of this is private land used for farming, however, there is significant access to the countryside provided through the rights of way network. It was not the intention of this audit to survey and map all these areas, but to focus on sites where there are definitive boundaries or areas of natural green space which have some form of public access. In some cases, access may not be fully clear, however, there is evidence of some level of informal use and access.

Some sites may provide access in different ways, for example, rivers or lakes are often used for water recreation (e.g. canoeing, fishing, sailing). Whilst access may not be available fully across all areas of these sites (e.g. the middle of a lake or dense scrub in a woodland), the whole site has been included within the assessment.

Some natural spaces have no access at all, and whilst they cannot be formally used by the general community, they can be appreciated from a distance, and contribute to visual amenity, green infrastructure and biodiversity. Whilst every effort was made to exclude these spaces from the open space assessment (these spaces will be included within the GI element), as already identified, in certain sites access may not always be clear.

Green corridors such as canal towpaths (and the canals themselves) provide important access, recreation and biodiversity opportunities and these linear routes have been considered as part of the provision of GI, rather than open space.

The local consultation and research elsewhere (Natural England[17])) have identified the value attached to natural spaces for recreation and emotional well-being. A sense of 'closeness to nature' with its attendant benefits for people is something that is all too easily lost in urban areas. Natural green spaces can make important contributions towards local Biodiversity Action Plan targets and can also raise awareness of biodiversity values and issues.

Due to resource limitations we were not able to visit and quality audit all accessible natural green spaces, and the focus for this typology was to ascertain accessibility and boundaries.

Open space typologies with no standards

None of the typologies below were subject to quality audits as part of the open space assessment – due to access and resources (although the PPS has audited pitches and outdoor sports facilities).

5.1.7   Education

Many schools and colleges have open space and sports facilities within their grounds. This may range from a small playground to large playing fields with several sports pitches. More often than not, public access to these spaces is restricted and in many cases forbidden. Nevertheless, many of the sports facilities are used by local people on both an informal and formal basis.

Sports clubs may have local informal arrangements with a school to use their pitches, and in some cases more formal 'dual-use' agreements may be in place. School grounds can also contribute towards the green infrastructure and biodiversity of an area.

Quantity and access standards have not been proposed for education sites. This is because they are not openly accessible to the public and whilst they can be important to the local community, there is less opportunity for the Council to influence their provision and management. Furthermore, community access to education sites is assessed within the separate Playing Pitch Strategy for Stroud.

It is recognised that links with the community do seem to change regularly over time with new regulations, new school leadership, sport or open space funding bid requirements etc. It is also noted that some private schools are exploring options of limited housing to fund school activities/infrastructure - this is covered within the Playing Pitch Strategy (PPS).

5.1.8   Outdoor Sport (Private)

Outdoor sports spaces which are privately managed and have varying levels of public access (e.g. private sports grounds), have also been recorded and mapped where known. For each site we have noted whether there is access for informal recreation such as dog walking, and these sites have been included in the access analysis along with parks and recreation

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[17] Natural England have published a variety of health and the natural environment publications at
http://publications.naturalengland.org.uk/category/127020

grounds[18]. Private sport space makes up an important part of outdoor sports provision across the District and forms an important part of the community facilities. The private sports spaces have been mapped separately to publicly accessible sites, to determine exact provision of the different types of provision.

This typology includes golf courses, where more often than not, public access is restricted. Nevertheless, these facilities are used by local people and they form part of the Green Infrastructure network. This typology also includes fixed outdoor sports space (including tennis courts and bowling greens) which are privately managed, and not accessible.

5.1.9   Churchyards and Cemeteries

The District has numerous churches and cemeteries, and these provide significant aesthetic value and space for informal recreation such as walking and relaxing. Many churches are heritage assets and are protected, and the churchyards and cemeteries provide a historical context and setting to them. They are important in 'place shaping' and provide a point of local geographical recognition. Many are also important in terms of biodiversity. Their importance for informal recreation, aesthetic value and contribution towards biodiversity must be acknowledged, and as such, investment in their upkeep, maintenance and quality is an important factor.

Churchyards and Cemeteries have been identified and mapped where known, however, no quantity or access standard for provision will be set, as it is outside the scope of this study to make recommendations related to requirements for new provision.

Quality recommendations for this typology have been made, however no quality audits were undertaken due to resource limitations.

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[18] It should be noted that some private grounds have permissible informal recreation access, which could change with leaseholders.

5.2   GI

Overview

Given that the vast majority of the District is rural and therefore can be considered as green (or blue) infrastructure, the mapping of GI in the District has focused on areas of high quality GI (e.g. statutory and non-statutory designated sites) and connectivity (rivers, major footpaths/cycleways, etc.). Maps/datasets have been grouped into the following themes, in accordance with Building with Nature[19]:

- Wellbeing;
- Water; and
- Wildlife.

The green infrastructure asset/datasets that have been mapped as part of the Study are provided in the table below.

Table 4   Datasets used for GI mapping

Theme	Overview	Datasets
Wellbeing	For the purpose of this study, this primarily relates to accessible open spaces and PROW/sustainable transport routes, recognising the importance that access to nature and open space has on improving health and wellbeing and social cohesion.	• Accessible open spaces mapped as part of the open space element of the study i.e. allotments and community orchards, amenity green space, parks and recreation ground, play

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	In addition to providing health and wellbeing benefits, these accessible open spaces and routes also provide opportunities for recreation and food growing, and support a range of habitats for wildlife. They act as 'wildlife corridors' for the dispersal of wildlife as well as providing access for people.	spaces, natural green space, churchyards and cemeteries (includes Local Greenspace designations). • Public Rights of Way Network (PROW) • Key Walking Routes • Cycle Routes (proposed and existing) • National Cycle Network (NCN)
Water	This includes all 'Blue GI' at a range of scales e.g. rivers, streams, canals and flood zones. For the purpose of this study we have focused on the key/strategic features. However, the importance of localised features such as ponds and SuDs is recognised. In addition to their vital function as 'wildlife corridors' for the dispersal of wildlife, these corridors can also provide access for people, connecting settlements and the surrounding landscape via walking and cycling routes.	• Rivers/Streams • Canals • Lakes/Surface Water • Flood Zone 2 • Priority River Habitat • Source Protection Zones • Slimbridge Wildfowl and Wetlands Trust
Wildlife	The Wildlife Theme has been split into a number of different sub categories/maps as follows: 1. Priority habitats, Strategic Nature Areas (SNAs) and Nature Improvement Areas (NIAs) 2. Designated Nature Conservation, Biodiversity and Geodiversity Sites, AONB and Registered Parks and Gardens 3. Landscape Character – NCAs, LCAs Stroud's varied geology and rich variety of habitats supports a diversity of wildlife.	• Priority habitat inventory (NE (Natural England)) • SNAs (Gloucestershire Local Nature Partnership (GLNP)) • Locally derived NIAs (GLNP) • SACs (NE) • SPAs (NE) • RAMSAR (NE) • SSSI (NE • NNR (NE) • LNR (NE) • KWS (Stroud District Council (SDC)) • Ancient Woodland (NE) • RIGS (SDC) • National Character Areas (NE) • Landscape Character Assessment (SDC) • AONB (NE)

	In addition to contributing to biodiversity and geodiversity services, these assets also contribute to a number of other important ecosystems services including climate regulation; regulating water quality and flow; regulating soil quality and erosion; pollination; pest regulation; genetic diversity; sense of place/inspiration; tranquillity; and recreation.	

GI assets and landscape context

5.2.1   National Character Areas (NCAs)

NCAs divide England into 159 distinct natural areas. Each is defined by a unique combination of landscape, biodiversity, geodiversity, history, and cultural and economic activity. Their boundaries follow natural lines in the landscape rather than administrative boundaries.

Each profile contains a description of landscape area and provide the main facts about the area, information about change in the landscape, the main attributes of the landscape and an assessment of provisioning, regulating and cultural ecosystem services. The statements of environmental opportunity found in each profile helps to bring together this information and offers suggestions where action can be best targeted to conserve and improve the natural environment.

The table below describes the three NCAs found within Stroud district, and sets out the Statements of Environmental Opportunity (SEOs) for each. Any plans for new GI, or improvements to existing GI should consider these and set out how they contribute towards these SEOs.

Table 5   NCAs in Stroud district

NCA	Overview	Statements of Environmental Opportunity
Severn and Avon Vales	The lower valleys of the rivers Severn and Avon dominate this low lying open agricultural vale landscape made up of distinct and contrasting vales, including Evesham, Berkeley, Gloucester, Leadon and Avon, with Cotswold outliers like Bredon Hill punctuating the otherwise flat vale landscape. The M5 Motorway runs through the centre and the eastern edge of the area.	SEO 1: Protect and manage the landscape, heritage and biodiversity associated with the Severn Estuary, the river valleys and other hydrological features, planning for a landscape scale expansion of wetlands, intertidal habitats and unimproved grasslands along river floodplains through, restoration, expansion and re-linkage of existing remnant areas of seminatural habitat. SEO 2: Seek to safeguard and enhance this area's distinctive patterns of field boundaries, ancient hedgerows, settlements, orchards, parkland, small woodlands, chases, commons

NCA	Overview	Statements of Environmental Opportunity
		and floodplain management with their strong links to past land use and settlement history, and for the benefits this will bring to soil erosion, soil quality and biodiversity. SEO 3: Reinforce the existing landscape structure as part of any identified growth of urban areas, hard infrastructure and other settlements ensuring quality green infrastructure is incorporated enhancing health, access, recreation, landscape, biodiversity and geodiversity. SEO 4: Protect geological exposures and maintain, restore and expand semi natural habitats throughout the agricultural landscape, linking them together to create a coherent and resilient habitat network enabling ecosystems to adapt to climate change.
Cotswolds	The Cotswolds form the best-known section of the predominantly oolitic Jurassic Limestone belt that stretches from the Dorset coast to Lincolnshire. The dominant pattern of the Cotswold landscape is of a steep scarp crowned by a high, open wold; the beginning of a long and rolling dip slope cut by a series of increasingly wooded valleys. The scarp provides a backdrop to the major settlements of Cheltenham, Gloucester, Stroud and Bath and provides expansive views across the Severn and Avon Vales to the west. Smaller towns and villages nestle at the scarp foot, in the valley bottoms and on the gentler valley sides at springlines. Scattered hamlets and isolated farmsteads are found on the higher ground. The limestone has been quarried and used locally in buildings and walls, bringing a distinctive harmony to the area. Settlements are linked by a complex network of roads and public rights of way.	SEO 1: Protect and enhance the highly distinctive farmed landscape, retaining the balance between productive arable, pastoral and wooded elements and the open, expansive views particularly from the scarp, high wold and dip slope. SEO 2: Safeguard and conserve the historic environment, cultural heritage and geodiversity that illustrate the history, evolution, foundations, land use and settlement of the Cotswolds landscape, and enable access to and interpretation of the relationship between natural processes and human influences. SEO 3: Protect, maintain and expand the distinctive character of the Cotswolds and the network of semi-natural and arable habitats, including limestone grassland, beech woods and wetlands along streams and rivers, to enhance water quality, strengthen ecological and landscape connectivity, support rare species and allow for adaptation to changes in climate. SEO 4: Safeguard and manage soil and water resources, allowing naturally functioning hydrological processes to maintain water quality and supply; reduce flooding; and

NCA	Overview	Statements of Environmental Opportunity
		manage land to reduce soil erosion and water pollution and to retain and capture carbon.
Bristol, Avon Valleys and Ridges	The Bristol, Avon Valleys and Ridges National Character Area (NCA) encompasses the City of Bristol with its historic port, and the surrounding area including the Chew and Yeo valleys, Keynsham, Clevedon, Portishead and parts of the Cotswolds and Mendip Hills Areas of Outstanding Natural Beauty (AONB). The area is characterised by alternating ridges and broad valleys, with some steep, wooded slopes and open rolling farmland. It is flanked by the Somerset Levels and Moors and the Mendip Hills to the south, the Cotswolds to the east and the Severn and Avon vales to the west, which largely separates it from the Severn Estuary except for a small stretch of coastline between Clevedon and Portishead. It has a complex geology, being rich in geomorphological features such as the dramatic Avon Gorge, and there are many designated exposures and rich fossil beds. The varied settlement pattern has been influenced by the geology and geomorphology and the expansion of the City of Bristol at its centre. The M5 motorway runs up the western edge and the M4 skirts across the north of Bristol, with Bristol Airport to the south. Although the urban area covering this NCA is significant at over 21 per cent, much of the surrounding rural landscape is farmed.	SEO 1: Conserve and manage the distinction between small rural settlements and the densely urban City of Bristol, the urban fringe transitional zone and the commuter settlements; and ensure that new development is sensitively designed to contribute to settlement character, reduce the impact of the urban fringe and provide well-designed green infrastructure to enhance recreation, biodiversity and water flow regulation. SEO 2: Protect and manage the strong sense of history and many historical assets ranging from prehistoric barrows to the mining legacy, as well as the Avon Gorge and the many varied geological exposures within this geologically significant landscape, to enable recreation and access, education, tourism and continued enjoyment of the heritage of the area. SEO 3: Conserve and sustainably manage the gentle clay vales and limestone ridges and downs of the rural agricultural landscape and enhance the network of semi-natural habitats, linking them together to create a coherent and resilient ecological network, enabling ecosystems to adapt both to climate change and for the benefits to landscape, biodiversity, water flow, water quality, soil quality, soil erosion, rural heritage and culture. SEO 4: Protect and manage the landscape, heritage and biodiversity associated with the Avon River corridor, other river valleys and lakes, planning for a landscape-scale enhancement of wetlands, wet woodland and semi-natural grasslands along river flood plains for the benefits to biodiversity, climate regulation, water quality and flooding mitigation.

5.2.2   Landscape Character Assessments

Landscape character assessment (LCA) is the process of identifying and describing variation in character of the landscape. LCA documents identify and explain the unique combination of elements and features that make landscapes distinctive by mapping and describing character types and areas. They also show how the landscape is perceived, experienced and valued by

people. The Stroud District Landscape Assessment (SPD, November 2000) sets out the following landscape areas and key priorities in table 6 below. Any plans for new GI, or improvements to existing GI should consider these and set out how they contribute towards these key priorities.

Table 6   Stroud District Landscape Character Areas and Key Priorities

Landscape Character Area	Key Features	Key Priorities
Escarpment	Large scale, semi-natural and elevated scarp slope. The outliers/isolated hills at the edge of the Escarpment form distinctive local landmarks. The landscape is varied with large areas of deciduous woods, areas of unimproved permanent species rich calcareous grassland and some patches of scrub. There are some small pastures enclosed by hedges on gentler slopes with parkland being a feature on the upper and mid-slopes. Settlements consisting of traditional buildings are situated at the top or bottom of the scarp face. There are some historical cultural sites along the escarpment ridge.	To maintain the traditional land use of Escarpment in relation to varied land cover types. To protect, conserve and interpret historic sites along the Escarpment. To exercise development control to limit impact of new development.
Kingswood Vale	Irregular undulating to locally broken, rolling terrain which becomes gentler to the south. A transitional landscape from Cotswold Escarpment footslopes to Severn Vales lowlands. Medium size fields with a mixture of pasture and arable land use. There are old orchards along the footslopes of the escarpment and frequent hedgerows becoming fewer to the south. The landscape is visually semi-enclosed to open with more outward distant views to the south. Buildings are made of red brick and stone, and the large traditional ones form local land marks.	To ensure strict control of any future development to protect the rural character of the area. To conserve the high-quality view from the AONB escarpment. To ensure the implementation of appropriate landscape schemes for development. To discourage removal of hedgerows and intensification of arable production. To encourage the replanting of new orchards and the management of old orchards. To encourage sympathetic redevelopment of vernacular buildings.
Rolling	Associated with the rolling topography of Cotswold dip slope. This landscape has a convex valley side profile (no upper valley-side rim or distinct break of slope). The valley head is open without scrub and woodland whereas the mid-valleys are more wooded on the	To encourage traditional land management and woodland management. To direct recreational pressure away from the more sensitive areas. To encourage careful siting of new farm buildings.

Landscape Character Area	Key Features	Key Priorities
	steeper slopes and the permanent grassland and wetland vegetation on the valley bottom. Field patterns consist of large regular shaped at the valley head and smaller field on the lower slopes. Farmsteads are situated on higher land with villages/hamlets at bridging/fording points.	
Rolling Agricultural Plain	A varied landscape of open flat plain to more undulating landform towards limestone escarpment which is dissected by the River Cam and Frome. It is an established, old, rich rural lowland with some woodlands and mature hedgerow trees. Land use is a mix of arable and pasture with medium to small field patterns. The landscape is semi-enclosed with some distinct views and more restrained views from Frome Valley. Dispersed pattern of isolated villages with churches act as strong landmarks.	To conserve and protect the river valley and wetland landscape. To encourage the continued management of existing hedgerows, hedgerow trees and farm woodlands. To review the schedule of conservation areas. To control sporadic development along the major routes and at the edges of small settlements.
Sandstone Ridge	An undulating ridge of Old Red Sandstone and Limestone. The landscape is semi enclosed with intermittent views to the River Severn estuary. Land use is mixed pasture and arable with blocks of woodland. Settlement is associated with Sharpness Docks and comprises of Victorian terraces with some recent housing. Traditional sandstone farmhouses are situated along narrow lanes. There is a strong influence of the docks, Gloucester to Sharpness Canal and the railway line.	To conserve local vernacular buildings and the variation between settlements through planning controls and design briefs. To conserve and continue to manage woodland and hedgerows. To protect important wetland habitats.
Secluded Valleys	This landscape has an enclosed and secluded character with steep sides. Predominantly pastureland with ancient woodland along valley rims. Scrub and unimproved grassland characterises the steep and broken slopes. Large settlements are situated at the valley mouth with smaller settlements along the valley	To ensure careful and stringent planning controls on the siting and design of new development are provided to maintain character of the landscape. To encourage the uptake of grants and support schemes to maintain traditional land management in the rural valleys.

Landscape Character Area	Key Features	Key Priorities
	bottoms and along upper valley rims.	To encourage the continued protection of important wildlife habitats. To conserve and restore important cultural features and protect old quarry sites. To protect remnant pastures and small woodlands within the urban pressured areas.
Severn Vale Grazing Marshes	These marshes occur intermittently along the edge of the Severn Estuary and is an open flat landscape with extensive views. A mixture of arable and wet alluvial pastures with vegetation reflecting this. Field boundaries are marked with ditches and banks. There are few settlements with isolated farmhouses. Flood embankments restrict the views of the estuary.	To encourage the use of water management plans to reduce the risk of water pollution. To control public access to the area. To restrict new development in the area and the siting of visually intrusive elements. To restrict new woodland planting to lines of willow and alder and encourage the continued management of pollarded willows.
Severn Vale Hillocks	Knolls of higher land composed of clay, head and gravel terraces. Well wooded with varied field patterns. Settlements flank roads as linear strips. The higher land forms a strong visual barrier between the River Severn and Severn Plain.	To conserve and continue to manage the ancient woodland. To conserve and manage orchard and hedges. To control new development. To control the species and location of new woodland.
Triassic Ridge	Designated as an Historic Landscape Area and Conservation site, this is a distinctive ridge rising to approximately 50-55m AOD. Consists of mixed woodland blocks with large field sweeping up the valley sides. Landscape is relatively inaccessible.	To ensure continued management of small orchards. To ensure continued management of woodland on the ridgeline. To managed existing footpaths and visitors. To ensure restoration of field boundaries and the prevention of further removal. To restrict new modern and visually intrusive development.
Undulating Lowlands	Low-lying gently undulating the flood plain. Distant views to surrounding ridges and Cotswold escarpment. Landscape has medium to large scale irregular shaped fields which includes pasture and small woodlands. Settlements include linear hamlets, farmsteads and old manors.	To conserve and protect the high-quality landscape occurring in the Wooded Lowlands. To control sporadic development and the extension of linear settlements. To encourage the management of existing hedgerow trees and farm woodlands. To conserve wet pastures and related wetland habitats.

Landscape Character Area	Key Features	Key Priorities
		To conserve important woodland habitats.
Wold Tops	A simple extensive character with long views. Broad undulating elevated topography giving large scale strong visual pattern of fields and woodland. Simple landcover of extensive arable use. Well managed woodland blocks with dry stone walls and sparse settlement.	To encourage diversification of farming including restoration of limestone grassland and dry-stone walls. To encourage and support positive management of native broadleaved and mixed woodlands. To maintain the open character of the landscape and avoid new development of prominent ridgelines.
Wooded Cambrian Ridge	Prominent rounded ridgeline with extension mixed woodland. The landform and woodland form a local landmark. Dissected by Little Avon River and bisected by the M5 motorway.	To ensure conservation and continue positive management of Ancient Woodland. To ensure conservation and positive management of the river valley.

5.2.3   Strategic Nature Areas (SNAs)

SNAs are Landscape scale blocks of land, which show where the characteristic habitats that typify the county can be expanded and linked to help wildlife survive. They are areas which contain higher than average concentrations of existing wildlife habitats. Each SNA is classified according to the dominant habitat type, however, the majority of SNAs are a mix of different wildlife habitats and other land uses.

The SNAs within Stroud are as follows:

- **The Severn Vale** – consisting of wet grassland habitat; and
- **The Cotswold Escarpment and Valley** – largely consisting of lowland calcareous (limestone) grassland, and two areas of woodland mosaic.

5.2.4   Nature Improvement Areas (NIAs)

NIAs were established to create joined up and resilient ecological networks at a landscape scale. They are run by partnerships of local authorities, local communities and landowners, the private sector and conservation organisations with funding provided by Defra and Natural England. 12 NIA projects were started in April 2012 and the funding ended in March 2015.

All 12 NIAs have the main components of an ecological network. These are:

- core areas, especially existing wildlife sites (e.g. national nature reserves, sites of special scientific interest, local nature reserves)

- habitat corridors and 'stepping stones' to allow species to move around the area
- restoration areas, with the potential to create priority habitats which may become further core areas
- buffer zones to reduce pressures on core areas
- surrounding land that is managed in a wildlife friendly way e.g. for sustainable food production

Defra also set out a role for LNPs to establish locally determined NIAs. The following locally determined NIAs were formally adopted by the Gloucestershire LNP in 2015:

1. **Severn Vale** – covers the flood plain of the River Severn and the lower reaches of it's major tributaries in Gloucestershire.
2. **Cotswold Scarp** – consists of the Cotswold scarp from and including the limestone valleys around Bath, the settled valleys around Stroud up to Ebrington Hill. The NIA also takes in Bredon Hill.
3. **Cotswold Valleys** – consists of the river valley systems of the Evenlode, Windrush, Leach, Coln, Churn and the By Brook. The NIA continues into Oxfordshire, Wiltshire and Bath and NE Somerset.
4. **Cotswold Water Park** – covers a total of 19,500 ha within Gloucestershire, Wiltshire and Swindon Borough.

5.2.5   The Cotswolds Area of Outstanding Natural Beauty (AONB)

The Cotswolds was designated an Area of Outstanding Natural Beauty (AONB) in 1966 in recognition of its rich, diverse and high quality landscape. It is the largest of 46 AONBs in England, Wales and Northern Ireland, and the second largest protected landscape in England after the Lake District National Park. Covering 790 sq miles, the Cotswolds stretches from Bath and Wiltshire in the south through Gloucestershire and Oxfordshire to Warwickshire and Worcestershire in the north.

Areas of Outstanding National Beauty are part of a family of protected areas recognised and classified by the International Union for the Conservation of Nature (IUCN) throughout the world. AONBs are designated in recognition of their national importance and to ensure that their character and qualities are protected for all to enjoy.

The Cotswold landscape is made up of a variety of features including rolling agricultural land, flower-rich limestone grassland, deep incised valleys, country parks and woodland. Section 3.2.2.5 provides an overview of The Cotswolds AONB Management Plan 2018-2023.

5.2.6   European Designated Sites

Special Protection Areas (SPAs): SPAs are classified by the UK Government under the EC Birds Directive. SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union. SPAs, together with SACs, form the Natura 2000 network.

Special Areas of Conservation (SACs): SACs are designated under the EC Habitats Directive. SACs are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive.

Ramsar Sites: Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. Originally intended to protect sites of importance especially as waterfowl habitat, the Convention has broadened its scope over the years to cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities.

5.2.7   Nationally Designated Sites

Sites of Special Scientific Interest (SSSIs): The SSSI series has developed since 1949 as the national suite of sites providing statutory protection for the best examples of the UK's flora, fauna, or geological or physiographical features. These sites are also used to underpin other national and international nature conservation designations. SSSIs are notified under the Wildlife and Countryside Act 1981.

National Nature Reserves (NNRs): NNRs contain examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats or to provide special opportunities for scientific study of the habitats communities and species represented within them. NNRs are declared by the statutory country conservation agencies under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981.

5.2.8   Locally Designated Sites

Local Nature Reserves (LNRs): Under the National Parks and Access to the Countryside Act 1949 LNRs may be declared by local authorities after consultation with the relevant statutory nature conservation agency. LNRs are declared and managed for nature conservation, and provide opportunities for research and education, or simply enjoying and having contact with nature.

Key Wildlife Sites (KWSs): Local authorities for any given area may designate certain areas as being of local conservation interest. The criteria for inclusion, and the level of protection provided, if any, may vary between areas. These sites are defined in local plans under the Town and Country Planning system and the National Planning Policy Framework and are a material consideration when planning applications are being determined. In Stroud, these sites are known as Key Wildlife Sites.

Regionally Important Geological and Geomorphological Sites (RIGS): RIGS are the most important places for geology and geomorphology outside statutorily protected land such as Sites of Special Scientific Interest (SSSI). Sites are selected under locally-developed criteria, according to their value for education, scientific study, historical significance or aesthetic

qualities. Whilst not benefiting from statutory protection, LGS are equivalent to Local Wildlife Sites.

5.2.9 Historic Sites

Scheduled Ancient Monuments (SAMs) – A scheduled monument is a nationally important archaeological site or historic building, given protection against unauthorised change. There are 68 SAMs within the District.

Registered Parks and Gardens - The Historic England 'Register of Historic Parks and Gardens of special historic interest in England', established in 1983, identifies sites of particular significance. There are 14 Registered Parks and Gardens within Stroud District.

5.2.10 Ancient Woodland

The Ancient Woodland Inventory identifies over 52,000 ancient woodland sites in England. Ancient woodland is identified using presence or absence of woods from old maps, information about the wood's name, shape, internal boundaries, location relative to other features, ground survey, and aerial photography.

The NPPF (paragraph 175C) states that 'development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists'

5.2.11 Priority Habitats

The Priority Habitat Inventory is a spatial dataset that describes the geographic extent and location of Natural Environment and Rural Communities Act (2006) Section 41 habitats of principal importance. This inventory replaces Natural England's previous separate BAP habitat inventories.

The following priority habitats are found within Stroud:

- Coastal and floodplain grazing marsh
- Coastal saltmarsh
- Deciduous woodland
- Good quality semi-improved grassland
- Lowland calcareous grassland
- Lowland dry acid grassland
- Lowland meadows
- Mudflats
- No main habitat but additional habitats present
- Purple moor grass and rush pastures
- Traditional orchard

5.2.12 Public Rights of Way including key walking and cycling routes

Stroud has an extensive network of PRoW, and a number of key walking and cycling routes which have been identified in figure 13. There are approximately 1434 km of PRoW within the district. The breakdown by cluster is provided in part 2 of this report. The Draft Stroud District Cycling and Walking Infrastructure Plan (see section 3.2.2.12) sets the priorities for the district.

5.2.13 Blue GI - Canals, Rivers/Streams, Priority River Habitat, Lakes/Surface Water, Floodzone, Source Protection Zones

Rivers and canals - The main rivers and canals and streams in Stroud are as follows:

- River Severn
- River Frome
- River Cam
- River Twyver
- River Ewelme
- Little Avon River

- Stroudwater Canal
- Thames and Severn Canal
- The Gloucestershire and Sharpness Canal

- Painswick Stream
- Toadsmoor Stream
- Nailsworth Stream
- Shorn Brook
- Daniels Brook

Flood Zones – The Environment Agency have produced a flood zone map for land-use planning. Detailed flood risk assessments need to be undertaken as part of development proposals to show how the flood risk to the site, or elsewhere as a result of proposed changes to the site, can be managed as part of the proposal.

Local planning authorities should use this map alongside an up-to-date Strategic Flood Risk Assessment to identify when a flood risk assessment is required. SDC have commissioned SFRA Level 1 and 2 studies to accompany the emerging Local Plan Review.

Flood Zone definitions are set out in the National Planning Policy Guidance:
- Flood Zone 1 - land assessed as having a less than 1 in 1,000 annual probability of river or sea flooding (<0.1%)
- Flood Zone 2 - land assessed as having between a 1 in 100 and 1 in 1,000 annual probability of river flooding (1% – 0.1%), or between a 1 in 200 and 1 in 1,000 annual probability of sea flooding (0.5% – 0.1%) in any year
- Flood Zone 3 - land assessed as having a 1 in 100 or greater annual probability of river flooding (>1%), or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year

Note: These flood zones refer to the probability of river and sea flooding, ignoring the presence of defences.

As flood zone 1 covers the whole district. Flood zone 2 areas have been mapped (which also incorporates those areas which have been identified as flood zone 3) as these are the areas where flood risk assessments are required.

Flood zone 2 data as at March 2019 has been used which reflects the latest modelling and Strategic Flood Risk Areas (SFRAs).

Priority River Habitat

Rivers – One of the two datasets that make up the Priority River Habitat Map. Consists of rivers and streams that exhibit a high degree of naturalness. Streams and rivers operating under natural processes, free from anthropogenic impact and with a characteristic and dynamic mosaic of small-scale habitats that supports characteristic species assemblages (including priority species), are the best and most sustainable expression of river ecosystems. These conditions provide the best defence against climate change, maximising the ability of riverine ecosystems to adapt to changing conditions. They also provide the most valuable and effective transitional links with other priority habitats, including lakes, mires and coastal habitats. In English rivers and streams, high levels of naturalness are rare.

Headwater areas - One of the two datasets that make up the Priority River Habitat Map. Under the UK BAP definition all headwaters potentially form part of the priority habitat definition. The headwater resource can be a significant proportion of the river habitat network, accounting for the large majority of total river length. The headwater areas selected as most natural by land cover comprise a relatively large proportion of the upland headwater resource but a very small proportion of the lowland resource.

Groundwater source protection zones - These are designated zones around public water supply abstractions and other sensitive receptors that signal there are particular risks to the groundwater source they protect. The Environment Agency is responsible for the protection of "controlled waters" from pollution under the Water Resources Act 1991. These controlled waters include all watercourses and groundwater contained in underground strata. It is an offence to cause pollution of controlled waters either deliberately or accidentally

Lakes/surface water – This dataset comes from the most recent layer developed using Ordnance Surveys Open Mastermap, and shows all inland water bodies above a certain size, including lakes and reservoirs.

5.3   Existing provision of open space and GI

5.3.1   Provision across the district

Summary of open space provision

The following table shows the existing provision of open space in hectares and hectares per thousand population across the district.

The figures for 'Park and Recreation Grounds (combined)' include a combination of the following typologies:

- Park and Recreation Grounds; and
- Outdoor Sport (Fixed).

Table 7   Summary of existing provision of open space across Stroud District

Typology	Existing (ha)	Existing (ha/1000)[20]
Allotments	41.66	0.35
Community Orchards	15.34	0.13
Amenity Greenspace (>0.15ha)	42.57	0.36
Parks and Recreation Grounds (combined)	141.46	1.19
Parks and Recreation Grounds	*139.78*	*1.18*
Outdoor Sport (Fixed)	*1.68*	*0.01*
Play (Child)	6.58	0.06
Play (Youth)	4.23	0.04
Accessible Natural Greenspace	2366.61	19.96
Cemeteries and Churchyards	61.03	0.51
Education	161.95	1.37
Outdoor Sport (Private)	92.35	0.78

Summary of GI provision

The table below shows the breakdown of the provision of GI assets (excluding landscape character areas and national character areas) mapped within the district. Further detail by cluster is provided in part 2 of this report.

Table 8   Summary of provision of GI assets

Priority Habitats	Area (ha)
Coastal and floodplain grazing marsh	3847.53
Coastal saltmarsh	199.78

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[20] Calculated using ONS 2017 mid-year population estimates

Priority Habitats	Area (ha)
Deciduous woodland	4169.25
Good quality semi-improved grassland	523.01
Lowland calcareous grassland	965.63
Lowland dry acid grassland	1.81
Lowland meadows	154.4
Mudflats	283.99
No main habitat but additional habitats present	608.24
Purple moor grass and rush pastures	8.82
Traditional orchard	348.26

Nature conservation, AONB, geology and historic sites	Area (ha)
Ancient Woodland	2584.82
KWS	2993.16
LNR	25.92
NNR	413.20
RAMSAR	1413.33
SAC	1799.78
SPA	1413.33
SSSI	2905.93
RIGS	58[21]
AONB	23486.35
Registered Parks	721.92
SAM	248.32

Rivers and Canals	Length (m)
River Severn	47683.13
River Frome	42015.88
The Gloucester and Sharpness Canal	23279.21
Little Avon River	14799.19
Thames and Severn Canal	11439.63
River Twyver	10045.53
River Cam	9193.23
Stroudwater Canal	7591.91
River Ewelme	4043.80

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[21] This is the number of RIGS, rather than the area, as the GIS data is mapped using point data, not polygons.

5.3.2 Quantity of open space by cluster

The following tables shows the existing provision of open space in hectares (table 9) and ha/1000 population (table 10) for each of the parish clusters in the District. Tables 11 and 12 show the provision by individual parish. The provision of GI by cluster is covered in part 2 of this report.

Table 9 Existing provision of open space (ha) by cluster

Cluster	Allotments	Community Orchards	Amenity Green Space	Parks and Recreation Grounds (combined)	Parks and Recreation Grounds	Outdoor Sport (Fixed)	Play (Child)	Play (Youth)	Accessible Natural Green Space	Cemeteries and Churchyards	Education	Outdoor Sport (Private)
Berkeley	4.11	0	4.94	6.36	6.24	0.12	0.44	0.11	21.1	3.48	8.44	8.06
Cam and Dursley	2.33	0	6.96	19.16	18.86	0.3	0.65	0.43	191.76	5.74	25.45	7.46
Cotswold	4.98	0.33	0.79	10.63	10.44	0.19	0.52	0	672.11	7.17	8.13	11.84
Stonehouse	3.4	2.27	3.14	22.63	22.48	0.15	1.15	0.53	386.78	5.92	30.23	14.04
Stroud Valleys	19.65	1.17	9.43	55.13	54.58	0.55	2.68	2.73	681.96	23.36	61.24	42.29
The Gloucester Fringe	2.72	4.65	8.17	5.93	5.81	0.12	0.4	0.06	110.72	7.67	9.49	1.7
The Severn Vale	1.89	6.66	6.95	4.97	4.79	0.18	0.26	0.04	93.19	3.98	2.04	6.63
Wooton	2.56	0.25	2.19	16.67	16.59	0.08	0.48	0.33	209.01	3.71	16.93	0.33

Table 10   Existing provision of open space (ha/1000 population) by cluster

Cluster	Allotments	Community Orchards	Amenity Greenspace	Parks and Recreation Grounds (combined)	Parks and Recreation Grounds	Outdoor Sport (Fixed)	Play (Child)	Play (Youth)	Accessible Natural Greenspace	Cemeteries and Churchyards	Education	Outdoor Sport (Private)
Berkeley	0.58	0	0.69	0.89	0.87	0.02	0.06	0.02	2.95	0.49	1.18	1.13
Cam and Dursley	0.12	0	0.36	1	0.98	0.02	0.03	0.02	10.01	0.3	1.33	0.39
Cotswold	0.76	0.05	0.12	1.62	1.59	0.03	0.08	0	102.49	1.09	1.24	1.81
Stonehouse	0.24	0.16	0.22	1.6	1.59	0.01	0.08	0.04	27.37	0.42	2.14	0.99

Cluster	Allotments	Community Orchards	Amenity Greenspace	Parks and Recreation Grounds (combined)	Parks and Recreation Grounds	Outdoor Sport (Fixed)	Play (Child)	Play (Youth)	Accessible Natural Greenspace	Cemeteries and Churchyards	Education	Outdoor Sport (Private)
Stroud Valleys	0.4	0.02	0.19	1.11	1.1	0.01	0.05	0.05	13.73	0.47	1.23	0.85
The Gloucester Fringe	0.3	0.52	0.91	0.66	0.64	0.01	0.04	0.01	12.28	0.85	1.05	0.19
The Severn Vale	0.46	1.62	1.69	1.21	1.17	0.04	0.06	0.01	22.67	0.97	0.5	1.61
Wooton	0.29	0.03	0.25	1.9	1.89	0.01	0.05	0.04	23.86	0.42	1.93	0.04

5.3.3 Quantity of open space by parish

Table 11   Existing provision of open space (ha) by parish

Parish	Allotments	Community Orchards	Amenity Green Space	Parks and Recreation Grounds (combined)	Parks and Recreation Grounds	Outdoor Sport (Fixed)	Play (Child)	Play (Youth)	Accessible Natural Green Space	Cemeteries and Churchyards	Education	Outdoor Sport (Private)
Alderley	0	0	0	0	0	0	0	0	0	0.12	0	0
Alkington	0	0	0	0	0	0	0	0	0	0	0	1.53
Arlingham	0	0	0.95	0	0	0	0.05	0	6.04	0.64	0	0
Berkeley	0	0	0.45	1.88	1.88	0	0.09	0	0	2.44	1.6	0
Bisley-with-Lypiatt	4.65	0.33	0	7.24	7.24	0	0.25	0	138.44	1.9	4.53	0.07
Brimscombe and Thrupp	1.33	0	0.43	0	0	0	0	0	43.9	0	0.41	1.21
Brookthorpe-with-Whaddon	0	4.63	0.22	0	0	0	0	0	3.4	0.6	3.91	0
Cainscross	3.33	0.24	1.66	6.28	6.28	0	0.29	0.16	0	1.36	3.89	0.42
Cam	1.62	0	3.46	7.5	7.5	0	0.22	0.22	50.98	1.18	12	2.46
Chalford	4.73	0	2.15	4.74	4.68	0.06	0.6	0.09	25.09	2.87	4.12	4.34
Coaley	0.01	0	0.37	1.07	0.96	0.11	0.04	0.02	11.47	0.65	0.95	0
Cranham	0.18	0	0	1.11	1.04	0.07	0.1	0	247.09	0.43	0.05	2.82
Dursley	0.4	0	3.13	5.83	5.64	0.19	0.22	0.19	65.47	2.39	10.54	0.13

Parish	Allotments	Community Orchards	Amenity Green Space	Parks and Recreation Grounds (combined)	Parks and Recreation Grounds	Outdoor Sport (Fixed)	Play (Child)	Play (Youth)	Accessible Natural Green Space	Cemeteries and Churchyards	Education	Outdoor Sport (Private)
Eastington	0.63	0.62	0.44	2.88	2.88	0	0.29	0.04	21.78	0.84	1.55	0
Elmore	0	0	1.2	0	0	0	0	0	16.42	0.75	0	0
Frampton on Severn	1.05	0	4.5	1.54	1.36	0.18	0.12	0.01	68.83	0.63	0.95	6.63
Fretherne with Saul	0.84	0	0	1.9	1.9	0	0.09	0.01	0	0.88	0.32	0
Frocester	0	0	0	3.45	3.45	0	0.09	0.01	28.34	0.48	0	1.65
Ham and Stone	0	0	1.2	0	0	0	0.18	0	0	0.42	0.13	4
Hamfallow	1.17	0	0.21	0	0	0	0	0	1.25	0	6.16	1.23
Hardwicke	1.11	0	5.05	2.15	2.14	0.01	0.22	0.01	10.6	0.73	2.36	1.67
Harescombe	0	0.02	0	0	0	0	0	0	25.49	0.48	0	0
Haresfield	0	0	0	1.3	1.3	0	0	0	13	0.53	0.16	0
Hillesley and Tresham	0.63	0	0.3	1.85	1.79	0.06	0.06	0	13.79	0.38	0.1	0
Hinton	2.94	0	2.88	2.22	2.1	0.12	0.04	0.09	19.77	0.29	0	0
Horsley	0	0.8	0	1.23	1.23	0	0.06	0.02	25	0.8	0.12	2.28
King's Stanley	0.29	1.27	0	2.63	2.62	0.01	0.3	0.27	132.2	1.34	0.77	1.69
Kingswood	0.35	0.25	0	2.53	2.53	0	0.17	0	0.56	0.76	0.18	0.15
Leonard Stanley	1.18	0.2	0	2.84	2.73	0.11	0.09	0.01	0.21	0.84	1.51	0
Longney and Epney	0	6.66	0	0	0	0	0	0	0	0.38	0.53	0
Minchinhampton	1.56	0	0.17	2.95	2.95	0	0.13	0.04	212.52	3.77	2.99	27.37
Miserden	0.15	0	0.79	0	0	0	0.02	0	45.99	0.39	1.49	1.74
Moreton Valence	0	0	0	0	0	0	0	0	0	0.37	0	0
Nailsworth	1.5	0.1	1.97	2.58	2.43	0.15	0.37	0.07	58.86	0.62	8.18	2.94
North Nibley	0	0	0	1.61	1.61	0	0.01	0	127.88	0.85	0.28	0
Nympsfield	0.1	0	0	2.45	2.45	0	0	0	60.18	0.61	1.32	0
Owlpen	0	0	0	0	0	0	0	0	0	0.15	0	0
Painswick	0	0	0	2.28	2.16	0.12	0.15	0	240.28	4.13	2.06	7.21
Pitchcombe	0	0	0	0	0	0	0	0	0.31	0.32	0	0

Parish	Allotments	Community Orchards	Amenity Green Space	Parks and Recreation Grounds (combined)	Parks and Recreation Grounds	Outdoor Sport (Fixed)	Play (Child)	Play (Youth)	Accessible Natural Green Space	Cemeteries and Churchyards	Education	Outdoor Sport (Private)
Randwick and Westrip	0.09	0	0	3.9	3.9	0	0.08	0	0	0.32	1.11	0
Rodborough	2.05	0	0.95	3.14	3.14	0	0.08	0.08	117.5	1.13	1.62	2.72
Slimbridge	0	0	0.2	2.26	2.26	0	0.13	0.02	0.08	0.33	0.55	1.3
Standish	1.3	0	0	2.39	2.39	0	0	0	197.32	0.48	0	0
Stinchcombe	0	0	0	0	0	0	0	0	0	0.27	0	4.87
Stonehouse	0	0.18	2.7	8.44	8.41	0.03	0.38	0.2	6.93	1.94	26.4	10.7
Stroud	4.51	0	2.1	25.07	24.73	0.34	0.96	0.21	44.14	7.51	37.65	0.16
Uley	0.2	0	0	2.31	2.31	0	0.17	0	3.66	0.49	0.64	0
Upton St. Leonards	1.61	0	2.9	2.48	2.37	0.11	0.18	0.05	58.23	5.33	3.06	0.03
Whiteshill and Ruscombe	0	0	0	2.35	2.35	0	0.11	0	0	0.65	0.23	0
Whitminster	0	0	0.3	1.53	1.53	0	0	0.02	1.9	0.33	0.24	0
Woodchester	0.55	0.03	0	2.89	2.89	0	0	2.06	154.95	4.33	0.92	0.85
Wotton-under-Edge	1.58	0	1.89	10.68	10.66	0.02	0.24	0.33	66.78	1.6	16.37	0.18

Table 12   Existing provision of open space (ha/1000 population) by parish

Parish	Allotments	Community Orchards	Amenity Greenspace	Parks and Recreation Grounds (combined)	Parks and Recreation Grounds	Outdoor Sport (Fixed)	Play (Child)	Play (Youth)	Accessible Natural Greenspace	Cemeteries and Churchyards	Education	Outdoor Sport (Private)
Alderley	0	0	0	0	0	0	0	0	0	0.36	0	0
Alkington	0	0	0	0	0	0	0	0	0	0	0	2.1
Arlingham	0	0	1.96	0	0	0	0.1	0	12.48	1.32	0	0
Berkeley	0	0	0.22	0.92	0.92	0	0.04	0	0	1.19	0.78	0
Bisley-with-Lypiatt	1.98	0.14	0	3.08	3.08	0	0.11	0	58.94	0.81	1.93	0.03
Brimscombe and Thrupp	0.73	0	0.24	0	0	0	0	0	24.04	0	0.22	0.66

Parish	Allotments	Community Orchards	Amenity Greenspace	Parks and Recreation Grounds (combined)	Parks and Recreation Grounds	Outdoor Sport (Fixed)	Play (Child)	Play (Youth)	Accessible Natural Greenspace	Cemeteries and Churchyards	Education	Outdoor Sport (Private)
Brookthorpe-with-Whaddon	0	11.69	0.56	0	0	0	0	0	8.59	1.52	9.87	0
Cainscross	0.48	0.03	0.24	0.9	0.9	0	0.04	0.02	0	0.19	0.56	0.06
Cam	0.19	0	0.41	0.89	0.89	0	0.03	0.03	6.03	0.14	1.42	0.29
Chalford	0.78	0	0.35	0.78	0.77	0.01	0.1	0.01	4.13	0.47	0.68	0.71
Coaley	0.01	0	0.47	1.36	1.22	0.14	0.05	0.03	14.56	0.82	1.21	0
Cranham	0.38	0	0	2.32	2.18	0.15	0.21	0	516.92	0.9	0.1	5.9
Dursley	0.05	0	0.42	0.79	0.76	0.03	0.03	0.03	8.82	0.32	1.42	0.02
Eastington	0.39	0.38	0.27	1.78	1.78	0	0.18	0.02	13.43	0.52	0.96	0
Elmore	0	0	6.09	0	0	0	0	0	83.35	3.81	0	0
Frampton on Severn	0.75	0	3.21	1.1	0.97	0.13	0.09	0.01	49.13	0.45	0.68	4.73
Fretherne with Saul	1.14	0	0	2.57	2.57	0	0.12	0.01	0	1.19	0.43	0
Frocester	0	0	0	23.63	23.63	0	0.62	0.07	194.11	3.29	0	11.3
Ham and Stone	0	0	1.54	0	0	0	0.23	0	0	0.54	0.17	5.15
Hamfallow	1.13	0	0.2	0	0	0	0	0	1.2	0	5.93	1.18
Hardwicke	0.22	0	0.99	0.42	0.42	0	0.04	0	2.07	0.14	0.46	0.33
Harescombe	0	0.08	0	0	0	0	0	0	104.9	1.98	0	0
Haresfield	0	0	0	3.17	3.17	0	0	0	31.71	1.29	0.39	0
Hillesley and Tresham	2.05	0	0.97	6.01	5.81	0.19	0.19	0	44.77	1.23	0.32	0
Hinton	2.18	0	2.13	1.65	1.56	0.09	0.03	0.07	14.66	0.21	0	0
Horsley	0	1.03	0	1.59	1.59	0	0.08	0.03	32.22	1.03	0.15	2.94
King's Stanley	0.12	0.51	0	1.05	1.05	0	0.12	0.11	52.96	0.54	0.31	0.68
Kingswood	0.24	0.17	0	1.72	1.72	0	0.12	0	0.38	0.52	0.12	0.1
Leonard Stanley	0.76	0.13	0	1.84	1.77	0.07	0.06	0.01	0.14	0.54	0.98	0
Longney and Epney	0	23.7	0	0	0	0	0	0	0	1.35	1.89	0
Minchinhampton	0.29	0	0.03	0.54	0.54	0	0.02	0.01	39.09	0.69	0.55	5.03
Miserden	0.33	0	1.74	0	0	0	0.04	0	101.08	0.86	3.27	3.82

Parish	Allotments	Community Orchards	Amenity Greenspace	Parks and Recreation Grounds (combined)	Parks and Recreation Grounds	Outdoor Sport (Fixed)	Play (Child)	Play (Youth)	Accessible Natural Greenspace	Cemeteries and Churchyards	Education	Outdoor Sport (Private)
Moreton Valence	0	0	0	0	0	0	0	0	0	2.28	0	0
Nailsworth	0.26	0.02	0.34	0.45	0.42	0.03	0.06	0.01	10.22	0.11	1.42	0.51
North Nibley	0	0	0	1.79	1.79	0	0.01	0	141.93	0.94	0.31	0
Nympsfield	0.24	0	0	5.92	5.92	0	0	0	145.36	1.47	3.19	0
Owlpen	0	0	0	0	0	0	0	0	0	0.36	0	0
Painswick	0	0	0	0.75	0.71	0.04	0.05	0	79.07	1.36	0.68	2.37
Pitchcombe	0	0	0	0	0	0	0	0	1.31	1.35	0	0
Randwick and Westrip	0.06	0	0	2.65	2.65	0	0.05	0	0	0.22	0.76	0
Rodborough	0.39	0	0.18	0.59	0.59	0	0.02	0.02	22.23	0.21	0.31	0.51
Slimbridge	0	0	0.17	1.87	1.87	0	0.11	0.02	0.07	0.27	0.45	1.08
Standish	5.18	0	0	9.52	9.52	0	0	0	786.14	1.91	0	0
Stinchcombe	0	0	0	0	0	0	0	0	0	0.55	0	9.92
Stonehouse	0	0.02	0.33	1.05	1.04	0	0.05	0.02	0.86	0.24	3.27	1.33
Stroud	0.33	0	0.15	1.83	1.8	0.02	0.07	0.02	3.22	0.55	2.75	0.01
Uley	0.17	0	0	1.97	1.97	0	0.15	0	3.13	0.42	0.55	0
Upton St. Leonards	0.56	0	1.02	0.87	0.83	0.04	0.06	0.02	20.42	1.87	1.07	0.01
Whiteshill and Ruscombe	0	0	0	2.09	2.09	0	0.1	0	0	0.58	0.2	0
Whitminster	0	0	0.35	1.81	1.81	0	0	0.02	2.25	0.39	0.28	0
Woodchester	0.46	0.02	0	2.39	2.39	0	0	1.71	128.38	3.59	0.76	0.7
Wotton-under-Edge	0.27	0	0.33	1.86	1.85	0	0.04	0.06	11.61	0.28	2.85	0.03

5.3.4   Provision maps for open space and GI

Open spaces mapped as part of this study are shown on the indicative map below (Figure 7). For each of the clusters/sub areas (see figure 1 and part 2 of this report), a map showing the provision of open space has been provided and a GIS database of all sites has been provided to the council.

The Green Infrastructure network has been mapped across the District, as shown in figure 8 below (and explained in section 5.2). The network has been broken down into three themes – Wellbeing, Water and Wildlife, as shown in the maps that follow. More detailed maps and analysis of gaps in the network and opportunities by cluster/sub area are provided in part 2 of this report.

Figure 7   Mapping of open space across the district
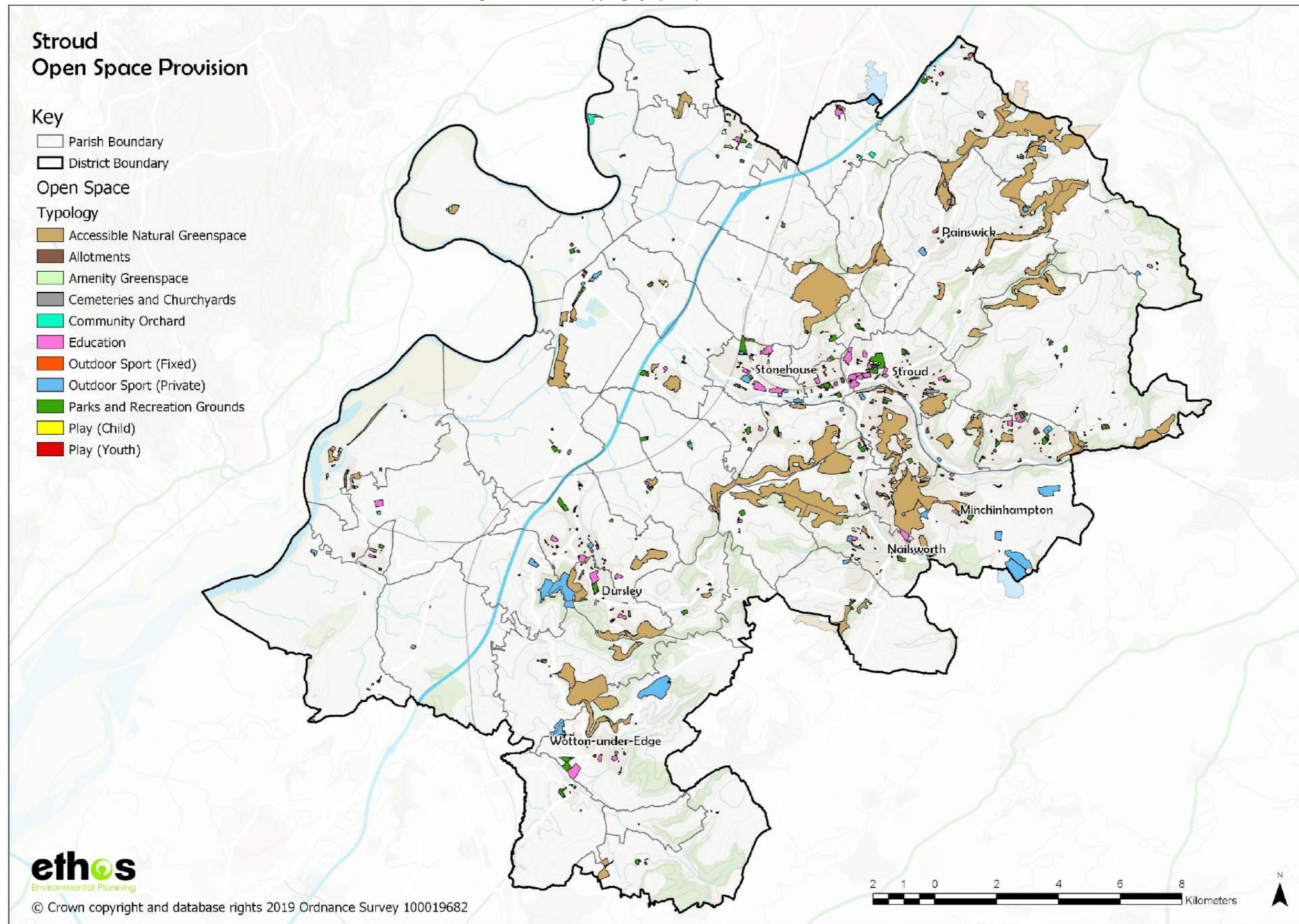
Figure 8   Mapping of overall GI network across the district
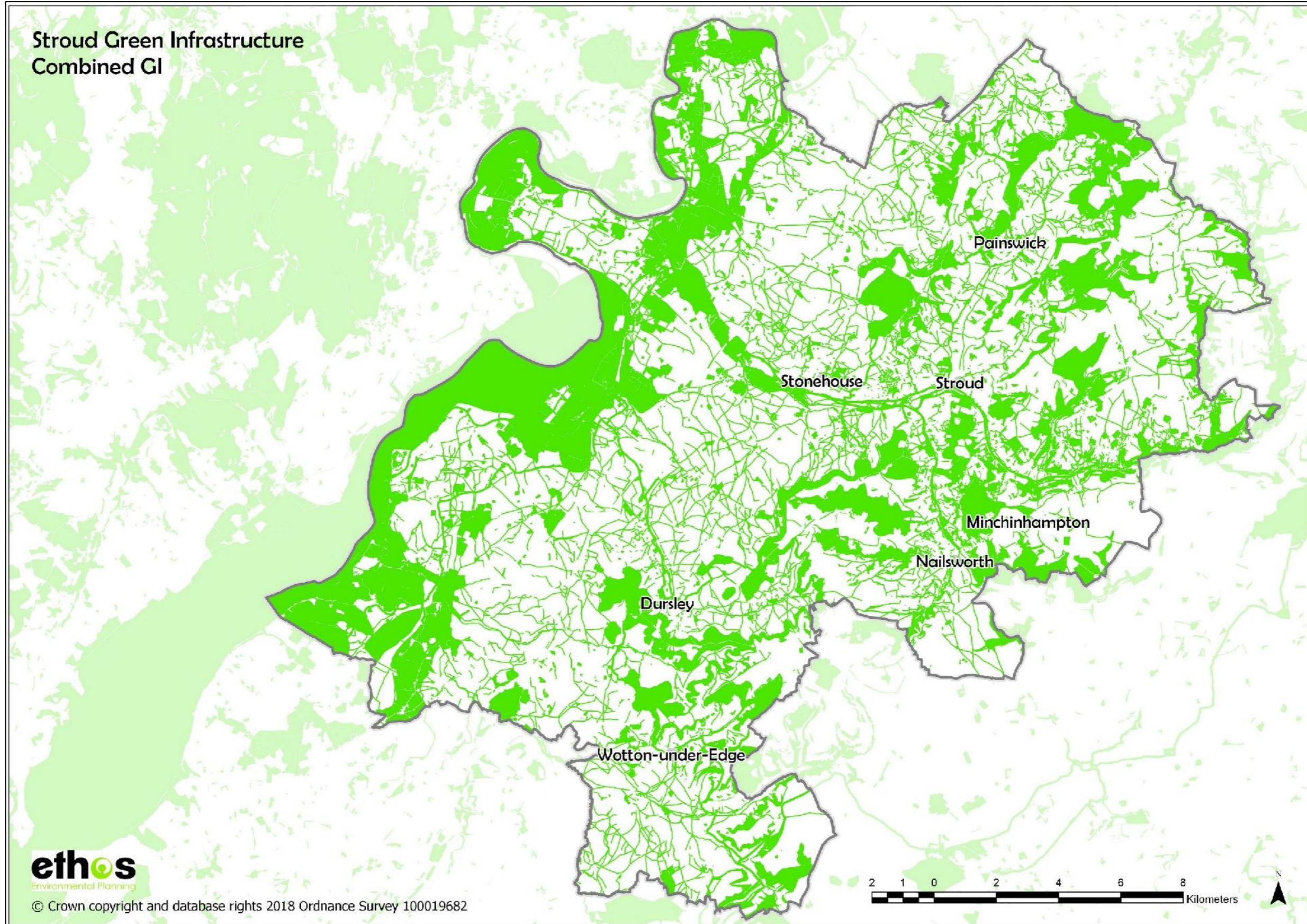
Figure 9   Mapping of GI Network by Theme – Wildlife: Designated Sites and AONB
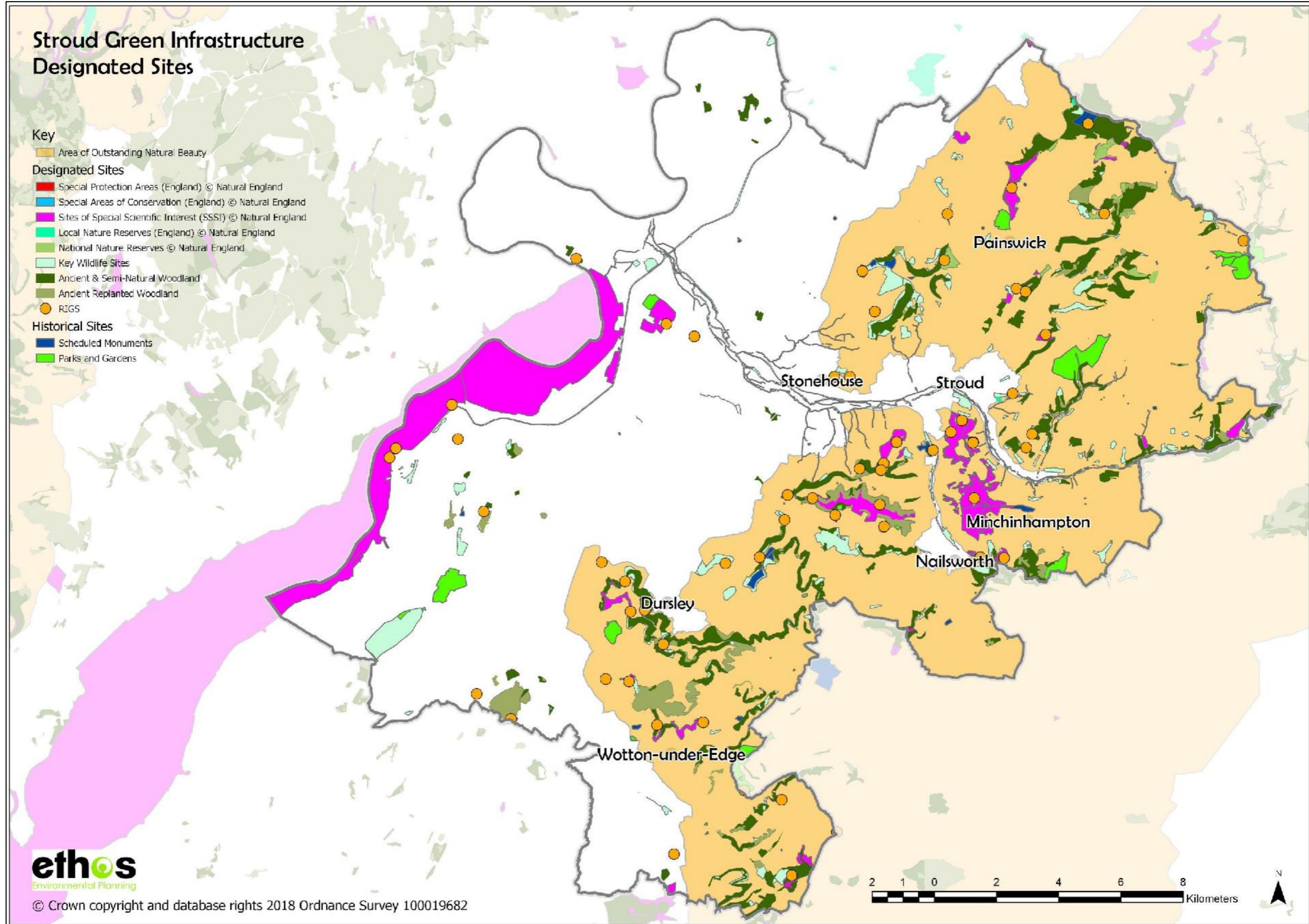
Figure 10   Mapping of GI Network by Theme – Wildlife: Priority Habitats, NIAs and SNAs
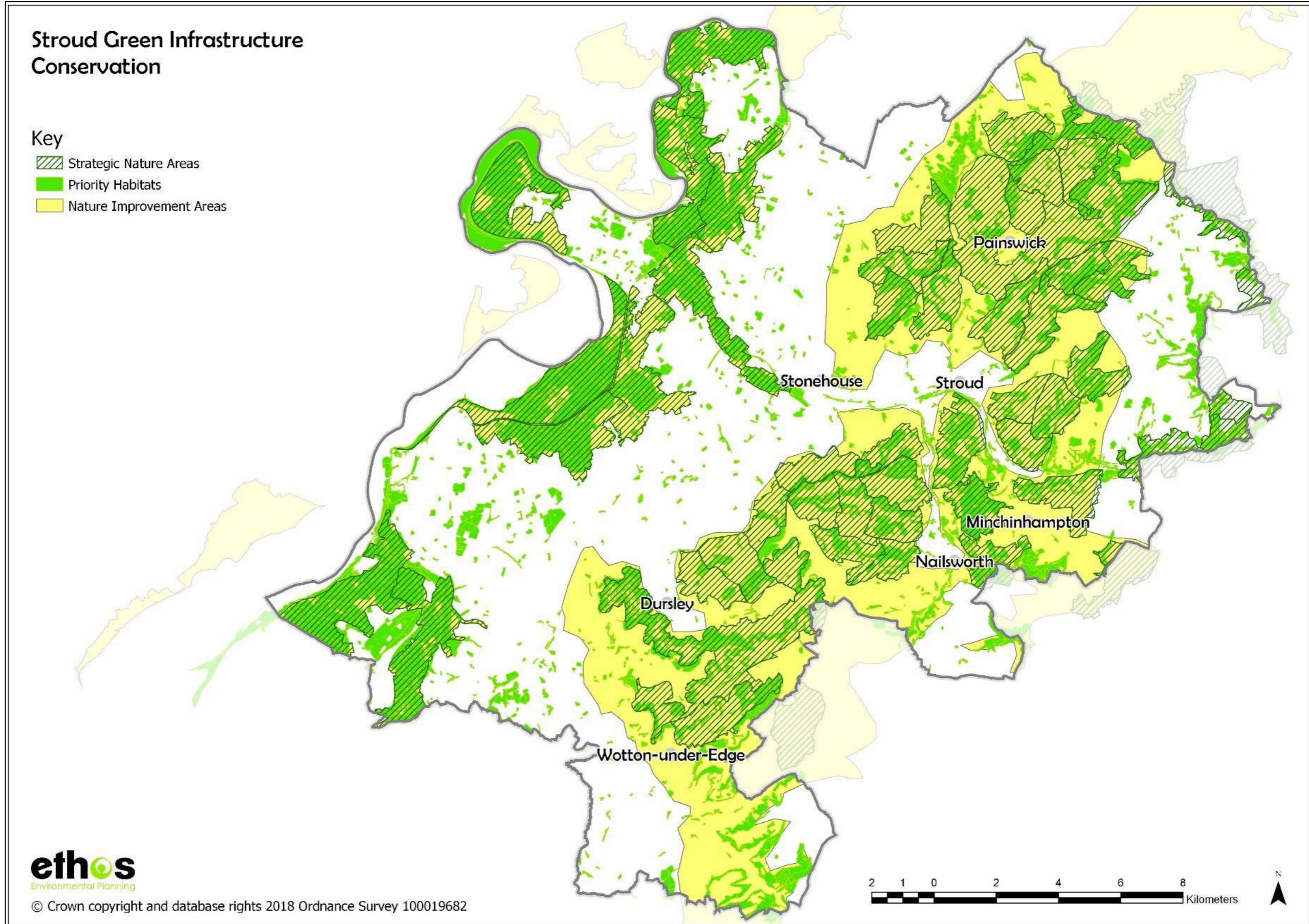
Figure 11   Mapping of GI Network by theme – Wildlife: Landscape Character
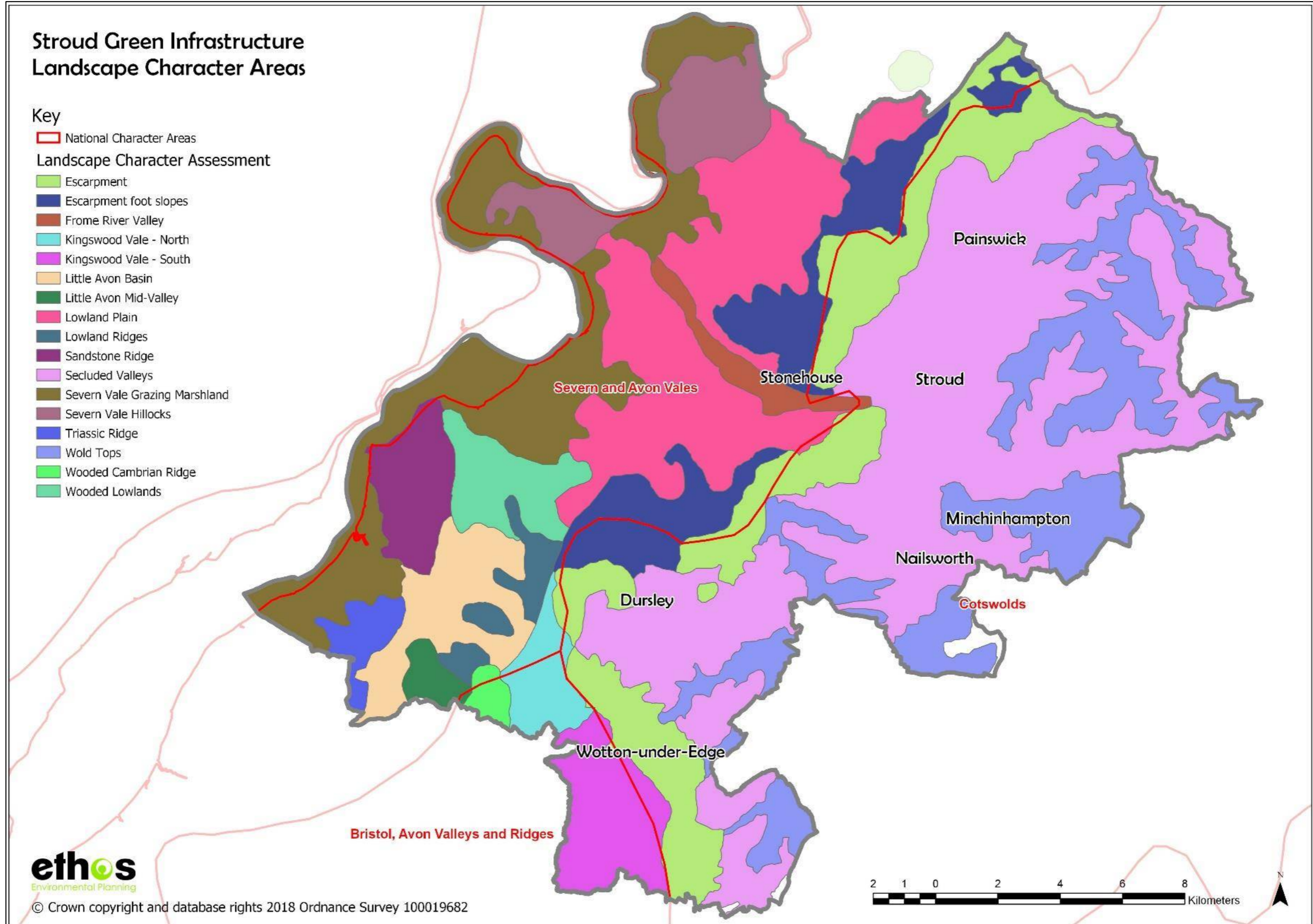
Figure 12   Mapping of GI Network by theme – Water
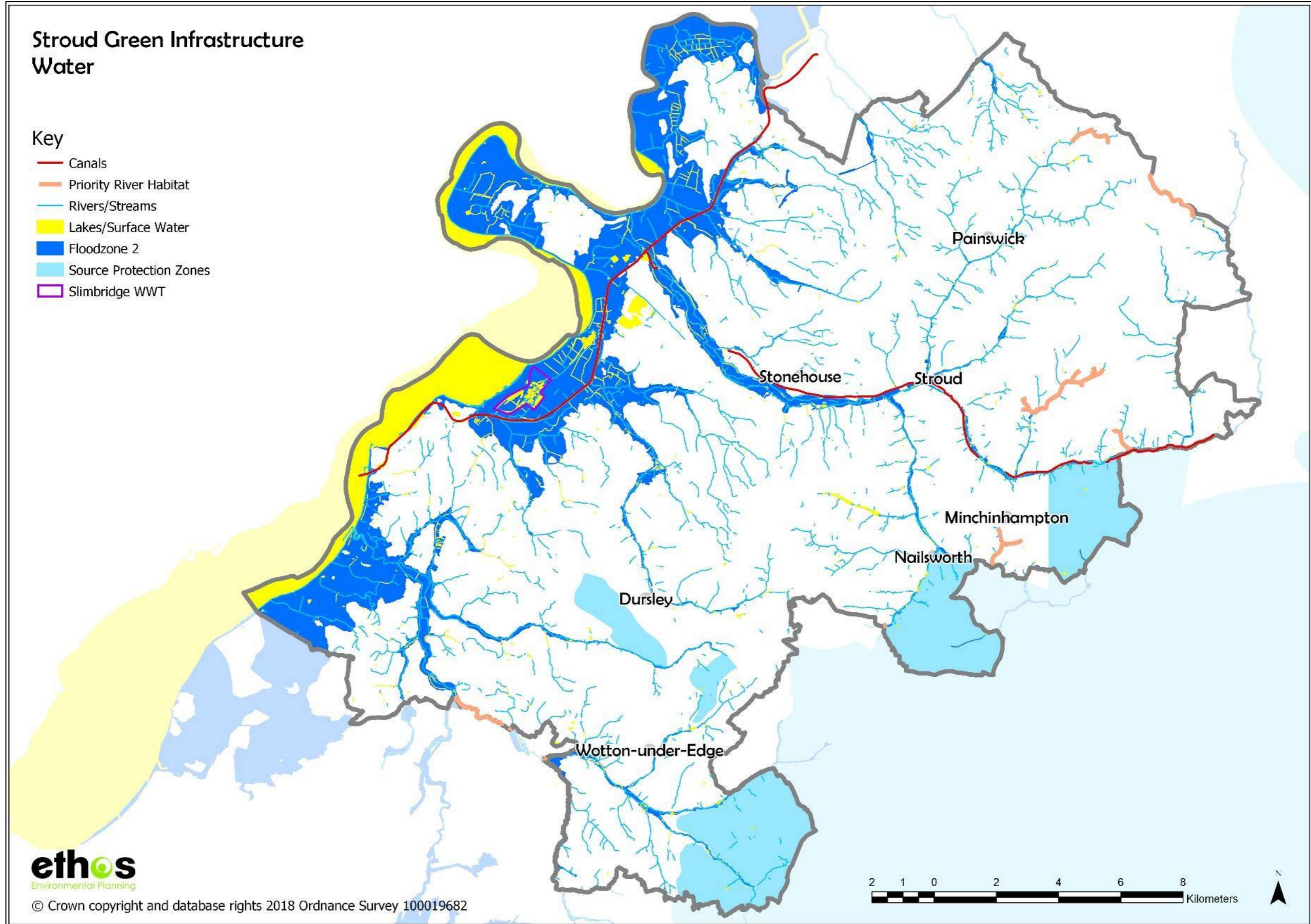
Figure 13   Mapping of GI Network by theme – Wellbeing: Accessible open space, PROW, key walking routes, cycle routes
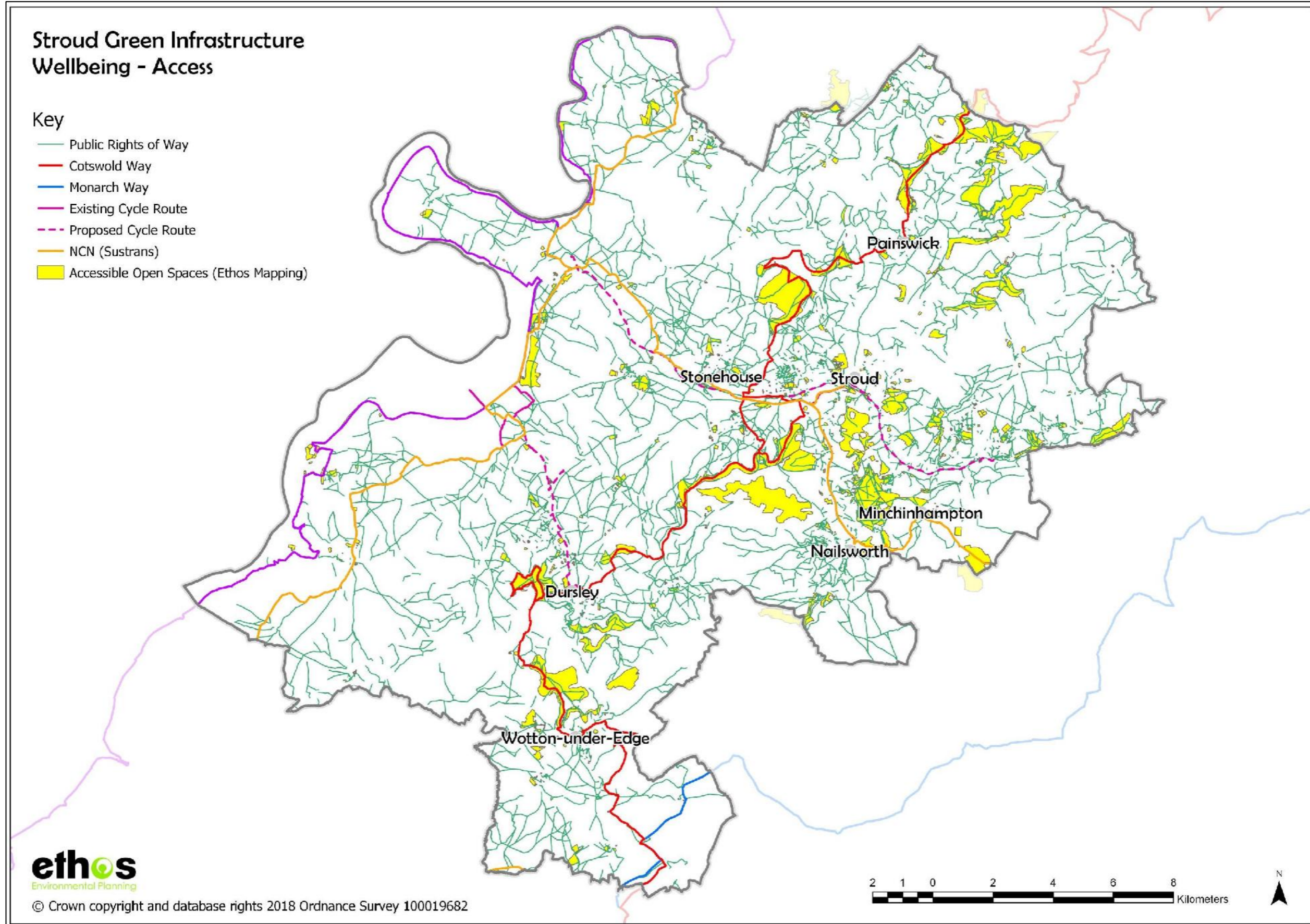
6.0 THE DEVELOPMENT OF STANDARDS FOR OPEN SPACE AND KEY PRINCIPLES FOR GI

6.1 Open Space Standards

Following the completion of the assessment of local needs and the audit of provision (the first two steps of this study), new standards of provision for open space are proposed below. This section explains how the standards for Stroud District have been developed, and provides specific information and justification for each of the typologies where standards have been proposed.

The justification for the standards draws on consultation from the recent resident and stakeholder surveys, and where relevant, makes comparisons with the 2013 study (Outdoor Playing Space – A Survey of Local Provision and Needs), which adopted the Fields in Trust (FIT) 'Six Acre Standard' and definition of outdoor playing space.

The standards for open space[22] have been developed in-line with the NPPF. Standards comprise the following components:

- **Quantity standards:** These are determined by the analysis of existing quantity, consideration of existing local and national standards and benchmarks and evidence gathered from the local needs assessment. It is important that quantity standards are locally derived and are realistic and achievable. The recommended standards need to be robust, evidence-based and deliverable through new development and future mechanisms of contributions through on-site provision and the Community Infrastructure Levy (CIL).

- **Accessibility standards:** These reflect the needs of potential users. Spaces likely to be used on a frequent and regular basis need to be within easy walking distance and to have safe access. Other facilities where visits are longer but perhaps less frequent, for example country parks, can be further away. Consideration is also given to existing local or national standards and benchmarks.

- **Quality standards:** The standards for each form of provision are derived from the quality audit, existing good practice and from the views of the community and those that use the spaces. Again, quality standards should be achievable and reflect the priorities that emerge through consultation.

The standards that have been proposed are for <u>minimum guidance levels of provision.</u> So, just because geographical areas may enjoy levels of provision exceeding minimum standards does not mean there is a surplus, as all such provision may be well used.

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[22] Standards for GI have not been developed, however key principles regarding provision and design/quality have been highlighted in section 6.2.

6.1.1 Allotments

Summary of quantity and access standard

Table 13   Quantity and access standards for allotments

Quantity Standard	Access Standard
0.35 ha/1000 population	720m (15 minutes walk time) for parishes with over 1000 people.

Existing national or local standards

National standards for allotments and other such open spaces are difficult to find. The closest thing to such standards appears to be those set out by the National Society of Allotment and Leisure Gardeners (NSALG). These are as follows:

- Standard Plot Size = 330 sq yards (250sqm)
- Paths = 1.4m wide for disabled access
- Haulage ways = 3m wide
- Plotholders shed = 12sqm
- Greenhouse = 15sqm
- Polytunnel = 30sqm

The previous Outdoor Playing Space Survey (2013) did not include/recommend standards for allotments.

Quantity standard for allotments

- The household survey identified that 86% of all respondents from the household survey 'never' use allotments (this was the least used type of open space facility);
- The existing average level of provision across the study area is 0.35 ha/1000 population.
- Provision by cluster area varies from 0.12 to 0.76 ha/1000 population
- Numerous parishes have no provision (generally those parishes with less than 1000 population), of those that do have allotments, the level of provision does vary significantly.
- The household survey identified 49% of people felt there should be more allotments, however, 49% also felt there are enough;
- Consultation with Parish Councils identified several areas where there is a need for more allotments, however in a number of areas it was identified that there was sufficient provision (with no waiting lists);
- The trend for smaller gardens in new development is likely to increase demand;
- The importance of allotments in contributing to the health and wellbeing agenda is recognised;
- Whilst the need and value of allotments is recognized, there is no solid evidence which justifies an increase against the existing levels of provision, and therefore a standard

of 0.35 ha/1000 is recommended for analysing existing provision and for new provision of allotments.

Access standard for allotments

- Responses received in relation to acceptable travel times to allotments from the household survey identified a mix in responses, with 26% wanting allotments within 5 minutes, 28% within 10 minutes, 13% within 15 minutes and 29% up to 20 minutes; of this, 86% walk to allotments and 14% drive.
- It is considered that the availability of allotments is more important than having them very close to home, nevertheless there is some demand for facilities relatively nearby. Therefore, a standard of no more than 15 minutes walk time (720 metres straight line) is proposed.
- We recommend that this standard is only applied to parishes with over 1000 population. This does not mean that parishes with populations less than 1000 should not have allotments (as several do), but that the above standard is used to identify existing gaps and to prioritise where new provision may be required.

Quality standards for allotments

The residents survey identified that 4% and 31% of people felt allotments were very good or good, whilst the majority, 51% felt they were average.

Compared to other typologies of open space, fewer comments were received in relation to the quality of allotments as the number of people who actually use allotments is very low compared to the numbers who use other types of open space and, therefore specific comments related to the quality of allotments are less frequent.

Allotments were excluded from the quality audit, as sites are often locked, and the quality audit criteria are also less relevant to this typology, due to the generally restricted access.

However, a number of general recommendations are made in relation to the quality of allotments, which should include the following:

- Well-drained soil which is capable of cultivation to a reasonable standard;
- A sunny, open aspect preferably on a southern facing slope;
- Limited overhang from trees and buildings either bounding or within the site;
- Adequate lockable storage facilities, and a good water supply within easy walking distance of individual plots;
- Provision for composting facilities;
- Secure boundary fencing;
- Good access within the site both for pedestrians and vehicles;
- Good vehicular access into the site and adequate parking and manoeuvring space;
- Disabled access;
- Toilets; and
- Notice boards.

6.1.2 Community Orchards

Summary of quantity and access standard

Table 14   Quantity and access standards for amenity green space

Quantity Standard	Access Standard
0.15 ha/1000 population for new provision only	720m (15 minutes walk time)

Existing national or local standards

There are currently no existing national or local standards for community orchards.

Quantity standard for community orchards

- The existing average level of provision across the study area is 0.13 ha/1000 population.
- Provision by cluster area varies from 0 to 1.62 ha/1000 population, with the large majority of community orchards falling within the Severn Vale.
- The majority of parishes have no provision, and of those that do have community orchards, the level of provision varies significantly.
- The trend for smaller gardens in new development is likely to increase demand.
- The importance of community orchards in contributing to the health and wellbeing agenda and biodiversity priority habitat targets is recognised, and there is support from politicians and local groups for community orchard initiatives in the District.
- There is evidence which shows a decline of orchards in Gloucestershire since the 1950's (The Gloucestershire Orchard Trust).
- Whilst the need and value of community orchards is recognized, there is no solid evidence which justifies an increase against the existing levels of provision, and therefore a standard of 0.15 ha/1000 is recommended for new provision of community orchards (it is not considered appropriate to set a standard for analysing existing provision due to the huge variation in provision across parishes).

Access standard for community orchards

- Although the consultation did not specifically cover community orchards, it is considered appropriate to apply an access standard in accordance with that of allotments, due to the similar functions and opportunities provided by these typologies.

Quality standards for community orchards

The Communities and Local Government 'Community orchards How to guide' (2011) provides information on starting an orchard, potential funding opportunities and additional sources of information[23].

The Federation of City Farms and Community Gardens have published a topic sheet on starting up community orchards and fruit gardens. This includes guidance on planning an orchard, including: where are what to plant; soil type; rootstocks and spacing; and maintenance[24].

6.1.3 Amenity Green Space

Summary of quantity and access standard

Table 15   Quantity and access standards for amenity green space

Quantity Standard	Access Standard
0.40 ha/1000 population (sites > 0.15ha)	600 metres (12-13 minutes walk time)

Existing national or local standards

The Fields in Trust (Previously known as the National Playing Fields Association) Guidance for Outdoor Sport and Play report 'Beyond the Six Acre Standard' proposes a benchmark guideline of 0.6ha/1000 population of amenity green space, and a walking distance guideline of 480m. <u>FIT recommend that the quantity guidelines are adjusted to take account of local circumstances.</u>

The Outdoor Playing Space Survey (2013) did not include/recommend standards for amenity green space.

Quantity standard for amenity green space

Quantity

- Existing average level of provision in the district is 0.36 ha/1000 population (for sites greater than 0.15 ha in size);
- Provision by cluster area ranges from 0.12ha/1000 to 1.69ha/1000;
- Provision varies by parish, with some areas falling well below the average, and others exceeding it. A large number of parishes have no provision;
- The household survey identified that 51% of people felt there was a need for more informal open space areas, whilst 48% felt there were enough;
- Considering the above factors, a minimum standard of 0.40 ha/1000 is recommended for analysing existing provision and for new provision of amenity green space, which

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[23]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/11466/1973262.pdf
[24] https://www.farmgarden.org.uk/system/files/starting_up_community_orchards.pdf

is in line with the existing average level of provision across the district but is below the FIT standard – however there is no clear evidence to justify an increase;

- The minimum size of a space that will be considered acceptable and count towards open space provision is recommended to be 0.15 ha in size (about the size of a mini football pitch). This will avoid a proliferation of small amenity spaces which have no real recreation function. Any spaces below this size will be acceptable in terms of their visual amenity but would not count towards the required level of provision.
- When delivering new provision, consideration should be given to combining this with the natural green space standard (i.e. a combined standard of 1.40 ha/1000) in order to provide bigger, more biodiverse spaces, in accordance with the NPPF.

Access standard for amenity green space

- The recent residents' survey identified people want spaces relatively close to home (29% within 5 mins, 21% within 10 mins, 26% within 15 minutes, 20% within 20 mins), and that the majority of people access these spaces by foot (68%);
- It is therefore recommended that a local standard of 600 metres straight line (12-13 minutes walk time) is applied.

Quality standards for amenity green space

The residents' survey identified that 11% of people felt this type of provision was very good, 29% good and 52% average. 9% of respondents stated poor or very poor.

The audit of provision as well as the consultation has identified the importance attached by local people to open space close to home. The value of 'amenity green space' must be recognised especially within housing areas, where it can provide important local opportunities for play, exercise and visual amenity that are almost immediately accessible. On the other hand, open space can be expensive to maintain and it is very important to strike the correct balance between having sufficient space to meet the needs of the community for accessible and attractive space, and having too much which would be impossible to manage properly and therefore a potential liability and source of nuisance. It is important that amenity green space should be capable of use for at least some forms of public recreation activity.

It is therefore recommended that in addition to the minimum size threshold identified above, that all amenity green space should be subject to landscape design, ensuring the following quality principles:

- Capable of supporting informal recreation such as a kickabout, space for dog walking or space to sit and relax;
- Include high quality planting of trees and/or shrubs to create landscape structure and biodiversity value;
- Include paths along main desire lines (lit where appropriate);
- Be designed to ensure easy maintenance.

6.1.4 Parks and Recreation Grounds

Table 16   Quantity and access standards for parks and recreation grounds

Quantity Standard	Access Standard
1.20 ha/1000 population	600 metres (12-13 minutes walk time). For parishes with less than 1000 people this could be met by an amenity green space.

Existing national and local policies

The Fields in Trust (FIT) Guidance for Outdoor Sport and Play report 'Beyond the Six Acre Standard' proposes a benchmark guideline of 0.80ha/1000 population for parks and gardens, with a walking distance guideline of 710m. In addition to this they also recommend the following standards:

- Playing pitches: 1.20ha/1000 population with a walking distance of 1,200m
- All outdoor sports: 1.6ha/1000 population with a walking distance of 1,200m
- Equipped/designated play areas: 0.25ha/1000 population, with a walking distance of 100m for Local Areas for Play (LAPs), 400m for Local Equipped Areas for Play (LEAPs) and 1000m for Neighbourhood Equipped Areas for Play (NEAPs).
- Other outdoor provision (MUGAs and skateboard parks): 0.30ha/1000 population and a walking distance of 700m.

FIT also accepts the importance of developing locally researched standards.

The Outdoor Playing Space Survey (2013) recommended the following local standards which were based on FIT:

- Youth and Adult Facilities including Multi Use Games Area at 1.6 ha per 1000 population
- Playing Pitches 1.2 ha per 1000 population (sitting within the Youth and Adult Facilities Standard)

Quantity of parks and recreation grounds

- Existing average level of provision in the study area is 1.18 ha/1000;
- Provision by cluster area ranges from 0.66ha/1000 to 1.90ha/1000
- There is an additional 0.78 ha/1000 of private outdoor sports space with varying levels of public access which includes a variety of uses (excluding golf courses);
- The recent household survey identified the following which is relevant to parks and recreation grounds:
  - 32% felt there was a need for more local recreation grounds and parks whilst 68% felt there were enough;
  - 23% felt there was a need for more outdoor playing fields, whilst 75% felt there were enough;

- Considering the average levels of provision and the variation in provision by parish, it is considered that the existing average level of provision at the district level is a good benchmark to assess provision;
- Therefore, a standard of 1.2 ha/1000 population is recommended for assessing the existing provision and for calculating the requirements for new provision of parks and recreation grounds;
- This standard is intended to provide sufficient space for facilities including pitches and fixed outdoor sport. It excludes play space (which is provided in addition to this standard).
- Quantity standards are not proposed for private outdoor sports facilities, although these are considered as part of the access analysis where they provide informal access e.g. for dog walking. Pitch provision on these privately managed sites is covered by the PPS.

Access standard for parks and recreation grounds

- The recent residents survey identified that 86% of people walk and 12% drive to local parks and recreation grounds, and that 30% travel up to 5 minutes, 27% up to 10 minutes and 27% up to 15 minutes;
- For outdoor playing fields, 40% of people walk and 39% use the car, of this, 10% travel up to 5 minutes, 24% up to 10 minutes and 36% up to 15 minutes;
- The findings indicate that people do want local parks close to home, but are willing to travel further to facilities that have playing pitches and outdoor sport. It is therefore recommended that a walk time of 12-13 minutes (600 metres straight line) is applied, which is in line with the FIT standard;
- However, it is also recognised that many of the smaller parishes are too small to have a park and recreation ground (those with less than 1000 people), and therefore the standard could be met by an amenity green space.
- Access to private outdoor sports which provide public access for informal recreation have been recorded and considered in the access analysis.

Quality standards for parks and recreation grounds

For local parks and recreation grounds, the residents survey identified that 6% of people felt this type of provision was very good, 53% good and 35% average, the rest (6%) stated facilities were poor or very poor. For outdoor playing fields 8% of people felt this type of provision was very good, 27% good and 55% average, the rest (10%) stated facilities were poor or very poor.

National guidance relevant to this typology is provided in the 'Green Flag' quality standard for parks which sets out benchmark criteria for quality open spaces. For outdoor sports space, Sport England have produced a wealth of useful documents outlining the quality standards for facilities such as playing pitches, changing rooms, MUGAS and tennis courts plus associated ancillary facilities. The Rugby Football Union have provided guidance on the quality and standard of provision of facilities for rugby, and the England and Wales Cricket Board have provided guidance for cricket facilities. It is recommended that the guidance provided in these documents is adopted by the District Council, and that all new and improved provision seeks to meet these guidelines.

6.1.5 Play Space (children and youth)

Table 17   Quantity and access standards for children's play space and youth play space

Typology	Quantity Standard	Access Standard
Children's Play Space	0.06 ha/1000 population	480m (10 minutes walk time) for parishes with over 500 people)
Youth Play Space	0.06 ha/1000 population	720m (15 minutes walk time) for parishes with over 1000 people

Existing National and Local Policies

The FIT guidance 'Beyond the Six Acre Standard' recommends provision of 0.25ha/1000 population of equipped/designated play areas, with a walking distance of 100m for Local Areas for Play (LAPs), 400m for Local Equipped Areas for Play (LEAPs) and 1000m for Neighbourhood Equipped Areas for Play (NEAPs). The guidance does not specifically cover the needs of most teenagers.

The previous FIT guidance (The Six Acre Standard) recommended provision of 0.8 hectares per 1000 people for children's play of which around 0.3 hectares should be equipped provision. These standards had been criticised because they were often seen as undeliverable, and can result in a proliferation of play areas that can be difficult to maintain, as well as setting unrealistic aspirations in urban areas where insufficient land is available to provide facilities, especially higher density development on brownfield sites. The level recommended within the new guidance (0.25 ha/1000 population), although lower than previously, is still considered to be high.

The Outdoor Playing Space Survey (2013) recommended the following standards for play space which was based on FIT:

- Equipped Play Space for Children and Young People at 0.2 – 0.3 ha per 1000 population
- Local Area of Play (LAP)/ Local Equipped Area for Play (LEAP)/ Neighbourhood Equipped Area for Play (NEAP) at 0.4 – 0.5 ha per 1000 population.

Quantity standards for play

- Current average levels of provision of children's play space in the district is 0.06 ha/1000 population, for youth space this is 0.04 ha/1000 population;
- Provision by cluster area ranges from 0.03ha/1000 to 0.08ha/1000 for children's play space, and from 0 to 0.05ha/1000 for youth play space;
- The household survey identified that 51% of people felt there was a need for more children's play space, and 48% felt there was enough. Whilst 63% of people felt there was a need for more youth facilities, with 34% of people identifying there was sufficient provision;
- Provision of children's and youth play space varies significantly across parishes, with the majority of parishes having no youth provision.

- The household survey also identified that the majority of people thought there was a need for additional youth facilities (64%), compared to improvements to existing facilities (2%), whereas for children's play space the type of improvement rated by the majority of respondents was improvements to existing facilities (33%).
- It is therefore recommended that existing levels of youth play facilities are increased with a standard of 0.06 ha/1000 for analysing existing and required provision, and that provision of children's play space remains in line with existing levels of provision, at 0.06 ha/1000;
- It should be reiterated that these are **minimum standards for equipped provision** and **do not include the need for surrounding playable space** as recommended by Play England[25] i.e. this surrounding playable space will need to be provided <u>in addition</u> to the quantity standard.

Access standards for play

- The household survey identified that for children's play space 87% of people walk to facilities, and 30% want facilities within 5 minutes, 32% within 10 minutes and 26% within 15 minutes;
- For teenage facilities 72% walk, and 12% want facilities within 5 minutes, 33% within 10 minutes, and 43% within 15 minutes, indicating users are willing to travel slightly further to teenage facilities than children's facilities. In light of these findings, the following access standards are recommended:
    - Children's provision – 480m (10 minutes straight line walk time) – for parishes with over 500 people; and
    - Youth Provision – 720m (15 minutes straight line walk time) - for parishes with over 1000 people.

Quality standards for play

The residents' survey identified that 9% of people identified children's play space as very good, 33% as good, 49% as average, and 9% as poor or very poor. For youth facilities, 3% was very good, 19% good, 47% average and 31% as poor or very poor. This indicates there is less satisfaction with the quality of youth facilities compared to children's facilities.

In terms of adopting quality standards for children's and teenage facilities, Play England are keen to see a range of play spaces in all urban environments:

A Door-step spaces close to home
B Local play spaces – larger areas within easy walking distance
C Neighbourhood spaces for play – larger spaces within walking distance
D Destination/family sites – accessible by bicycle, public transport and with car parking.

Moving forward, Play England would like their Design Guide; '*Design for Play (2008)[26]*' to be referenced and added as a Supplementary Planning Document (SPD) in standard

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[25] Design for Play: A guide to creating successful play spaces
[26] http://www.playengland.org.uk/media/70684/design-for-play.pdf

configuration. Play England have also developed a '*Quality Assessment Tool (2009)[27]*' which can be used to judge the quality of individual play spaces. It has been recommended that the Council consider adopting this as a means of assessing the quality of play spaces in the District. Play England also highlight a potential need for standards for smaller settlements and rural areas where the doorstep, local, neighbourhood, and destination hierarchy is unlikely to be appropriate.

Disability access is also an important issue for Play England and they would like local authorities to adopt the KIDS[28] publication; '*Inclusion by Design (2008)*' as an SPD. Their most recent guidance document, '*Better Places to Play through Planning (2009)[29]*' gives detailed guidance on setting local standards for access, quantity and quality of playable space and is considered as a background context for the standards suggested in this study.

6.1.6 Natural Green Space

Table 18   Proposed quantity and access standard for Natural Green Space

Quantity Standard	Access Standard
1.0ha/1000 population for new provision	960m (20 minutes' walk time) ANGst Standards

Existing National and Local standards

Natural England Accessible Natural Green Space Standards (ANGSt):

ANGSt recommends that everyone, wherever they live should have accessible natural greenspace:

- Of at least 2 hectares in size, no more than 300 meters (5 minutes walk) from home;
- at least one accessible 20 hectare site within two kilometre of home;
- one accessible 100 hectare site within five kilometres of home; and
- one accessible 500 hectare site within ten kilometres of home; plus
- a minimum of 1 hectare of statutory Local Nature Reserves per thousand population.

The Outdoor Playing Space Survey (2013) did not include/recommend standards for natural/semi natural green space, although Local Plan Delivery Policy ES14 for the provision of semi-natural and natural green space with new residential development is based on the above ANGSt.

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[27] http://www.playengland.org.uk/media/211694/quality-assessment-tool.pdf

[28] KIDS, is a charity which in its 40 years, has pioneered a number of approaches and programmes for disabled children and young people. KIDS was established in 1970 and in 2003, KIDS merged with KIDSACTIVE, previously known as the Handicapped Adventure Play Association.

[29] http://www.playengland.org.uk/media/82621/better-places-to-play-through-planning.pdf

Quantity standards for natural green space

- The existing level of provision across the District is 19.96ha/1000, however this is highly variable by parish, and therefore a standard based on this level of provision is not considered deliverable in terms of new provision or effective in terms of analysing existing supply;
- In terms of analysing existing provision, it is recommended that the ANGst standards are applied, to identify where there are any key gaps in access – although it should be noted that these are aspirational standards;
- In addition, it is recommended that a standard is set for new provision from development; and also that an access standard is applied for analysing access to all natural green space across the district;
- The household survey identified that 56% felt there is a need for more woodlands, wildlife areas and nature reserves, compared to 43% who felt there are enough;
- The purpose of the quantity standard is to ensure that developments provide natural green space in areas of need;
- It is therefore recommended that a standard of 1.0ha/1000 is used for assessing requirements for new provision through development;
- The importance of natural green spaces is recognised not only in their contribution to recreation and health and wellbeing, but also importantly in terms of Green Infrastructure and Biodiversity. Therefore, policy wording will afford protection of existing NGS.
- As already mentioned under the quantity standard for amenity green space, when delivering new provision, consideration should be given to combining this with the amenity green space standard (i.e. a combined standard of 1.40 ha/1000) in order to provide bigger, more biodiverse spaces.

Access standards for natural green space

- The household survey identified 19% want woodlands, wildlife areas and nature reserves within 5 minutes travel time, 14% within 10 minutes, 14% within 15 minutes, 24% within 20 minutes and 29% more than 20 minutes – of these, 54% walk and 40% drive.
- This indicates that people are generally willing to travel further to access this type of open space compared to other typologies, and therefore a standard of 960m (20 minutes walk time) is proposed in order to identify the key gaps in access and therefore the priority areas for new provision, alongside the ANGSt standards.

Quality standards for natural green space

59% of respondents from the household survey felt that woodlands, wildlife areas and nature reserves were good or very good, a further 36% felt they were average 5% felt they were poor or very poor. Woodlands, wildlife areas and nature reserves were also noted as a high priority for improvement by significant numbers (49%) in the household survey. Consultation results also highlight the value attached to certain attributes of open space, in particular:

- Good maintenance and cleanliness

- Ease of access
- Lack of antisocial behaviour, noise etc.

This suggests that the provision of new or improved open space cannot be considered in isolation from the means of maintaining such space, perceptions of antisocial behaviour, and ease of access from within the surrounding environment.

The shape and size of space provided should allow for meaningful and safe recreation. Provision might be expected to include (as appropriate) elements of woodland, wetland, heathland and meadow, and could also be made for informal public access through recreation corridors. For larger areas, where car borne visits might be anticipated, some parking provision will be required. The larger the area the more valuable sites will tend to be in terms of their potential for enhancing local conservation interest and biodiversity. Wherever possible these sites should be linked to help improve wildlife value as part of a network.

In areas where it may be impossible or inappropriate to provide additional natural green space consistent with the standard, other approaches should be pursued which could include (for example):

- Changing the management of marginal space on playing fields and parks to enhance biodiversity.
- Encouraging living green roofs as part of new development/ redevelopment.
- Encouraging the creation of mixed species hedgerows.
- Additional use of long grass management regimes.
- Improvements to watercourses and water bodies.
- Innovative use of new drainage schemes / Sustainable Drainage Systems (SuDS).
- Use of native trees and plants with biodiversity value in high quality soft landscaping of new developments.

The above should in any event be principles to be pursued and encouraged at all times.

6.1.7 Churchyards and Cemeteries

It is outside the scope of this study to set quantity or access standards for this type of provision, however the following quality recommendations have been made.

Quality standards for churchyards and cemeteries

The CABE Space briefing on cemeteries, churchyards and burial grounds[30] states that 'Urban burial grounds in the 19th century were originally envisaged as public open spaces, and were professionally designed to be attractive places to visit in their own right. Today, many cemeteries are neglected, with little to attract anyone apart from those visiting specific burial plots. This lack of design, planning and ambition means that the potential health and environmental benefits of cemeteries are not being realised.'

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[30] http://webarchive.nationalarchives.gov.uk/20110118111022/http://www.cabe.org.uk/files/cemeteries-churchyards-and-burial-grounds.pdf

The briefing also highlights issues with 'cramming' new graves into historic cemeteries, often in inappropriate places such as footpaths, and planting areas which then destroys the original design and aesthetic harmony of the cemetery.

It should be noted that the interest and demand for natural burials has grown in recent years as an alternative option for people concerned about the potential environmental impacts of modern funerals. Natural burial is a term used to describe the burial of human remains where the burial area creates habitat for wildlife or preserves existing habitats (woodland, species rich meadows, orchards, etc). There would be an opportunity for inclusion in any new cemetery or as a separate natural burial ground within the district.

The Green Flag Award scheme is increasingly being used to monitor and reward good cemetery management and provision. In addition, The Guide for Burial Ground Managers, Department for Constitutional Affairs, November 2005[31] sets out that burial ground managers should give consideration to the facilities provided for the bereaved and visiting members of the public. Such facilities might include:

- Shelter (including shelter at the graveside during the burial ceremony)
- Seating areas
- All-weather pedestrian access
- Car-parking
- Floristry
- Water supplies (for floral tributes)
- Litter and waste bins (including bins for dog faeces)
- Rubbish recycling
- Toilets
- Refreshments
- Signs

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[31] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/326370/burial-ground-managers.pdf

6.1.8 Summary of open space standards

Table 19   Summary of open space quantity and access standards[32]

Typology	Quantity standards (ha/1000 population) for analysing existing provision	Quantity standards (ha/1000 population): requirements from new development	Access standard
Allotments	0.35	0.35	720 metres or 15 minutes' walk time for parishes with over 1000 people
Community Orchards	N/A	0.15	720 metres or 15 minutes' walk time
Amenity Green Space	0.40	0.40	600 metres or 12-13 minutes' walk time
Parks and Recreation Grounds	1.20	1.20	600 metres or 12-13 minutes' walk time. For parishes with less than 1000 people this could be met by an amenity green space.
Play Space (Children)	0.06	0.06	480 metres or 10 minutes' walk time for parishes with over 500 people
Play Space (Youth)	0.06	0.06	720 metres or 15 minutes' walk time for parishes with over 1000 people
Natural Green Space	N/A	1.00	960 metres or 20 minutes' walk time. ANGSt
Total for new provision		**3.22 ha/1000**	

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[32] In addition to this, the playing pitch strategy also sets out an additional requirement from new development for playing pitches and outdoor sports facilities, which is 0.7ha/1000.

6.2   Key principles for GI within the District

Key principles have been developed for GI within Stroud, considering the County GI principles set out within the Gloucestershire Local Nature Partnership report: A Strategic Framework for Green Infrastructure in Gloucestershire (2015). These are as follows:

- Ensure that there is functional and well-connected strategic and local green infrastructure across the district. Gaps or missing links in Gloucestershire's strategic green infrastructure and district green infrastructure (as revealed by the Local Nature Partnership's schematic map and local analysis by district and cluster (part 2 of this report) should be addressed.
- Maximise opportunities to improve green infrastructure, whenever change is being considered – from individual development proposals and open space improvements to landscape scale environmental projects and flood alleviation schemes.
- Continue to work in partnership with other groups and organisations to deliver GI enhancements, including partners outside of the district to ensure GI links (local and strategic) across administrative boundaries.
- Ensure that the multifunctional benefits of green infrastructure are understood by all stakeholders in the district and that all these benefits are considered when delivering Green infrastructure improvements and change.
- Ensure that green infrastructure principles are embedded in policies that guide change in the district, for example local plans; neighbourhood plans; open space management plans etc.
- Open space/GI should be provided as part of new development in accordance with the locally derived open space quantity, access and quality standards recommended within this report (see table 19 above). GI should be embedded into the layout of new development from the start of the masterplanning process.
- Development proposals should protect as well as contribute to new and existing GI
- The design and management of GI should follow good practice guidelines e.g. Building with Nature.
- Biodiversity enhancements and nature conservation should be considered at all stages of development e.g. through creation of new habitats, management, and linking existing biodiversity assets. Green features on buildings should be incorporated where possible e.g. green roofs and walls, bird and bat boxes. SuDs should mimic the natural drainage of the site, and should not only serve a drainage role, but contribute to the biodiversity and visual amenity of the site.

Simply put, the protection, enhancement and provision of GI should ensure that green spaces are bigger, better and more joined up – in accordance with the Lawton Review[33].

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[33]https://webarchive.nationalarchives.gov.uk/20130402170324/http://archive.defra.gov.uk/environment/biodiversity/documents/201009space-for-nature.pdf

7.0   APPLYING LOCAL OPEN SPACE STANDARDS AND ANALYSIS OF GI NETWORK

7.1   Introduction

This part of the report uses the set standards (access, quality and quantity) to analyse open space provision across the district and also by individual parishes.

It also includes an overview at the district level of the key opportunities for improving connectivity, the quality of GI assets (where assessed), and access to GI (using Natural England data).

This section includes:

Quantity analysis of open space

The quantity of provision is assessed using the recommended quantity standards for each of the typologies where a quantity standard has been developed. Recommended standards are expressed as hectares of open space per 1000 people.

The quantity assessment looks at the existing levels of provision, then uses the recommended standard to assess the required level of provision. From this a calculation is made of the supply, which will either be sufficient or insufficient. Within this section, levels of provision are provided by Parish. Provision by cluster/sub area is analysed in part 2 of this report.

This section also includes an assessment of the future need for open space, based on projected population growth from new housing.

Access analysis of open space

This section of the report provides analysis of the recommended access standards for each typology across the study area. The maps and analysis in this section are intended to be indicative, providing an overall picture of provision and highlighting any key issues across the district.

However, the key to access analysis, is understanding the picture at a more localised level, therefore, maps showing local access provision by cluster/sub area are provided in part 2 of this report.

Quality analysis of open space

This section of the report makes analysis of each typology across the study area – it highlights any common themes or issues that have arisen from the consultation and provides a summary of the quality audit results at the district level. The detailed quality audits have been provided to the Council as part of the GIS database and maps by cluster/sub area within

part 2 of this report provide a summary of the quality audit results and show the ranking of each space audited (good, average or poor).

A number of typologies were not included within the quality audit. These are: churchyards and cemeteries; education sites; private outdoor sports facilities; allotments and amenity green spaces smaller than 0.15 ha.

Analysis of the GI network

This section of the report uses the existing GI mapping to identify the key GI corridors and opportunities for addressing gaps in connectivity in terms of biodiversity and access. It provides an overview of access to GI across the district (using Natural England data) and also an overview of the value/quality of open space in contributing to GI against the three themes of Wellbeing, Water and Wildlife.

More detailed analysis is provided by cluster/sub area in part 2 of this report.

7.2   Application of quantity standards

7.2.1 Current supply against the Stroud District standards

Table 20 shows the existing supply (in hectares) of open space for each typology for each of the Parishes. The supply is calculated using the population figures for each Parish, and the quantity of open space compared to what the requirements for open space are against the standards set[34].

Those parishes with less than 1000 people (or 500 people for children's play space) have been greyed out in the table below, to reflect where a parish would not be expected to meet the quantity standard for a particular typology due to it's population size.

The figures of 'Park and Recreation Grounds (Combined)' includes a combination of the following typologies:

- Park and Recreation Ground; and
- Outdoor Sport (Fixed).

The supply of open space by cluster/sub area is covered in part 2 of this report.

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[34] For example, for the parish of Cainscross, the population is 6,993 (ONS 2017 mid year estimate). The existing quantity of allotments within this parish is 3.33 ha, and the required provision (using the standard of 0.35ha/1000) is 2.45 ha. Therefore, the resultant supply is 0.88 ha i.e. there is sufficient supply against the quantity standard.

Table 20   Supply by Parish (hectares) against the Stroud quantity standards

Parish	Allotments	Amenity Greenspace	Parks and Recreation Grounds (combined)	Play (Child)	Play (Youth)	Population (2017 ONS mid-year estimate)
Alderley	-0.12	-0.13	-0.39	-0.02	-0.02	329
Alkington	-0.26	-0.29	-0.87	-0.04	-0.04	729
Arlingham	-0.17	0.76	-0.58	0.02	-0.03	484
Berkeley	-0.72	-0.37	-0.57	-0.03	-0.12	2044
Bisley-with-Lypiatt	3.83	-0.94	4.42	0.11	-0.14	2349
Brimscombe and Thrupp	0.69	-0.3	-2.19	-0.11	-0.11	1826
Brookthorpe-with-Whaddon	-0.14	0.06	-0.48	-0.02	-0.02	396
Cainscross	0.88	-1.14	-2.11	-0.13	-0.26	6993
Cam	-1.34	0.08	-2.65	-0.29	-0.29	8458
Chalford	2.6	-0.28	-2.55	0.24	-0.27	6078
Coaley	-0.27	0.05	0.12	-0.01	-0.03	788
Cranham	0.01	-0.19	0.54	0.07	-0.03	478
Dursley	-2.2	0.16	-3.08	-0.23	-0.26	7424
Eastington	0.06	-0.21	0.93	0.19	-0.06	1622
Elmore	-0.07	1.12	-0.24	-0.01	-0.01	197
Frampton on Severn	0.56	3.94	-0.14	0.04	-0.07	1401
Fretherne with Saul	0.58	-0.3	1.01	0.05	-0.03	739
Frocester	-0.05	-0.06	3.27	0.08	0	146
Ham and Stone	-0.27	0.89	-0.93	0.13	-0.05	777
Hamfallow	0.81	-0.21	-1.25	-0.06	-0.06	1038
Hardwicke	-0.68	3	-3.99	-0.09	-0.3	5113
Harescombe	-0.09	-0.1	-0.29	-0.01	-0.01	243
Haresfield	-0.14	-0.16	0.81	-0.02	-0.02	410
Hillesley and Tresham	0.52	0.18	1.48	0.04	-0.02	308
Hinton	2.47	2.34	0.6	-0.04	0.01	1349
Horsley	-0.27	-0.31	0.3	0.01	-0.03	776
King's Stanley	-0.58	-1	-0.37	0.15	0.12	2496
Kingswood	-0.16	-0.59	0.77	0.08	-0.09	1469
Leonard Stanley	0.64	-0.62	0.99	0	-0.08	1544
Longney and Epney	-0.1	-0.11	-0.34	-0.02	-0.02	281
Minchinhampton	-0.34	-2	-3.57	-0.2	-0.29	5436
Miserden	-0.01	0.61	-0.55	-0.01	-0.03	455
Moreton Valence	-0.06	-0.06	-0.19	-0.01	-0.01	162
Nailsworth	-0.52	-0.33	-4.33	0.02	-0.28	5760
North Nibley	-0.32	-0.36	0.53	-0.04	-0.05	901
Nympsfield	-0.04	-0.17	1.95	-0.02	-0.02	414
Owlpen	-0.14	-0.17	-0.5	-0.02	-0.02	414
Painswick	-1.06	-1.22	-1.37	-0.03	-0.18	3039
Pitchcombe	-0.08	-0.09	-0.28	-0.01	-0.01	237
Randwick and Westrip	-0.42	-0.59	2.14	-0.01	-0.09	1470
Rodborough	0.2	-1.16	-3.2	-0.24	-0.24	5285
Slimbridge	-0.42	-0.28	0.81	0.06	-0.05	1209
Standish	1.21	-0.1	2.09	-0.02	-0.02	251
Stinchcombe	-0.17	-0.2	-0.59	-0.03	-0.03	491
Stonehouse	-2.83	-0.53	-1.25	-0.1	-0.28	8074
Stroud	-0.29	-3.38	8.62	0.14	-0.61	13709

Parish	Allotments	Amenity Greenspace	Parks and Recreation Grounds (combined)	Play (Child)	Play (Youth)	Population (2017 ONS mid-year estimate)
Uley	-0.21	-0.47	0.91	0.1	-0.07	1170
Upton St. Leonards	0.61	1.76	-0.94	0.01	-0.12	2851
Whiteshill and Ruscombe	-0.39	-0.45	1	0.04	-0.07	1126
Whitminster	-0.3	-0.04	0.51	-0.05	-0.03	846
Woodchester	0.13	-0.48	1.44	-0.07	1.99	1207
Wotton-under-Edge	-0.43	-0.41	3.78	-0.11	-0.02	5752

Table 20 shows that provision varies across Parishes and typologies, with some meeting the standards and some falling below.

This will be an important consideration when determining the need for new provision of open space on site as part of new development, along with the access analysis (covered in the section below and in more detail within part 2). Even in cases where there is no shortfall in supply of a particular typology, there may be a need for new provision due to accessibility issues (see figure 29, section 8.5).

Although these figures highlight where there are shortfalls in supply and therefore where new provision should be sought, in many cases new provision will not be achievable (unless, for example, through new development). These figures can help inform decisions about the form of new open spaces and improvements to the existing quality/capacity of open spaces, rather than it being imperative that every Parish must achieve a '+' number.

Provision and access to accessible natural green space (including against the Natural England Accessible Natural Green Space Standards) and community orchards is considered under section 5.3 and 7.3 below and within the cluster/sub area analysis (part 2).

7.2.2   Future need for open space

Future population growth arising from new development that has not already been accounted for (through CIL and S106 agreement) has been estimated at 23,881 (for the period 2018-2040). This is based on a figure of 10,383 dwellings and an estimated occupancy rate of 2.3 people per household.

These housing figures were calculated taking into account unimplemented permissions as of April 2018, allocated sites and windfall sites, and were agreed by the Council's Senior Planning Strategy Advisor in November 2018. The average household size was calculated using the mid-2016 total population estimate for SDC in 2018 (119,074 (say 119,100)) divided by the mid-2016 based corresponding estimate for the number of households (51k), which equaled 2.33. The corresponding figure for the 2036 time horizon is 2.257; and, only very slightly less (2.256) for the 2040 time horizon. As a compromise between all three of the above, the figure of 2.3 has been used as the projected average household size over the period 2018 – 2040.

This section of the report considers the overall implications for open space provision from the predicted population growth.

Requirements from predicted population growth across Stroud

Table 21   Stroud open space requirements from new development (up to 2040)[35]

Typology	Required standard for new provision (ha/1000)	Requirement for 23,881 people (ha)
Allotments	0.35	8.36
Community orchards	0.15	3.59
Amenity Green Space	0.4	9.55
Park and Recreation Ground	1.2	28.66
Play Space (Children)	0.06	1.43
Play Space (Youth)	0.06	1.43
Natural Green Space	1.00	23.89
Total	**3.07 ha/1000**	**76.91 ha**

7.3   Application of access standards

This section provides an overview of access to different types of open space typologies across the district, using the access standards summarised in table 19. The maps are intended to provide an overview and are for illustrative purposes only. More detailed maps by cluster/sub area are provided in part 2 of this report.

The walk time buffers are created using QGIS and the OSM Tools plugin which relies on the openstreetmap paths and street network to accurately map realistic potential walking routes. It is based on a walk time of 5 kilometres/3.1 miles an hour[36].

Linear buffers were used for accessible natural green space because the walking time buffer tool relies on the centroid of a feature and the large size of most ANGS would mean this method is less effective. The straight line buffers are derived from table 22 below. The straight line walking distances do not take into account roads or barriers to access and so the actual route walked (the pedestrian route) is generally further i.e. straight line distances are around 60% of actual distances.

The access maps also show Census 2011 Output Areas (OAs). Each OA centroid is the lowest level of geography from the census which contains roughly 129 households. By using this

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[35] In addition to the requirements for open space typologies in table 21, there will also be a requirement for playing pitches and outdoor sports facilities (to account for those facilities that fall outside of parks and recreation grounds). This additional requirement is for 0.7 ha/1000 of playing pitches and outdoor sports facilities. This results in a requirement of 16.70 ha for 23,881 people. The Playing Pitch Strategy should be referred to for the detail.

[36] This is in line with the British Heart Foundation state as an average walking pace on country and forestry footpaths: https://www.bhf.org.uk/how-you-can-help/events/training-zone/walking-training-zone/walking-faqs

point dataset, it is possible to clearly indicate those households that fall outside open space access buffers i.e. where the key gaps in access are.

Table 22   Standard walk times and distances

walk time (minutes)	Pedestrian Route (metres)	Straight line (metres)
1	100	60
2	160	96
3	240	144
4	320	192
5	400	240
6	480	288
7	560	336
8	640	384
9	720	432
10	800	480
11	880	528
12	960	576
13	1040	624
14	1120	672
15	1200	720
16	1280	768
17	1360	816
18	1440	864
19	1520	912
20	1600	960

7.3.1 Access to open space across the district

Figure 14   Access to allotments (15 minutes' walk time)
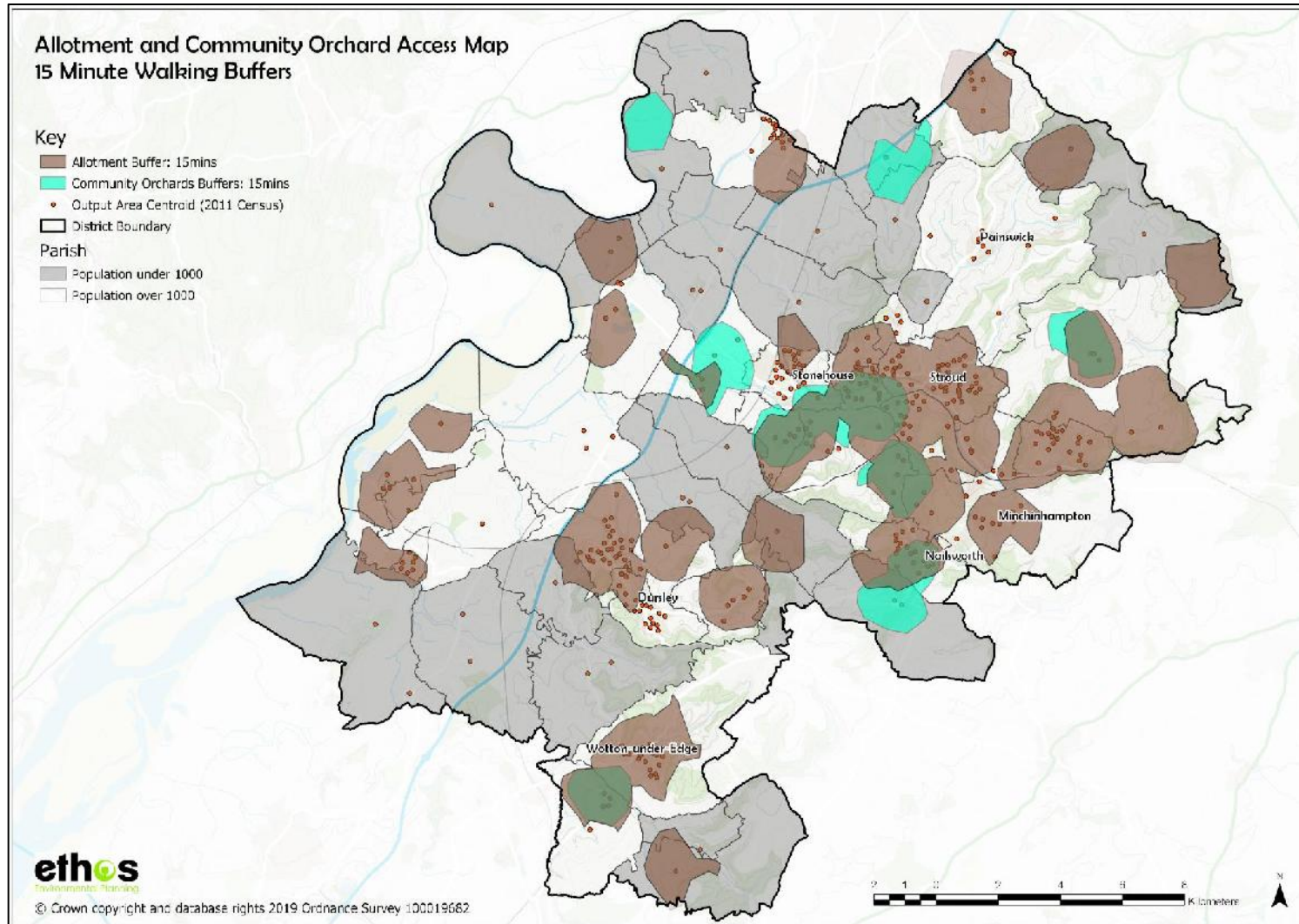
Figure 15   Access to amenity green space (13 minutes' walk time)
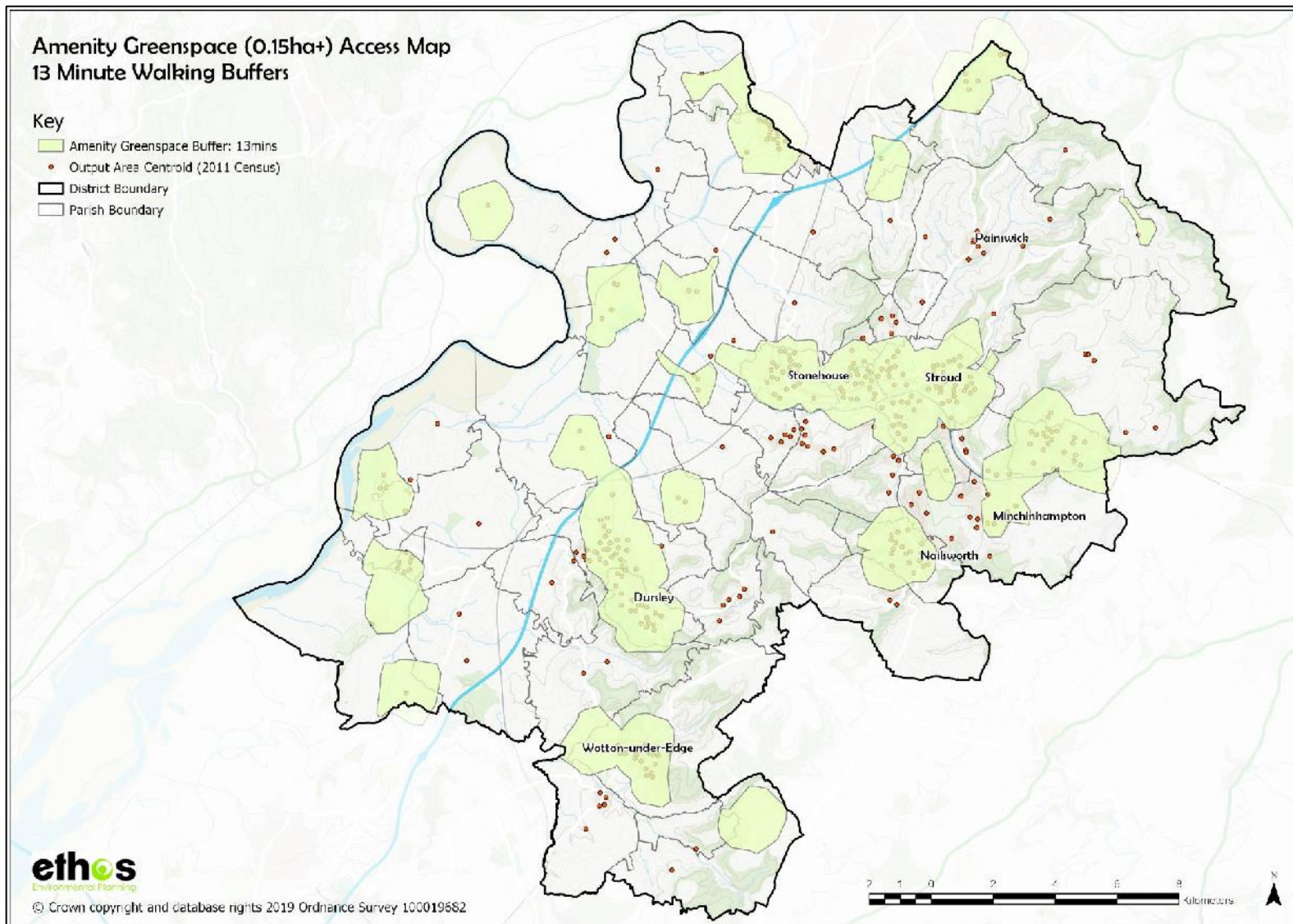
Figure 16   Access to parks and recreation grounds, amenity green space and outdoor sport (private) (13 minutes' walk time)
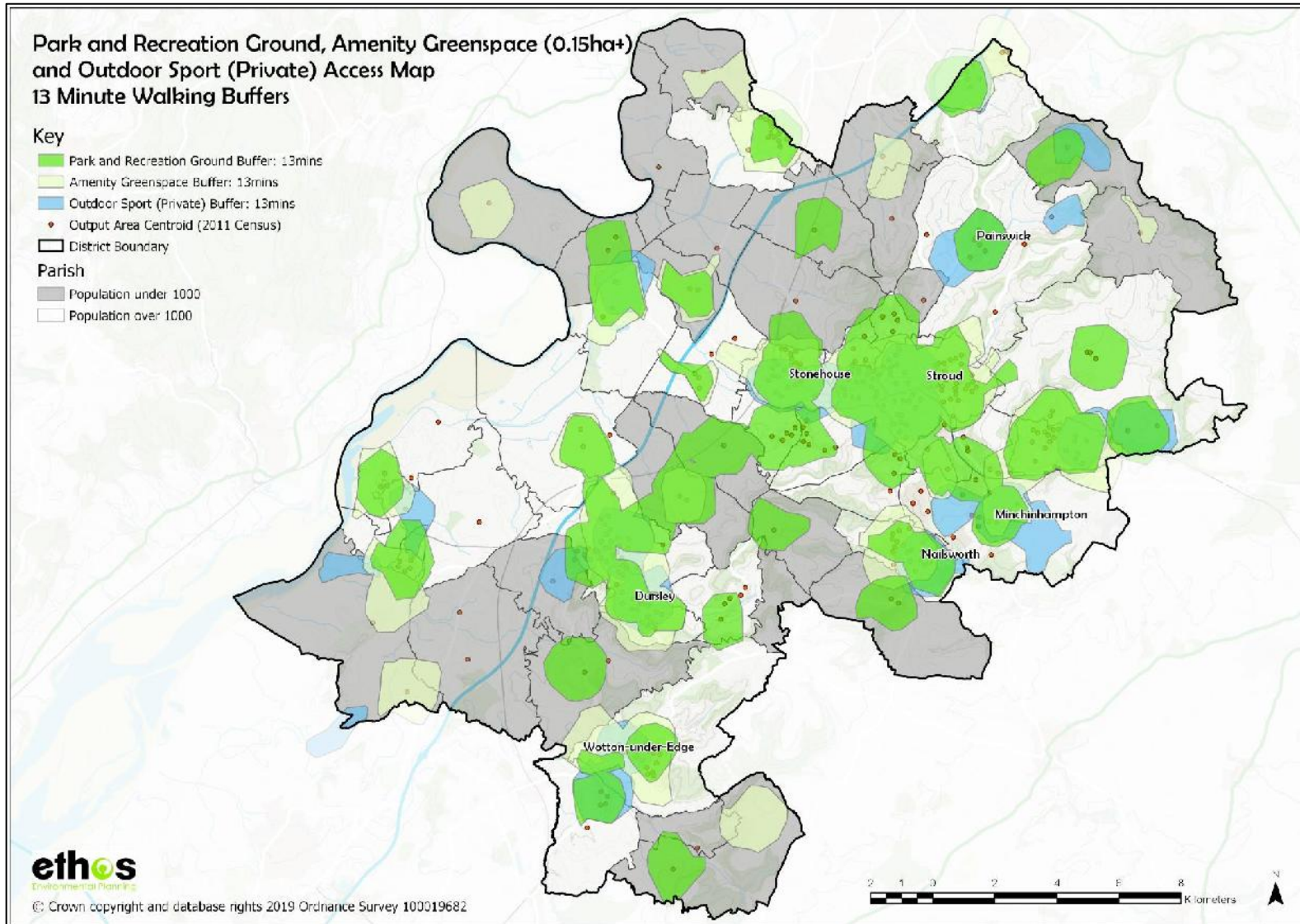
Figure 17   Access to children's play space (10 minutes walk time)
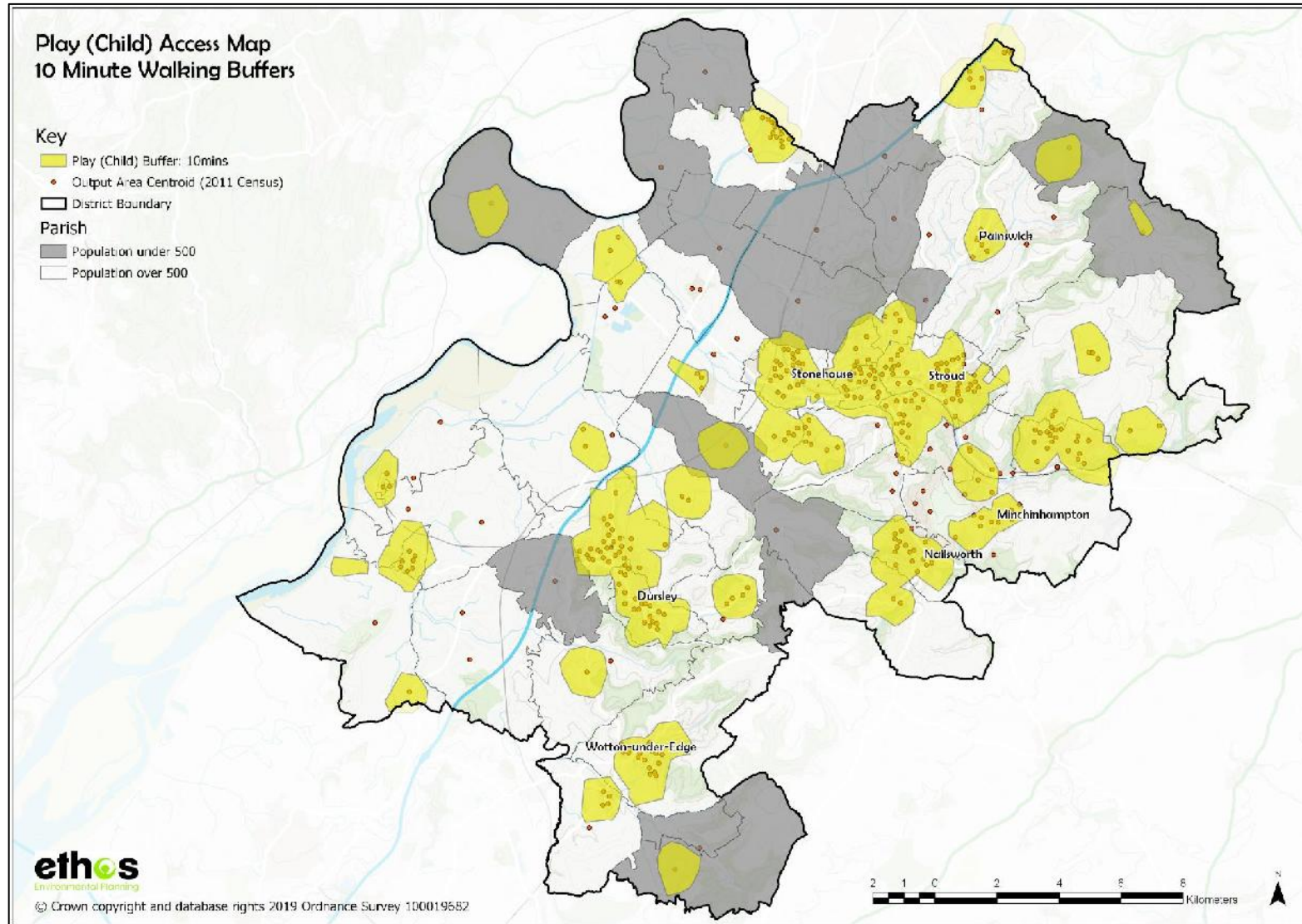
Figure 18   Access to youth play space (15 minutes walk time)
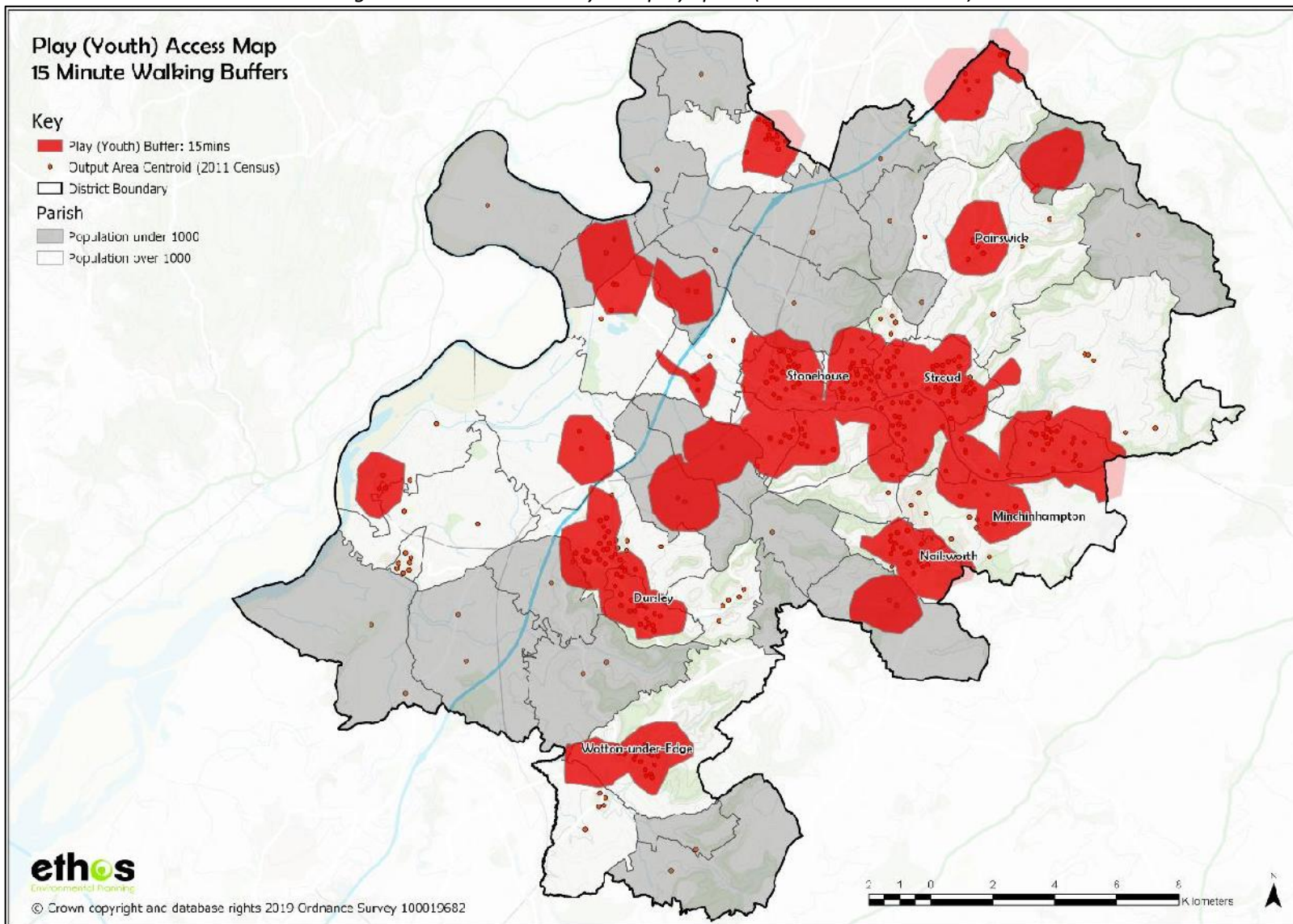
Figure 19   Access to Accessible Natural Green Space (960m buffer)
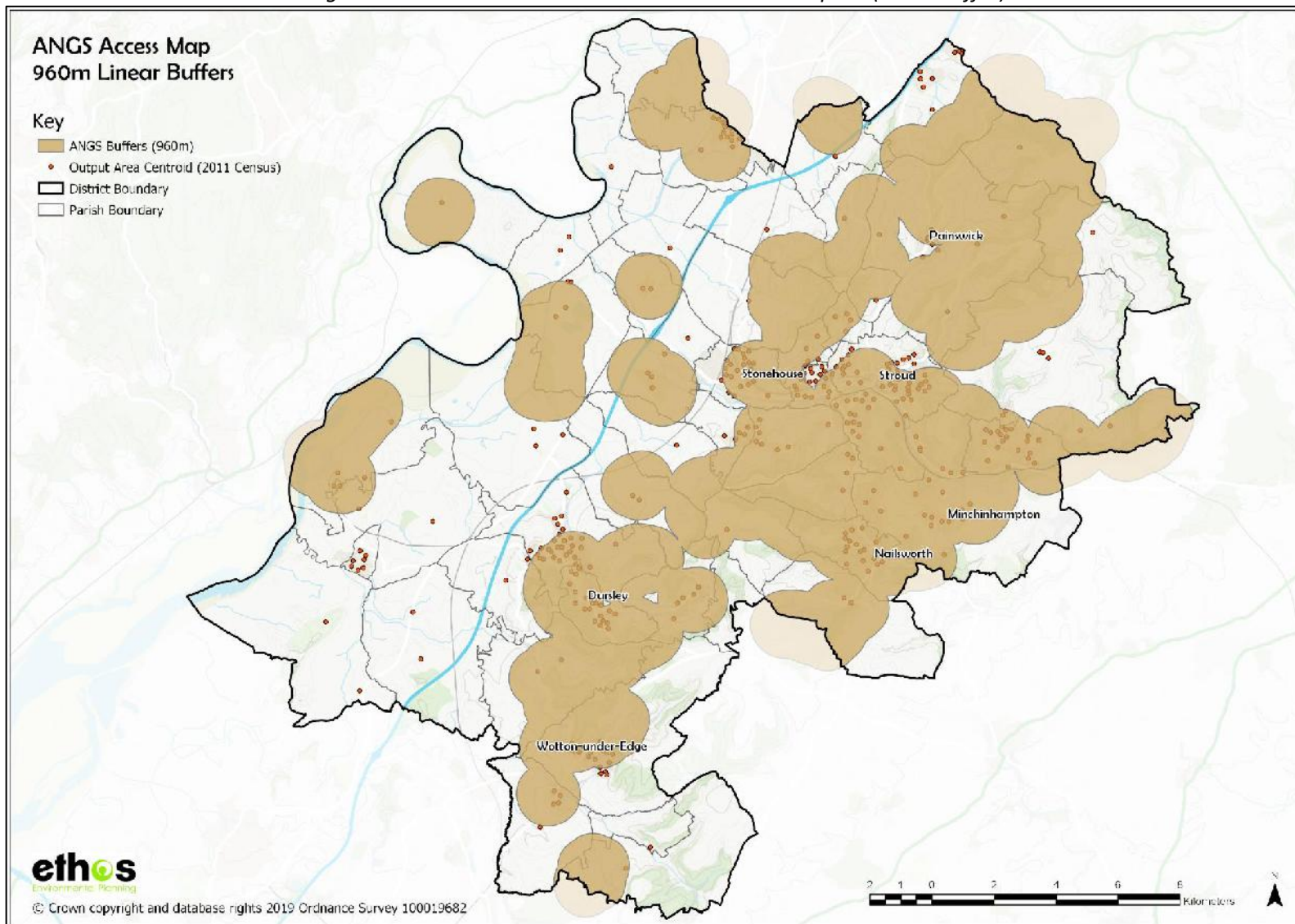
7.3.2   Application of ANGSt standards for natural green space

This section looks at access to natural/semi-natural green space through the application of ANGSt standards for accessible natural green space.

Accessible Natural Green Space Standards (ANGST)

ANGSt recommends that everyone, wherever they live should have accessible natural greenspace:

- Of at least 2 hectares in size, no more than 300 meters (5 minutes walk) from home;
- at least one accessible 20 hectare site within two kilometre of home;
- one accessible 100 hectare site within five kilometres of home; and
- one accessible 500 hectare site within ten kilometres of home; plus
- a minimum of 1 hectare of statutory Local Nature Reserves per thousand population.

There are no 500 ha sites mapped within the district and there are only two Local Nature Reserves – Bisley Road Cemetery (Stroud Valleys) and Coopers Hill (The Gloucester Fringe). The maps below show how the district meets the 2ha, 20ha and 100ha standards.

As can be seen, there are large gaps in access against the 2ha/300m standard. It is considered that this standard is difficult to achieve, and not particularly realistic in identifying key gaps, due to the 2ha minimum size (smaller spaces than this will still have recreational and biodiversity value), and very small access buffer, and therefore analysis against this standard has not been taken further within the cluster analysis in part 2 of this report. However, a local standard has been developed (see figure 19 and section 6.1.6), which is based on the results of the consultation and serves to highlight where the key gaps in access to local green spaces are. There is generally good access to natural green space above 20ha and 100ha across the eastern half of the district, with large gaps in the western part of the district. More detailed analysis by cluster is provided in part 2 of this report.
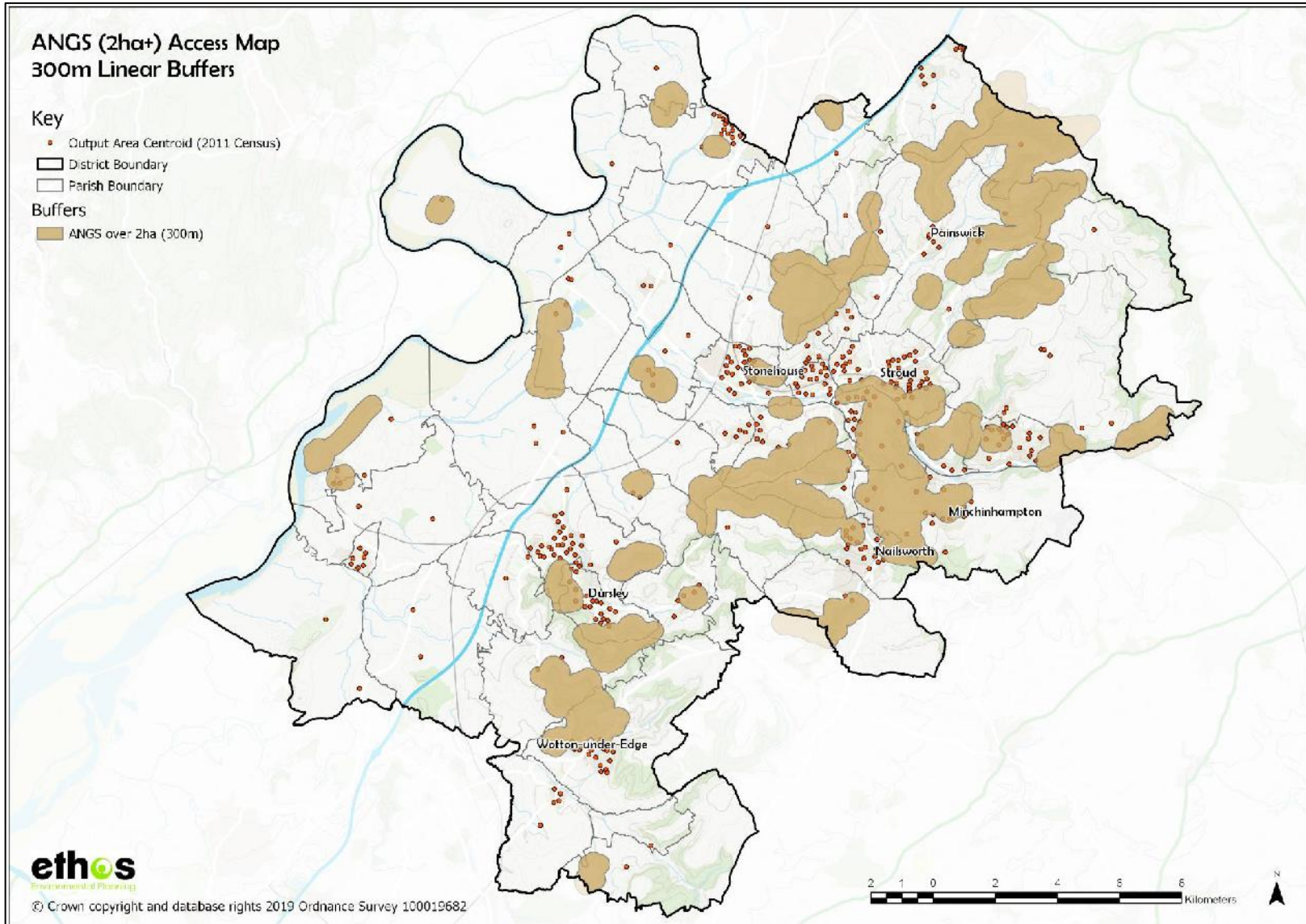
Figure 20   Access to 2 ha sites within 300m
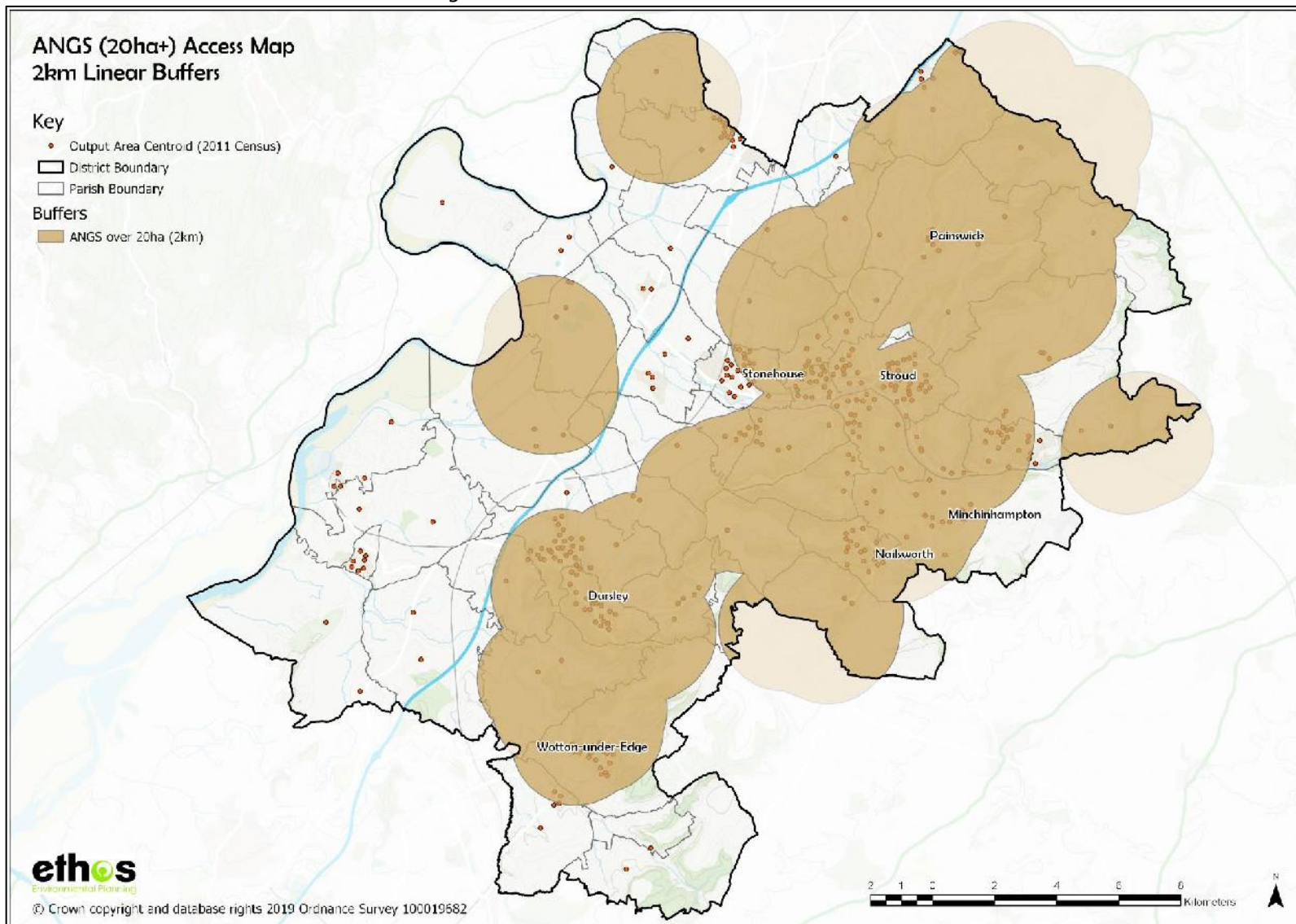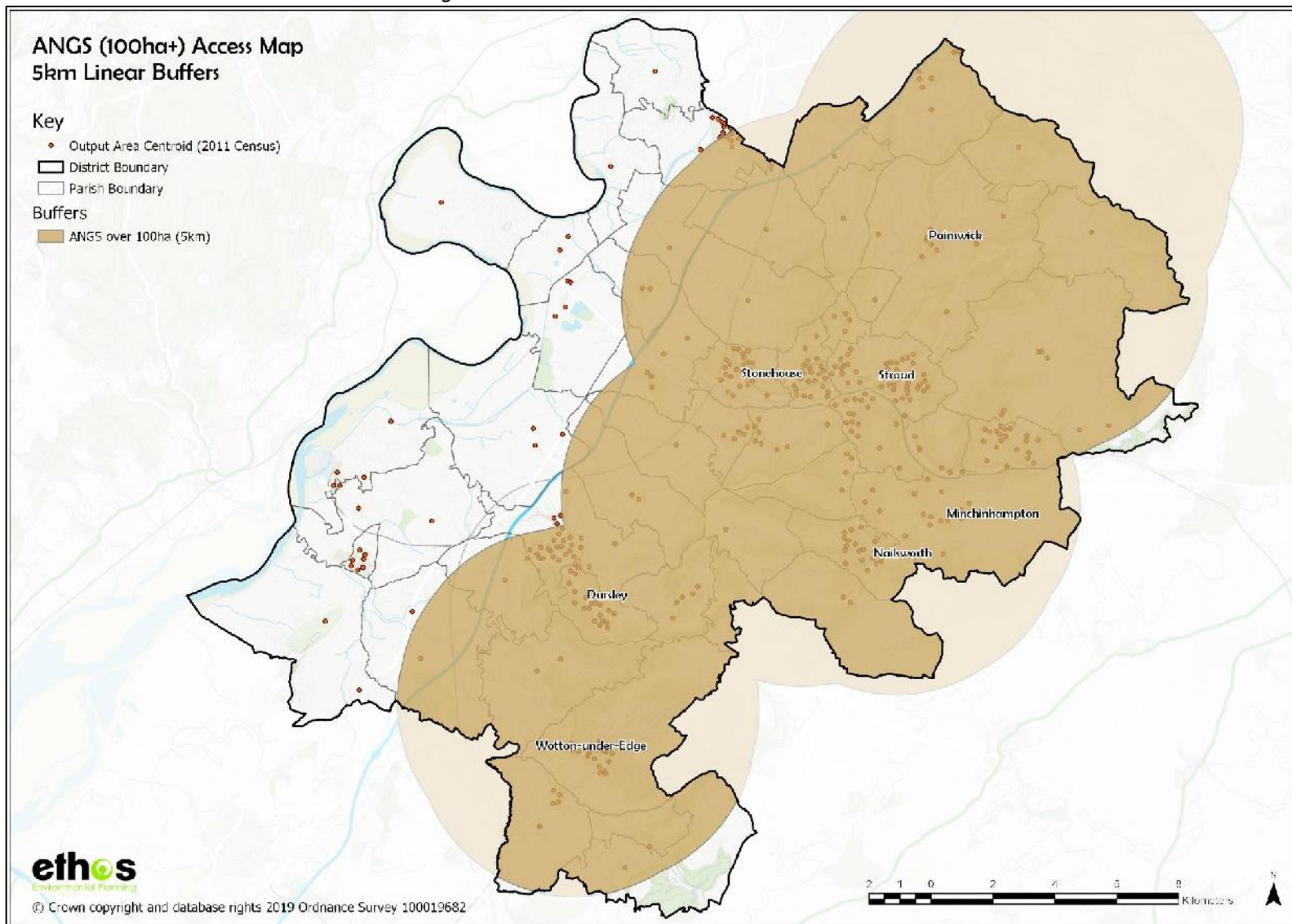
Figure 21 Access to 20 ha site within 2km

*Figure 22   Access to 100 ha site within 5 km*

7.5   Application of quality standards

7.5.1   Quality of open space – consultation key findings

Respondents were asked how they rated various types of facilities in the district in terms of quality. The responses of those expressing an opinion on specific categories of facility are illustrated in Figure 23 below.

Figure 23   Quality of open space (responses from household survey)
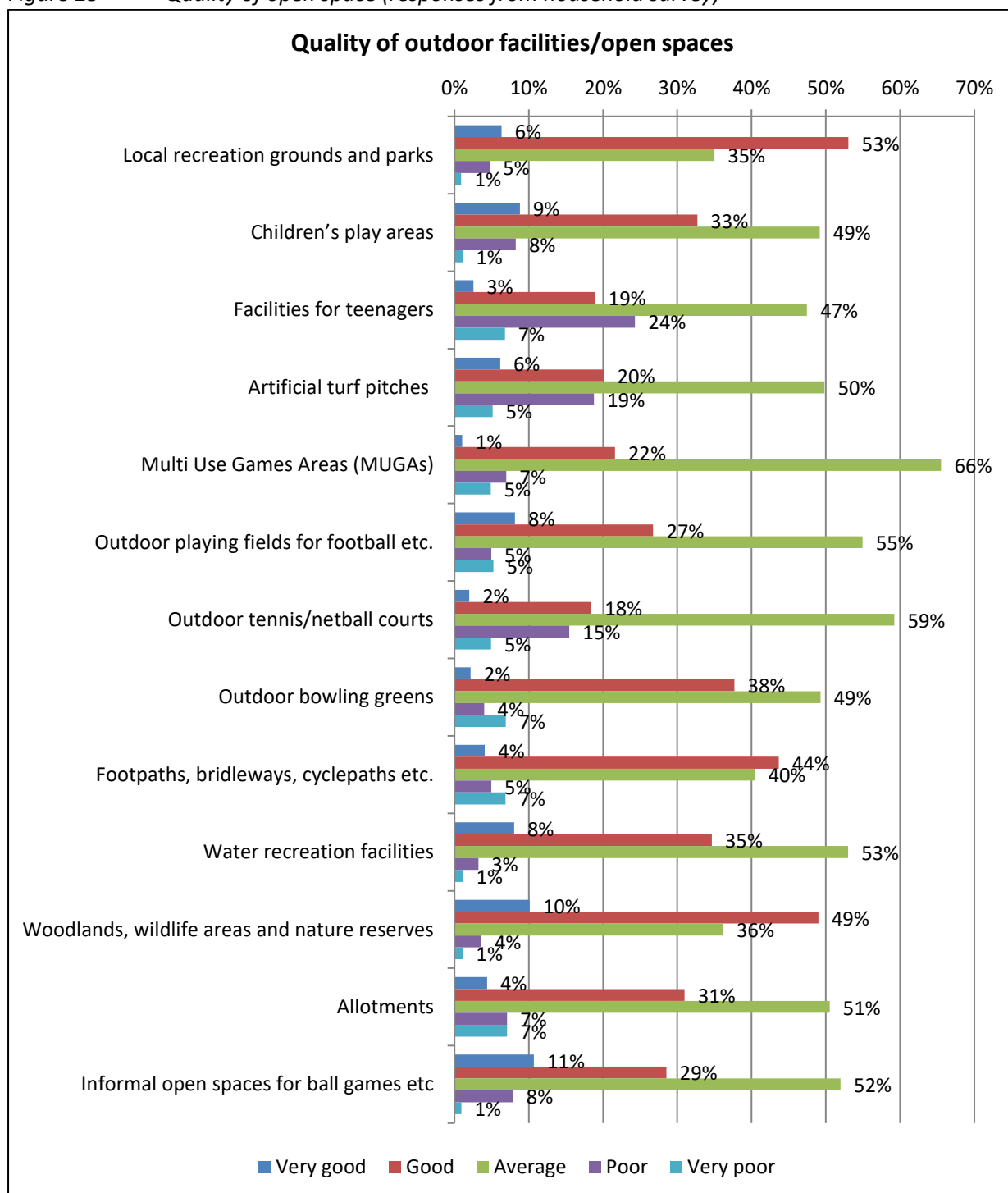
For most kinds of outdoor facilities/open spaces a majority of households suggested that in general they were of average or better quality (though the most common rating tended to be only "average"). However, for some typologies there were notable levels of dissatisfaction with general levels of quality as noted below.

31% of households highlighted the overall quality of outdoor facilities for teenagers as being either poor or very poor. The quality of artificial turf pitches and tennis/netball courts was rated as poor or worse by at least 20% of respondents.

In contrast some kinds of facilities/open spaces were rated highly in terms of quality. These include: parks and recreation grounds (59% rate quality in general as being good or very good); woodlands, wildlife areas and nature reserves (59%); and footpaths, bridleways and cycle paths (48%).

7.5.2   Green infrastructure – Building with Nature

The District Council is supportive of Gloucestershire Wildlife Trust's Building with Nature initiative. The Trust is working with developers and planners to create a common understanding of what constitutes high-quality green and blue infrastructure (GI). The aim is to secure the benefits to people and wildlife, without provision for the natural environment being regarded as a hold up to development.

Building with Nature provides a clear set of standards and a technical user guide to help applicants secure evidence on how their development or policy meets the benchmark standard for high-quality green infrastructure.

The three elements on which the standards are based are:

- Promote health and wellbeing
- Ensure effective water management
- Protect and enhance wildlife

In partnership with the Trust specific questions were developed to secure the degree of local resident's support for these three elements of quality. Responses are shown in the table below:

Table 23   Results from residents survey - residents support for GI

Factor	Very Important	Quite Important	Neutral	Not very Important	Not at all Important	No opinion
Promote health and wellbeing: by ensuring that public open and green spaces are accessible for all, and close to where people live and work - to optimise use and enjoyment.	430	73	3	1	1	2
Ensure effective water management: by securing a commitment to improve water quality; reduce the risk of flooding; and manage water naturally for maximum benefit of people & wildlife.	422	76	4	1	1	2
Protect and enhance wildlife: by ensuring green/open spaces provide areas where nature can flourish; and linking up spaces to the wider green network to promote better wildlife habitats and improve biodiversity.	414	77	12	1	1	2

It is clear from the above that local residents strongly support provision of green infrastructure that promotes health and wellbeing; ensures effective water management; and protects and enhances wildlife.

7.5.3   Quality of open space – audit methodology

The audits were undertaken using a standardised methodology and consistent approach. However, audits of this nature can only ever be a snap-shot in time and their main purpose is to provide a consistent and objective assessment of a site's existing quality rather than a full asset audit. The audits were undertaken in July and August 2018.

It was not possible to survey all sites due to access restrictions, namely private sports grounds/open space and education sites. Other sites were also excluded due to limitations of resources, these included allotments, small amenity green spaces (<0.15 ha in size, which have little or no recreational value) and churchyards and cemeteries. This has meant that the quality audits have focused on the key open spaces and play areas.

Sites were visited, and a photographic record made of key features, along with a description of the site and recommendations for improvements. An assessment of the quality of the open space was undertaken using the following criteria, which is based on the Green Flag Award criteria:

1. Welcoming
2. Good and Safe Access
3. Community Involvement

4. Safe Equipment & Facilities
5. Appropriate Provision of Facilities
6. Quality/Management of Facilities and Infrastructure
7. Personal Security on Site
8. Dog Fouling
9. Litter and Waste Management
10. Grounds/Habitat Management

Children's play space and youth play space was also audited separately using the above criteria.

For each of the criteria a score of between 1 -10 is given, where 1 is very poor and 10 is very good. The scores for each site are added together and the mean calculated based on how many criteria were scored (e.g. If 'Community involvement' is given N/A for a site, the total will be divided by 9). This mean is then multiplied by 10 to produce the final score from which sites are grouped into 3 categories – good (those sites with a score of between 70 and 100), average (those sites with a score of between 40 and 70) or poor (those sites with a score of between 10 and 40).

In addition to carrying out the above quality audit, each open space was assessed for it's quality in terms of it's contribution to GI, drawing on the three key themes from the Building with Nature benchmark (Wellbeing, Water and Wildlife).

For each of the three GI themes, a score of between 1-10 is given, where 1 is very poor and 10 is very good. Recommendations have also been made around how sites could be improved against each themes.

The full quality audit is captured within the GIS database which has been provided to the council.

7.5.3   Quality of open space – quality audit findings

The quality audit was undertaken at 172 open spaces and 132 children and youth play spaces across the study area. For each of the clusters/sub areas within the study area, a map showing the quality audit results has been produced (see part 2 of this report). The maps show the sites categorized into three groups – good quality (with a score of A), average quality (with a score of B) and poor quality (with a score of C). Separate maps are also provided showing the GI quality scores in section 7.6 below.

As can be seen from figure 24, the majority of open spaces surveyed were assessed as being good quality.

Figure 24   Overview of open space quality audit results
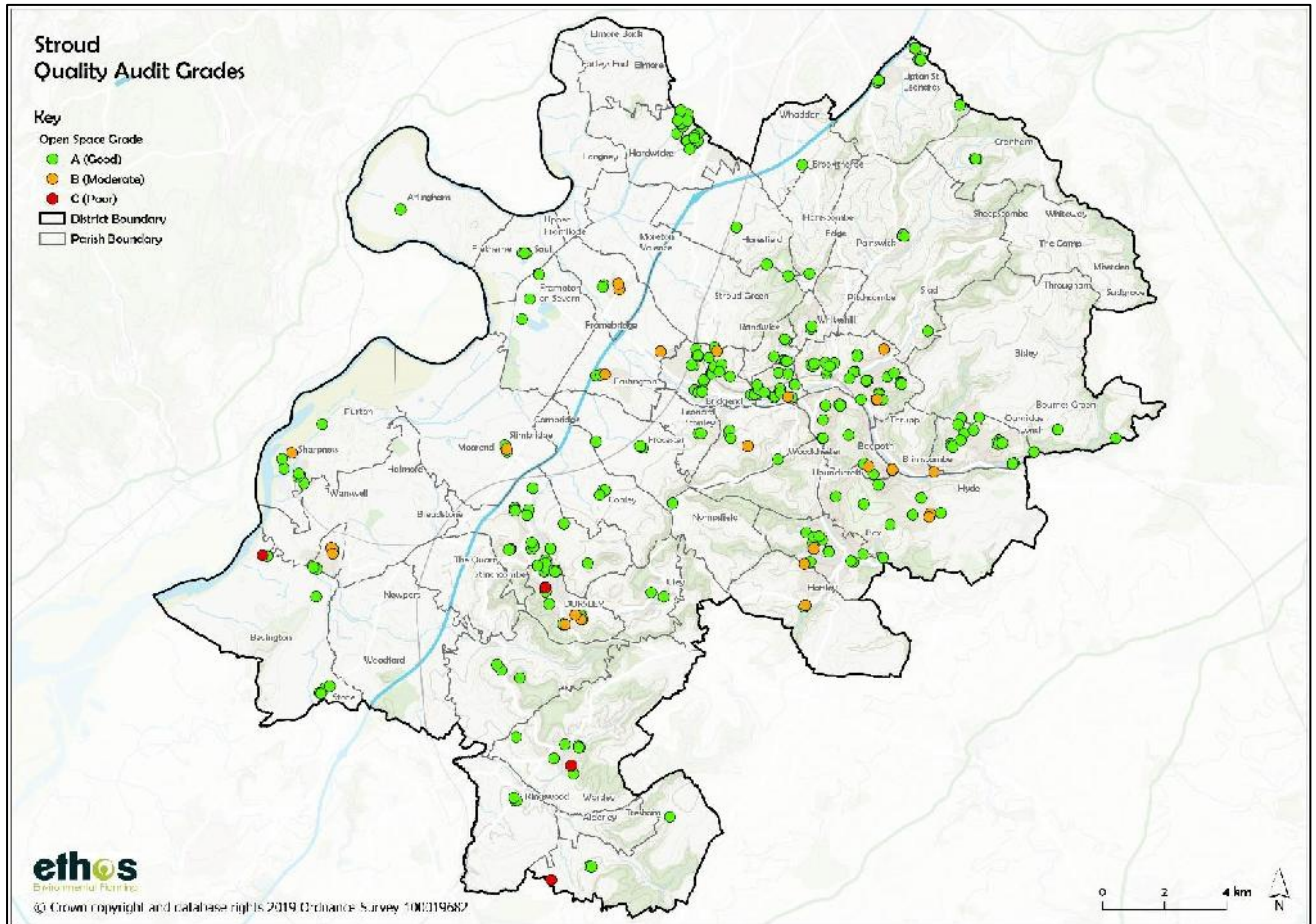
7.6   Analysis of the GI network

7.6.1   Identification of key GI corridors and opportunities for improving connectivity

A desktop assessment of the network has been undertaken to identify the key GI corridors and also opportunities in terms of improving connectivity for biodiversity (wildlife dispersal) and access for people.

This identification of opportunities used the Natural England National Habitat Network dataset (developed in 2018, based on the priority habitat inventory) as a starting point (see figure 25 below), however there were limitations to this dataset as it did not map priority habitats including coastal floodplain grazing marsh, rivers and open waters, ancient woodland and wood pasture and parkland. It also considered the priorities identified within the Local Plan Review Emerging Strategy (2018).

Overview maps showing the key GI corridors and the opportunities for improving connectivity are provided below (Figures 26 and 27). More detail by cluster/sub area is provided in part 2 of this report.

Figure 25   Natural England National Habitat Network Dataset (as of March 2019)
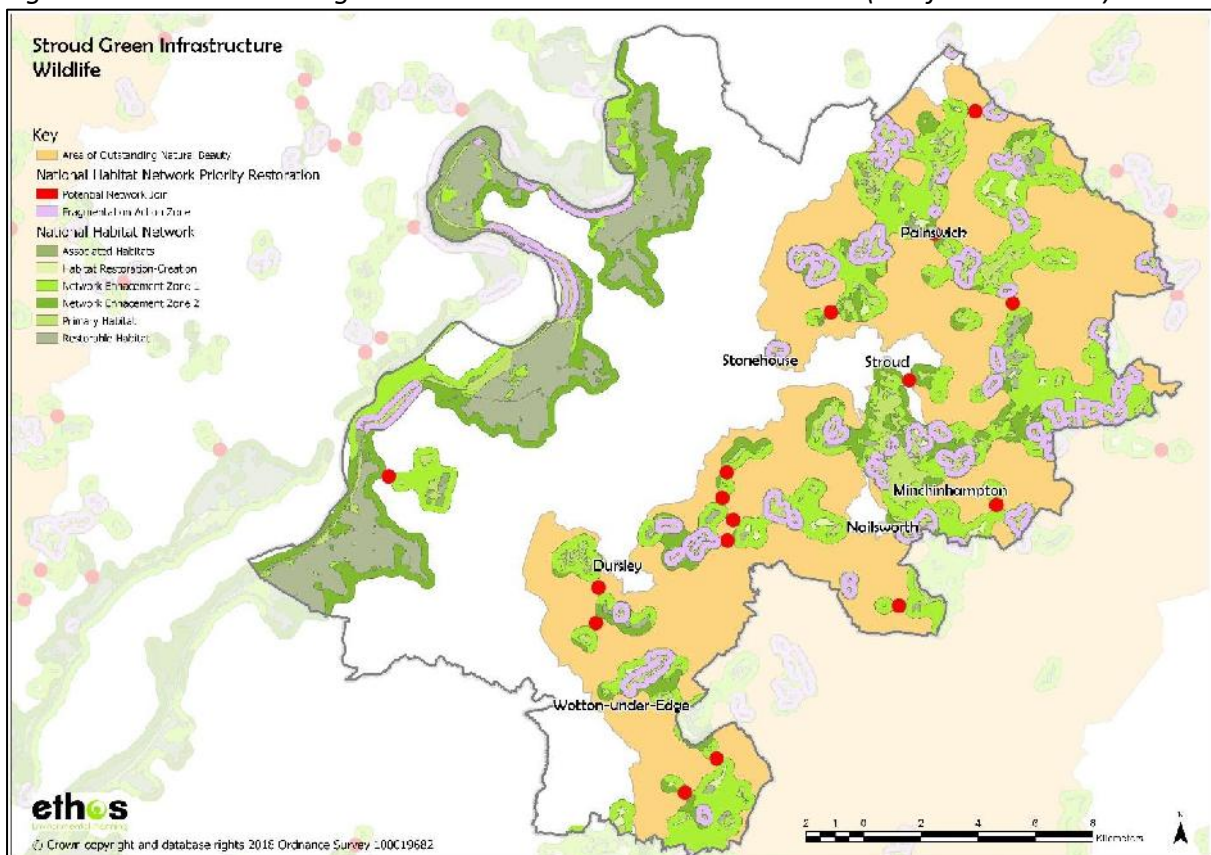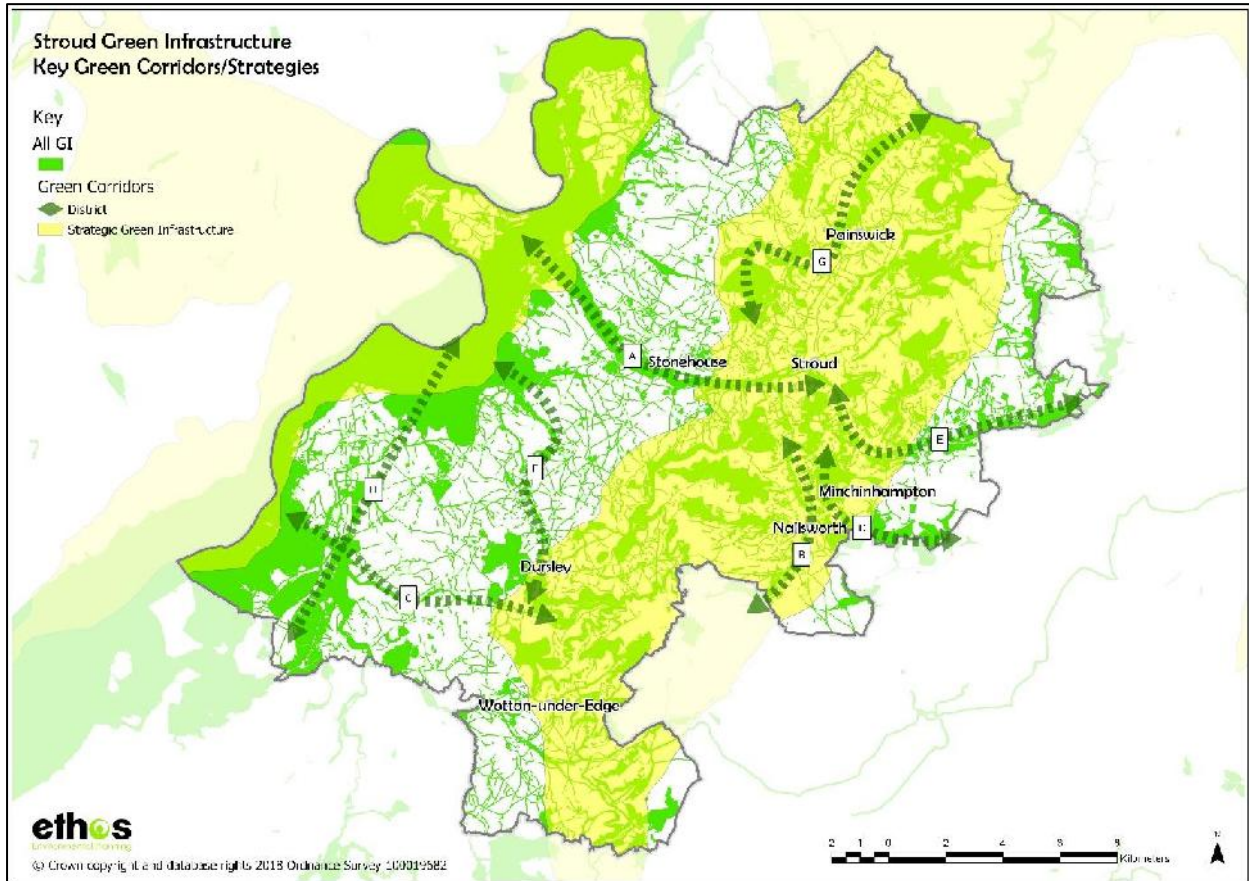
*Figure 26   Overview of key GI corridors*

The strategic County GI corridors are the areas in yellow identified by the Gloucestershire Local Nature Partnership. They essentially cover the two SNAs within the district – The Severn Vale (wet grassland habitat) and The Cotswold Escarpment and Valley (lowland calcareous grassland). In addition to this, a number of district GI corridors have been identified as follows:

A. Saul to Stroud. River Frome (KWS) and Stroudwater Canal

B. Selsey Common to Kingscote via Nailsworth. Ancient woodland and broadleaved woodland including Nailsworth Brook KWS.

C. Doverte Brook linking coastal flood plains in Berkeley to woodlands south of Dursley.

D. Minchinhampton Common to Cherington linking SSSI and lower calcareous grassland to ancient woodlands and Minchinhampton Golf Course.

E. River Frome and Thames and Severn Canal east from Stroud through Ancient Woodlands and Key Wildlife Sites.

F. River Cam linking Dursley to Frampton grazing marsh.

G. Standish Park/Wood to Cotswold Commons and Beechwoods through woodland

H.   Frampton Moors to Berkeley grazing via Meadows KWS and Bushy Grove.

Figure 27   Overview of key GI opportunities
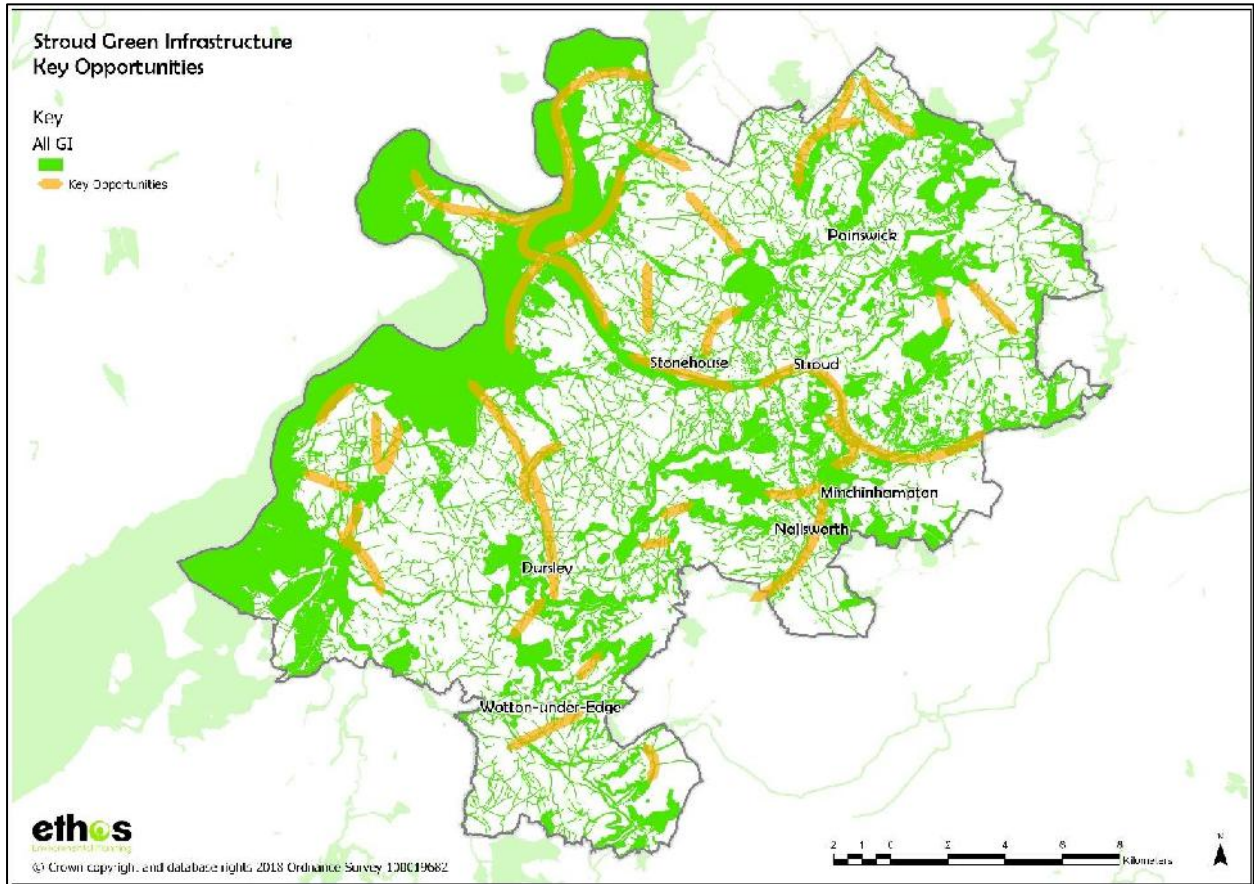
The figure above shows the key opportunities that have been identified for improving the connectivity of GI in the district. This is covered in more detail by cluster in part 2 of this report.

The approach to delivering GI and identifying opportunities set out in this Study are intended to provide a framework for GI in the District. As new projects and opportunities arise, some of which may be not included within this current Study[37], it is the intention of SDC and it's partners to deliver enhanced GI at every opportunity.

7.6.2   Access to GI

The Natural England Access Network Mapping dataset is a national composite dataset of Access layers, showing analysis of extent of Access provision for each Lower Super Output Area (LSOA), as a percentage or area coverage of access in England.

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[37] For example, the preferred option 30 for the A417 missing Link (which falls outside of Stroud District), may offer some arable land opportunities in the locality upon which to recreate limestone grasslands or open space as part of a wider landscape/biodiversity/recreation scale restoration and connectivity concept project. www.highwaysengland.co.uk/A417MissingLink.

The 'Access Network Map' was developed by Natural England to inform its work to improve opportunities for people to enjoy the natural environment. This map shows, across England, the relative abundance of accessible land in relation to where people live. The map does not, and cannot, provide a definitive statement of where intervention is necessary. Rather, it should be used to identify areas of interest which require further exploration.

The Access Network Maps are compiled from the datasets available to Natural England which contain robust, nationally consistent data on land and routes that are normally available to the public and are free of charge.

Datasets contained in the aggregated data:

• Agri-environment scheme permissive access (routes and open access)
• CROW access land (including registered common land and Section 16)
• Country Parks
• Cycleways (Sustrans Routes) including Local/Regional/National and Link Routes
• Doorstep Greens
• Local Nature Reserves
• Millennium Greens
• National Nature Reserves (accessible sites only)
• National Trails
• Public Rights of Way
• Forestry Commission 'Woods for People' data
• Village Greens – point data only

This dataset has been used to indicate access to GI across the district as shown in figure 28 below. As can be seen, access is generally better (shown in green) within the eastern half of the district, which also corresponds with the Cotswolds AONB.

*Figure 28   Overview of access to GI*
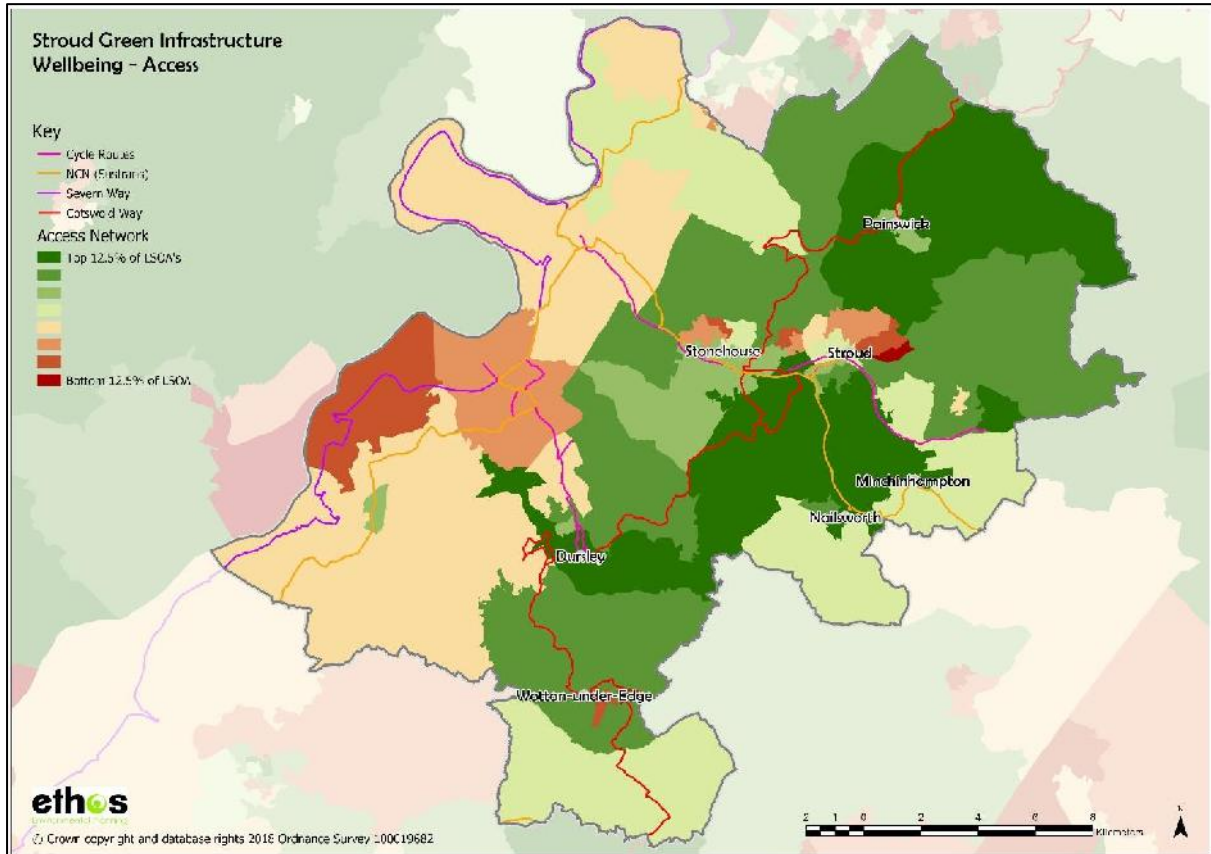
7.6.3   Quality of GI

It has not been possible to assess the quality of all GI assets within the district, however the open space quality audits assessed each open space in terms of it's contribution to each of the GI themes (Wellbeing, Water and Wildlife). A summary of these results in figure 28 below. More detail is provided by cluster/sub area in part 2 of this report, where consideration of the quality of designated sites (where information was available online e.g. SSSI condition assessments) is also covered.

As can be seen from figure 29 below, the vast majority of open spaces have been assessed as being good to average in terms of each site's contribution to GI (1 being the poorest quality and 10 being the best quality).

Figure 29   Overview of GI scores for open space (where 1 is poor and 10 is good)
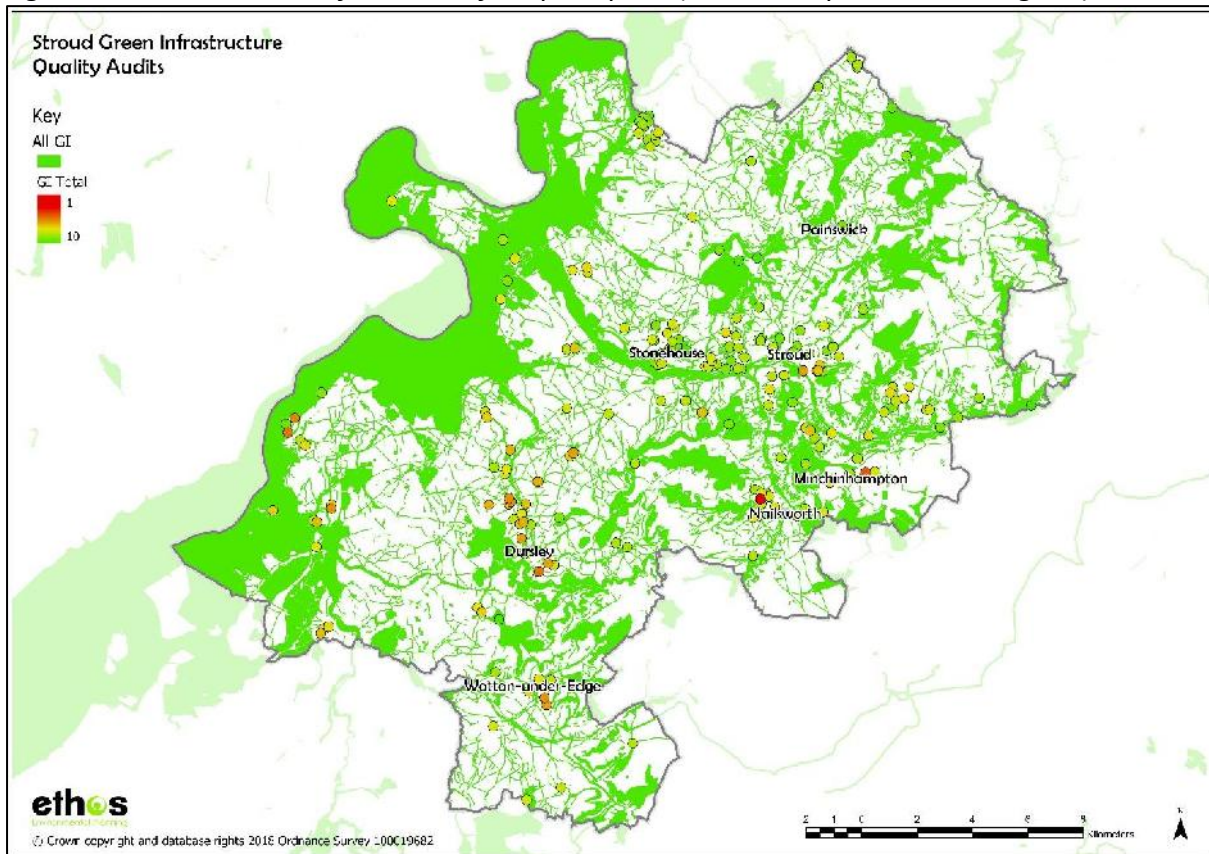
8.0   STRATEGIC OPTIONS, POLICY & MANAGEMENT RECOMMENDATIONS

This section sets out strategic options and policy recommendations for open space and GI within the District. It draws on all the previous steps of the study to bring together informed recommendations and addresses a number of specific requirements of the study brief.

8.1   Strategic Options

8.1.1   Introduction

The strategic options for open space and GI address five key areas:

1)   Existing provision to be protected;
2)   Existing provision to be enhanced;
3)   Opportunities for re-location/re-designation of open space (includes consideration of multifunctional strategic hubs of open space/sports facilities);
4)   Identification of areas for new provision; and
5)   Facilities that may be surplus to requirement.

The recommendations will ensure that the Council and it's partners and community groups can work together to protect, deliver and effectively manage open space GI, sport and recreation across the District.

8.1.2   Delivering Strategic Options

The National Planning Policy Framework (NPPF) was first published in 2012 and has since been updated in July 2018. It provides the framework for producing local plans for housing and other development, which in turn provide the background against which applications for planning permission are decided.

The planning system has three overarching objectives (economic, social and environmental - which are interdependent) in order to achieve sustainable development. Open space and GI (provision, protection, enhancement) and their associated intrinsic benefits are key components of all three of these objectives.

Whilst Local Authorities will have an important role in delivering open space, sport and recreation facilities, in some cases their role may move from that of 'deliverer' to 'facilitator'. The aim will be to work with community organisations to make local decisions about how facilities and services will be provided. Organisations such as residents' groups, voluntary organisations, sports clubs and societies will all have a key role in this.

Although it is up to local communities to define their own priorities within neighbourhood plans, the information provided within this study will form a good basis to inform any decisions related to the provision of open space and GI.

The following sections consider the key issues for open space and GI in the study area, and the recommendations that emerge need to be taken in context with National policy

(including the Localism Act) and consider how they can fit into local decision making. The following sections serve to highlight issues, but do not necessarily resolve how they may be delivered. The GI principles identified in section 6.2 of this report are embedded in the recommended policies below.

The information provided within this study will also form the basis for potential future strategies. In addition, the recommended policies within this study will form the basis of any open space and GI policies adopted by the Council.

8.2   Existing provision to be protected

The starting point of any policy adopted by the Council should be that all open space and GI should be afforded protection unless it can be clearly proved it is not required.

Existing open space/GI which should be given the highest level of protection by the planning system are those which are either:

- Critically important in avoiding deficiencies in accessibility, quality or quantity and scored highly in the quality assessment (or are critically important to the functioning of the GI network); **or**
- Of particular nature conservation, historical or cultural value.

The cluster/sub area analysis (part 2 of this report) and analysis of supply by Parish (table 20, section 7.2) provide more detailed results as to the above considerations. The following draws on this and makes some more general observations and recommendations.

Open Space Policy Direction (protecting open space):	
OS1	The distribution of open space varies across the District, however, there are identified shortages of at least 1 typology of open space in all Parishes and clusters/sub areas. It is therefore strongly recommended that priority is placed on protecting those open spaces where there is an existing shortfall of supply.
OS2	Sites which are critical to avoiding deficiencies, or making existing deficiencies worse, in quality, quantity or access should be protected unless suitable alternative provision can be provided which would compensate for any deficiencies caused.
OS3	Sites which have significant nature conservation, historical or cultural value should be afforded protection, even if there is an identified surplus in quality, quantity or access in that local area.

Green Infrastructure Policy Direction (protecting GI):	
GI1	Development proposals will protect as well as contribute to new and existing GI. The starting point will be the protection and enhancement of existing GI on site, and ensuring GI links (both for biodiversity and access) with the surrounding area. GI

must be embedded into the layout of new development from initial project thinking, identification of constraints and opportunities identified in the master planning process, through to implementation, management and maintenance. Example illustrations of how development should protect and enhance GI are provided at figures 29 and 30 below.

GI2   Development that will cause material or demonstrable harm to the functioning of the GI network should not be permitted, unless mitigation or compensation can be provided to ensure the overall multifunctionality and connectivity of the GI network is maintained. Priority should be placed on protecting the strategic GI network identified by the Gloucestershire Local Nature Partnership, and local/district corridors identified within this study (see section 7.6, figure 26 and part 2 of this report). In the future it is also anticipated that the Gloucestershire Nature Recovery Network mapping may contribute to this understanding.

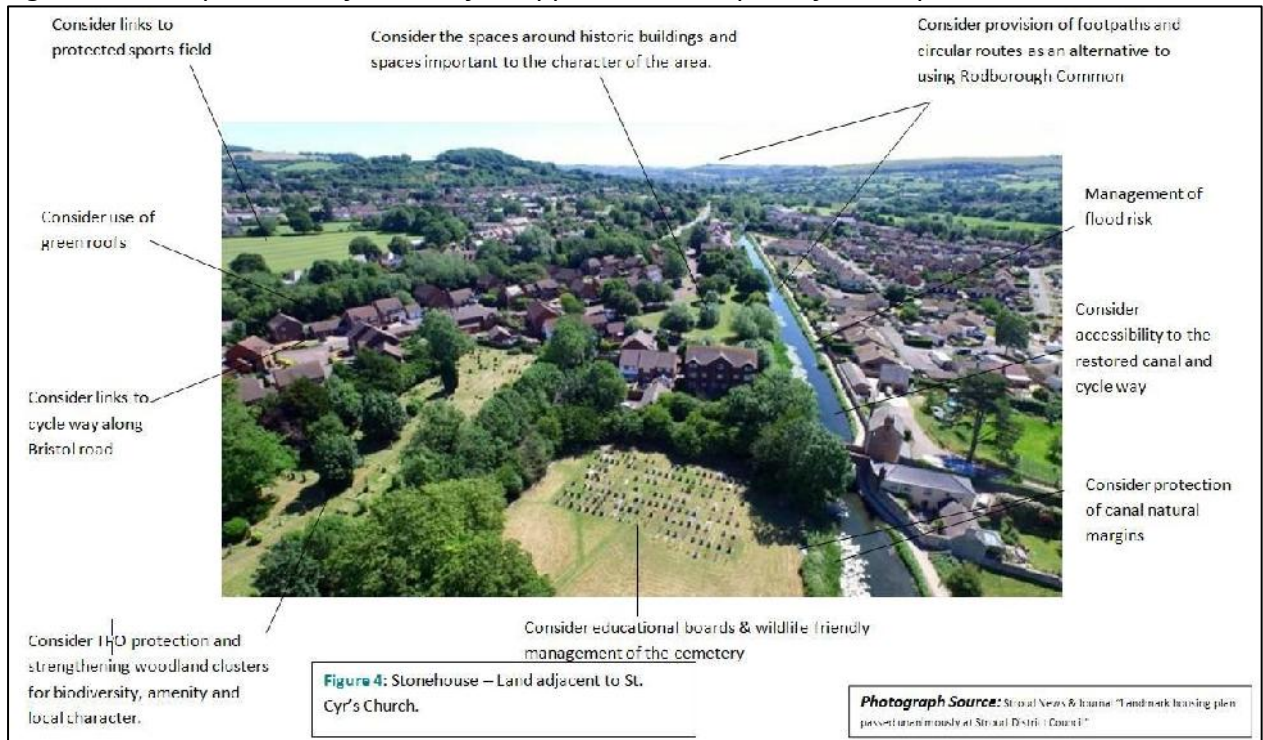*Figure 29 Example – identification of GI opportunities as part of development*
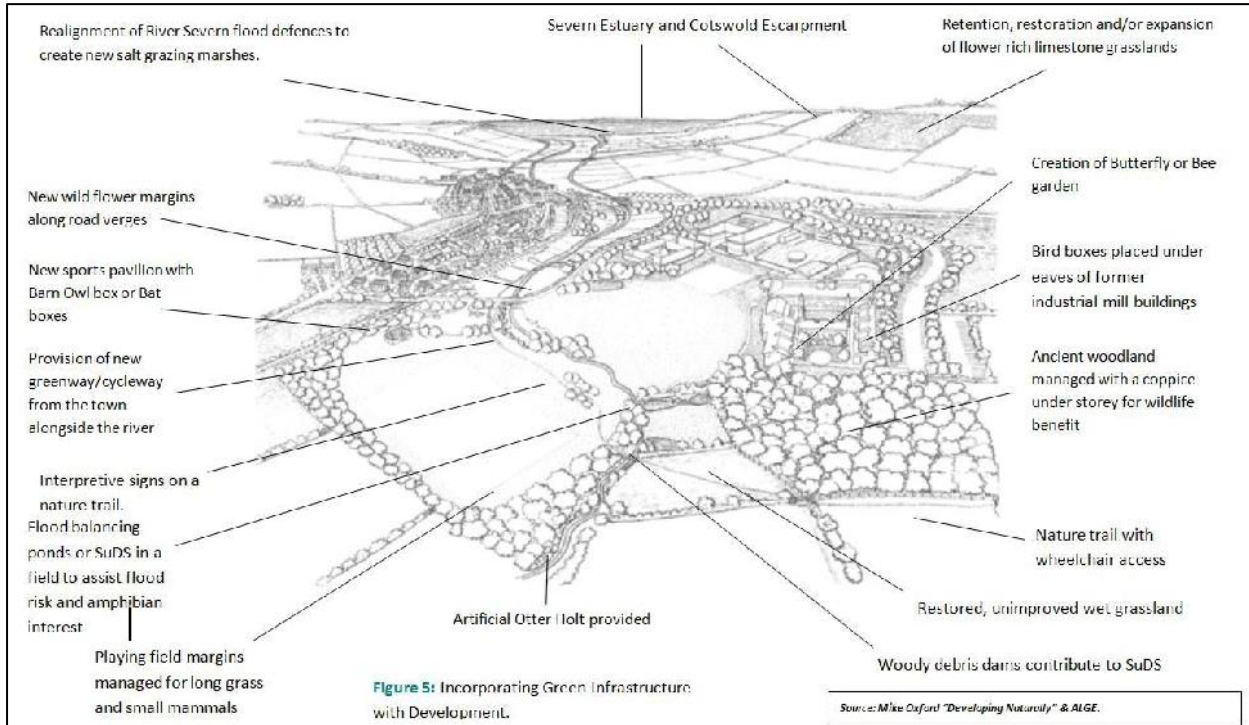
Figure 30   Example – incorporating GI with Development

Figure 5: Incorporating Green Infrastructure with Development.
Source: Mike Oxford "Developing Naturally" & ALGE.

8.3   Existing provision to be enhanced

In areas where there is a quantitative deficiency of open space provision but no accessibility issues then increasing the capacity (i.e. quality) of existing open space provision may be considered. Alternatively, in areas where facilities or spaces do not meet the relevant quality standards, qualitative enhancements will be required.

This includes those spaces or facilities which:

- Are critically important in avoiding deficiencies in diversity, accessibility or quantity, **but**
- Scored poorly in the quality or value assessment.

Those sites which require enhancement are identified within the quality audit that was undertaken as part of this Study. Some of the key observations related to site enhancement include:

1. The importance of providing high quality provision and maintenance of formal facilities such as Parks and Recreation Grounds and Play Space.
2. The need for additional and improved facilities for young people.
3. The role of private sports spaces to some local communities and the need to provide opportunity for investment.
4. The need to ensure high quality open spaces/GI are designed and provided through new development where feasible.
5. The importance of rights of way and natural green space within the Study area, and the need to maintain and enhance provision for biodiversity.

6. The role of open space and GI in contributing to wider initiatives and strategies, such as health and wellbeing.

7. Extending and enhancing the network of GI in accordance with the Building with Nature benchmark including the connectivity between sites and improved accessibility to existing sites.

The cluster/sub area analysis (part 2 of this report) provides maps showing sites grouped into three categories – good, average and poor (as identified within the quality audit GIS database provided to the council). An overview of the open space quality audit scores is provided in section 7.5.3. (and 7.6.3 in relation to GI). The following recommendations are made in relation the quality of open space:

Open Space Policy Direction (enhancing open space):	
OS4	Where new housing development is proposed, should provision not be able to be provided on-site, consideration will be given to improving existing open spaces first within the parish where the development is located, and then within neighbouring parishes within or adjoining that Cluster area. Priority should be given to those sites identified as being of poor or average quality, as detailed in the quality audit.
OS5	The priorities for improvement (identified within the household survey) are footpaths, bridleway and cyclepath provision and woodlands, wildlife areas and nature reserves, followed by informal open space for ball games, picnics, dog walking etc.
OS6	Management plans should be developed for the main parks and recreation grounds. These priorities could be considered in neighbourhood plans and by the local community.

Green Infrastructure Policy Direction (enhancing GI):	
GI3	The priority areas for improvements/enhancements to GI (in terms of biodiversity and access) is the strategic GI network identified by the Gloucestershire Local Nature Partnership, and the local/district corridors identified within this study (see section 7.6, figure 26). The opportunities map (section 7.6, figure 27 and by Cluster in part 2 of this report), indicates where local opportunities for improvement exist. Other opportunities for improvement may also be identified by the Council through working with partners and local groups.
GI4	In terms of improvements to the quality/functionality of individual sites, this should be informed by information available such as condition monitoring of SSSIs, open space quality audits/GI value assessments undertaken as part of this study, and site management plans. More detail by cluster is provided in part 2 of this report.

	The Council and other stakeholders could set out a delivery plan/action plan with funding opportunities, on the basis of the cluster analysis provided in part 2 of this report.
GI5	The design and management of GI in housing and commercial developments shall follow the Building with Nature Benchmark standards[38]. As a minimum, the 5 core standards should be met, including:

- Contextual - The design of GI needs to respond to the local context of the area e.g. features such hedgerows, trees and ponds should be retained and integrated into the GI network, and new planting schemes should consist of species found within the local area. The Landscape Character Areas Key Priorities (table 6 and figure 11) and National Character Area Statements of Environmental opportunity (table 5 and figure 11) should be refererred to when identifying opportunities for new provision and enhancement, In order to protect and enhance the local diversity and distinctiveness of the landscape character areas.
- Future-proof - Maintenance and management needs to be put in place to ensure the long term quality of GI, and the design of new GI needs to enable effective management
- A multifunctional and climate-resilient network - GI should be multifunctional and interconnected – it should fulfil various functions including formal sport provision, recreation, sustainable transport routes (walking, cycling, horseriding), wildlife habitat and wildlife corridors, flood attenuation/SuDs, food growing etc, and should be physically connected within the site and also to the wider GI network, providing dispersal opportunities for wildlife and access for people.

The Council advocate these standards and developers will be expected to demonstrate how they meet the 5 core standards and as many as the wellbeing, wildlife and water standards as possible. For larger schemes (500 dwellings and above), the Council advocate that developers apply for accreditation by the Building with Nature Standard (there are three levels – design award, full award (good) and full award (excellent).

GI6	Developments will be expected to comply will the relevant policy in the NPPF regarding Biodiversity Net Gain. Like the Green Infrastructure recommendations, biodiversity enhancements and nature conservation should be embedded at all stages of development thinking from initial project ideas through to delivery and future management e.g. through creation of new habitats, construction and management plans, and linking existing biodiversity assets. Green features on buildings should be incorporated where possible e.g. green roofs and walls, bird and bat boxes, and gateways to facilitate movement of reptiles or mammals (such as hedgehogs) within their established territories or foraging areas. SuDs should mimic the natural drainage of the site, and should not only serve a drainage engineering role, but positively contribute to the GI, biodiversity and visual amenity roles of the site.

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[38] https://www.buildingwithnature.org.uk/how-it-works

8.4   Opportunities for re-location/re-designation of open space

In some areas or instances, it may be possible to make better use of land by relocating an open space or sport and recreation facility, especially if this will enhance its quality or accessibility for existing users, or use land which is not suitable for another purpose. This needs to be determined at a local level, working with key organisations and stakeholders, where there is consideration of the quality, quantity and access to facilities at neighbourhood level and in some cases across the district.

Although it is up to local communities to define their own priorities within neighbourhood plans, the information provided within this study will form a good basis to inform any decisions related to the provision or replacement of open space, sport and recreation facilities. Some settlements may seek a consolidation of facilities on a single site, such as a new sports hub.

These decisions could include the spatial and investment plans for open space, and set the foundations for open space provision (e.g. for the next 20 years). They should outline where different types of facilities and space - such as children's playgrounds, sports pitches, young people's facilities etc. are to be located. It will also identify if any open space is no longer needed and its disposal or re use can be used to fund improvements to other spaces.

The new Local Plan, and any neighbourhood plans should apply the standards and policies set out in this study and ensure that the significant investment anticipated for open spaces is prioritised with the help of stakeholders and communities. The standards agreed in this study can determine a minimum level of quality and quantity of open space provision and the maximum distance people should have to travel to access different types of open space.

This study provides information on the existing supply of different types of open space, an analysis of access and identifies local issues related to quality. The cluster/sub area analysis (part 2 of this report) sets out limited opportunities for re-location/re-designation of open space where there is clearly sufficient supply, in order to reduce shortfalls in supply and access to other open space typologies.

In addition to this, the Playing Pitch Strategy (PPS) suggests potential locations for sport, health and wellbeing hub sites. These are as follows:

- Hamfields Leisure Centre
- Dursley Rugby Club
- War Memorial Playing Fields, Dursley
- Reg Davies Memorial Ground (Frampton FC)
- Everlands, Cam
- Hardwicke Village Hall Playing Fields & Rob Dawe Memorial Close
- Maidenhill School
- Stratford Park Leisure Centre & Stratford Court Playing Fields
- Wooton Community Sports Parc

This will act as a good starting point for feeding into the Local Plan review and any neighbourhood plans/strategies for future decision making in consultation with the local community.

8.5   Identification of areas for new provision

New open space/GI provision will be required where there is a new development and a planned increase in population, and/or an existing deficiency in supply or access to facilities exists. Section 7 outlines the existing situation with regards to supply and access to open space. As discussed, neighbourhood plans would form a good mechanism to determine exactly where new provision is required, however, this study can be used as the basis for decision making, as follows:

Quantity of open space

Within the study report, for each typology, there is an identified 'sufficient supply' or 'under supply' for each of the Parishes and clusters/sub areas. If an area has an existing under supply of any typology, or if the population increase from a development will result in a deficiency, then there may be need for additional provision. This could be delivered through developing a new site (for example as part of a housing development), acquiring land to extend the site or changing the typology of an existing space (which may be in over supply).

The supply statistics should be used as part of the decision making process in development management to determine if a new development should provide facilities on-site or enhance existing provision through developer contributions.

Section 7.2.1 outlines the variation in supply of different typologies of open space across Parishes. Part 2 of this report also shows the supply of open space by cluster/sub area. As identified, every Parish and cluster/sub area has a shortfall in at least one typology of open space, therefore, the starting point for new housing is to assume that some form of on-site open space provision would be required.

The use of the quantity statistics should not be in isolation, and considered alongside the access standards.

Access to open space

This study considers how access to different types of open space varies across Parishes/clusters against the proposed standards. The maps in section 7 (and in part 2 of this report - the cluster/sub area analysis) show where there are deficiencies and potential over-provision of facilities. This information can be used alongside the quantity statistics to determine if new provision or improved accessibility is required in an area. For example, if a new development is proposed, the maps should be consulted to determine if there is an existing gap in provision of a particular typology which could be met by the development, or if development may be able to facilitate better access to existing provision.

Therefore, even though the quantity statistics may identify a sufficient supply of a particular typology, there may be gaps in access, and thus a new facility may still be required.

New provision of GI

As already discussed, new open space provision and enhancements to existing open spaces as part of new development will help contribute to the GI network. The starting point will be the protection and enhancement of existing GI assets, such as woodland, hedgerows or watercourses. Development will also need to contribute to the connectivity/functionality of existing GI, through providing improved connectivity and multifunctionality e.g. providing SuDs which contribute biodiversity and visual amenity as well serving a drainage role, and connecting features such as hedgerows and woodland within the site, and also with the surrounding areas.

Delivering new provision

There are a number of opportunities for delivering new facilities through new development – developer contributions and to a lesser extent through capital and grant funding.

New development, CIL and developer contributions

The council implemented its Community Infrastructure Levy (CIL) in February 2017 to contribute to the costs of the infrastructure that development will rely upon. The levy applies to most new buildings and conversions where new residential or supermarket warehouses floorspace is being created, though there are various exemptions.

Previously, SDC have secured contributions through S106 agreements. Although they will still run concurrently, in many cases CIL will replace the use of S106 agreements.

S106 contributions will still be sought for major allocated schemes, affordable housing, public open space and where there are site specific measures required to make a development acceptable. Off-site infrastructure will now be paid for using CIL.

For windfall sites, SDC expect parish councils to use their CIL receipts to provide improvements to existing local open space to meet the needs arising from the developments. The quality audits undertaken as part of this assessment should be referred to in order to inform the required improvements, although there may also be local aspirations for improvements identified in addition to the suggestions set out within the quality audits. SDC will use their CIL receipts for strategic infrastructure e.g. sports hubs, filling gaps in strategic GI network.

The Council as Charging Authority cannot also collect S106 funding for items stated on the Regulation 123 List as stipulated by the Community Infrastructure Levy 2010 (as amended). This ensures that there is no duplication between the two types of developer contributions, whilst the District can only spend the money collected from CIL on projects that fall within the scope of the Regulation 123 list.

The CIL Regulation 123 List includes (amongst other things): Social Infrastructure (Including sports, recreational, play infrastructure, youth provision. Excluding on site provision); Transport (Including cycling and walking infrastructure. Excludes specific mitigation works on, or directly related to a development site); Canal Infrastructure (associated with improving or re-opening the Stroudwater Navigation, the Thames and Severn Canal or the Gloucester and Sharpness Canal including towpaths); Green Infrastructure (the creation, improvement and maintenance of accessible natural green space, woodland and river corridors, biodiversity, Water Framework Directive water body improvements and flood risk enhancements. Excluding on site provision); and Strategic Flood Risk Management Infrastructure (Improvements to the Severn Estuary and other flood defences, river corridors and restoration of the canal network for flood risk enhancements including the RSuDS scheme and as set out in the Stroud Valleys Initiative. Excluding on site provision).

New development will be required to provide on-site open space in line with the standards outlined in this study. Whilst not all developments will be of a size that will generate the requirement for on-site open space (see table 26 which applies to unallocated sites only), when considering future housing numbers for Stroud, there will be many that will. This study should be used to make local decisions about where and when new on-site provision of open space will be required.

Figures 31 and 32 show example flow charts/decision making process to help developers/council officers determine the need for on-site provision of open space, or where CIL/S106 contributions would be required to provide open space off site/improve existing open space provision. This is only a guide and requirements will be determined on a case by case basis using the standards and assessment within this study. This should be determined through pre-application discussions with the council.

Capital and grant funding

Although the availability of capital and grant funding has diminished in recent years, nevertheless funding does become available for providing facilities for open space, sport and recreation. National and governing bodies for individual sports should be consulted where new infrastructure is required, such as changing rooms and sports pitches. Environmental grants and stewardship schemes are available for managing natural green space. As neighbourhood plans are developed and open space priorities are established within these, funding requirements will be identified and delivery through grant funding can be considered.

Figure 31 *Decision making process for on-site provision of open space, or off-site contributions to enhance existing open space **for allocated sites***
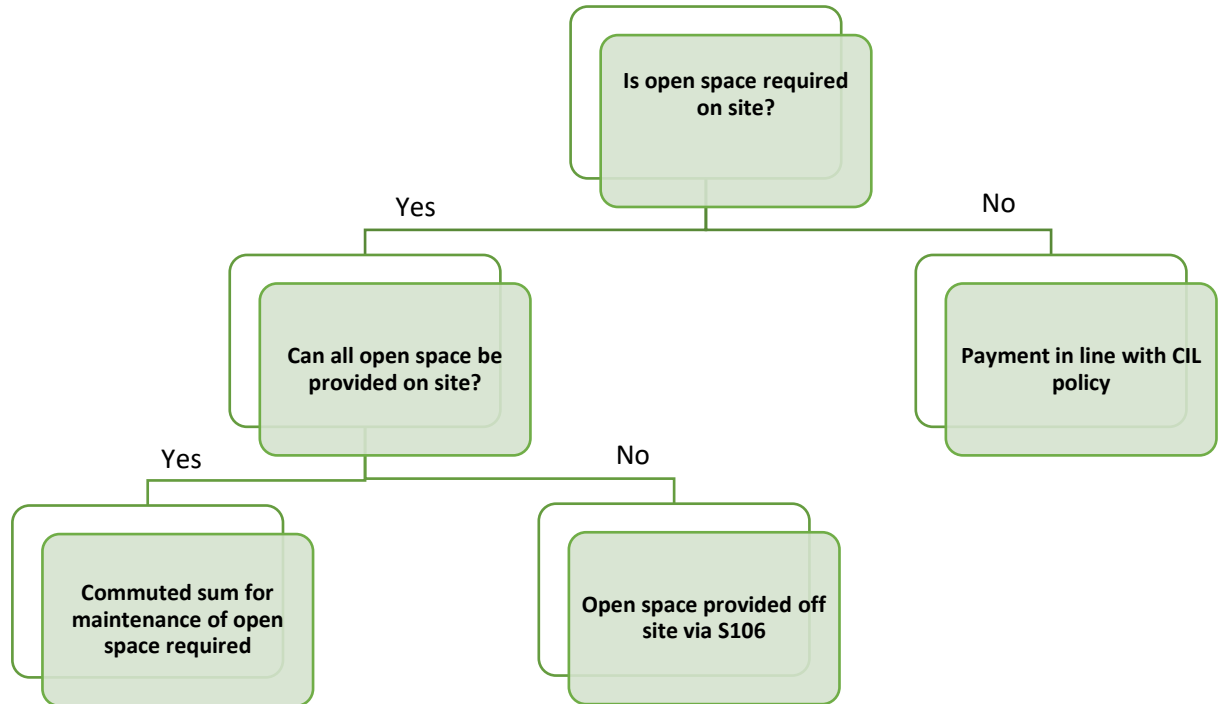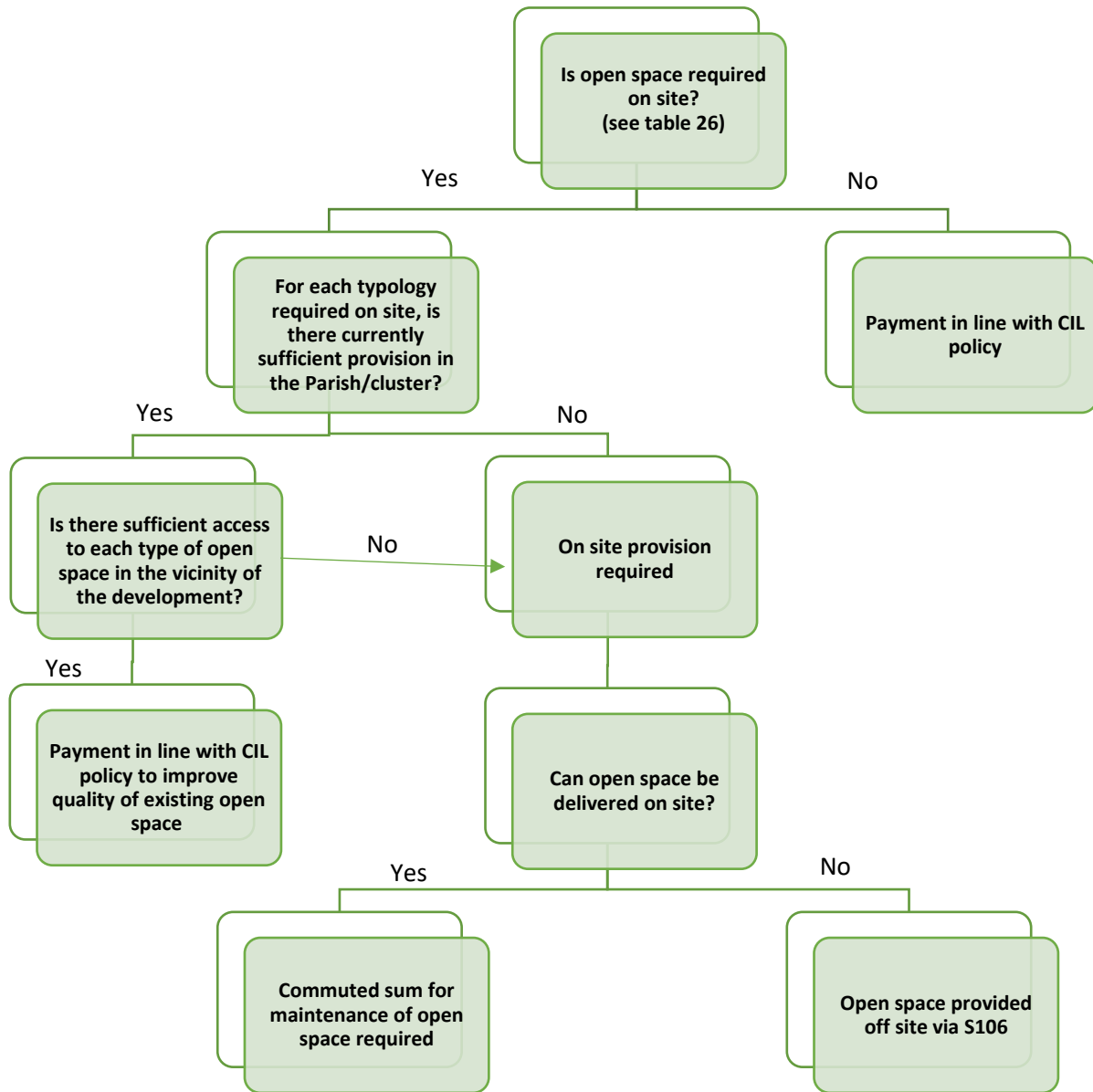
*Figure 32   Decision making process for on-site provision of open space, or off-site contributions to enhance existing open space **for unallocated sites***

Open Space Policy Direction (new provision of open space):

OS7	Allocated sites for housing within the local plan will be required to provide open space on site in line with the open space standards. If it can be demonstrated that it is not viable or appropriate to provide the full requirement of open space on site, developers will be expected to make a contribution for off site provision in line with Table 24, through a S106 agreement. For small sites or smaller non-allocated sites, contributions towards open space will be secured through CIL. For large unallocated sites which are brought forward for development, there will be a clear expectation for on-site provision in line with the standards (and taking account of the existing supply and access to open space). Open space contributions will be secured through CIL. This will be dealt with on a case by case basis. Contributions in terms of S106 and CIL funding for open space will be used to provide new open space or to increase the capacity of existing facilities (i.e. through quality improvements) to accommodate the additional pressure from housing. Contributions from development for open space will be targeted at the Parish within which the development is located. If there is no identified requirements within the parish, then contributions could be allocated to neighbouring Parishes. Priority sites requiring improvements will be identified from the quality audit (those sites assessed as being of poor or average quality being the highest priority for improvement) and also from site management plans and the Council's own knowledge of their sites.

Green Infrastructure Policy Direction (new provision of GI):

GI7	Development will contribute to protecting, enhancing and creating habitats to provide a network of well connected ecological corridors, enhancing connectivity for both people and wildlife, both within the development site and connecting to the wider surrounding area. Outside of new development, the Council will work with partner organisations and local groups to seek funding and opportunities for improvements to the GI network. Some of the existing initiatives and projects are highlighted in section 3.3 of this report. As already discussed, the priority areas for new provision of GI are the strategic GI network identified by the Gloucestershire Local Nature Partnership, and local corridors identified within this study (see section 7.6, figure 26). The opportunities map (section 7.6, figure 27 and by Cluster in part 2 of this report), indicates where local opportunities for improvement exist. Other opportunities for

|	
	improvement/new provision may also be identified by the Council through consultation with partner organisations and local groups.
GI8	A functional and well-connected green infrastructure network will be protected and enhanced across the District. Gaps or missing links in Gloucestershire's strategic green infrastructure and local green infrastructure (as revealed by the Local Nature Partnership's schematic map and local analysis by cluster (part 2 of this report) will be addressed at every opportunity e.g. from individual development proposals, open space improvements, flood alleviation schemes and landscape scale environmental projects.

8.6   Open space facilities that are surplus to requirement

In addition to the strategic options outlined above, consideration should also be given to open space facilities that are surplus to requirement. There are important issues to resolve in terms of getting the correct balance of open space across the district before any disposal can be contemplated. Whilst there is under provision relative to the minimum standards in several areas, there are other areas where provision compares favourably with the standards. However, it is once again emphasised that the proposed standards are for *minimum* levels of provision. Factors to be taken into account before any decision to release open space for alternative uses can be taken include:

- The local value and use of a given open space - as it may be a locally popular resource.
- Whether future local development/population growth might generate additional demands for open space.
- Whether there is a demonstrable need for some other type of open space within the locality that a given space (subject to a change of management regime) would be well placed to meet.
- Other non-recreational reasons that suggest a space should be retained (which might include ecological and visual reasons).

Figure 30 and the associated paragraphs overleaf provide an example and suggests an outline of the decision process that should be followed before the development/alternative use of an open space can be seriously contemplated.

Figure 30   *Outline decision making process in relation to sanctioning (re)development of open space*
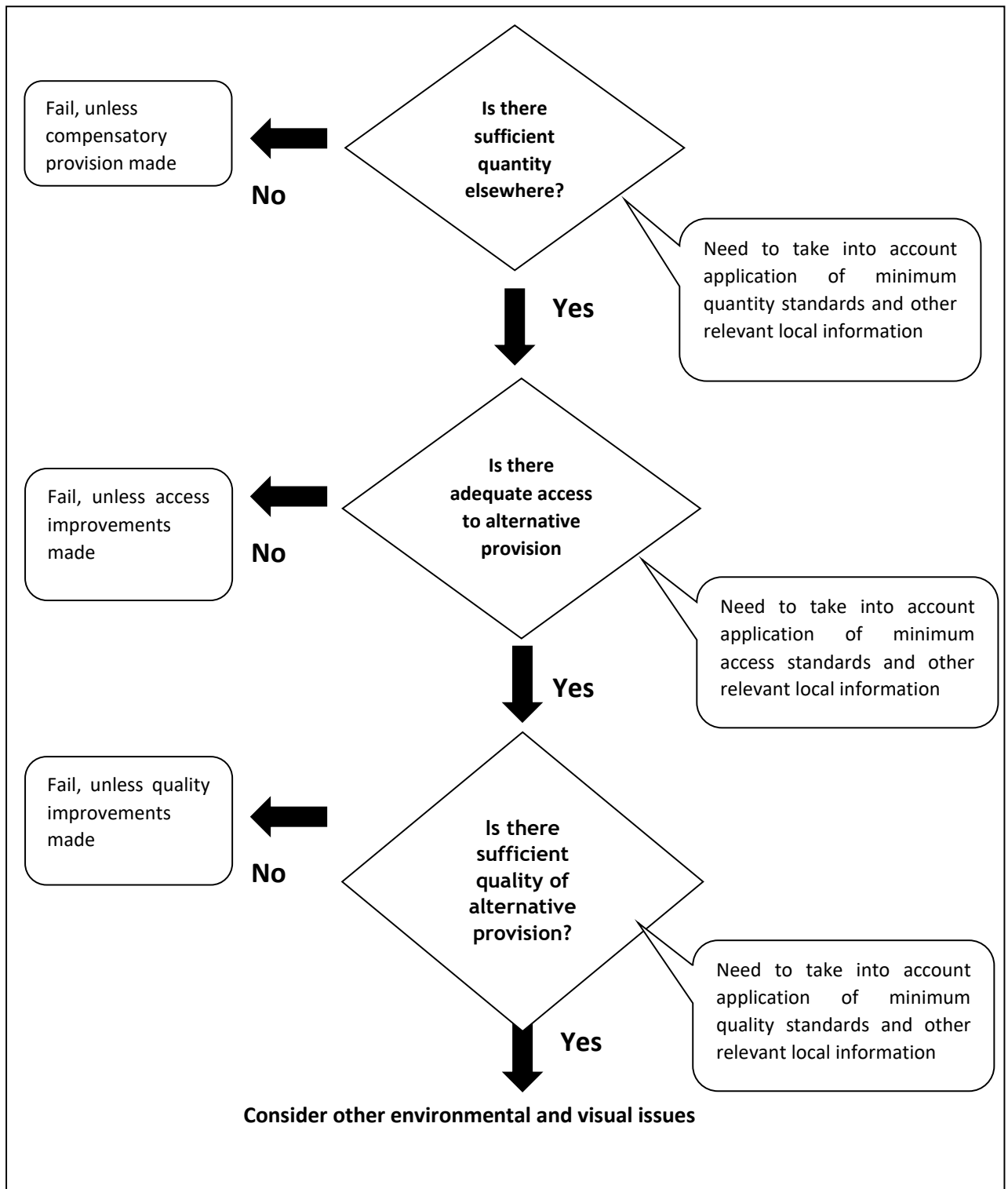
Q. Is there sufficient quantity?

A. If the minimum quantitative standard for amenity green space is exceeded in a defined geographical area, the relative provision of other forms of open space must then be considered. (Amenity green space can in principle be converted into other forms of open space where the need arises). If a) provision meets the minimum quantitative standard; b) there is no significant local information suggesting a need to retain the site; and, c) there is not a perceived lack of other forms of open space, the next question can be addressed.

Q. Is there adequate access to alternative provision?

A. Within the defined geographical area there may be good overall provision of amenity green space relative to the quantity standard, but is it in the right place and can it be easily reached? Applying the accessibility component of the minimum standards will help to answer this question. If other similar open space cannot be easily reached, the site's disposal for other uses may be unacceptable.

Q. Are other accessible and similar opportunities elsewhere of sufficient quality?

A. If it can be demonstrated that alternative opportunities are sufficient both in quantity and accessibility, there may still exist issues with the quality of these alternative provisions. The quality component of the proposed standards may indicate that certain improvements to alternative opportunities must be made which should be funded and secured before development is sanctioned.

The quality audit provided as part of this study provides a useful framework for identifying and prioritising open spaces that require improvements. Those open spaces which have been assessed as being of poor or average quality have the highest potential for improvement. If existing open spaces in the vicinity of new development are of poor/average quality, then funding for their improvement (e.g. access improvements, signage, improvements to facilities and/or habitats – as recommended in the quality audit GIS database provided to the council) would need to be secured before any 'surplus' in a particular open space typology could be considered.

Even if these three tests are passed there may be other reasons for the site to remain as open space. For example, it may have value as a natural habitat or be visually important.

8.7   Developer Contributions

8.7.1   Introduction

In Stroud, developer contributions are secured via CIL or S106. SDC adopted CIL in February 2017, which applies to all unallocated sites permitted after 1st April 2017. S106 applies to Local Plan strategic allocations. Neighbourhood Development Plan (NDP) allocations are not seen as strategic and are covered by CIL.

The Community Infrastructure Levy (CIL) is a charge on developers and land owners made when liable planning permissions are implemented. It allows Collecting Authorities to help fund the infrastructure that is needed as a result of development.

The CIL rates for 2019/2020 have increased by 7.56% which has resulted in a charge of £90.72 per m² for Residential development and £85.05 per m² for Supermarkets and Retail Warehouses. Liable permissions granted from the 01/04/2019 will be subject to the new rates.

The levy applies to planning applications for all new dwellings/annexes, extensions where there is a gross new build floor space of 100m² or more, and the conversion of buildings that have not been in use. The creation of supermarkets/retail warehouses in the Stroud district is also development liable for CIL. However, there are a number of exemptions which can be applied for which may result in non-payment of the levy.

From April 2017 (when SDC implemented CIL) S106 agreements are now only used for:

- Major allocated schemes as identified in the District's adopted Local Plan
- Specific agreed affordable housing requirements
- On-site public open space and social provision
- Where there are very site specific measures required to make a development acceptable (e.g. flood risk management, recycling and waste management, transport linkages etc).

SDC cannot ask for payment for infrastructure from both an S106 agreement and CIL charge – this would be known as 'double dipping' and is not allowed. Strategic infrastructure that is identified on the Regulation 123 List (CIL) cannot be requested in any S106 agreement. However, on some special occasions there may be instances where a CIL payment is sought and a S106 agreement is also made for that development to mitigate a special need.

1)   *On site provision*

Where open space is required on site, it will be provided in line with the standards for open space (see table 19).

2)   *Off site provision*

<u>CIL</u>

Town and Parish Councils will receive either 15% (if no NDP adopted) or 25% (if NDP adopted) of CIL collected for their area. CIL monies should be used to 'support the development of the area' by funding: the provision, improvement, replacement, operation or maintenance of infrastructure; or anything else that is concerned with addressing the demands that development places on an area. The District Council expects town and parish councils to use their allotted CIL monies to pay for improvements to local open space needed by the windfall development approved within their areas.

Where an NDP has been made, the Parish/Town Council should also consider how the Neighbourhood CIL portion can be used to deliver the infrastructure identified in that plan.

The remaining amount and majority of CIL will be used towards supporting the provision of large scale strategic infrastructure. SDC will support district wide strategic infrastructure through CIL funds which have been formally approved to be spent on the 'Regulation 123 List' including developing Green Infrastructure networks across administrative boundaries, strategic built facilities and open space with a wider than local catchment area.

In most cases off-site infrastructure will now be paid for using CIL monies collected, replacing the use of S106 agreements on new permissions.

<u>S106</u>

In the situation where an allocated Local Plan site has demonstrated that open space cannot be feasibly provided on site, table 24 will be used to calculate the off-site contributions which would be secured through a S106 agreement. These costs have been calculated by Ethos Environmental Planning using Spon's [39]. A summary of the costs are outlined in table 24 below, and these may be adopted by SDC.

Contributions towards the provision or improvement of open space are calculated using the capital cost of provision. The same charges apply to both provision of new facilities and the upgrading/improvement of existing facilities, which more often than not, includes new provision. Contribution per person is therefore taken to be a reasonable measure of that impact, irrespective of whether new provision or improvement of existing facilities is required. The calculated costs have drawn on the standards of provision summarised in table 19.

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[39] Spon's Architects' and Builders' Price Book 2017

Table 24   Costs for providing open space

Typology	Standard (m²) per person	Cost of provision	
		Cost / m²	Contribution per person
Allotments	3.5	£22.34	£78.19
Community Orchards	1.5	£20.24	£30.36
Amenity Green Space	4.0	£20.24	£80.96
Parks and Recreation grounds	12.0	£92.94	£1115.28
Play Space (Children)	0.6	£168.76	£101.26
Play Space (Youth)	0.6	£168.76	£101.26
Natural green space	10	£20.24	£202.40
Total	**32.20**		**£1709.71**

This shows that it costs £1709.71 per person to provide new open space to meet the Stroud standards for open space. An inflation rate based on the Bank of England inflation rate should be applied.

A cost calculator has been provided to the council so that the on and off-site requirements for open space can be calculated for different sized strategic allocations.

The cost calculator is based on the following assumptions:

- Equivalent people per dwelling size as follows
  - 1 bed= 1.4 people
  - 2 bed= 1.8 people
  - 3 bed= 2.4 people
  - 4+ bed = 2.8 people
- The open space quantity standards (see table 19)
- The costs for providing open space per m2 (see table 24)
- Thresholds for on-site provision (see table 26)

Example

A housing development of 95 dwellings (a strategic site allocation), consisting of 5x 1 bed dwellings, 50x 2 bed dwellings, 10x 3 bed dwellings and 30x 4+ bed dwellings would generate the following requirements for on-site provision of open space and contributions for off-site improvements:

Minimum on-site provision required:

- 1500 sqm of amenity green space (although the requirement generated from a development of this size would generate the need for 820 sqm (0.082 ha) against the standard, the minimum size of amenity green space that is considered acceptable is 1500 sqm (0.15ha).

- 103 sqm of equipped children's play space (this is for the area of equipped provision only, and excludes the need for surrounding playable space).

Contributions for off-site provision/improvements required (if the above are provided on site):

- £16,029 for allotments
- £228,632 for park and recreation grounds
- £20,757 for youth play space
- £41,492 for natural green space
- £6,224 for community orchards

A screenshot from the cost calculator is provided below.

Number of dwellings	Enter number	Equivalent people	Open Space requirement	Required msq per person	Cost per msq	Total requirement (msq)	Cost of provision (£)	On site required ?	Required quantity on site (msq)	Enter actual provision on site (msq)	Value of provision	Contribution required
1 bed	5	7	*Allotments*	3.5	22.34	718	£16,029	0	FALSE		0	£16,029
2 bed	50	90	*Amenity Green Space*	4	20.24	820	£16,597	Y	820	820	16,597	£0
3 bed	10	24	*Parks & Recreation Grounds*	12	92.94	2,460	£228,632	0	FALSE		0	£228,632
4+bed	30	84	*Play Space (Children)*	0.6	168.76	103	£17,382	Y	103	103	17,382	£0
Elderley 1 bed	0	0	*Play Space (Youth)*	0.6	168.76	123	£20,757	0	FALSE		0	£20,757
Elderley 2 bed	0	0	*Natural Green Space*	10	20.24	2,050	£41,492	0	FALSE		0	£41,492
			Community Orchards	1.5	20.24	308	£6,224	0	FALSE		0	£6,224
TOTAL	95	205		32.20		6,581	£347,114		923		33,979	£313,135

As part of initial site consideration, the existing natural assets should be identified, and this information used to inform any subsequent layout and form of development on site. Any proposal should seek to maximise the GI functioning (including connectivity) and secure net biodiversity gain.

3)   *Maintenance Contributions*

Where new open space is provided, the developer would be expected to maintain the open space for a minimum period of 1 year. Developers will then be asked to maintain the new provision through a management company. It is expected that a management plan for the open space would be submitted and approved by the council as a planning condition.

In the event that the open space would be adopted by the council/parish council, they may be willing to accept a commuted sum and make arrangements for management of the open space. The amount payable for the commuted sum will be calculated using the figures in table 25.

Table 25   Maintenance costs for open space

Typology	Cost/sq m per annum
Play Space (Children's and Youth Provision)	£4.59
Parks and Recreation Grounds	£4.59
Amenity and Natural Green Space	£0.62
Allotments and Community Orchards	£0.13

The figures in table 25 show how much it costs to maintain open space per metre squared. The costs have been provided from maintenance costs estimated by Ethos Environmental Planning. An inflation rate based on the Bank of England inflation rate should be applied.

4)   Thresholds for provision

The required open space facilities can be provided by on-site or off-site provision/contributions. Where facilities are to be provided on-site, the Council will expect the developer to provide the land for the facility and either:

- Design and build the provision to the satisfaction of the Council; or
- Make a financial contribution to the Council so that it may arrange for the construction and development of the required facility.

The decision on whether facility provision is to be on-site, off-site or both depends on the following considerations[40]:

- If a site is allocated/the scale of the proposed development and site area;
- The suitability of a site reflecting, for example, its topography or flood risk;
- The existing provision of facilities within the neighbourhood and/or the sub area;
- Other sites in the neighbourhood where additional provision is proposed;
- Existing access to facilities within the neighbourhood and/or sub area.

Table 26 provides a <u>guide</u> to assess which scales of housing generate a need for facilities in the categories listed to be provided on-site[41]. The minimum size of amenity green space considered acceptable as part of new development is 0.15ha. Therefore, developments that require on-site provision, but which would result in less than 0.15ha of amenity green space against the standard, the minimum size of amenity green space is 0.15ha.

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[40] Also see figures 31 and 32

[41] This is for unallocated sites, as all allocated sites require on-site open space provision or off-site provision via S106

Table 26   Requirement for open space facilities

Type of Provision	1-49 dwellings	50-99 dwellings	100-199 dwellings	200+
Allotments	X	X	X	✓
Community Orchards	X	X	✓	✓
Amenity Green Space	X	✓	✓	✓
Parks and Recreation Grounds	X	X	X	✓
Play Space (children)	X	✓	✓	✓
Play Space (Youth)	X	X	X	✓
Natural Green Space	X	X	✓	✓
GI[42]	✓	✓	✓	✓

KEY: ✓   on-site provision normally sought
       X   improvements to existing (off-site) provision normally required

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[42] Accreditation against the Building with Nature Standard will be required for developments of 500 or more dwellings.

9.0   CONCLUSION

This Open Space and Green Infrastructure Study has been undertaken by Ethos Environmental Planning to inform and support the preparation of the Council's Local Plan Review and the Council's decision-making process in relation to open space and Green Infrastructure (GI) provision up to 2040 (The plan period is 2020 – 2040). It is one of six reports provided as part of the overall Study.

The six reports are the:

- Executive Summary;
- Stroud Community and Stakeholder Consultation Report;
- Stroud Open Space and Green Infrastructure Study (part 1 and 2);
- Stroud Playing Pitch Strategy Needs Assessment;
- Stroud Playing Pitch Strategy -Strategy and Action Plans (part 1 and 2); and
- Stroud Indoor Sports Facilities Needs Assessment.

The Executive Summary should be referred to for an overview of the entire study, and for a summary of the key recommendations and management policies across each of the studies. The intent of the audit and assessment evidence is to set out the relationships between open spaces, playing pitches and recreation areas set within a functioning, effective and wider green Infrastructure network. As such all reports and recommendations provide a clear opportunity to protect and effectively manage open space, green infrastructure, sport, as well as recreation provision across the District.

This report (part 1 and 2) provides a solid snapshot of the status of open space and GI within Stroud District in 2018. It includes a suite of policies and methodology for interpreting and informing the needs for these assets over the coming years, up to 2040. It should be read in conjunction with the local needs assessment - Community and Stakeholder Consultation Report (2018).

The role and value of open space and GI in helping to deliver national, regional and local priorities and targets is clear from this assessment. It is important that the policies and recommendations included within this assessment are enshrined in the Local Plan Review, and acknowledged in relevant strategies, as and when they are reviewed. Council Officers and members play a pivotal role in adopting and promoting the recommendations within the assessment, and ensuring that key stakeholders such as Parish councils, developers and community groups are engaged in open space and GI provision in the future.