

## **Chapter 5:**

### **Protecting and enhancing Oxford's green and blue infrastructure network**



*It is important to ensure that Oxford is a healthy and attractive place to live, work and visit, that biodiversity is protected and enhanced where possible, and that the city is able to deal with the impacts of climate change. Green spaces and our waterways play a very important role in helping to achieve this. In a compact city where development needs to be accommodated, it is the quality and accessibility of a network of spaces that will be important.*

## 5.1 Green and Blue Infrastructure Network

Oxford benefits from a wide range of green spaces such as parks, amenity space, natural and semi-natural spaces, historic sites, floodplains and sites of importance to biodiversity and nature conservation. The Blue Infrastructure Network is interwoven and interlinked with the Green Infrastructure Network, and enhances the experience and function of it. The key waterways are the River Thames, River Cherwell and the Oxford Canal. There are also many brooks and streams, for example Bayswater Brook and Northfield Brook, which often form part of wildlife and movement corridors. These green and blue spaces and features perform important functions both individually and as part of a wider network:

- Social Functions – contributing to health and wellbeing, heritage, sense of place and tranquillity
- Environmental Functions – supporting biodiversity, water management and air quality
- Economic Functions – supporting jobs, tourism and an attractive business environment

It is important to protect a network of green and blue spaces across Oxford for different needs such as recreation, biodiversity and flood protection. The Oxford Green Infrastructure Study identifies Oxford's green spaces and assesses their social, environmental and economic functions. This information has been used to identify a network of multi-functional green spaces, many of which are part of the network of watercourses that require protection through the Local Plan as part of the Green and Blue Infrastructure Network.

To maintain the existing recreational resource of waterways in the city for residents and visitors it is important to prevent the loss of existing water-based recreational facilities, including centres for boating activities such as college boathouses, boat hire bases, boat passenger services, rowing clubs and businesses providing support services for boat users. The importance of the network of waterside paths for cycling, running and walking should also be protected and enhanced.

Most of the city's parks have a range of functions and are an important recreational resource. These are protected as part of the Green and Blue Infrastructure Network. Some spaces have a specialist function that is protected, which might be biodiversity, allotments or open air sports. These sites might be in or outside of the Green and Blue Infrastructure Network. Policies G2, G4, and G5 set out specific considerations in relation to these sites.

### **Policy G1: Protection of Green and Blue Infrastructure Network**

Green and open spaces and waterways of the Green and Blue Infrastructure Network are protected for their social, environmental and economic functions and are defined on the Policies Map.

Planning permission will not be granted for development that would result in harm to the Green and Blue Infrastructure network except where:

- a) the loss resulting from the proposed development would be replaced by equivalent or better provision elsewhere in a suitable location; and
- b) it can be demonstrated that there will be no harm to any biodiversity network function; and
- c) any loss of water-based recreation facilities, support services for boat users or other facilities that enable the enjoyment of the blue infrastructure network, is to be replaced by a facility in another equally accessible and suitable location; and
- d) adequate mitigation measures to achieve a net improvement in green infrastructure provision in the locality are proposed; and

e) any relevant criteria of the policies G2-G5 are met.

## **5.2 Protection of biodiversity and geo-diversity**

Oxford benefits from a concentration of high-quality, ecologically important sites. Designated sites range in a hierarchy from internationally protected sites to nationally and locally designated sites. The Oxford Meadows Special Area of Conservation (SAC), part of which is within Oxford's boundary, has been designated by the European Commission because of its international importance for biodiversity interest. There are also 12 Sites of Special Scientific Interest (SSSIs), designated by Natural England for their national interest. Many sites also have a local nature conservation interest and are protected as Local Wildlife Sites or Oxford City Wildlife Sites. Oxford City Council offices hold a copy of the "Living List" of locally designated biodiversity sites, and online mapping is kept updated. This list of sites will be reviewed and maintained throughout the Local Plan period.

### **The Biodiversity Impact Assessment metric**

Green spaces that do not have local or national protection for their wildlife value are still likely to have some biodiversity value, which could often be mitigated by improvements to remaining green spaces, or the introduction of green roofs and walls, for example. If any biodiversity loss cannot be avoided or mitigated on-site, then biodiversity compensation may be acceptable.

Where mitigation or compensation measures are proposed, a biodiversity metric should be applied for all major developments on greenfield sites or brownfield sites where vegetation has developed. The biodiversity metric should be used to calculate the biodiversity value of a site before and after development; this calculation shows whether the development is likely to cause a loss or gain to biodiversity. There are a number of recognised biodiversity accounting metrics that have been developed, including one developed locally by Thames Valley Environmental Records Centre. The biodiversity calculators take account of the fact that it will take time for a new habitat to get to a target condition, and often a larger area will be required to compensate for loss of a site. The Biodiversity TAN provides advice on available biodiversity calculators and their use.

### **Policy G2: Protection of biodiversity and geo-diversity**

Development that results in a net loss of sites and species of ecological value will not be permitted.

Sites and species important for biodiversity and geodiversity will be protected. Planning permission will not be granted for any development that would have an adverse impact on sites of national or international importance (the SAC and SSSIs), and development will not be permitted on these sites, save where related to and required for the maintenance or enhancement of the site's importance for biodiversity or geodiversity.

On sites of local importance for wildlife, including Local Wildlife Sites, Local Geological Sites and Oxford City Wildlife Sites, and where there are species and habitats of importance for biodiversity that do not meet criteria for individual protection, development will only be permitted in exceptional circumstances whereby:

- a) there is an exceptional need for the new development and the need cannot be met by development on an alternative site with less biodiversity interest; and
- b) adequate onsite mitigation measures to achieve a net gain of biodiversity are proposed; and
- c) where this is shown not to be feasible then compensation measures will be required, secured by a planning obligation.

Compensation and mitigation measures must offset the loss and achieve an overall net gain for biodiversity. For all major developments proposed on greenfield sites or brownfield sites that have become vegetated, this should be measured through use of a recognised biodiversity calculator. To demonstrate an overall net gain for biodiversity, the biodiversity calculator should demonstrate an improvement of 5% or more from the existing situation. Offsetting measures are likely to include identification of appropriate off-site locations/projects for improvement, which should be within the relevant Conservation Target Area if appropriate, or within the locality of the site. When assessing whether a site is suitable for compensation, consideration will be given to the access, enjoyment and connection to nature that the biodiversity site to be lost has brought to a locality. A management and monitoring plan might be required for larger sites. The calculation should be applied to the whole site.

### **5.3 Green Belt**

Green Belt is a strategic planning policy tool designed primarily to prevent the spread of development and the coalescence of urban areas. The Oxford Green Belt offers important protection to the historic setting of the city and it must continue to be protected where it is important to this aim.

Through a Green Belt review process associated with the preparation of this Local Plan some sites in the Oxford Green Belt have been identified for release. Details of the approach to particular sites proposed for release from the Green Belt and of the sites released from the Green Belt are given in Chapter 9. It is important that the remaining areas of Green Belt are protected in accordance with the National Planning Policy Framework, in order that their function and purpose of protecting Oxford's historic setting is retained.

#### **Policy G3: Green Belt**

Save where otherwise provided for within this Local Plan, proposals for development in the Green belt will be determined in accordance with national policy. Planning permission will not be granted for inappropriate development within the Green Belt, in accordance with national policy.

The Green Belt Boundary is defined on the Policies Map.

### **5.4 Allotments and community food growing**

Allotments are important community spaces, enabling people to grow food close to their homes. They can provide benefits to physical and mental health and well-being, sustainability and biodiversity. An increase in population is likely to lead to an increased demand for allotments. Increased housing densities also mean that there is likely to be less garden space available and allotments and other areas available for community food growing will be particularly important to enable people to grow their own food. The Oxford Green Spaces Strategy notes the importance of allotments being available close to homes. There are waiting lists for many allotment sites in Oxford, and most sites are in full or almost full active cultivation, demonstrating a strong demand for allotment space in the city. These are an important recreational and community resource requiring protection and, where possible, enhancement by the provision of better facilities or by bringing unused plots back into use. Allotments are protected because of their various benefits. Some are also protected as part of the Green Infrastructure Network. The City Council will support attempts by

allotment associations to widen the community role of their allotment sites, to enhance sites and bring any disused plots back into cultivation.

#### **Policy G4: Allotments and community food growing**

Planning permission will not be granted for development that results in the loss of protected allotment sites or plots. Protected allotment sites are shown on the Policies Map.

On new residential developments of 50 or more dwellings, the provision of new community food growing space may form part of the open space provision required under Policy G9.

### **5.5 Outdoor sports**

Oxford possesses many playing fields and other areas for outdoor sports, such as tennis courts. These are an important recreational resource requiring protection and, where possible, enhancement by the provision of better facilities.

Many outdoor sports areas are owned by colleges or private schools and are not necessarily available for public use, which means that there is a lot of potential to increase public use of sports pitches, for example through joint use agreements.

Many outdoor sports areas are of special significance for their contribution to other green space functions, such as being part of the biodiversity network. These are also designated as part of the Green and Blue Infrastructure Network. It is important to protect outdoor playing pitches because of the city's shortfall and anticipated growth in the population of Oxford over the Plan period, and also because any outdoor sports space has potential to be improved to increase its benefits.

Replacement facilities should be better in terms of quantity and quality. In suitable circumstances, the alternative provision could be in the form of significant improvements to existing outdoor sports facilities, such as the provision of pavilions/changing facilities, improved drainage or an all-weather surface, 3D pitches and floodlights, which would enable it to be more intensively used as an all-weather facility. Where this increased quality would also lead to significantly increased capacity beyond that which already existed, then this is likely to be considered an acceptable replacement.

School playing fields are considered important outdoor sports facilities and are protected as such. In exceptional circumstances, the City Council will grant permission for the development of a school playing field where it is satisfied that the local education authority has investigated and established that the site will not be required in the longer term (up to 2036) for school playing field or school use, and it is not part of the Green Infrastructure Network.

There is great potential in Oxford to enhance the public accessibility of open space. The City Council will work with private landowners to increase access to existing green spaces and to seek public access to private and institutional facilities through sharing schemes and joint user agreements which will be secured through a planning condition or a planning obligation. This will be important to ensure there remains excellent access to sport and recreation facilities as Oxford's population continues to grow.

#### **Policy G5: Outdoor sports**

The City Council will seek to protect outdoor sports facilities.

Where development will lead to the loss of an outdoor sports facility, proposals must compensate for this loss with improved provision in terms of quantity and quality. Consideration will be given to the need for different types of sports pitches as identified in the Playing Pitch Study. Any replacement provision should be provided in a suitable location equally or more accessible by walking, cycling and public transport, and accessible to local users of the existing site where relevant.

The City Council will, where the opportunity to do so arises, seek public access to private and institutional facilities through sharing schemes and joint user agreements.

### ***5.6 Residential garden land***

Development on residential gardens has made a significant contribution to Oxford's new housing stock in recent years. However, large areas of adjoining private gardens can add to the character of an area. They can provide wildlife habitats, a store for surface water following rainfall, and cumulatively help to regulate local and global climate.

Policy G6 is designed to strike a balance between the contribution of gardens to local character, and the need to ensure that suitable land can be used for well-designed residential development. Development can continue to come forward on appropriate sites in residential areas, but the policy also ensures that any negative impacts on biodiversity or townscape are properly dealt with. In applying Policy G6, the City Council will expect all existing houses to retain an area of private garden. The definition of residential garden land is set out in the Glossary.

#### **Policy G6: 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 size of 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 H15 and H16; and
- c) any loss of biodiversity value on the site will be fully mitigated, and where practicable measures to enhance biodiversity through habitat creation or improvement are incorporated.

## **5.7 Other green and open spaces**

Most green and open spaces in Oxford are protected as part of the Green and Blue Infrastructure Network, for their biodiversity value, as allotments, as part of the Green Belt or for outdoor sport. However, there are some sites which do not meet any of the criteria for protection. Because of the exceptional need for development within Oxford it is appropriate to consider development proposals for these sites in exceptional circumstances, following the approach set out in Policy G7.

### **Policy G7: Other green and open spaces**

Proposals for development on green and open spaces which are not protected by Policy G1 and which have not been allocated for development, must be accompanied by detailed information (in the Design and Access Statement or Planning Statement) demonstrating that:

- a) there is an exceptional need for the development that it can be demonstrated overrides the existing benefits it provides; and
- b) the development will bring benefits to the community, for example through delivery of community-led housing; and
- c) there are not suitable alternative sites where development could reasonably be located that would result in less or no harm; and
- d) the proposals will lead to improvements in biodiversity or amenity value; and
- e) consideration has been given to the layout of any proposed development in order to avoid impacts on biodiversity and any other important features of any green space within a development site, such as its contribution to townscape or the setting of a heritage asset; and
- f) any proposals adjacent to watercourses should demonstrate how the watercourse will be protected and promoted as part of the development.

## **5.8 Protection of existing Green Infrastructure features**

Green infrastructure features include hedgerows and trees. Existing green infrastructure features should be incorporated in new developments wherever possible.

Trees perform a number of important functions. Individual trees, groups of trees, areas and woodlands can have amenity value relating to the character and appearance of a site and its setting. The urban tree population as a whole is also important in terms of ecosystem services such as reducing flooding, modifying the urban heat island effect, supporting biodiversity, reducing air pollution and carbon sequestration and storage. In cities these benefits often correlate to the tree canopy cover of the tree population, or 'urban forest', as a whole. Therefore developments should incorporate established trees as well as the planting of new trees. In addition to protecting existing trees that are important for amenity in an area, consideration should be given to protection and enhancement of tree canopy cover. Policy G8, sets out the approach to be taken if protection of trees is not feasible, as part of the development.

### **Policy G8: Protection of existing Green Infrastructure features**

Planning permission will not be granted for development that results in the loss of green infrastructure features such as hedgerows, trees or woodland where this would have a significant adverse impact upon public amenity or ecological interest. It must be demonstrated that their retention is not feasible and that their loss will be mitigated.



Planning permission will not be granted for development resulting in the loss or deterioration of ancient woodland or ancient or veteran trees except in wholly exceptional circumstances. Planning permission will not be granted for development resulting in the loss of other trees, except in the following circumstances:

- a) it can be demonstrated that retention of the trees is not feasible; and
- b) 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 following development); and
- c) where loss of trees cannot be mitigated by tree planting onsite then it should be demonstrated that alternative proposals for new Green Infrastructure will mitigate the loss of trees, such as green roofs or walls.

### ***5.9 New public open spaces and incorporation of Green Infrastructure features in new development***

New residential development brings new people to an area, which increases demand on public open spaces. Larger developments which are more self-contained in particular require some on-site public open space. Usable public spaces will be small parks which should have a variety of uses, for example a nature area, seating, a playground and a kick-about area. The aim of the Policy is to achieve on-site public open space provision on sites where a large enough area could be provided to be useable and worthwhile public open space. Where appropriate, applicants will be expected to enter into a legal agreement to ensure that the new public space is properly maintained, by means of a financial contribution to the City Council. If the City Council agrees that on-site provision is not practical, a financial contribution may instead be accepted towards alternative provision in the area.

#### ***Biodiversity enhancement***

Opportunities should be taken to enhance biodiversity and create new habitats in new developments. This will be through incorporation and enhancement of existing features where possible, or through additions such as bird and bat boxes, and landscape planting which helps to maintain and create wildlife corridors. These measures should be proportionate to the size of development proposed.

The Conservation Target Areas project identifies area of significance at county level as areas where conservation action will have the greatest benefit. It is important to restore and manage these habitats for biodiversity and landscape interest. Four Conservation Target Areas are found within Oxford, which are Oxford Meadows and Farmoor CTA, Shotover CTA, Thames and Cherwell at Oxford CTA, Oxford Heights West CTA.

#### ***Green and brown roofs and walls***

Green roofs and walls are simply roofs or walls that have been intentionally covered, in whole or in part, in vegetation. Green and brown roofs and walls can bring many benefits. In an urban area such as Oxford, where there is pressure to make the most of land and where there are areas of flood risk, utilising roof space and walls to bring as many benefits as possible is particularly important. They can introduce valuable habitats to urban areas and are particularly effective in combination with other biodiversity enhancements. The costs associated with providing green/brown roofs will vary according to the specification (including potential structural design implications to take into account any additional weight), but will not add substantial costs to a development scheme. However, green roofs and walls can increase the life expectancy of the roof or wall and to increase development value and roof lifetimes. Green or brown roofs and walls should be designed with consideration of



the particular needs of the scheme. The potential benefits of introducing green roofs and walls include:

- adaptation to climate change through insulation and thermal efficiency;
- supporting biodiversity;
- reducing rainwater run-off;
- aesthetic and amenity value including amenity space for food production or relaxation;
- increasing energy efficiency;
- sustainable drainage- decreasing the quantity or run-off and increasing quality;
- managing air quality;
- reduced noise levels;
- improvements to appearance and resilience of the building;
- creating a microclimate that enhances the operating efficiency of PV panels.

### *Accessibility of public open space and enhancement to the recreational value of the Green and Blue Infrastructure Network*

Oxford possesses a well-used network of footpaths, bridleways and towpaths, which provide valuable public access to Oxford's green spaces, and which often have intrinsic value as an important element of the enjoyment of green and blue infrastructure. They also often form, or have potential to form, an important part of Oxford's off-road walking and cycling routes, including as commuter cycle routes. Where a site is to be developed close to a local footpath, bridleway or towpath, consideration should be given to how development could lead to improvements to and integration with the active travel network.

There is potential to develop the recreational uses of each of the watercourses provided this is done without a detrimental impact on the waterside environment. On the Thames there is the potential to develop modern river sport facilities on land adjoining Donnington Bridge Road, catering for sports such as rowing, canoeing and sub-aqua (site allocation policy X). The Cherwell will continue to be used for informal recreation such as punting.

#### **Policy G9: New and enhanced Green and Blue Infrastructure Network features**

Development proposals affecting existing Green Infrastructure features should demonstrate how these have been incorporated within the design of the new development where appropriate. This applies to protected and unprotected Green Infrastructure features, such as hedgerows, trees and small public green spaces.

All proposals requiring a Design and Access Statement<sup>1</sup> should demonstrate how new or improved green or blue infrastructure features will be incorporated, which should contribute to the following, except where not relevant:

- i) public access
- ii) health and wellbeing, considering opportunities for food growing, recreation and play

<sup>1</sup> The requirement for a Design and Access Statement is set out in the Town and Country Planning (development Management Procedure) (England) (Amendment) Order 2013, and is:

- (a) development which is major development;
- (b) where any part of the development is in a designated area, development consisting of—
  - (i) the provision of one or more dwellinghouses; or
  - (ii) the provision of a building or buildings where the floor space created by the development is 100 square metres or more.

- iii) biodiversity
- iv) creating linkages with the wider Green Infrastructure Network (and the countryside)
- v) climate change (including flood risk and sustainable drainage)
- vi) character/sense of place
- vii) SuDS
- viii) connectivity of walking and cycling routes

Proposals for green or brown roofs and walls will be supported. All major developments that include flat or gently sloping roofs should incorporate green or brown roofs where feasible, which should be designed to be low maintenance, or if they are not, a maintenance plan should be provided.

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, and 10% of that space used as public open space. Where appropriate, applicants will be expected to enter into a legal agreement to ensure that the new public space is properly maintained, by means of a financial contribution to the City Council.

Planning permission will only be granted for developments that affect, or are likely to increase the use of Public Rights of Way if, by planning condition or planning obligation, they safeguard and improve or add to the Public Rights of Way network.

Planning permission will be granted for new water-based recreation facilities or extensions to existing facilities except where they would create unacceptable adverse environmental impacts or effects, or have an adverse effect on the environmental quality of Oxford's waterways and their surroundings.

- a) .