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**OXFORD
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*Biodiversity
including Source
Pathway Receptor
Analysis (SPRA)*

**Oxford Local Plan
2040**

**BACKGROUND
PAPER 8**

This paper addresses the protection of biodiversity including designated sites as well as how the Local Plan will provide new features/spaces for enhancing biodiversity. The paper also incorporates the Source Pathway Receptor Analysis undertaken to support site allocations (included in detail in appendix).

SA Objective(s): *To provide adequate green infrastructure and to conserve and enhance Oxford's biodiversity.*

SEA theme(s): *Landscape, biodiversity, flora, fauna*

1. Introduction

1.1 Oxford's location benefits from a range of internationally, nationally and locally important habitats and species which are important for biodiversity and supporting health and wellbeing of people and the environment as part of the wider green infrastructure network in various ways. Yet biodiversity (the abundance of different kinds of insects, animals, plants and other forms of life in an area¹) is under threat across the UK, as it is globally, from a range of pressures including urban development, pollution and climate change. Conserving and enhancing biodiversity is therefore an important priority for the Local Plan 2040 to address

1.2 This background paper sets out the existing context of biodiversity 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 green infrastructure background paper which addresses several other policies in the Local Plan which are mutually supportive of this topic.

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 and biodiversity policies are summarised below:

NPPF, PPG, any other relevant policy and legislation
National Planning Policy Framework (NPPF) (revised 2023)

¹ <https://www.worldwildlife.org/pages/what-is-biodiversity>

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.

Chapter 15 addresses the natural environment and biodiversity particularly, with **Para 174** stating that plans should: recognise the wider benefits from natural capital and ecosystem services such as trees and woodland, and minimise impacts on and provide net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures. **Para 175** saying that Local Plans should distinguish a hierarchy of designated sites and take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure. **Para 179** stating that local plans should identify, safeguard components of wildlife-rich habitats and wider ecological networks; promote the conservation/restoration/enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify/pursue opportunities for securing measurable net gains for biodiversity.

Supporting biodiversity is closely linked with making provisions for wider green infrastructure, which is referenced in multiple places within the NPPF. More detail on these specific aspects of national policy are summarised in the Green Infrastructure background paper.

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

The online Planning Practice Guidance has a dedicated page² for the natural environment including green infrastructure and biodiversity considerations. The PPG guidance includes responsibilities regarding protected and priority species and habitats; 'proportionate' information and assessment required on biodiversity impacts at all stages of development; local ecology networks and nature recovery networks; application of mitigation hierarchy, net gain metrics, and promotion of woodlands.

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 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 as well as making space for biodiversity.

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',

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

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.

The Environment Act

This legislation received Royal Assent on 9th November 2021³ and is intended to operate as the new framework of environmental protection for the UK and includes powers to set new binding targets, including for air quality, water, biodiversity, and waste reduction.

With regards to biodiversity, the Act includes provisions to strengthen and improve the duty on public bodies to conserve and enhance biodiversity, and also introduces a mandatory requirement for net gains in biodiversity of 10% from most forms of new development approved through the planning system. Applicants will be expected to calculate net gain using the DEFRA Biodiversity Metric and submit a biodiversity gain plan which details the strategy for how biodiversity net gain will be delivered. The expectation is that habitat is secured for at least 30 years via obligations/ conservation covenant. The 10% net gain requirement is expected (at time of writing) to come into effect in January 2024 for major development, with the requirement for smaller sites from April 2024.

The Act also requires the preparation and publication of Local Nature Recovery Strategies to support Nature Recovery Networks by setting out priorities for nature recovery and proposing actions in the locations where it would make a particular contribution to achieving those priorities. These Recovery Strategies are to be prepared by 'Responsible Authorities' as appointed by the Secretary of State, Oxford will fall into the strategy that will cover the Oxfordshire County area.

Natural Environment and Rural Communities Act 2006

Section 40 of this Act places a duty on all public authorities in England and Wales to have regard, in the exercise of their functions, to the purpose of conserving biodiversity.

Conservation of Habitats and Species Regulations 2017 (as amended)

Legislation that previously transposed the European Habitats Directive (European Commission 92/43/EEC) into English law was amended upon exit from the EU in order to transfer functions from the European Commission to the appropriate authorities in England and Wales but otherwise functions broadly the same. The Regulations designate Special Areas of Conservation (SAC) and Special Protection Areas as priority locations for biodiversity conservation. In Oxford, this is the Oxford Meadows SAC, and near Oxford are the Cothill Fen SAC and Little Wittenham

³ <https://www.gov.uk/government/news/world-leading-environment-act-becomes-law>

SAC. The effects of any plan or programme on these designated areas must be assessed via a Habitats Regulations Assessment (HRA).

National Parks and Access to the Countryside Act 1949

Section 21 of this Act enables local authorities to designate Local Nature Reserves where they are of high natural interest in the local context.

Other relevant plans and programmes/strategies

Natural England Green Infrastructure Framework (2023)

The Green Infrastructure Framework was launched by Natural England in 2023⁴. It is a collection of policy tools and documents whose purpose is to assist local planning authorities and developers in 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.

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 According to most recent land use data (2018) from the Ministry of Housing, Communities and Local Government, 7.8% of Oxford’s land use classified as forest, open land or water. Biodiversity in Oxford is supported by a network of different types of green and blue

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

spaces as are covered in greater detail within the Green Infrastructure (GI) background paper and many of these spaces have informal value to biodiversity, be that through areas of wilder vegetation, tree canopy cover and linear features like hedgerows. Supporting our green spaces are the interconnections provided by 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, providing habitat for wildlife and movement channels for it as well as people.

3.2 However, as the GI study noted, there are inequalities in access to a range of green spaces including access to more naturalised spaces. For the Accessible Natural Green Space typology for example, the study noted that there are large gaps in walkable access in Cowley/Temple Cowley in the south and in the North (around Sunnymead), both of which are areas with relatively high levels of deprivation. It is likely that residents in these areas will have to rely on other means of transport (e.g. cars or public transport) if they wish to spend time in wilder areas around the city, reducing their engagement with nature as a result. There are a range of studies⁵ which highlight the various health benefits (particularly mental health such as through stress reduction) that access to nature can provide which these residents could therefore be missing out on.

3.3 The wider GI network includes a number of particularly valuable sites for biodiversity which we refer to collectively in the Local Plan as the 'ecological network'. Oxford benefits from a concentration of rare and valuable habitats that are important refuges for a variety of flora and fauna, including lowland hay meadows, calcareous grassland, alkaline spring fen (among other types of wetland) as well as pockets of woodland and a number of sites have been designated as being of particular importance to ecology including:

The Oxford Meadows Special Area of Conservation (SAC) - an internationally important site of nature conservation importance. The SAC is situated on the broad floodplain of the River Thames to the west and north-west of Oxford. The site is made up of an extensive complex of meadows and pastures which support species-rich grassland vegetation which would once have been widespread on floodplains in lowland England but which is now very rare.

The qualifying features for which the area was designated as a SAC are the presence of Lowland Hay Meadows habitat and the species *Apium repens* (creeping marshwort), which is a very rare plant of seasonally-flooded habitats. The Port Meadow population of this plant remains the largest and most consistently recorded in the UK. Natural England's assessments indicate that the colony of *Apium repens* is under pressure from hydrological changes in the areas, possibly due to deeper, more prolonged and frequent

⁵ For example: <https://www.mentalhealth.org.uk/our-work/research/nature-how-connecting-nature-benefits-our-mental-health>

flood episodes. There is also concern about invasive species moving into the habitat from other parts of the meadow and outcompeting the plant.

Sites of Special Scientific Interest (SSSIs) - These nationally important designated sites include four geological SSSIs and eight ecological SSSIs that are wholly or partly within the city. Four of these SSSIs comprise the Oxford Meadows SAC: Cassington Meadows SSSI; Pixey and Yarnton Meads SSSI; Port Meadow with Wolvercote Common and Green SSSI; and Wolvercote Meadows SSSI.

Local ecological designated sites - Whilst the national and international sites highlighted above benefit from protections that are conferred upon them by legislation outside of the Local Plan, the city includes a number of locally important sites made up of Local Wildlife Sites, Oxford City Wildlife Sites and Local Nature Reserves. These are non-statutory sites of local importance for nature conservation, recognised for having high conservation value, containing rare species or habitats whose protection is bestowed upon them via the policies of the Local Plan rather than national legislation. This means that our policies will be particularly important for these local features which do not reach of the benchmark of higher protections and yet can still be valuable refuges of priority habitats and for local species.

Local Wildlife Sites are designated through criteria that is shared across the county, meanwhile Oxford City Wildlife Sites are sites of importance to the city. Whilst the overall interest of OCWSs has not been considered sufficient to be of county level importance in the same way LWSs are, with appropriate management, many do however have the potential to become LWSs in the future.

3.9 Beyond these formally designated sites within the city, there are also many of types of habitats which have been formally identified as being of importance in other ways. This includes Priority Habitats under Section 41 of the Natural Environment and Rural Communities Act 2006, many of which are included within Conservation Target Areas⁷ which identify the most important areas for wildlife conservation in Oxfordshire, where targeted conservation action will have the greatest benefit.

3.10 As referenced in section 2, a requirement of the Environment Act is the creation of Local Nature Recovery Strategies (LNRS) which the county is leading on for Oxfordshire. In advance of the LNRS, Thames Valley Environmental Records Centre (TVERC) were commissioned to work

⁶ Under Section 41 of the Natural Environment and Rural Communities Act 2006, the Secretary of State is obliged to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England.

⁷ These areas were identified as part of work on Oxfordshire's Biodiversity Action Plan (BAP) developed in response to achieving 'more, bigger, better, joined' habitats as advocated by the Lawton Review. More info here: <https://www.oxfordshire.gov.uk/residents/environment-and-planning/countryside/natural-environment/environmental-policy-and-planning/biodiversity-and-planning>

with a variety of stakeholders across Oxfordshire to develop Nature Recovery Network (NRN) mapping for the county. In essence, the NRN works on the basis that existing protected sites represent best area for wildlife and should form core of the network whilst sites also need to be identified that can help extend and link these sites to support nature recovery and recover the range of multi-functional benefits nature can provide. The mapping has been available in draft format with some refinements taking place during the period of the Local Plan's preparation. The development of the LNRS in future will likely incorporate the NRN mapping and help to define its role, potentially with further refinement on that basis.

3.11 The technical report⁸ on the draft mapping includes the methodology for how different elements of the NRN were defined though this mapping has been subject to further revisions since. The NRN includes a number of core areas across Oxford, aligned with existing designations as well as priority habitat records that TVERC holds. The recovery zone covers a wider area of the city and includes a variety of types of landscape including the Conservation Target Areas and boundaries of flood zones. As noted in the Green Infrastructure background paper, the NRN mapping has been used to help inform the designations of the GI network for the Local Plan policy G1.

3.10 The various types of habitat discussed above are important for supporting a range of wildlife species, many of which are under direct threat from pressures like habitat loss, climate change and pollution. The city has records of a variety of notable species, again as identified under Section 41 of the Natural Environment and Rural Communities Act 2006 referenced above. Species that are present in Oxford and that are protected under the Act include, but are not limited to:

- Hedgehogs
- Water voles
- Dormice
- Swifts
- Slow worms

3.11 It is not only the natural environment which supports some of these different types of wildlife. There are certain species present in the city which have come to rely upon elements of the built environment to support their life cycle. For example, urban birds like swifts which return to the UK every spring to breed and raise young and that have experienced significant declines. Swifts have come to rely on buildings for nesting and will often return to the same nest site each year so the re-development and demolition of buildings, and loss of old nest sites can have further negative impacts. The development process can support the species through careful design and inclusion of artificial roosting features.

⁸ <https://www.wildoxfordshire.org.uk/oxfordshires-nature/oxfordshires-nature-recovery-network>

Feedback from previous consultations

3.12 Feedback from the 2021 Issues consultation was varied reflecting the broad scope of that initial consultation process, full details can be found in the consultation summary report, however some key messages arising from feedback included:

- Concerns over loss of biodiversity in the city and the need for protecting biodiversity for its own sake (not just human benefits)
- Ensuring biodiversity and ecological considerations are a stronger theme through the Local Plan
- Losses of green spaces and ensuing impacts on biodiversity as well as more broadly
- The balance between growth aspirations and biodiversity protection
- The need for development to make a genuine contribution to biodiversity in the city

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 inclusion of mandatory net gain policy of 10% and encouraging ambition to go further. Flag LP approach needs to comply with mitigation hierarchy, and also flag that Local nature Recovery Strategies will be key mechanism for delivering Nature Recovery Network in future.
- Welcome the proposed requirement for applicants to identify protected habitats as part of proposals and use of checklists to secure enhancements on site with prescriptive requirements.
- Flag that policy should clearly distinguish a hierarchy of ecological sites and that these should be identified on proposals map.

Environment Agency:

- Support 10% net gain policy option and use of the Biodiversity Metric to demonstrate this. Support as much net gain onsite as possible with remainder as local as possible.
- Supported approach of requiring applicants to identify and protect existing feature on sites in combination with prescriptive requirements on the types of biodiversity features that should be included in new development. Flag that prescriptive requirements may be more challenging for watercourses thus this policy requirement may not be as workable, though would be happy to support Council in identifying what would be most beneficial. Flag that watercourse are likely to hold most potential for biodiversity in terms of enhancement and should be a priority.
- Ecological network should include the rivers and streams because of their vital role in connecting up sites. Also support the protection of non-designated sites which may be managed/or already have high biodiversity value.

Historic England:

- Would not support the alternative approaches published as part of consultation. Flag that biodiversity policy needs to take account of historic environment – e.g. offsite solutions should not come at cost to archaeological assets. Policy options needed more reference to blue infrastructure. They also advised that mapping biodiversity assets/opportunity areas will help support implementation of policy and being in line with national policy.
- Flag that ecological sites protection policy has opportunity to acknowledge that effective decision making on land use depends on considering natural and historic context in an integrated way.

Oxford Local Nature Partnership:

- Feel policy should seek 20% net gain, 10% is only a minimum necessary to be confident of no net loss. Flag that there is precedent for going beyond 10%, including in commitments as part of the Ox-Cam arc work. 10% represents lack of ambition which is not in keeping with 'Ecological Emergency' discourse.
- Flag that the definition of the ecological network should be expanded to include the areas identified within the Oxfordshire Nature Recovery Network (NRN). Agree it is appropriate to ensure level of protection for sites is proportionate to level of ecological interest but hope Local Plan also considers the role of recovery zone which provide significant opportunities for ecological enhancement. The Local Plan should be clear how its policies with respect to NRN will influence development.

Other comments:

- Concern about policy options duplicating national BNG requirements and making local policy unnecessary
- Preference for going beyond 10% net gain (different targets mentioned e.g. 20%, 30%)
- Feeling that biodiversity requirements should not be put onto areas outside of the local authority
- Need to ensure net gain is not temporary – sufficient wording to deliver in perpetuity
- Need to consider how biodiversity requirements affect brownfield sites
- Concern policy options offer too many 'get outs' which could undermine biodiversity net gain potential, including through allowing offsetting
- Need to consider how policy requirements for biodiversity balances with the scale of housing/economic growth being sought
- Developers also need to think about management of any features put on the site
- Policy requirements around checklist need to be flexible to account for site specifics – to avoid tick box exercise with any biodiversity checklist, also to avoid overlap with BNG requirements

- Policy options aspirations will only work where permitted development rights are addressed e.g. to enforce porous driveways
- Support for protecting network of ecological sites – important for supporting flora and fauna
- Current core strategy high level of protection for local sites should be continued – and this includes protecting wildlife corridors in same way.
- New sites should be designated and existing sites expanded, also connectivity between sites is important.
- Lye Valley is not sufficiently protected and existing development has negatively impacted – special guidance is needed which addresses protection for this area including rewilding and water flow management in surrounding urban areas.

4. Likely trends without a new local plan

4.1 Up until 2036 the currently adopted Local Plan will maintain protection of ecological sites within the city (via LP2036 policy G2). The Local Plan 2036 sets out that development that results in a net loss of sites and species of ecological value will not be permitted and includes specific details of protection/mitigation required for the SAC, SSSIs and Local sites. It also requires a 5% net gain in biodiversity on all major developments proposed on greenfield sites or brownfield sites that have become vegetated, which should be measured through use of a recognised biodiversity calculator. After that, protection will fall to national policy which affords protection to nationally designated sites as well as protections more generally to open space.

4.2 Increasing development, recreational disturbance, ingoing impacts of climate change and pollution will continue to put pressure on biodiversity in and around the city. The Environment Act will require a mandatory 10% biodiversity net gain on all new development and will be set as a condition unrelated to the Local Plan. As such, there is potential that biodiversity could receive increasing support going forwards regardless of the new Local Plan, however opportunities for this net gain to be delivered within the city are likely to be limited.

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

5. Approach to biodiversity in the Local Plan 2040

5.1 Similar to the approach to green infrastructure as outlined in the separate background paper, the policy approach to biodiversity is one of protection of a network of existing spaces, particularly those that are designated as greatest value to species, as well as driving enhancement and new provision through new development. Three interrelated policies in the Local Plan drive this approach as is shown in Figure 1.

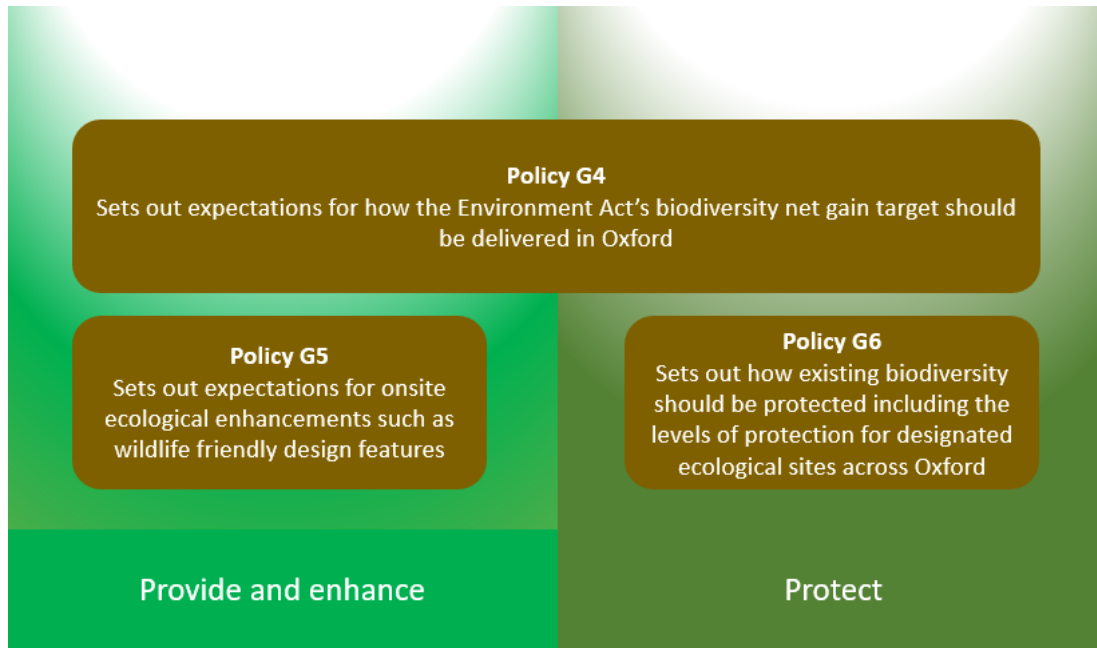


Figure 1: Approach to biodiversity in the Local Plan – policies that address both provision/enhancement of new biodiversity features and protection of existing.

5.2 Naturally, there is a close relationship with the green infrastructure policies (policies G1 to G3) and the benefits of those policies in terms of protection, enhancement and new provision will be mutually supportive of the Local Plan's objectives for biodiversity. Policy G1 and G3 for example drive protection of existing green infrastructure which can include habitats of ecological importance, whilst G2 and G3 also seek enhancement of existing features and the addition of new features. Whilst new green infrastructure is intended to support a range of objectives, because it should be multi-functional, it is also likely to be supportive of biodiversity.

Implementing the ambitions of the Environment Act - Biodiversity net gain

5.3 As was set out earlier in this paper, the new Environment Act includes provisions for biodiversity net gain that sit above any policy in the Local Plan. The 10% biodiversity net gain requirement will therefore be set upon all new development (apart from those limited exceptions built into the legislation) without the need for Local Plan policy. As outlined in the

Preferred Options consultation, however, the Council considers it prudent to embed the requirement into Local Plan policy for a couple of reasons:

- At time of preparation the national requirement has yet to come into effect, indeed during the preparation of the policy the previous target for requirement has already been delayed.
- To use the policy to set out local expectations for how offsite provision should be delivered, in light of expected difficulties with onsite delivery within Oxford based upon previous performance of 5% net gain requirements of Local Plan 2036.

5.4 Policy G4 sets a requirement of 10% net gain consistent with the target required through the Environment Act. This target should be considered as a minimum however, and the policy encourages delivery which exceeds this wherever possible. The preferred options consultation included an alternative policy option of going beyond this requirement (e.g. 15% or 20% net gain) though was clear that a higher target was not considered realistic/deliverable particularly on many smaller, constrained sites. There were responses that expressed a desire for the Council to go with a higher target, and officers are aware of other authorities considering similar, however upon further reflection as will be discussed below, the decision has been taken to maintain the target at 10% for this Local Plan but to reinforce this policy with other policies that seek to support biodiversity in other ways that suit Oxford's constrained context (which are discussed further in paras 5.9 to 5.13).

5.5 It is important to recognise that the 10% net gain requirements of the Environment Act are very specific in how they can be delivered. The requirement is essentially focused on habitat creation (as a proxy for biodiversity) which must be to a certain quantity and quality that conforms with the DEFRA net gain metric, which is the calculation tool applicants are expected to use to assess and demonstrate how they have met the target. For many sites in the city, a higher than 10% target is likely to result in additional proportions of offsetting payments being secured for delivery in other locations, rather than extra habitat creation on sites themselves. This is particularly the case when combined with other policy requirements that have an impact on space. Indeed, current performance of the 5% net gain policy suggests that the 10% target in itself is likely to be challenging enough to deliver onsite in many areas of city.

5.6 The Environment Act requires 'information about the steps taken or to be taken to minimise the adverse effect of the development on the biodiversity of the onsite habitat and any other habitat' be included in the applicant's biodiversity gain plan. It allows for net gain to be delivered offsite where onsite provision is shown to not be possible or for developers to purchase statutory biodiversity credits as a last resort. The DEFRA Biodiversity Metric 4.0 uses a 'Spatial Risk Multiplier' as part of its calculation methodology to incentivise habitat delivery on or close to the development site by reducing the biodiversity value of habitats delivered further away from the development.

5.7 In recognition of the fact that 10% net gain is likely to be challenging and that there is potentially going to be a lot of development that will need to resort to some form of offsite provision, policy G4 sets out the Council's preferred hierarchy for how sites ought to be selected. The policy sets out that in the first instance net gain should be provided onsite. Where this is shown to be unfeasible, the next preference is for this to be delivered within an area in the city that is identified within the Oxfordshire Nature Recovery Network. This second step seeks to keep delivery as local as possible, whilst also aligning delivery with the strategic mapping that has identified the areas of greatest importance/benefit for ecological recovery in the county. After this is shown to be unfeasible, offsite net gain should look more widely at other areas in the city.

5.8 Whilst the city does have larger tracts of green space in places, Oxford's constrained nature means that many of these spaces may still not be suitable for biodiversity net gain that meets the criteria of the DEFRA metric and as such applicants may still find that they need to rely on areas beyond our administrative boundaries. Again, the policy tries to steer offsite towards the NRN in the wider county which is the preference before applicants resort to payment into a statutory biodiversity credit scheme which could ultimately be spent on nature recovery more widely across the country. Looking to the future, whilst there are emerging land banks locally to Oxfordshire that could accommodate net gain, the market is still maturing to catch up with the incoming demand that net gain legislation is likely to generate thus it is feasible that new opportunities for local delivery of offsite solutions to facilitate development could emerge over the lifetime of the plan. Equally, ongoing work is being undertaken by the City Council to identify net gain opportunities on land within the city which could accommodate offsite needs in future.

Further supporting onsite biodiversity including priority species

5.9 Whilst biodiversity net gain will be an important mechanism for delivering new habitat for biodiversity in future, in light of the challenges of onsite delivery identified above, it is important that the Local Plan utilises other mechanisms to deliver for nature. This is also important because the DEFRA metric primarily focuses on habitat as a way to support species, whereas there are other important features that support wildlife which are not recognised/incentivised by it⁹. For example, species-based features like bird and bat boxes are not included within the metric but can be just as valuable to more urban wildlife.

5.10 As was described in section 3, Oxford hosts a range of important species and these have varying environmental needs in terms of space, shelter, and feeding. Our urban context and the development processes that happen throughout the city can negatively impact these species in different ways, like fragmenting landscapes, introducing pollution, removing food sources and

⁹ More info; <https://www.local.gov.uk/pas/topics/environment/biodiversity-net-gain-local-authorities/biodiversity-net-gain-faqs>

spaces to rest. In some cases though, development can positively support these species too, particularly for the wildlife that have come to rely on areas of the urban environment to flourish, e.g. buildings for roosting.

5.11 The planning process is an important mechanism for mitigating negative impacts on existing species where they could arise but also for supporting developers to maximise on opportunities to positively support species in other ways. Whilst policy G6 includes requirements for ensuring that important species on a site are properly identified and impacts on them mitigated in accordance with the mitigation hierarchy, policy G5 sets out the additional enhancement actions the Council expects to see to support onsite biodiversity regardless of whether 10% habitat net gain has been provided onsite or not.

5.12 The biodiversity points list has been devised to offer applicants as much flexibility as possible to respond to the specifics of their site. The list includes a number of potential enhancement features which have been chosen for their suitability in supporting known species in Oxford and that are generally not covered by the considerations of the DEFRA biodiversity metric. Applicants are required to select from a certain number of features depending on the scale of the development from three different 'pots'. Some features (those in first pot) are mandatory and form a minimum provision, whilst the other two pots address needs for shelter/movement and for other supporting landscape features. The intention is for this list to be kept live and added to in the future, so whilst the initial list is included in the appendix to the Local Plan, future versions will be published via the Technical Advice Note along with additional guidance on how they should be implemented in a scheme.

5.13 Alongside the minimum standards for green surface cover on a site as set out in policy G3 (and discussed in the green infrastructure background paper), policy G5 is intended to ensure that overall new development will bring forward a variety of additional spaces for nature. The combination of these policies is considered to be a more bespoke but pragmatic approach response to the constraints of many sites in Oxford that is in keeping with the spirit of going beyond the minimum 10% biodiversity net gain. It also means that, even if the Environment Act's 10% net gain cannot be delivered onsite, the Local Plan can help ensure direct onsite delivery of features to support nature throughout the city.

Protecting designated sites

5.14 Section 3 details the extensive network of designated ecological sites in the city which have either international, national or local importance for biodiversity. Policy G6 sets out how the Local Plan will protect the hierarchy of ecological sites for the future of the city. Because the various sites have been designated for a range of qualities, they are susceptible to different sorts of impacts from new development and so the policy acts as an overarching protection

from adverse impacts and requires appropriate mitigation which will need to be informed by relevant data sources such as Natural England's SSSI Impact Risk Zones mapping¹⁰.

5.15 As noted in section 3, the Local Plan plays a particularly important role in assigning protections to local sites of importance for nature conservation which do not benefit from the same statutory protection afforded to sites like the SAC and SSSIs. A comprehensive review of the city's local sites was conducted with Thames Valley Environmental Records Centre (TVERC) as part of the background work for the current Local Plan 2036. This work included the creation of a robust set of selection criteria which were used to assess sites in the city for designation as Oxford City Wildlife Sites (OCWSs) which would form a secondary tier of protected local sites of importance to Oxford, sitting below Local Wildlife Sites that are of county level importance.

5.16 As is documented in the review paper¹¹, the extensive piece of work entailed a review of 68 sites with potentially significant wildlife value and follow up surveys for more data on 26 sites. Using the specially created site selection criteria for the review, a panel comprising of representatives from organisations including BBOWT, Natural England, TVERC, Oxford City Council and Oxford Ornithological Society was brought together to determine which sites warranted designation. They considered 41 sites, and determined that 29 sites met the criteria for selection as Oxford City Wildlife Sites.

5.17 The extensive nature of the review undertaken for the last Local Plan means that the sites identified as OCWS are considered to still be of importance for continued protection in the new Local Plan. However, a number of sites were not taken forward for designation at the time for varying reasons such as there being a lack of available survey data, or because sites were put forward for LWS designation but were ultimately not deemed to meet the criteria instead put forward for future designation as an OCWS. Officers have worked with TVERC to review data availability for all of the local sites in the city, including these sites that were not previously designated, to identify any sites that ought to be considered for designation again this time. To focus resources, a candidate list was prioritised which mainly focussed on the sites which were not resolved during the LP2036 review mentioned above, along with several additional spaces that were considered to have ecological potential that might warrant protection through the Local Plan.

5.18 Throughout 2023, officers from TVERC as well as the Council's ecologist have undertaken surveys on a number of these sites to update baseline biodiversity information. Challenges in gaining access permissions has resulted in some sites being unable to be surveyed during the 2023 season. The site selection panels which determine whether a site meets the criteria for designation as an LWS are convened in the spring each year and as such any sites

¹⁰ Available online: <https://naturalengland-defra.opendata.arcgis.com/datasets/sssi-impact-risk-zones-england/explore>

¹¹ Oxford City Wildlife Sites review 2017: https://www.oxford.gov.uk/downloads/download/1053/013_grs_-_green_setting

that warrant LWS designation will be considered in spring of 2024. The OCWS site selection panel will convene after this in order to consider sites that meet OCWS criteria as well as any which fail to meet standard of LWS but could warrant city-level designation. All sites being considered through the 2023 review are additionally protected as part of the GI network should they fail to meet criteria for additional protection as part of the ecological network.

5.19 The Council is highly aware from previous engagement and ongoing experience through the development management process of concerns around the sensitivities of the Lye Valley to impacts of new development. The key concern for this area is changes to surface and groundwater flows from new development which could impact upon the site. The protections for ecological sites addressed within policy G6 (Protecting Oxford's biodiversity including the ecological network) relates to all the designated sites including the SSSIs (e.g. Lye Valley) and the Oxford Meadows SAC and is intended to ensure development mitigates any potential adverse effects. We specifically highlight the sensitivities for this location within supporting text to make the issues of water flows clear for applicants to know they will need to respond to.

5.20 The Preferred Options consultation included an option for a bespoke policy addressing Lye Valley, which would be informed by a hydrogeological study of the area. This is important for ensuring that any additional planning requirements are evidence based and justified through an appropriate understanding of the complex hydrological conditions in the area. The study was commissioned in late 2022 and is ongoing though the complexities of the work and the ongoing monitoring informing it (expected to run until the end of this winter) mean that the results are not yet finalised to inform more specific requirements for mitigation of impacts on that location through the Local Plan itself. Policy G6 therefore acts as the overarching protection for the Lye Valley and this will be used as the hook onto which the Council will supplement separate guidance (in the same way that we do at present with Technical Advice Notes that set out additional guidance on how to interpret/address requirements of Local Plan policies). The hope is for this extra guidance to be published as soon as the findings of the study are complete and can inform the specific mitigations we would want to see (which may be in advance of the new Local Plan's adoption).

[Additional work informing Local Plan 2040 allocations](#)

5.21 The Local Plan allocates a number of sites for development, these policies are set out in chapter 8. The majority of these sites are carried over from the Oxford Local Plan 2036 with several additional smaller sites. The process of developing the site allocations was informed by input from a range of expertise within the Council, this included a review of the emerging allocations from the Council's ecologist as well as tree officers. This input helped to identify where there could be ecological sensitivities which would need to be addressed by any new development. As a number of the sites are carried over from the previous Local Plan, officers also drew upon ecological assessments undertaken for a number of these sites previously.

Where sensitivities were identified (e.g. potential for parts of site to be used as bat corridors, potential for sensitive invertebrates or other species), the allocations flag the potential for these and include details of specific mitigation requirements that applicants will need to follow.

5.22 Separately, a Source Pathway Receptor Analysis (SPRA) has been completed in order to assess any potential impacts from development on the allocations on nearby SSSIs and a copy of this is included in the Appendix. The analysis looked at available data on existing condition of the ecological sites, considered the potential hazards arising from development and how these could impact the sites (potential pathways). The findings were used to help inform any additional mitigation needed on the site allocations to protect the SSSIs, mainly these were in relation to mitigating against changes in flows of water, impacts on surface and groundwater, implementation of buffer measures during construction phases. See appendix for full details including mitigations identified for specific allocations.

5.23 Additionally, the Council is required to complete a Habitats Regulations Assessment (HRA) in order to test if a plan or project proposal could significantly harm the designated features of the Oxford Meadows Special Area of Conservation (SAC). The Council needs to consider the impacts of development in Oxford 'alone or in-combination' with other plans and programmes. This has been undertaken in ongoing consultation with Natural England who have flagged concerns about air quality and had emphasised the need to undertake air quality modelling in their representations at the Regulation 18 consultation. The HRA process also consider other potential impacts such as recreational pressure which has also been assessed. Reference should be made to the HRA for further details.

Conclusions

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

Policy G4 – Delivering mandatory net gains in biodiversity

Planning permission will only be granted for development where it delivers a minimum of 10% biodiversity net gain, as measured by the latest version of the DEFRA Biodiversity Metric, unless exempted by national legislation or guidance. This must be achieved in all sections of the Biodiversity Metric relevant to that development (e.g. habitat, hedgerow, and river units). Delivery that exceeds 10% net gain is strongly encouraged wherever possible.

A copy of the completed metric spreadsheet must be submitted in support of planning applications. All metrics must be completed in line with the requirements set out in the relevant DEFRA User Guide, Technical Supplement, and best practice principles.

Applications are expected to prioritise the delivery of net gain onsite.

Where this is not feasible, delivery of off-site biodiversity enhancements will be expected to accord with the following hierarchy of preference:

- Land in Oxford identified for its ecological potential within the Oxfordshire Nature Recovery Network or the future Local Nature Recovery Strategy
- Elsewhere within the Oxford boundary
- Elsewhere within the Nature Recovery Network in wider Oxfordshire

Where offsite measures are proposed, these should focus on delivering high-quality priority habitats. Any offsetting proposed in alternative locations will be considered on a case-by-case basis.

Where it is robustly justified that the above cannot be achieved, purchase of biodiversity units from habitat banks elsewhere or statutory credits may be accepted as a last resort.

All onsite and offsite measures must be delivered through a biodiversity management and monitoring plan which must cover a period of at least 30 years in line with the national legislation requirements.

Policy G5 – Enhancing onsite biodiversity in Oxford

All extensions and new-build development should seek to incorporate ecological enhancements into landscaping or building facades/roof spaces which are tailored to the priority habitats and protected species present within the site and surrounding area. Opportunities to create, expand, enhance or link ecological networks are particularly encouraged.

All new development must deliver a minimum number of ecological enhancements selected from the Council’s Ecological Points List to achieve the required point total. The number of points required is as follows:

Type of application	Pot 1 requirements	Pot 2 requirements	Pot 3 requirements
Householder	All mandatory features (where applicable)	N/A	N/A
Minor		1	1
Major		2	2

Seeking advice from a suitably qualified ecologist on the ecological enhancements selected is encouraged. The chosen measure(s) will need to be clearly highlighted on landscape and elevation plans and/or within the design and access statement.

In addition, all new tree and soft landscaping must incorporate an element of native planting, and where non-native planting is proposed this should comprise species beneficial to UK pollinators and/or chosen to be well-adapted to future changes in climate. Proposals incorporating invasive plant species will be refused.

All maintenance and management requirements of the proposed enhancements must be specified within planning applications and secured via planning conditions.

Policy G6 – Protecting Oxford’s biodiversity including the ecological network

Development proposals must seek to conserve and enhance biodiversity including safeguarding the key sites of Oxford’s ecological network.

Proposals with a reasonable likelihood of adversely impacting semi-natural habitats or protected species on or immediately adjacent to the site, will only be permitted where:

- a) They have been informed by targeted ecological surveys, completed prior to determination of the planning application, unless explicitly agreed with the Council; and
- b) Any impacts identified have been satisfactorily addressed in the design of the development in accordance with the mitigation hierarchy; and
- c) Any impacts on species or habitats that are of city or county importance, in line with the criteria for LWS or OCWS designation, have been addressed in accordance with requirements for proposals affecting locally designated sites (criteria d and e below).

Internationally and nationally designated sites

Development will not be permitted that would have an adverse effect on the integrity of the Oxford Meadows Special Area of Conservation (SAC) or an adverse effect on any Site of Special Scientific Interest (SSSI).

In addition, development will not be permitted within the SAC or a SSSI except where it is related to and required for the management, maintenance or enhancement of the qualifying features of the site.

Development proposed on land immediately adjacent to the SAC or any SSSI must be designed with a buffer to that site that both helps to prevent adverse effects during the construction and operational phases of the development and delivers habitat supporting the interest features of that site.

Locally designated sites

Development that would have an adverse effect on a Local Nature Reserve (LNR), Local Wildlife Site (LWS) or Oxford City Wildlife Site (OCWS) will only be permitted where:

- d) There is an exceptional need for the new development that outweighs any adverse effect from loss of habitat or harm to any feature of interest for which the site was selected, and this need cannot be met by development on an alternative site with less biodiversity interest; and
- e) Satisfactory mitigation and compensation onsite or sufficiently local to preserve the feature of interest can be delivered and has been agreed with the Council.

The same level of protection will be afforded to proposed LWS and proposed OCWS (prior to the conclusion of the selection process).

Where proposals result in habitat loss within a LNR or LWS, they must retain and enhance the interest features for which the site was selected.

Other features of interest

Development should seek to retain and enhance habitats and species of principal importance for biodiversity wherever possible.

Appendix - Source Pathway Receptor Analysis (SPRA)

1 Introduction

1.1 The SPRA is a method to understand the linkages between potential hazards and risks to a SSSI. For a risk to arise there must be a 'hazard' called a source (e.g. the proposed development sites increasing visitors, causing surface water run off etc.), a 'receptor' (SSSIs) and a pathway between the source and the receptor (i.e. air, water, visitors). A hazard does not always lead to a detrimental impact but, if identified, it shows there is a possibility of detrimental impact occurring. The nature of the impact depends on the type of hazard and the characteristics of the SSSIs.

2 SPRA METHODOLOGY

2.1 In the preparation of the SPRA, the Council developed and followed the methodology below.

Methodology stages	Description
1. Develop list of SSSIs within Oxford's boundaries and those near the city boundary.	Information sourced from previous assessments and current Natural England databases.
2. Understanding of SSSI conservation objectives and current status	Desk study with information from Natural England (via previous SPRAs) establishing: <ul style="list-style-type: none">• what is being protected via each site's designation;• known sensitivities or pathways to negative impacts; and• known trends on either improvement or decline.
3. Identify potential pathways by which negative impacts associated with the 2040 Local Plan might affect SSSIs	Ecological expertise (Natural England, via previous SPRAs) has been used to focus only on those pathways that are verifiable as important links between land-use and development and the SSSIs.

<p>4. Identify whether potential pathways are likely to have a significant effect on SSSIs</p>	<p>Information from Natural England on known sensitivities of SSSIs. Map based data comprising of impact pathways by area, distance from SSSI and type of development proposed was overlaid on site allocations and the potential level of impact was determined based on the location. Based on the status of the sites and expert knowledge from planners, Natural England and Environment Agency on how impacts and pathways might affect sites in a worst-case scenario.</p>
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2.2 The SSSIs assessed were:

Table 2: Assessed SSSIs	
Within Oxford City Council boundary	Outside of Oxford City Council boundary
Pixey and Yarnton Meads	Wytham Woods
Wolvercote Meadows	Sidlings Copse and College Pond
Port Meadow with Wolvercote Common and Green	Brasenose Wood and Shotover Hill (partially within city boundary)
Hook Meadows and Trap Grounds	
New Marston Meadows	
Magdalen Grove	
Magdalen Quarry	
Rock Edge	
Lye Valley	
Littlemore Railway Cutting	
Iffley Meadows	

2.3 The Council carried out an initial screening of each of the sites in the Preferred Options Document considering;

- Comments from Natural England on the Preferred Options;
- Comments from Environment Agency on the Preferred Options;

- Whether the site was proposed for allocation;
- Whether the site fell within an 'easy walking distance' from any SSSI (600 metre buffer) that has been identified as being sensitive to recreational pressure;
- Whether the site, regardless of distance, could affect water tables or the quality of water of the rivers Thames and Cherwell

2.4 A number of the preferred options sites were taken forward as allocations in the emerging 2040 Local plan, based on their availability during the plan period and suitability for the preferred uses. Of these, the sites considered to have a potential impact upon a SSSI and therefore worth assessing are:

Site	Proposed development sites
SPE1	Former Government Buildings and Harcourt House
SPE2	Land Surrounding St Clement's Church
SPE3	Headington Hill Hall and Clive Booth SV
SPE4	Oxford Brookes Marston Road Campus
SPE6	Churchill Hospital Site and Ambulance Resource Centre
SPE7	Nuffield Orthopaedic Centre, Windmill Road
SPE14	Slade House
SPS16	Redbridge Paddock
SPS8	Bertie Place Recreation Ground
SPCW2	Canalside Land, Jericho
SPS14	Former Iffley Mead Playing Fields
SPS13	Land at Meadow Lane
SPCW3	Land off Manor Place
SPN1	Northern Gateway

3 SPRA results

3.1 The SPRA was developed in a table to ensure that the potential cumulative impacts on each SSSI could be comprehensively assessed. This is contained at the end of this

appendix. This section contains a summary of the findings which are as follows:

- None of the proposed development sites fall within an SSSI, and there will therefore be no direct physical disturbance to the SSSIs. However, sites SPE6 (Churchill Hospital Site), and SPCW3 (Land off Manor Place) are adjacent to SSSIs and would be expected to include a buffer zone during construction to ensure SSSI land is not disturbed, and other mitigation measures as required by the site allocation policy.
- None of the proposed development sites affect **Hook Meadows and Trap Grounds, Wytham Woods or Sidling's Copse and College Pond SSSIs**.
- The Council undertook a Habitats Regulation Assessment (HRA) in relation to the Oxford Meadows SAC. **Pixey and Yarnton Meads, Wolvercote Meadows and Port Meadow with Wolvercote Common and Green SSSIs** all form part of the SAC. Although they are included in the SPRA table, the HRA supersedes the SPRA recommendations. See the Habitats Regulation Assessment for more information.
- **New Marston Meadows SSSI** is sensitive to changes in the flows and quality in the River Cherwell due to being on its flood plain. The SPRA recommended that development proposals for site SPE1 (Government Buildings and Harcourt House Site, SPE2 (Land Surrounding St Clement's Church), SPCW4 (Winchester Road, Banbury Road and Bevington Road), SPCW3 (Land off Manor Place), and SPE4 (Oxford Brookes Marston Road Campus). The design of the proposals should ensure no impact on the River corridor and SSSI.
- **Magdalen Grove SSSI, Magdalen Quarry SSSI, Rock Edge SSSI and Littlemore Railway Cutting SSSI** are geological sites that are only sensitive to direct land take. No land take will result from any of the proposed development sites and there is therefore no direct impact.
- **Lye Valley SSSI** is sensitive to changes in the surface and groundwater of the area including both the flows and the quality of the water. Erosion of the watercourses upstream of the two SSSIs can also have an impact on them. The SPRA indicated that sites SPE6 (Churchill Hospital), SPE7 (Nuffield Orthopaedic Centre), and SPE14 (Slade House)
 - involve the redevelopment or partial redevelopment of existing sites and provide the opportunity to reduce water run-off in the area;
 - need assessment of groundwater and surface water.
- Site SPE6 (Churchill Hospital) is directly adjacent to **Lye Valley SSSI**. Development proposals should include sufficient buffering to ensure that there is no disturbance of SSSI land during the construction phase, along with mitigation measures as required by the site allocation policy.
- **Iffley Meadows SSSI** is sensitive to changes in the flows and quality of water in the two arms of the river Thames due to being in its floodplain. The SPRA recommends that sites

SPS16 (Redbridge Paddock), SPS8 (Bertie Place Recreation Ground), SPS14 (Former Iffley Mead Playing Field) and SPS13 (Land at Meadow Lane):

- provide Sustainable Urban Drainage Systems;
- may need to be accompanied by a ground water study depending on the final development proposals for the sites

4 Policy actions

4.1 Each of the mitigation measures referred to above will be included within the wording of the relevant site allocation policy within the proposed submission document.

4.2 Allocated sites that are within a comfortable walking distance (600m) of SSSIs that are particularly sensitive to recreational pressure or declines in air quality during construction or operational phases, will have their proximity highlighted.

Source Pathway Receptor Analysis of SSSI'S and Proposed Development Sites

SSSI*	Condition	Designation features	Site Allocation	Permitted Uses	Direct Impact	Indirect Impact: Broad Impact Pathway			Potential cumulative Impact	Mitigation or recommendation
					Physical disturbance	Air	Water	Other pathways		
Pixey and Yarnton Meads	100% favourable	MG4 Alopecurus pratensis - Sanguisorba officinalis grassland	SPN1 – Northern Gateway	Residential incl. poss. employment and community facilities.	None.	Volume traffic relates mainly to proximity to A34. However, some onsite employment uses could have an impact on the SSSI. Potential effect from volume traffic dust during construction.	Surface water run-off. Water contamination. Alteration of water tables.	Potential greater number of visitors increasing recreational pressure.	Part of Oxford Meadows SAC. Sensitive to air quality and changes in hydrology Within walking distance to a proposed housing site (min 122 new homes) which could potentially increase visitor pressure.	<p>Development proposals should be accompanied by: Assessment of ground water and surface water flows.</p> <p>If employment proposed as part of Site SPN1, an assessment of the employment use on air quality to demonstrate no impact on SSSI.</p> <p>All proposals should minimise impact on air quality during construction phase.</p> <p>The Council is undertaking a Habitats Regulations Assessment in relation to this SAC and will screen a large number of sites including those listed in here.</p>

SSSI*	Condition	Designation features	Site Allocation	Permitted Uses	Direct Impact	Indirect Impact: Broad Impact Pathway			Potential cumulative Impact	Mitigation or recommendation
					Physical disturbance	Air	Water	Other pathways		
Wolvercote Meadows	100% favourable	MG4 Alopecurus pratensis - Sanguisorba officinalis grassland	SPN1 – Northern Gateway	Residential incl. poss. employment and community facilities.	None.	Volume traffic relates mainly to proximity to A34. However, some onsite employment uses could have an impact on the SSSI. Potential effect from volume traffic dust during construction.	Surface water run-off. Water contamination. Alteration of water tables.	Potential greater number of visitors increasing recreational pressure.	Part of Oxford Meadows SAC. Sensitive to air quality and changes in hydrology Within walking distance to a proposed housing site (min 122 new homes) which could potentially increase visitor pressure.	Development proposals should be accompanied by: Assessment of ground water and surface water flows. If employment proposed as part of Site SPN1, an assessment of the employment use on air quality to demonstrate no impact on SSSI. All proposals should minimise impact on air quality during construction phase. The Council is undertaking a Habitats Regulations Assessment in relation to this SAC and will screen a large number of sites including those listed in here.

Port Meadow with Wolvercote Common and Green	98.72% favourable	1.28% unfavourable recovering	Population of schedule 8 plan - Apium repens, Creeping Marshwort; MG11 - Festuca rubra - Agrostis stolonifera - potentilla anserina grassland; MG13 Agrostis stolonifera - Alopecurus geniculatus grassland; MG6 - Lolium perenne - Cynosurus cristatus grassland	SPN1 – Northern Gateway	Residential incl. poss. employment and community facilities.	None	Air quality impacts relate mainly to the proximity to the railway line. However, some employment uses on site 193 could have an impact on the SSSI. Potential effect from volume traffic and dust during construction of all sites.	Surface water run-off. Water contamination Alteration of water tables.	Potential greater number of visitors, occupiers and users of the development and from neighbouring sites.	Part of Oxford Meadows SAC. Sensitive to air quality and changes in hydrology Within walking distance to proposed housing sites (some 280 new dwellings) would increase visitor numbers and could increase recreational pressure on the SAC.	Development proposals should be accompanied by: Assessment of recreational pressure; Assessment of ground water and surface water flows. If employment proposed as part of SPN1, an assessment of the employment use on air quality. All proposals should minimise impact on air quality during construction phase. The boatyard on site SPCW2 may need some sealed areas if fuels, paints and chemicals are being used.
				SPCW2 - Canalside Land	Mix to include residential, community centre and boatyard.						There is potential mitigation for SPN1 by providing open recreational space to the rear of the proposal. However, whether this mitigation is effective would depend on its detailed design and the results of a visitor survey linked to the Habitats Regulation Assessment. The Council is undertaking a Habitats Regulations Assessment in relation to this SAC and will screen a large number of sites including those listed in here.

New Marston Meadows	100% favourable	MG13 - <i>Agrostis stolonifera</i> - <i>Alopecurus geniculatus</i> grassland; MG4 - <i>Alopecurus pratensis</i> - <i>Sanguisorba officinalis</i> grassland; S28 - <i>Phalaris arundinacea</i> tall herb fen; S5 - <i>Glyceria maxma</i> swamp; S6 - <i>Carex riparia</i> swamp; S7 - <i>Carex acutifrrmis</i> swamp	SPE1-Former Government Buildings and Harcourt House	Mix incl. student accommodation/residential and academic institutional.	None.	Potential effect from volume traffic and dust during construction of all sites.	Surface water run-off. Water contamination.	None.	SSSI sensitive to changes in the flows and quality of water in the river Cherwell due to being in its floodplain.	Development proposals should reduce surface water runoff in the area and should be accompanied by an assessment of groundwater and surface water. Development proposals must incorporate sustainable drainage with an acceptable management plan.
			SPE2 – Land Surrounding St Clements Church	Residential/student accommodation						
			SPE3 – Headington Hill Hall and Clive Booth SV	Mixed use comprising Academic, research, student accommodation.						
			SPE4 - Oxford Brookes Marston Road Campus	Mixed use comprising Academic, research, student accommodation.						
			SPCW3 - Land off Manor Place	Student accommodation.						
			SPE7 - Nuffield Orthopaedic Centre	Hospital and medical research.						
			SPCW3 - Land off Manor Place	Student accommodation.						
Hook Meadows and Trap Grounds	100% unfavourable no change	MG23 - <i>Juncus effusus/acutiflorus</i> - <i>Galium palustre</i> rush pasture; MG5 - <i>Cynosurus cristatus</i> - <i>Centaurea nigra</i> grassland; MG8 - <i>Cynosurus cristatus</i> - <i>Caltha palustris</i> grassland	None.					SSSI sensitive to changes in hydrology and air quality (being close to the railway line).	None.	

Magdalen Grove	100% favourable	FB - Quarternary of the Thames	None.		None.	None.			SSSI is a geological site only sensitive to direct land take. No land take involved in any of the site allocations.	Avoid development on site.
Rock Edge	100% favourable	ED - Oxfordian	None		None.	None.			SSSI is a geological site only sensitive to direct land take. No land take involved in any of the site allocations.	Avoid development on site.
Lye Valley	100% unfavourable recovering	Invertebrate Assemblage; M13 - Schoenus nigricans - Juncus subnodulosus mire; M22 - Juncus subnodulosus - Cirsium palustre fen meadow	SPE6 - Churchill Hospital	Mainly hospital and medical related uses.	Site SPE6 is adjacent to SSSI and could be a source of disturbance during the construction phase.	None.	Surface water run-off. Water contamination. Alteration of water tables.	None.	Sensitive to changes in the surface and groundwater of the area, including both the flows and quality of the water. Erosion of the watercourses upstream of the two SSSI sites can also have an impact on them. Any significant development proposals on the eastern side of the allocation area would need to consider potential impacts on hydrology within the Lye Valley where important peat deposits are preserved. No direct land take involved in any of the site allocations. However, a mechanism should be put in place to ensure that SSSI land is not disturbed during construction phase of adjacent sites (Site SPE6)	AI proposals involving redevelopment or partial redevelopment of existing sites and provide the opportunity to reduce water run-off in the area. Assessment of groundwater and surface water impacts needed at design stage for all sites. Buffer zone during construction phase at site SPE6 to ensure SSSI land is not disturbed.
			SPE7 - Nuffield Orthopaedic Centre	Hospital and medical research.						
			SPE14 - Slade House	Residential.						
Littlemore Railway Cutting	100% unfavourable declining	ER - Oxfordian	None						Geological site only sensitive to direct land take. No land takes involved in the proposals.	

Iffley Meadows	100% unfavourable recovering		Nationally scarce plant - Fritillaria meleagris, Fritillary; MG10 - Holcus Lanatus - Juncus effusus; MG4 - Alopecurus pratensis - Sanguisorba officinalis grassland; MG9 - Holcus lanatus - Deschampia Caespitosa	SPS8 - Bertie Place Recreation Ground	Residential.	None.	None.	Surface water run-off. Water contamination.	None.	This site is sensitive to changes in the flows and quality of water in the two arms of the river Thames due to being in its floodplain.	Sustainable Urban Drainage required for all sites. Potential requirement of ground water assessment depending on the final proposals for the sites.
				SPS16 - Redbridge Paddock	Residential.						
				SPS14 - Former Iffley Mead Playing Field	Residential.						
				SPS13 – Land at Meadow Lane	Residential						
Wytham Woods	50% favourable	50% unfavourable recovering	Populations of nationally scarce butterfly species - Strymonidia pruni, Black Hairstreak; Vascular plant assemblage; CG3 - Bromus erectus lowland calcareous grassland; CG5 - Bromus erectus - Brachypodium pinnatum lowland calcareous grassland; W10 - Quercus robur - Pteridium aquilinum - Rubus fruticosus woodland; W8 - Fraxinus excelsior - Acer campestre - Mercurialis perennis woodland	None					Air quality may be an issue being so close to the A34. No sites proposed for allocation affect this site.	None.	
Sidlings Copse and College Pond	66.67% favourable	16.67% unfavourable recovering	Nationally scarce plant - Epipactis phyllanthes, Green flowered Helleborine; Population of schedule 8 plant - Himantoglossum hircinum, Lizard Orchid; CG3 - Bromus erectus lowland calcareous grassland; M13 - Schoenus nigricans - Juncus subnodulosus mire; S26 - Phragmites australis - Urtica dioica tall-hern fen; U1e - Festuca ovina - Agrostis capillaris - Rumex acetosella lowland acid grassland; W10 - Quercus robur - Pteridium aquilinum - Rubus fruticosus woodland	None	None	None	None	Potential greater number of visitors increasing recreational pressure.	This site is sensitive to recreational pressure from Oxford City, with footpaths from the district linking up to the site. There are already cases of vandalism on site, and further development will increase both recreational pressure and other damaging activities. There are no proposed development sites within walking distance to the SSSI.	Although the sites allocations in the Local Plans are unlikely to have a directly detrimental effect on the SSSI, other Council proposals could. E.g., the Barton Area Action Plan contains a policy requiring the submission and implementation of a plan for mitigating any potential adverse impact as a result of increased recreational pressures from development.	

Brasenose Wood and Shotover Hill	20% favourable	60% unfavourable recovering	Invertebrate Assemblage; Populations of nationally scarce butterflies - Strymonidia pruni, Black Hairstreak; H1 - Calluna vulgaris - Festuca ovina heath; U1 b, c, d, f - Festuca ovina - Agrostis capillaris - Rumex Acetosella grassland; W10 - Quercus robur - Pteridium aquilinum - Rubus fruticosus woodland; W16 - Quercus spp. - Betula spp. - Deschampia flexuosa woodland; W8 - Fraxinus excelsior - Acer campestre - Mercurialis perennis woodland	SPE14 - Slade House	Residential, employer linked housing, improved healthcare facilities.	None	None.	None.	Potential greater number of visitors increasing recreational pressure.	Sensitive to recreational pressure. Within walking distance (600m) from proposed residential and employment usage which would potentially increase pressure on this site.	Development proposals should be accompanied by: Assessment of recreational pressure from site SPE14 once proposals are known. Alternatively, and subject to agreement with Natural England, the proposals could submit and implement a plan for mitigating any potential adverse impact as a result of increased recreational pressures from development.
* All proposals for sites which would have a potential effect on a SSSI should tailor their mitigation measures around the specific conservation objectives for that SSSI.											

