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**OXFORD  
CITY  
COUNCIL**

*Green  
Infrastructure*

**Oxford Local Plan  
2040**

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**BACKGROUND  
PAPER 7**

*This paper addresses the green infrastructure network including the protection of green spaces and other features like trees as well as the provision of new green infrastructure in development.*

**SA Objective(s): 7.** *To provide adequate green infrastructure, leisure and recreation opportunities and make these readily accessible for all; and to conserve and enhance Oxford's biodiversity.*

**SEA theme(s):** *Landscape, human health, biodiversity, flora, fauna, soil, water, air.*

## 1. Introduction

1.1 Green infrastructure is an integral component of healthy and sustainable development and ensuring that we have a strong and resilient green infrastructure network across the city is an important objective for the new Local Plan. There are various definitions used for the term Green infrastructure (GI); the National Planning Policy Framework (NPPF, 2023) defines it as:

*A network of multi-functional green and blue spaces and other natural features, urban and rural, which is capable of delivering a wide range of environmental, economic, health and wellbeing benefits for nature, climate, local and wider communities and prosperity.*




1.2 The National Planning Practice Guidance (NPPG)<sup>1</sup> expands on this definition stating that the term embraces:

*A range of spaces and assets that provide environmental and wider benefits. It can, for example, include parks, playing fields, other areas of open space, woodland, allotments, private gardens, sustainable drainage features, green roofs and walls, street trees and 'blue infrastructure' such as streams, ponds, canals and other water bodies.*

1.3 The impacts of the covid pandemic brought to light the importance of having locally accessible green spaces for many living under the recent restrictions to movement. Public open space is particularly valuable to those who do not have access to sufficient private open space within their homes. But as the definitions above highlight, the value of green infrastructure is more extensive in how it is able to deliver upon multiple functions which provide significant environmental, social, and economic benefits (also known as ecosystem services) at the same time – a quality we refer to as multi-functionality. Some examples are provided in Table 1.

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<sup>1</sup> <https://www.gov.uk/guidance/natural-environment>

 <b>Environmental</b>
<ul style="list-style-type: none"> <li>• Supports and provides biodiversity (which underpins healthy and resilient ecosystems) and species movement/dispersal including through providing habitat, wildlife corridors and stepping-stones.</li> <li>• Provides climate change mitigation and adaption e.g., through providing flood and soil erosion protection, carbon sequestration and storage, and urban cooling.</li> <li>• Improves air and water quality (pollution absorption and removal).</li> <li>• Enables food production and supports pollination.</li> <li>• Supports and creates attractive and sustainable places and landscapes i.e., quality placemaking.</li> </ul>
 <b>Social/health and wellbeing</b>
<ul style="list-style-type: none"> <li>• Provides opportunities for outdoor recreation, exercise, play and access to nature.</li> <li>• Provides attractive and safe spaces for people to enjoy and improve social contacts – a key component of ‘liveable’ towns and cities where people want to live.</li> <li>• Supports the development of skills and capabilities.</li> <li>• Improves air and water quality, provides urban cooling and shade, reduces noise pollution.</li> <li>• Provides green active travel routes.</li> </ul>
 <b>Economic</b>
<ul style="list-style-type: none"> <li>• Provides attractive places to live and work, attracting inward investment and tourism.</li> <li>• Increased land and property values.</li> <li>• Supports sustainable homes and communities e.g., through providing local food and building materials, encouraging low carbon lifestyles e.g., through well connected and attractive walking and cycling routes.</li> <li>• Provides health and wellbeing benefits that result in avoided healthcare costs.</li> <li>• Provides local food, energy, and timber production.</li> <li>• Climate change mitigation and adaption.</li> </ul>

*Table 1: The various benefits that green infrastructure can provide to an area (source: Oxford Green Infrastructure study 2022)*

1.4 This background paper sets out the existing context of green infrastructure provision in the city and how the Local Plan 2040 addresses this topic through its policies. The paper sets out the wider policy context, before moving on to discuss the existing situation in Oxford and likely situation without a new Local Plan. The remainder of the discussion then focuses on the key elements of the Local Plan 2040 policy approach and how the Council has approached formulation of these policies. The paper has close links with the separate biodiversity background paper.

## 2. Policy Framework

2.1 There are a range of national and local plans, policies and strategies which form important context for the policies of the new Local Plan. Those of most relevance to the green infrastructure policies are summarised below:

[NPPF, PPG, any other relevant policy and legislation](#)

**National Planning Policy Framework (NPPF) (revised 2023)**

National planning policy highlights that planning for green infrastructure can help deliver a variety of planning policy objectives. Specifically **para 20** states that green infrastructure is an element which local planning authorities should address in their strategic policies. **Para 154** and **186** highlight that green infrastructure should be considered as important mitigation measures for the impacts of climate change and poor air quality. Further references are made to green infrastructure elsewhere in the document:

- **Para. 34:** plans should set out the development contributions expected in association to green infrastructure and set out the levels and types required.
- **Para. 92:** Provision of safe and accessible green infrastructure is one example of a way that local authorities can enable and support healthy lifestyles.
- **Para. 130:** developments should optimise the potential of the site to accommodate and sustain an appropriate amount/mix of development including green and public space

With regard to open space, **para 98** of the NPPF sets out that 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, and can deliver wider benefits for nature and climate change, and that local plan should assess what open space is needed and make provision to accommodate this. **Para 99** sets out strict conditions for when loss of open space, sports land/buildings and pitches can be lost.

Chapter 5 addresses the natural environment and biodiversity and includes a number of additional paragraphs of relevance, these are covered in greater detail in the biodiversity background paper.

### **National Planning Practice Guidance (PPG) including National Design Guide/National Model Design Code**

The online Planning Practice Guidance has a dedicated page<sup>2</sup> for the natural environment including green infrastructure and biodiversity considerations. Paragraphs 4 to 8 include guidance on why green infrastructure is important and how local plans should take a strategic approach to addressing it including use of strategic policies to identify the location of existing and proposed green infrastructure networks and set out appropriate policies for their protection and enhancement. Open space is addressed in separate guidance<sup>3</sup> and includes guidance for how this should be taken into consideration in Local Plans to support health and wellbeing.

The National Design Guide is a material consideration and forms part of national planning guidance. The guide sets out ten characteristics of good design, of which designing to

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<sup>2</sup> <https://www.gov.uk/guidance/natural-environment>

<sup>3</sup> <https://www.gov.uk/guidance/open-space-sports-and-recreation-facilities-public-rights-of-way-and-local-green-space>

incorporate nature is one. It highlights the value that natural spaces can bring to people and encourages networks of green and blue infrastructure within the design of spaces.

### **Oxford Local Plan 2036 (adopted June 2020)**

The topic of green and blue infrastructure in the city is addressed in detail in chapter 5 of the adopted Local Plan, 'Protecting and enhancing Oxford's green and blue infrastructure network', through policies G1 to G8. As well as overarching policies for protection of the GI network (policy G1) and providing new green features (policy G8), there are a number of individual policies for different aspects of the GI network including policy G6 which addresses biodiversity and the ecological network specifically.

### **Small Holdings and Allotments Act 1908**

This places a duty on local authorities to provide allotment gardens where demand for them exists. Requests for allotments submitted by at least six local people must be taken into account when considering whether demand exists. Allotment provision is also subject to other legislation arrangements less related to the planning process, including the Allotments Acts of 1922, 1925 and 1950.

### **Other relevant plans and programmes/strategies**

#### **Natural England Green Infrastructure Framework (2023)**

The Green Infrastructure Framework was launched by Natural England in 2023<sup>4</sup>. It is a collection of policy tools and documents whose purpose is to assist local planning authorities and developers meet requirements in the National Planning Policy Framework to consider GI in local plans and in new development. The framework is structured around a number of key components that include a set of national standards on quantity/quality of GI; mapping; planning and design guidance.

The Green Infrastructure Standards help to set out what 'good' looks like along with recommended levels of achievement/delivery. Whilst they have no statutory power, they are intended to support better planning for good quality GI and help to target the creation or improvement of GI, particularly where existing provision is poorest. When supplemented with local knowledge and evidence, Natural England advise that they can be used to help set local targets for provision.

#### **Oxford City Council Green Spaces Strategy 2013-2027**

The strategy focuses on green space that is freely available to the public for informal recreation, allotments and play irrespective of who the land is owned by.

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<sup>4</sup> <https://designatedsites.naturalengland.org.uk/GreenInfrastructure/Home.aspx>

## **Oxford City Council Playing Pitch Strategy 2022-2036**

An updated Playing Pitch Strategy was recently finalised and approved by the city council. It is based on a needs and evidence based document that is aligned with the adopted Local Plan, and it seeks to ensure that the city has a good supply of well-managed, well-maintained and efficient playing pitches and other outdoor sports facilities that would help to encourage residents to maintain healthy and active lifestyles. Whilst there was no legal requirement for a Playing Pitch Strategy, the Council had opted to develop one as one of the ways to promote healthier living and reduce inequality. The Strategy would be reviewed every year and refreshed on a five yearly basis.

## **Oxford Green Infrastructure Study (2022)**

An updated green infrastructure was commissioned to form part of the foundational evidence base for the emerging Local Plan. The study comprises of an analysis of open spaces within the city, assessing their quality, multi-functionality and accessibility within the environmental and socio-economic context of the city. It also makes recommendations for improving GI to reduce these deficiencies and address local needs.

### **3. Current situation**

3.1 The Green Infrastructure network in Oxford is comprised of a multitude of different typologies of green and blue spaces (some of which are publicly accessible and others private or restricted access) along with other individual features and includes:

- Parks and Gardens/recreation grounds
- Allotments
- Cemeteries/churchyards
- Outdoor sports (including pitches)
- Accessible natural green spaces
- Designated ecological sites
- Amenity green spaces
- Private green spaces e.g. college land and gardens
- Fields/greenbelt land
- Rivers
- Streams
- The canal
- Individual features like trees, hedgerows and ponds

3.2 The Green Infrastructure study (2022) identified that Oxford's green spaces are providing a variety of roles that support health and wellbeing of residents and ecosystems. With regard to publicly accessible green spaces, the analysis highlighted that whilst there is a fairly even distribution of green spaces across the city in general meaning that accessibility for residents to walk or cycle to green spaces was good, however, there are inequalities in distribution of certain types of green spaces resulting in gaps in accessibility for specific types of green space. Whilst it is very challenging to establish significant new green space to counter these gaps, additional loss of open space in certain areas could exacerbate these accessibility problems or establish access deficits for other types of green space like parks or outdoor sports. In summary, the report found that:

- Allotments: Gap in access in the eastern part of the city centre (low deprivation) (however much of this area is university land), and smaller gaps in the north (low deprivation) and west (pocket of high deprivation) of the study area.
- Amenity green space: large gaps in access in the north and east of the city (low levels of deprivation, and small gaps in the south in Littlemore and Temple Cowley (high levels of deprivation). However, the good access to parks and recreation grounds across the city mitigates this.
- Parks and recreation grounds: Good access across the city. Small gap in the north in Wolvercote (low levels of deprivation) but there is access to amenity green space and accessible natural green space in this area, which helps to mitigate this gap in access (although it is acknowledged that these types of spaces do not typically offer the same level of facilities that a park might).
- Accessible Natural Green Space (15-minute walk time buffer): large gaps access in Cowley/Temple Cowley in the south and in the North (around Sunnymead), both in areas with relatively high levels of deprivation
- Play space: for children's play spaces, gaps in access in the city centre (although much of this area is university land) and North Oxford (low levels of deprivation). There is also a gap in the south in Iffley (IMD decile of 6). For youth play spaces, small gaps in access in the centre and north of the city centre (in areas of low deprivation).

3.2 The study was informed by more than 200 site visits to assess quality of these spaces as well as desk top assessment work to look at other quality criteria. The report found that the majority of public open spaces in the city (84%) were currently of good or excellent quality, however there are opportunities to improve quality on some spaces, with 16% assessed as fair or poor quality. The study also reviewed multi-functionality of spaces within the city, which is an important indicator of the expanded role they can play in delivering various benefits to people and the environment. It found smaller sites typically delivered fewer functions (though not in all instances) and that there are areas with lower levels of multifunctionality in the south and east of the city (which generally corresponds with areas of high deprivation). Some additional findings with regard to quality:

- The quality of the majority of publicly accessible open spaces across the city is generally high, although there are a number of open spaces in need of improving.
- In general, the highest quality sites fall within areas of lower levels of deprivation, however there are exceptions to this. The wards with generally higher numbers of poorer scoring sites are Marston, Headington Hill and Northway, Quarry and Risinghurst, Barton and Sand Hills, Churchill and Lye Valley.
- The larger/destination parks within the city are high quality sites providing multiple functions and are important sites for tourism and built/natural heritage. Sites delivering very low numbers of functions tend to be private spaces and amenity green spaces.

- For lower scoring sites, common issues appeared to be low biodiversity value, poor access (e.g. path quality and overgrown vegetation), management of soft landscaping, dog fouling, litter and lack of signage.

3.3 Beyond public open spaces, there are a variety of greenspaces in the city which are not freely accessible to public, yet still make an important contribution to the overall green infrastructure network. For example, many of the schools and colleges in the city have their own playing fields and outdoor spaces which play an important role in the health and wellbeing of the young people and children in attendance and add to the sense of place locally (sometimes playing an important role in heritage setting particularly around the colleges).

3.4 According to land use data (2018), around 19.9% of Oxford's land use is classified as residential gardens. There is significant diversity in the amounts of green infrastructure that is present across Oxford gardens and policy has little control over how they are managed but many of these spaces nevertheless are an important location for green assets like trees in the city. Whilst only being accessible to individuals within the home, private gardens offer an important outdoor space for socialising and being active. Of course there is not an equal distribution of this type of space across the community, and many individuals, particularly those living in flatted developments or house shares, may not have any privately accessible green space at all.

3.5 The GI study found that some of areas of the city with the lowest amounts of private garden are also located in areas with lowest access to public open space. In these locations (highlighted in red and yellow in Figure 1), there is potential for existing open space to be under greater pressure from local residents but also potential for higher priority in terms of new open space (where the opportunities exist). Notably, some of these locations are also areas of higher deprivation which could exacerbate existing health inequalities where residents are not able to benefit from sufficient outdoor space.



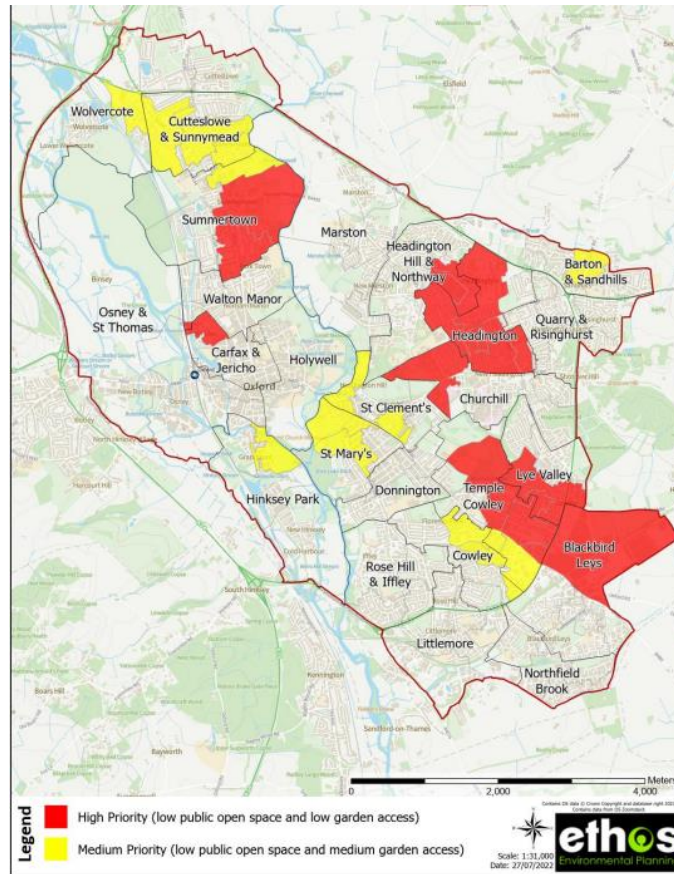


Figure 1: Bivariate map showing areas of the city with lowest public open space in combination with lowest garden access (red are lowest)

3.6 Beyond green spaces, the city hosts a range of other important green infrastructure features such as trees. Trees can be found within many of our greenspaces but also help to break up the urban fabric of roads and streets throughout the city. Many of these trees have been protected for their high amenity value through Tree Preservation Orders (TPOs) however there are a greater proportion that have not (and TPO designation is not the only determiner of high-quality trees). Oxford is also home to several areas of ancient woodland, including Brasenose Wood and at Shotover Country Park. The Oxford Urban Forest Strategy estimates that the urban forest in Oxford contains approximately 248,000 trees which equates to a total canopy cover of 22.3%; meanwhile separate analysis that used a slightly different methodology conducted for the GI study concluded with a similar figure of 21.02%. This is above the 20% minimum recommended by Forest Research for urban areas which is a positive, however, as Table 2 shows, canopy cover does vary across the city with some of our more deprived wards featuring some of the lowest amounts of coverage (e.g. Blackbird Leys).

Ward	Canopy Cover (%) – Ethos analysis 2m+	Highest level of deprivation in ward (1 is most deprived).
Barton & Sandhills	21.82	2
Blackbird Leys	9.69	2
Carfax & Jericho	15.9	6
Churchill	28.1	3
Cowley	19.71	4
Cotteslowe & Sunnymead	31.02	4
Donnington	22.28	4
Headington	28.33	9
Headington Hill & Northway	32.54	5
Hinksey Park	24.07	4
Holywell	22.42	2
Littlemore	22.54	2
Lye Valley	22.74	5
Marston	22.59	7
Northfield Brook	19.62	1
Osney & St Thomas	11.64	7
Quarry & Risinghurst	29.45	4
Rose Hill & Iffley	30.26	2
St Clement's	27.64	3
St Mary's	33.27	5
Summertown	26.36	8
Temple Cowley	21.69	6
Walton Manor	26.74	9
Wolvercote	21.75	6

*Table 2: Canopy cover % and Indices of Multiple Deprivation score per ward as shown in the Oxford Green Infrastructure Study (2022)*

3.7 The GI network also includes a range of blue spaces including the two rivers (Cherwell and Thames), a number of streams and smaller water courses, as well as the canal and other waterbodies like ponds and lakes. These features act as important corridors through the city and in between green spaces, providing habitat for wildlife and connectivity for people. The Water Cycle study discusses the current environmental conditions of the main water courses, which continue to be challenged by a range of pollutants such as from agriculture, urban run-off and sewer discharges.

#### Feedback from previous consultations

3.8 Feedback from the 2021 Issues consultation was varied reflecting the broad scope of that initial consultation process, whilst a full summary can be reviewed in the main consultation report, some of the key comments are as follows:

**Natural England:** NE welcomes the priority given to GI and the recognition that it is a cross-cutting theme. A strategic approach is required to GI. Green Infrastructure should be incorporated into the plan as a strategic policy area, supported by appropriate detailed policies and proposals to ensure effective provision and delivery. Evidence of a strategic approach can be underpinned by a Green Infrastructure Strategy.

The plan should provide for an appropriate quantity and quality of green space. Suggest ANGSt standards may be of use when assessing current levels of greenspace and planning improved provision. NE is in the process of developing a Framework of GI standards. This work may be able to inform the plan.

**County Council:** Both grey and green infrastructure are important to successful and resilient communities. Existing green infrastructure assets should be protected from loss and enhanced where possible, including by the addition of new land. The Local Plan can also have a role in that policy can require green infrastructure assets (e.g. trees, SuDS, meadows) to be managed and maintained by developers so that the assets continue to deliver benefits.

**Other Comments:** There were a wide variety of other comments covering a broad range of issues and concerns including:

- There remains great concern that green spaces that provide, or have the potential to provide, amenity value, visual relief and ecological benefits for their communities are too easily lost to development.
- There is inadequate commitment shown so far to preserve existing green infrastructure.
- There is a wrong presumption that existing green spaces and features provide adequate relief and amenity to residents, where much more is needed.
- There is an increase in hard surfacing not just with large schemes and public realm but also with domestic developments, which cumulatively are harmful to drainage increasing flood risk, biodiversity and overall amenity.

3.9 Feedback from the 2022 Preferred Options consultation again was quite varied and is summarised in detail in the main consultation summary, however some key feedback included the following:

#### **Natural England**

- Welcome high-level inclusion of GI considerations throughout LP and the production of the GI Study 2022.
- Flag that all green spaces have importance for a variety of reasons especially due to difficult nature of creating new ones in constrained city like Oxford. Should ensure a strategic approach taken including that new allocations do not conflict with protected GI. Highlight that their new GI framework can help inform Local Plan.
- Policy protection should potentially include other features like priority/irreplaceable habitat. Also consider management and maintenance arrangements for new and existing GI.
- Support use of an Urban Greening Factor – suggest it is applied across all non-householder applications and that it could be tailored to provide greater recognition of certain features.

#### **Historic England**

- Objected to the policy options as initially proposed, wanted to see stronger recognition of historic sites as part of GI network, and emphasis on need for holistic approach to

natural environment with historic environment. Flag the need for caution over term 'designated sites' to avoid confusion.

- Want to ensure new GI also takes account of and integrates positively with historic environment – needs to be sensitive to the local context. Any use of targets needs to be carefully considered to avoid unintended consequences (e.g. wrong tree in wrong place).

### **Environment Agency**

- Felt the policy options needed to reflect stronger protection for watercourses and associated features including expectations in terms of ecological buffers, long term management plans and opportunities for deculverting.
- Support highlighting more tailored requirements to enable considerations on specific sites in relation to topics like re-naturalising watercourses and reconnecting rivers and flood plains. DEFRA biodiversity metric should be used in combination with these measures where relevant and consider watercourses through this.
- Concerned about lack of condition grading within UGF tools and potential for inappropriate greening which could have impacts particularly for watercourses and wider ecology. Might be able to support such tool if it includes requirement to balance needs of people and wildlife.

### **Woodland Trust**

- Generally supported the preferred policy options. Flagged need for stronger target for tree canopy cover and access to natural greenspaces. Recommend CAVAT tool as one way to value existing mature trees which could be incorporated into UGF tool.

### **Oxfordshire Local Nature Partnership**

- Felt the proposed GU network corresponded well with the draft Nature Recovery Network mapping for County. Encourage further analysis to help refine. Supported an approach of prioritising areas that could benefit from green infrastructure most.
- Support requirement for new GI in all new development. Flag Building for Nature as a framework for good GI provision which could act as supplementary requirement for development as way of achieving UGF requirements.

### **Other comments**

- Support for protecting green spaces.
- Essential playing fields are protected.
- Options sets didn't have enough emphasis or omitted certain types of GI – examples given included tree planting and extending canopy cover, hedgerow protections, freshwater habitats.

- Need to think about improving connections between spaces in the network – e.g. via planting of streets and enhancing watercourses, PROW.
- Concern about policies requirements preventing delivery of affordable homes.
- Disagreement expressed from some over having one strategic policy protection for all of the network – preference for individual protections on different types of spaces, or for protection to larger strategic sites.
- Lack of clarity on what is defined as ‘green space’. Concern that overarching GI network policy could miss the nuances/values of different types of spaces.
- The initial drafts of there GI network omitted spaces that needed to be included.
- Concern ‘poorer quality’ green spaces could be allowed to be lost. Also concern that desire for housing is overruling other considerations like flooding, climate change, natural environment.
- Concern the policy approach will be too complex to understand/manage - potentially with additional administrative burdens for applicants. Also about impacts on viability.
- Feeling there is a need for flexibility to address existing constraints on many sites. Inclusion of principles for new GI would support flexibility.
- Larger developments have more opportunities to achieve new, high quality open space – need to maximise these opportunities with specific requirements for open space in policy.
- Concern about missing site specific opportunities where a specific/stringent target for new GI is incorporated into policy requirements.
- Need to address underprovision in certain areas of city
- Some expressed desire for no local policy target and to instead defer to national requirements.
- On UGF policy options specifically, various comments on extent of tool:
  - UGF policy requirement not needed on all site, e.g. small sites. Others did not feel it needed to be limited to certain sites, or felt it should be mandatory everywhere.
  - Greening requirements should be determined through application process – no need for tool such as UGF, particularly where sites are already very green.
  - Need for it to be easy to understand – concern about vagueness of exemptions that could be used too.
  - Would like to see it targeted to certain socio-economic areas of city.
  - Need to carefully consider strengths/weaknesses of tool and impacts on development process.

#### 4. Likely trends without a new local plan

4.1 Up until 2036 the currently adopted Local Plan will maintain protection of key green infrastructure. The Local Plan 2036 sets out requirements for new greening including a percentage of open space on larger developments and also protects a network of green spaces

across the city. After that, protection will fall to national policy which does afford protections to open space and strict criteria as to when it can be lost.

4.2 The GI study 2022 noted the unequal distribution of certain types of greenspace and this is likely to remain the case in the absence of the new Local Plan. The constrained nature of the city means that opportunities for creation of significant new green spaces within the denser urban areas will remain limited.

4.3 A growing population means that there is likely to be increasing demand on our green spaces in future not only for new development but also for recreational uses. Green spaces will continue to play an important role for health and wellbeing, particularly for those with limited private green space. Specific types of green space are likely to continue to be in demand, for example pitches for sports, and allotments for food growing. There are also additional external pressures such as climate change and pollution from various sources which will continue to negatively impact on the GI network, particularly more sensitive sites.

4.4 Some types of GI will continue to be protected from inappropriate development through other mechanisms outside of the Local Plan, for example some trees benefit from Tree Preservation Orders (TPOs) and conservation area protection. Formal allotments benefit from protection that can only be removed via application to the secretary of state. Some of our parks and gardens benefit from heritage protection as Registered Parks and Gardens. Many sites also benefit from biodiversity protections at national level (e.g. the SAC and SSSIs).

## 5. Approach to Green Infrastructure in the Local Plan 2040

5.1 The policy approach to Green infrastructure (GI) is guided by recognising and protecting a network of green features across the city and in order to harness the ability of GI to provide multi-functional benefits to the city's inhabitants and the wider environment. The intention is to ensure that new development preserves our highest quality GI and avoids unnecessary harm to it, whilst also ensuring that new GI is an integral component of the design of development. Three interrelated policies drive this approach as is shown in Figure 2.



Figure 2: The approach to green infrastructure in the new Local Plan

### Establishing the Green Infrastructure network hierarchy

5.2 As established in section 3, Oxford's Green Infrastructure (GI) network is made up of a variety of green and blue spaces across the city which provide multiple benefits to the wider natural environment and the health and wellbeing of the people of Oxford. Whilst national policy already includes protections for open space through the NPPF, which is expanded upon in the associated guidance, the Local Plan policy G1 includes protections which go beyond this for certain sites (the 'core network'). The rationale for this approach is supported by several justifications:

- a strong theme within the consultation feedback at earlier stages of engagement on the Local Plan's development highlighted the strong desire for protecting green spaces in the city

- the analysis in the 2022 Oxford Green Infrastructure Study and background research on existing issues in the city collated through the various background papers identifies multiple benefits that GI provides to the sustainability of Oxford and in addressing various challenges (e.g. meeting physical/mental health needs for people, providing space for biodiversity, driving greater resilience to climate change).
- The city's constrained nature, unequal distribution of green space and limited ability to establish new areas of green space makes protection of existing spaces extremely important.

5.3 Whilst the approach to all of the green spaces of the network is one of resistance to their loss or harm in line with national policy, the Local Plan assigns the spaces of the network to one of two different levels of protection with the hierarchy set out in policy G1. The hierarchy is as follows:

- **Core:** Spaces within the highest level of the hierarchy benefit from the strongest level of protection meaning loss would not be deemed acceptable in any circumstance because their location is fundamental to the benefit they provide and to supporting the functioning of the wider network and addressing wider sustainability issues.
- **Supporting:** Spaces within the second level of the hierarchy which also play an important role in supporting the network and addressing sustainability issues; however, specific location is not as fundamental and loss could be acceptable where this is reprovided elsewhere in the network.
- **All other spaces:** Not identified through policy G1 and do not have additional protections applied on them via the Local Plan. Applications would defer to the protections which already exist through national policy – e.g. meeting the tests for loss of open space as set out in para 99 of the NPPF

5.4 This approach is considered to be a reasonable and pragmatic way of responding to the constrained nature of the city and recognising the varying clusters of functions different spaces provide to supporting the city-wide network. It takes a strong line on protection of many spaces across the city, affording higher levels of protection to those areas whose value derives significantly from their current geographic location in order to perform these functions – value which could not be easily replicated elsewhere were they to be lost.

5.5 Equally, it acknowledges the demands on space that the city is constantly subject to and it recognises that to meet the wider vision for the city in 2040 and meeting the other Local Plan objectives, sometimes other types of uses may be necessary. Whilst the protection of the supporting tier also exceeds national policy, it recognises that these spaces can provide more limited value to the overall network where they currently preside and that these could potentially be reprovided in another part of the network without irreparably reducing quality of GI in the city where a more fitting use can be demonstrated for the site.



## The process of classifying spaces into the GI network hierarchy

5.6 The process for allocating spaces to the network involved a number of considerations which revolved around the principles outlined in para 4.3 above. There were several typologies of green spaces which were automatically assigned to the core network because these typologies provided a clear role or unique set of functions/benefits that other typologies could not and in a location that would be challenging to reprovide in the short term as part of the development process. These typologies included:

- allotments for their role in food growing and social interaction, particularly for those without private gardens (also protected through additional national legislation),
- churchyards/cemeteries because of their important setting for heritage assets and burial spaces.
- ecological sites protected under a local or national designation due to their specific ecological value for the habitats in these areas to supporting biodiversity.

5.7 Access to a park that can provide multiple types of facilities and functions to meet recreational needs was also considered to be an important component to the GI network, particularly in supporting the needs of residents with limited private open space but also more generally for meeting a range of health needs. The GI study identified a number of 'destination' parks which are of a significant size (varying from 7ha to 122ha), which formed the basis of a list of sites to be included in the core network. Council officers subsequently reviewed and added to this list to ensure a spread of larger parks were protected across the city e.g. adding some additional spaces within the Blackbird Leys area.

5.8 Other typologies of open space with a more heterogenous character required a more nuanced approach, particularly where they were more variable in the types of functions they provide. Unlike spaces with a more singular or primary function such as an allotment, or cemetery, other spaces such as the remaining parks as well as areas of natural green space can vary more greatly in character and the role they play in the network sometimes. There are a range of parks and gardens in the city for example and some have an important heritage status being designated as Registered Parks and Gardens; whilst some are particularly large and serve a wide area of the community; others are much smaller with limited features and potentially congregated in areas with an abundance of other types of green space. This variation necessitated further analysis to designate certain spaces into core and others into supporting.

5.9 A key driver in identifying and protecting a network of core spaces across the city was the understanding that many of their benefits need to be retained in situ and are very challenging to relocate. In this context, officers have considered a number of specific factors relating to key multi-functional benefits that arise from the situation of certain spaces and broadly fall under three topics: heritage, biodiversity and climate change. The remaining spaces not already within core network were assessed in terms of their contribution to these benefits and allocated to core where they met the following criteria:

- Biodiversity – has the space been identified as containing core habitat within the Oxfordshire Nature Recovery Network and is it also connected to other spaces and clearly forming part of a wider wildlife corridor through the city?
- Heritage – is it a registered park and garden or has the space been identified on the Oxford Heritage Asset Register as a local feature of significance?
- Climate change - is the majority of the space within flood zone 3b and therefore acting as important source of flood storage?

5.10 Appendix A shows the network mapped as it is in the proposals map. Appendix B (contained in a separate document) details all sites added into the core network and the justification for why they have been afforded the maximum protection of the policy.

5.11 There were a number of other types of green space which did not meet the standards for core protection set out in the preceding paragraphs but were deemed important enough to be classified as supporting spaces to the network. Typically, these were spaces which could feasibly be reprovided to another part of network if necessary and were typically of a more limited wider benefit to the area in terms of functionality or public access but still played some function that supports the wider area and that would need to be replaced. Sports pitches, for example, are an important asset to supporting health and wellbeing through providing formal spaces for recreation, however they typically offered limited benefits beyond this enough to warrant core protection (unless they met one of the additional considerations in para 4.9).

5.12 A number of spaces with no fixed role, including amenity spaces and private outdoor spaces, were also added to the supporting tier where they were of a significant enough size<sup>5</sup>. These spaces can make a valuable contribution to greening the urban realm in general and can have potential for enhancement in future. Amenity green space (areas of informal grass with limited features) were included within the supporting tier where they exceeded a size threshold of 0.15ha, which was deemed significant enough to be of benefit to the local environment. Private green spaces were included within the supporting tier based upon a size threshold, however, due to their restricted public access benefit this was only where they exceeded a size threshold of 0.3ha.

#### Enhancing and providing new Green Infrastructure in Oxford

5.13 A key driver behind the policies of the new Local Plan is encouraging green and blue infrastructure to be considered with equal importance and value to more traditional grey infrastructure provision. Whilst policy G1's hierarchy of protection seeks to ensure that we retain our highest quality GI in the city and supports the objective of retaining opportunities to enhance what we have, policies G2 and G3 then set out the framework for how we expect to see enhancement and new provision take place.

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<sup>5</sup> As was found in the 2022 GI study, typically (though not in all cases), larger areas of green space are able to perform a wider variety of positive functions for the city than smaller ones.

5.14 Principally, policy G2 requires applicants to consider not just the provision of features on the site but also how they connect in with features around the site to deliver greater interconnectedness with the wider GI network. This is important for building resilience into the GI network, reducing fragmented landscapes and supporting movement of people and wildlife across the city. Equally, policy G2 sets out the importance of a design rationale which looks for ways to secure multi-functionality. It sets out various functions that are considered important such as supporting biodiversity, building climate resilience and providing spaces for people, which should guide design beyond purely aesthetic concerns. To be most effective at fulfilling multi-functional roles, these have to be taken into account in informing the design of green spaces/features from the beginning, rather than as an afterthought. Where re-provision is required to accord with loss of protected space under policy G1 – the requirements of G2 guide how we expect the re-provided GI to be delivered.

5.15 There are some other elements to the policy that address more specific situations. For example, recognising that our blue spaces are an integral component to the city's landscape and that in places the connection with our watercourses has been degraded over time which can lead to negative impacts for the water environment, Policy G2 also sets out specific expectations in relation to development that occurs adjacent to watercourses. It sets out the requirement that new development adjacent to these spaces incorporates a sufficient buffer to mitigate negative impacts on them and also help to enhance the environment in these areas. Where the land alongside our watercourses has already become urbanised the policy requires that buffers ideally be reinstated.

5.16 The policy also sets out requirements for new open space on larger developments. Whilst our analysis of the city through the GI study 2022 and of the existing development sites over the Local Plan period suggest that opportunities for the creation of large-scale new open space is limited by various constraints, open space is an important component of healthy, well designed development and where possible this needs to be incorporated within the site layout of larger schemes. The new Local Plan therefore retains the existing requirement for 10% open space to be delivered on larger developments of 1.5ha and above.

5.17 Where green features are included in a development, it is important to recognise that these are live components of a design which are subject to varying levels of ongoing care and maintenance. A successful development is one that considers these longer-term needs and plans accordingly for them as part of the design process. Certain features like trees have a crucial establishment window which requires more intensive care and attention in terms of watering to ensure the longevity of these features going forward. Meanwhile, other features like green walls and roofs require more regular watering and maintenance throughout their lifetime to avoid failure due to their more exposed and unnatural planting location. With climate change and longer hot/dry conditions in future these demands are likely to increase. The policy therefore sets out specific requirements for ongoing maintenance/management arrangements which need to be included as part of the applications, along with conditions that

will be set for replacement of failed specimens during the establishment period post-construction.

### Urban Greening Factor for major development

5.18 As has already been identified, Oxford's constrained nature makes the delivery of new green spaces of notable size within the city boundary challenging to achieve. There are also parts of the city that are more densely developed and deficient in green spaces in terms of their size, accessibility and quality. It is therefore crucial that in areas where new development comes forward, all opportunities are taken to maximise the amount of greening within the site. This also supports other objectives such as making space for nature and building resilience to climate change (through reducing surface water flood risk and risk of overheating in summer). Whilst the scope of policy G2 sets out principles and requirements in this regard that apply to all scales of development, policy G3 introduces additional requirements of major development in the city in the form of the Urban Greening Factor (UGF) assessment.

5.19 The UGF assessment process produces a score for the proportion of urban greening in comparison to the total area of a given development site. The calculation focuses on the types of surface cover used within the landscape of the site and is measured for the existing situation and post development conditions following building and landscape proposals. Each surface cover type is assigned a weighting factor (between 0.0 to 1.0) that reflects its environmental and social value in urban greening; its functionality in providing ecosystem services, including improving permeability; and its benefit in supporting biodiversity and habitat creation.

5.20 The benefit of the UGF process is that it provides a simple means of quantifying the changes in amount and type of green surface cover delivered through a development in a transparent way. Whilst certain types of more natural surface cover are incentivised through the UGF, applicants have flexibility in how they meet the policy requirements for post-development score and can freely pick the proportions of different surface cover types to best fit their site's constraints. This is particularly important in addressing the constrained nature of many sites in the city, balancing out the space demands of various policy requirements in the Local Plan, and viability challenges of delivering development.

5.21 Whilst the UGF process involves the use of an area-based metric which has similarities to the DEFRA Biodiversity Net Gain metric that applicants will be required to complete as part of Biodiversity Net Gain (BNG), the two tools have different roles in meeting the Local Plan's objectives. The DEFRA metric works as an uplift in score for a site (a 10% improvement on current score) and is focused primarily on habitat creation for biodiversity. Meanwhile, the UGF sets out a minimum target and is focused on delivering multi-functional green features which could provide for biodiversity but also many other benefits. On particularly urbanised sites lacking in existing habitat, a 10% uplift in a low score as required by BNG may have relatively

limited effect, whilst the UGF instead requires sites to meet a minimum score based upon the combination of surface covers as a proportion of overall site area. Meeting the UGF requirements can of course support biodiversity objectives of the DEFRA net gain tool (and vice versa).

5.22 Urban Greening Factor style policies have been in existence in various forms within Local Plan policies for some time (including Southampton and London). The Council has also made reference to Natural England’s newly released Green Infrastructure Framework (2023) which were discussed in section 2.

5.23 In formulating the specific requirements of policy G3 the Council has adopted the list of surface cover types and individual scores recommended through Natural England’s guidance, which applicants will be required to utilise in their assessments (Table 3). Natural England devised these different weightings in order to maximise multi-functionality of green infrastructure in urban areas and benchmarked them against their Environmental Benefits from Nature tool which assigns values to different habitats based on the ecosystem services they provide<sup>6</sup>. As the intention is to provide a consistent approach across England and in discussion with Natural England, the Council deemed that it was unnecessary to amend the weightings further.

No.	Surface Cover Type	Factor
1	Semi-natural vegetation and wetlands retained on site (including existing / mature trees)	1.0
2	Semi-natural vegetation established on site	1.0
3	Standard / semi-mature trees (planted in connected tree pits)	0.9
4	Native hedgerow planting (using mixed native species)	0.8
5	Standard / semi-mature trees (planted in individual tree pits)	0.7
6	Food growing, orchards and allotments	0.7
7	Flower rich perennial and herbaceous planting	0.7
8	Single Species or mixed hedge planting (including linear planting of mature shrubs)	0.6

*Table 3: A selection of the surface covers and their weightings from the Natural England UGF tool – the full list is included in the Appendix of the Local Plan – any updates will be published in the Green Infrastructure and Biodiversity TAN in future.*

5.24 In relation to the specific targets new development will need to meet in Oxford, whilst Natural England also set out recommendations in this regard (e.g. 0.4 for residential and 0.3 for non-residential), an additional assessment of the local context and other aspirations in the Local Plan have helped informed the targets for policy G3. Sites in Oxford are particularly

<sup>6</sup> More details on their methodology can be found here:  
<https://nepubprod.appspot.com/publication/5846537451339776>

constrained by a variety of pressures whilst the Local Plan also includes a variety of policies which will put additional demands on the layout of development sites. As such, high level testing of the UGF assessment was carried out on proposed allocated sites in the Local Plan to understand how these sites currently score and what could practically be achieved. This testing process has led to slightly reduced targets for major development (0.3 for residential sites and 0.2 for non-residential). However, the policy also includes an additional requirement that proposals should not result in a reduction in the baseline score, meaning sites that already exceed these targets (e.g. greenfield), will need to maintain these scores as a minimum (no net loss).

5.25 The testing process on allocated sites enabled officers to identify existing natural features on site, particularly those that are of good quality and likely to add to the UGF score and supported the design-led approach to writing the allocations policies. Whilst the overarching targets of policy G3 apply to all sites, where applicable, such features have been highlighted in the allocation policy as part of the overall guidance on natural features and placemaking. They are written in such a way as to not be unduly prescriptive, which should give more allowance for applicants to explore appropriate design solutions and engage with council officers.

5.26 Overall, as this policy requirement is a new addition for Oxford (and the broader UGF standards from Natural England are still relatively new in themselves), the approach taken is considered to be most pragmatic for the local circumstances of the city. It will ensure that green infrastructure provision is appropriately considered in all major development (and policy encourages its use on other types of development also), that provision is quantified helping to understand net change and achieves a realistic minimum baseline, whilst also leaving flexibility for applicants to tailor their approach to the particular circumstances of their sites. The approach can be tailored in future iterations of the Local Plan based upon how the new approach performs.

## 6. Conclusions

6.1 The analysis and discussion as set out above has led to the inclusion of three Green Infrastructure related policies in the new Local Plan which are as follows:

### Policy G1 – Protection of Green Infrastructure

#### Green and Blue Infrastructure Network

**The City Council will seek to protect the GI network for the many and varied benefits it offers. The hierarchy of GI spaces and the policy approach for each level of the hierarchy is as follows:**

#### G1A: Core Green and Blue spaces

Planning permission will not be granted for development that would result in loss of, or harm to, the protected spaces identified as Core Oxford Green and Blue spaces and the important green network function they provide. These spaces are designated G1A on the proposals map.

**G1B: Supporting Green and Blue spaces**

Planning permission will only be granted for proposals which affect Supporting Green and Blue spaces where any harm/loss is mitigated by ensuring sufficient re-provision, ideally onsite, and to the same standard or higher. These spaces are designated G1B on the proposals map.

**G1C: All other Green and Blue spaces**

Planning permission will only be granted for proposals which affect all other Green and Blue spaces where any impacts are mitigated by ensuring sufficient re-provision, ideally onsite, and to the same standard or higher, or if it can be demonstrated in the application that current provision is surplus to requirements.

**Residential Garden Land**

Planning permission will be granted for new dwellings on residential garden land provided that:

- a) the proposal responds to the character and appearance of the area, taking into account the views from streets, footpaths and the wider residential and public environment; and
- b) the plot to be developed is of an appropriate size and shape to accommodate the proposal, taking into account the scale, layout and spacing of existing and surrounding buildings, and the minimum requirements for living conditions set out in Policies HD11, HD12 and HD13; and
- c) requirements are met for biodiversity as set out in Policy G4, greening factor as set out in Policy G3 as well as requirements for protection of existing green infrastructure features, as set out below.

**Existing green infrastructure features**

Planning permission will not be granted for development resulting in the loss or deterioration of ancient woodland or ancient or veteran trees and important hedgerows except in wholly exceptional circumstances or there is a suitable compensation strategy in place (as per Government Guidance<sup>1</sup>).

Planning permission will not be granted for development resulting in the loss of other trees, except in the following circumstances:

- d) it can be demonstrated that preservation of the trees is not feasible which should include:
  - i. evidence of testing of practical alternative site layouts that might preserve the tree(s) where possible; and
  - ii. Evidence that loss or other impacts to any tree(s) on the site has been minimised where possible, and guided by BS.5837:2012 recommendations or its future equivalent;
- e) where tree retention is not feasible, any loss of tree canopy cover should be mitigated by the planting of new trees or introduction of additional tree cover (with consideration to the predicted future tree canopy on the site at maturity following development) to achieve a minimum of no net-loss of tree canopy cover; and
- f) where loss of trees cannot be mitigated by tree planting then alternative forms of green infrastructure should be incorporated that will mitigate the loss of trees, using the Urban Greening

Factor to demonstrate no reduction in GI score as a minimum (as well as meeting any other requirements as set out in policy G3).

Planning permission will not be granted for development that results in the loss of other green infrastructure features such as hedges or ponds where this would have a significant adverse impact upon public amenity or ecological interest. If it is demonstrated that their retention is not feasible, then their loss must be mitigated in accordance with other relevant policies, in particular Policy G3.

### Policy G2 – Enhancement and provision of new Green and Blue features

Planning permission will be granted for proposals that include a variety of green infrastructure features as a fundamental component in the design of new development. Where the site includes existing GI features, proposals should seek to enhance these, prioritising opportunities to improve linkages between features in order to strengthen connections with the wider green infrastructure network including beyond the boundaries of the site. Features should be highlighted clearly within the Design and Access Statement where required and/or on landscape/elevation plans, which should also include details of how the following requirements have been met where relevant.

The selection of green/blue features, or enhancement of any existing features, should be tailored to the specific context of the site and surrounding area. The proposal should set out clearly how GI has been designed to secure multi-functional benefits which contribute to the following, where relevant:

- a) Public access
- b) Health and wellbeing, including facilitating recreation and play for people of all age groups and abilities
- c) Biodiversity
- d) Creating linkages with surrounding green infrastructure (including the countryside)
- e) Addressing climate change (including carbon sequestration; reducing flood risk; providing sustainable drainage; reducing overheating and promoting urban cooling)
- f) Enhancing appearance and character/sense of place
- g) Enhancing the setting of heritage assets
- h) Connectivity of walking and cycling routes
- i) Opportunities for edible planting or community food growing

#### Opportunities to enhance blue corridors

For proposals on sites incorporating or located adjacent to watercourses, opportunities should be sought through careful design and landscaping to re-naturalise the water courses where possible, including restoration of the bankside and instream habitats and leaving an undeveloped buffer zone of at least 10 metres width. In some cases, this may require reinstatement of the buffer zone on previously developed land.

#### New public open space

In situations where the proposal relates to replacement provision that is mitigating losses elsewhere, this will need to be demonstrated to be equally or more accessible for people of all ages and abilities by walking, cycling and public transport to local users of the existing site where relevant.

For residential sites of 1.5 hectares and above, new public open space of 10% of the area covered by residential development is required. For mixed-use sites, the area of residential use should be used for that calculation.

#### Maintenance/management arrangements

Appropriate maintenance/management plans should be organised as part of the design/construction process. Applicants will be required to replace any failed features for the first five years post-completion, unless agreed otherwise with the Council, and this will be secured through planning condition. Where appropriate, applicants



will be expected to enter into a legal agreement to ensure that any new public space is properly maintained, by means of a financial contribution to the City Council.

### **Policy G3 – Provision of new Green and Blue features – Urban Greening Factor**

An appropriate proportion of natural green surface cover – which may be comprised of both existing and newly installed features – will need to be demonstrated on certain proposals (as set out below) and evidenced via submission of a completed Urban Greening Factor (UGF) assessment.

Applicants are expected to assess and submit the baseline score for the site pre-development, prior to any site clearance, as well as the proposal as built/post-development. The as built/post-development score required for development proposals will need to meet the following policy criteria:

**Major development: proposals should demonstrate that there would be no reduction in baseline score and achieve a minimum score of:**

- **0.3 for residential or predominantly residential schemes**
- **0.2 for predominantly non-residential schemes**

All other forms of development – with the exception of householder applications – are encouraged to demonstrate how they have undertaken greening of their site through use of the UGF tool, though this is not mandatory.

Along with the submitted UGF assessment, all greening features proposed for the development and used in the calculation of the UGF score should be clearly demonstrated on associated landscaping/elevation plans in the application.

The adopted calculation formulae and the factors for various surface cover types are outlined in Appendix 4.1.

# Appendix A – Map of GI network (policy G1)

