Biodiversity and Planning in Buckinghamshire









Berkshire
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THE wildlife TRUSTS

BUCKINGHAMSHIRE COUNTY COUNCIL

Buckinghamshire & Milton Keynes Environmental Records Centre

MILTON KEYNES COUNCIL

NATURAL ENGLAND

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WHO IS THIS GUIDANCE FOR?

This guidance should be helpful if you are:

- a planning officer in either policy or development management;
- writing a Neighbourhood Plan;
- going to be submitting a planning application;
- wanting to know more about the wildlife of Buckinghamshire and its conservation.

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Back cover images: Slow worm by Andy Fairbairn; green-winged orchid by Paul Lane; silver-washed fritillary by Don Sutherland.



Chilterns Area of Outstanding Natural Beauty
(Tina Stallard/Natural England)

1a About this guidance

Protecting and enhancing Buckinghamshire's* biodiversity

The Berks, Bucks & Oxon Wildlife Trust (BBOWT), Buckinghamshire County Council, Milton Keynes Council, Natural England and the Buckinghamshire & Milton Keynes Environmental Records Centre (BMERC) have worked in partnership to produce this document, in consultation with the wider biodiversity partnership, to help those involved in planning in Buckinghamshire ensure that development within the County protects and enhances its valuable local biodiversity.

Buckinghamshire supports a diversity of wildlife habitats and species, ranging from wood-pasture and parkland to floodplain grazing marsh and chalk rivers, as well as the chalk grasslands and beech woods in the Chilterns to pockets of rare fen and heathland. However less than 8000 ha of Buckinghamshire retains any special value for wildlife, around 4% of the total land area. Buckinghamshire has over 100 legally protected species records and around 200 species recognised as being a priority for conservation.

Some of the important sites and species in Buckinghamshire are protected by legislation, others by planning policy. National and local planning policy identifies the need to protect existing biodiversity and deliver enhancements to achieve a net gain in biodiversity. Here we bring together legislation and planning policy, alongside information on the biodiversity of Buckinghamshire to help identify when and where biodiversity will need to be protected by the planning system, as well as how to identify opportunities to deliver biodiversity enhancements in the most effective way.



Amethyst deceiver (Terry Longley/seeing.org.uk)

Otter (Helen Walsh)

Meadow pipit (Mike Taylor/ seeing.org.uk)

***Note:** Based on the partnership working of the biodiversity community and the provision of ecological data through the Buckinghamshire & Milton Keynes Environmental Records Centre (BMERC), this document covers both the County of Buckinghamshire and the Unitary Authority of Milton Keynes. All references to Buckinghamshire therefore include Milton Keynes. This document is a guide and should not be used in place of ecological expertise in assessing sites.*

HOW TO USE THIS GUIDANCE

This guidance has been arranged to align with National Planning Policy Framework (NPPF) sections on biodiversity. This guidance has sections dealing with various biodiversity features which should be protected and enhanced through the planning system.

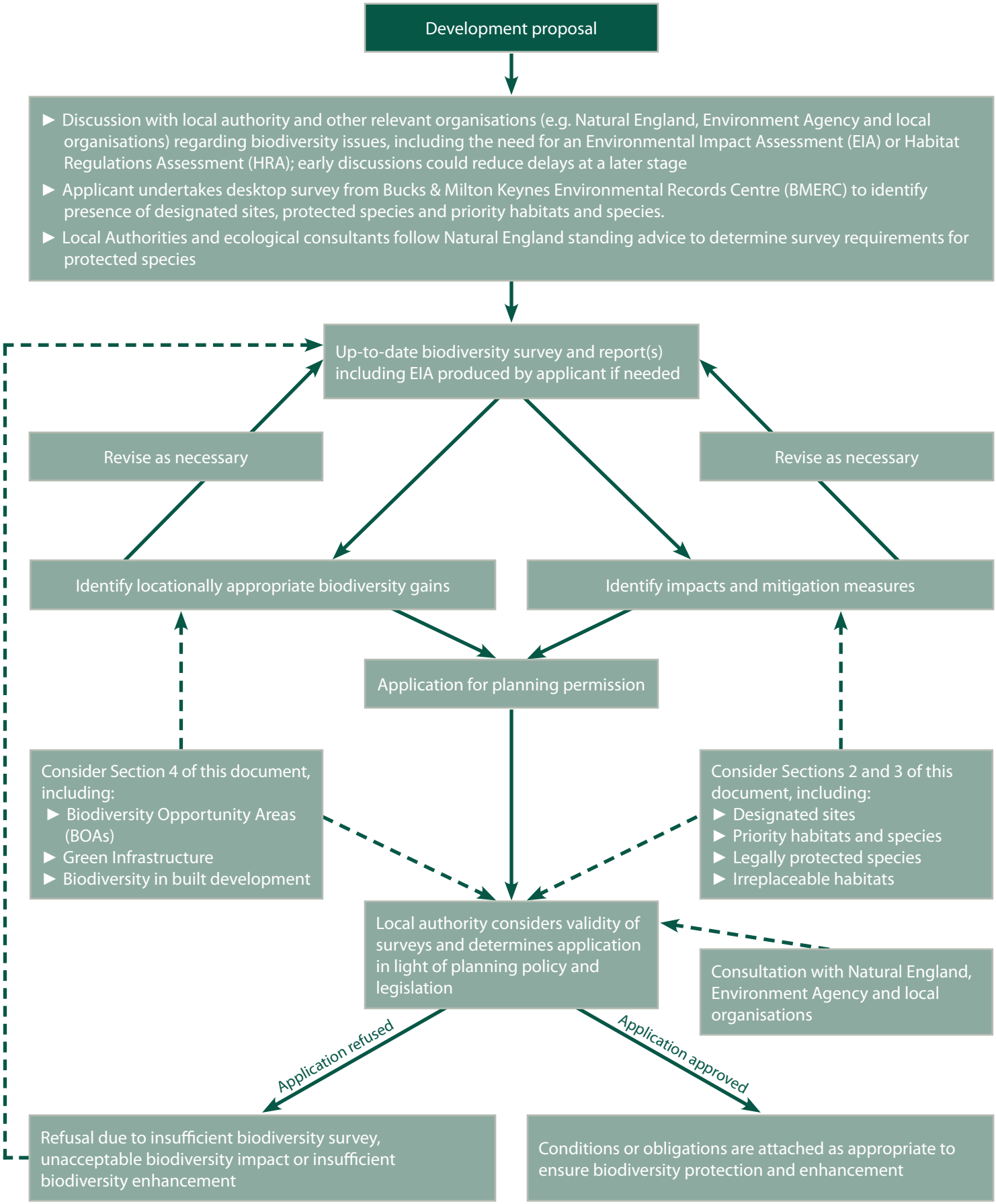
In general Sections 2 and 3 outline those features which should be protected, and Section 4 outlines opportunities to deliver biodiversity enhancements.

For each section locally specific biodiversity information, including maps and key organisations, is included. Most of the maps are produced by BMERC and identify the distribution of sites/species/ habitats in Buckinghamshire. It should be noted that these maps are intended to provide a strategic overview and only show the current situation at time of publication. More detailed and updated site-specific information is available directly from BMERC on request or, for those working in local authorities, much of this information will be available on GIS layers within your authority through a Service Level Agreement (SLA) with BMERC.

An online version is provided on the Ecology and Development pages of the Buckinghamshire County Council website, which will be updated as regularly as possible to keep up-to-date with changes in legislation and policy. Legislation and policy change frequently. Please contact the Ecology Advice Service at Buckinghamshire County Council to check whether there have been any major changes since publication. The online version provides links to the documents, websites and key legislation highlighted.

1b Biodiversity in the planning process

This flow diagram illustrates the importance of taking biodiversity into consideration at all stages of the planning application process, highlighting the key features to take into account.



1c Information requirements

The importance of up-to-date information

The National Planning Policy Framework (NPPF) requires that development plan policies and planning decisions are based upon up-to-date information and assessment about the environmental characteristics of their areas, including the relevant biodiversity resources of the area (see right).

In submitting a planning application, the standard planning application form requires that applicants identify any protected or priority species, designated sites, important habitats, or other biodiversity features on, or adjacent to, the application site. This document gives an overview of these features in Buckinghamshire; more detailed site level information is available from BMERC. BMERC provide necessary local data that is not available from national data searches.

Where it is likely that a proposal will impact on any of these features, up-to-date biodiversity information will need to be provided with a planning application. The type of assessment needed will vary from a biodiversity survey and report to Environmental Impact Assessment and Appropriate Assessment if a European Site is involved. Adequate surveys and reports must be provided. Surveys must be undertaken to recognised standards (e.g. CIEEM methodology, at the correct time of year). For detailed advice on how to undertake these, see Further Information

It is not within the scope of this document to explain how or when to undertake such assessments, there is other national and regional guidance available on this – see the 'Further Information' box. It is important to bear in mind that the survey work needed to inform such assessments will be seasonally restricted.

Discussion of biodiversity survey needs at pre-application stage can help reduce the likelihood of delays resulting from requirements for survey being identified at a late stage. Without this information it is unlikely that an application will be validated.

All ecological reports should include the following to demonstrate how the mitigation hierarchy outlined in paragraph 118 of the NPPF has been applied:

a) What biodiversity is present
b) How negative impacts on biodiversity can be avoided
c) If it is not possible to avoid negative impacts, how they can be mitigated
d) If there is no way of mitigating negative impacts, compensation measures should be identified
e) The report should demonstrate how the application can result in an overall enhancement in biodiversity

Avoidance, mitigation, compensation and enhancement measures must be clearly stated to enable report recommendations to be assessed, conditioned and enforced.



College Lake Nature Reserve, Buckinghamshire (Helen Walsh)

PLANNING POLICY

The National Planning Policy Framework states that:

'165. Planning policies and decisions should be based on up-to date information about the natural environment and other characteristics of the area ... Working with Local Nature Partnerships where appropriate, this should include an assessment of existing and potential components of ecological networks ...

'121. Planning policies and decisions should also ensure that: ... – adequate site investigation information, prepared by a competent person, is present.'

Check the relevant District Council's Local Plan for local policy.



Little owl (Helen Walsh)

FURTHER INFORMATION

- ALGE Biodiversity Toolkit
- Ecological Impact Assessment Guidelines (CIEEM)
- Guidelines for Preliminary Ecological Appraisal (CIEEM)
- The Habitats Regulations Assessment Handbook
- The British Standard on Biodiversity: 'Biodiversity – Code of practice for planning and development' (BS 42020:2013)
- Working with Wildlife Guidance for the Construction Industry, CIRIA
- Natural England Standing Advice for Ancient Woodland
- Natural England Standing Advice on Protected Species

2a Internationally and nationally designated sites

Internationally designated sites: Special Areas of Conservation (SAC)

Special Areas of Conservation (SACs) are designated under the Habitats Directive to establish a European network of high quality conservation sites conserving the habitats and species identified in the Directive. Buckinghamshire has three sites designated at this level which fall partly or entirely within the county; they are shown on **Map 1**. The law is very strict with regard to these sites; development proposals which will adversely affect these sites are not permitted*. If a development is proposed that could possibly impact on a SAC, the applicant will need to submit an assessment of potential impacts and their significance with their planning application; this information is used by the local authority to make an 'Appropriate Assessment' of the implications for the SAC.

Impacts that will need to be considered include direct impacts, for example habitat loss through land-take, and indirect impacts such as changes to water quality or quantity, air pollution or increased recreational pressure. Indirect impacts could result from development proposals some distance from a SAC; impacts on internationally designated sites in other counties should also be considered. These might include Special Protection Areas (SPAs), designated for their importance for birds (there are no SPAs in Buckinghamshire).

** In exceptional circumstances a proposal that would impact negatively on a SAC may be permitted but only where there are no alternative solutions and the proposal is necessary for imperative reasons of overriding public interest. Where this is the case, compensatory measures will be necessary.*

BUCKINGHAMSHIRE'S SPECIAL AREAS OF CONSERVATION

- Aston Rowant: (Wycombe) One of the best remaining examples in the UK of lowland juniper scrub on chalk.
- Burnham Beeches: (South Bucks) One of the best areas in the UK for Atlantic acidophilous beech forests and one of the richest sites in the UK for saproxylic invertebrates.
- Chilterns Beechwoods: (Wycombe, Aylesbury Vale) Extensive tract of beech forest, comprising multiple sites in the centre of the habitat's UK range.

LEGISLATION

Special Areas of Conservation (SACs): EC Habitats Directive

Special Protection Areas (SPAs): EC Birds Directive (Council Directive 79/409/EEC on the conservation of wild birds)

In the UK these are implemented through UK law by the Conservation of Habitats and Species Regulations 2010 (as amended) and Wildlife & Countryside Act 1981 (as amended)

PLANNING POLICY

Because these sites are strictly protected by law, no further protection is required through the National Planning Policy Framework; paragraph 113 states that:

'113. Local planning authorities should set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged. Distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks.'

SACs are identified on proposals maps within Local Development Frameworks.*

Nationally designated sites: Sites of Special Scientific Interest (SSSI)



Aston Clinton Ragpits SSSI (Tim Reed)

SSSIs are a series of sites across the UK, which provide a representative sample of the country's best habitats. There are 66 SSSIs in Buckinghamshire, covering a total of 3532ha. SSSIs are designated for either their biological or geological interest, they are shown on **Map 1**. Buckinghamshire's SACs are also designated as SSSIs – the features for which the different types of site have been designated may differ.

SSSIs are given a high level of protection through both the planning and legal system. Normally development which would adversely affect a SSSI is not acceptable. Only in special cases, where the importance of a development outweighs the impact on the SSSI, would an adverse affect be permitted. In such cases, planning conditions or obligations would be used to mitigate the impact.

There is not a requirement to undertake an 'Appropriate Assessment' for SSSIs, but for developments likely to impact on a SSSI an Environmental Impact Assessment (EIA) will probably be necessary. CIEEM provide guidance for carrying out the ecological aspects of an EIA.

LEGISLATION

Wildlife and Countryside Act (1981)

Countryside and Rights of Way Act (2000)

PLANNING POLICY

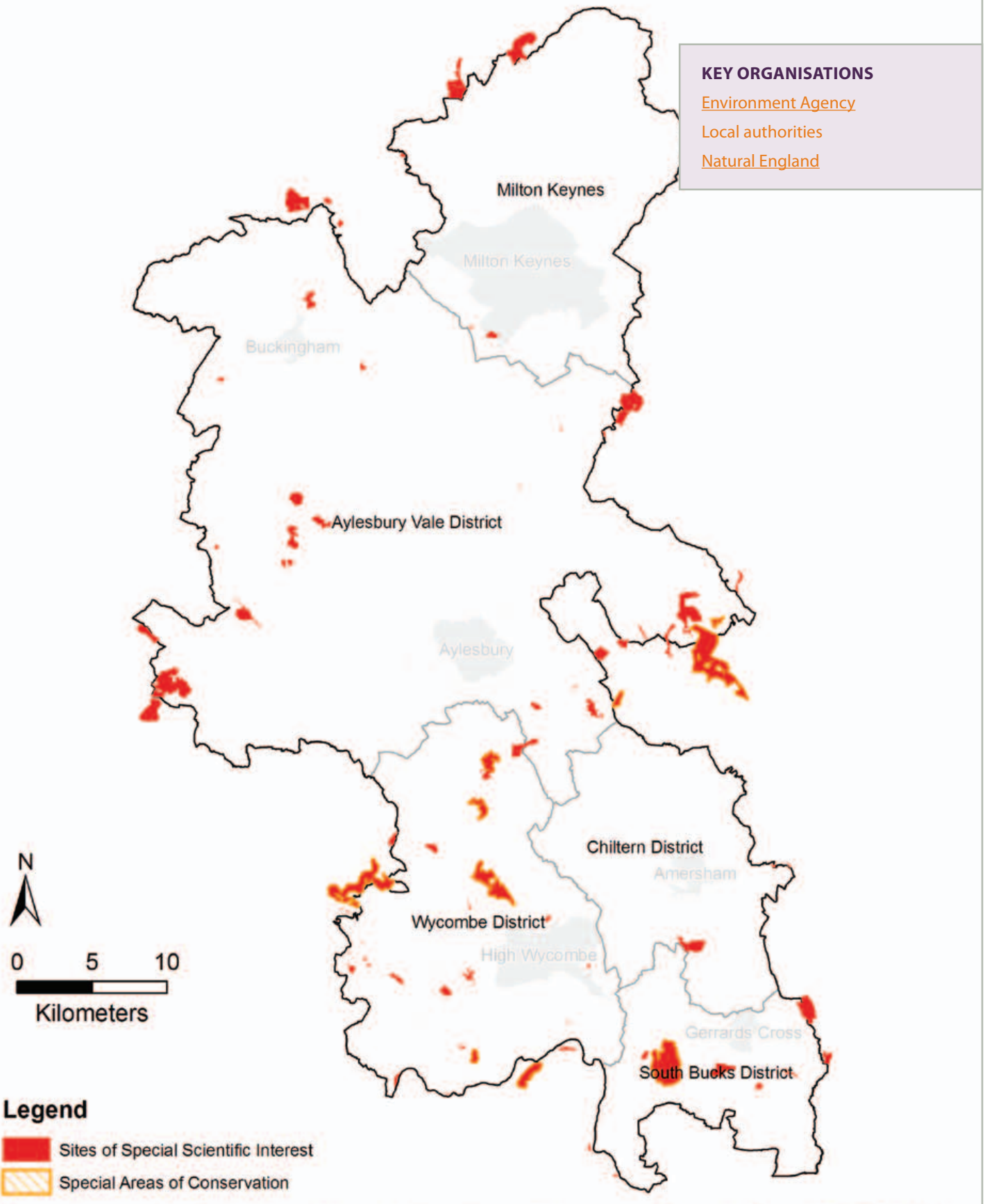
National Planning Policy Framework paragraph 118 states that:

'Proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest.'*

**Check the relevant District Council's Local Plan for local policy.*

Map 1: Special Areas of Conservation (SAC) and Sites of Special Scientific Interest (SSSI) in Buckinghamshire

This map is only an example – for up-to-date information contact BMERC



Map produced by the Buckinghamshire and Milton Keynes Evironmental Records Centre (BMERC, 2014)
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(http://www.buckinghamshirepartnership.gov.uk/environmental-records/)

2b Legally protected species

Protected species occur throughout the county

The distribution of current records is provided on **Map 2**. The species receiving the strictest protection are generally referred to as 'European Protected Species', or 'EPS', since they are protected under European Directives (see right). The European Protected Species found in Buckinghamshire are bats, dormouse, great crested newt and otter. These are protected against killing, injury, disturbance in their place of shelter, taking or selling. Cruelty to wild mammals is a criminal offence under The Wild Mammal (Protection) Act 1996.

Examples of activities that could breach the legislation include: in-filling or earthworks near to a great crested newt pond, felling of trees or demolition of buildings used by bats, clearance of woodland or hedgerows supporting dormice, or work on water course banks near an otter holt.

Species can receive varying levels of protection under the Wildlife and Countryside Act (WCA). Buckinghamshire species receiving protection under this act include water vole, common lizard, grass snake, slow worm and roman snail; all these species are protected against killing and injuring, sale or advertisement for sale. It is also illegal to take a roman snail or freshwater crayfish. Water voles receive full protection under this Act, additionally making it illegal to obstruct access to, or destroy, a water vole burrow, or to disturb a water vole in its burrow.

Development will need to avoid impacts on protected species, and where this is not possible, mitigation or compensation will be necessary. If there is a possibility that a development proposal will impact on a protected species, then surveys will need to be submitted with a planning application to determine the impacts. Please note; surveys to determine the presence of protected species need to be provided upfront with a planning application, and should not be made a condition of planning permission, since the local authority will need this information to inform their decision (see Circular 06/05, page 9, Regina v Cornwall County Council ex parte Jill Hardy [2001 JPL 786]). If planning permission is granted, a development licence, or conservation licence, from Natural England may be required.

BIRDS

All bird nests (while in use or being built), eggs and young are protected under the Wildlife and Countryside Act. Therefore removal of any bird nesting habitat such as trees or scrub (or buildings in the case of birds such as barn owls, swifts, swallows, house martins and house sparrows) should only take place outside of the bird breeding season (March – August).

Some birds, listed on Schedule 1 of the WCA receive an extra level of protection which means that they cannot be disturbed during the breeding season (March – August); those likely to be found in Bucks include red kite, kingfisher, hobby, barn owl, peregrine, little ringed plover and cetti's warbler.

Amendments to the Habitats Regulations that came into force in 2012 mean that, when making decisions as a competent authority, local authorities must use 'all reasonable endeavours' to avoid any pollution or deterioration of wild bird habitats. Public bodies, such as local authorities, in carrying out their normal duties must also take steps to preserve, maintain and re-establish habitat for wild birds. The objective of this duty is to maintain the populations of wild birds, while taking account of economic and recreational requirements.

In time, guidance will be issued by the Secretary of State for DEFRA on how to interpret the requirements, and compliance will be reviewed by Natural England. Until guidance is issued, authorities will, themselves, have to take account of the new regulations and the new duties imposed on them.

LEGISLATION

The Conservation of Habitats and Species regulations 2010 (as amended)

The Conservation of Habitats and Species (Amendment) Regulations 2012

Wildlife and Countryside Act (1981)

Protection of Badgers Act 1992

ODPM Circular 06/2005

PLANNING POLICY

National Planning Policy Framework does not cover protected species specifically since they are protected by law. However, the National Planning Policy Framework paragraphs 109 and 118 state that net gains in biodiversity should be sought and net loss of biodiversity avoided.

Check the relevant District Council's Local Plan for local policy.



Badgers (Terry Longley/ seeing.org.uk)

BADGERS

Badgers are a fairly common species, and are, therefore, quite likely to be encountered on a potential development site. Whilst not a rare species, badgers receive legal protection due to persecution and animal welfare issues.

Badgers are protected under the Protection of Badgers Act 1992 against killing, injury or taking. Badger setts are also protected against damage, destruction or obstruction and it is illegal to disturb a badger in its sett.

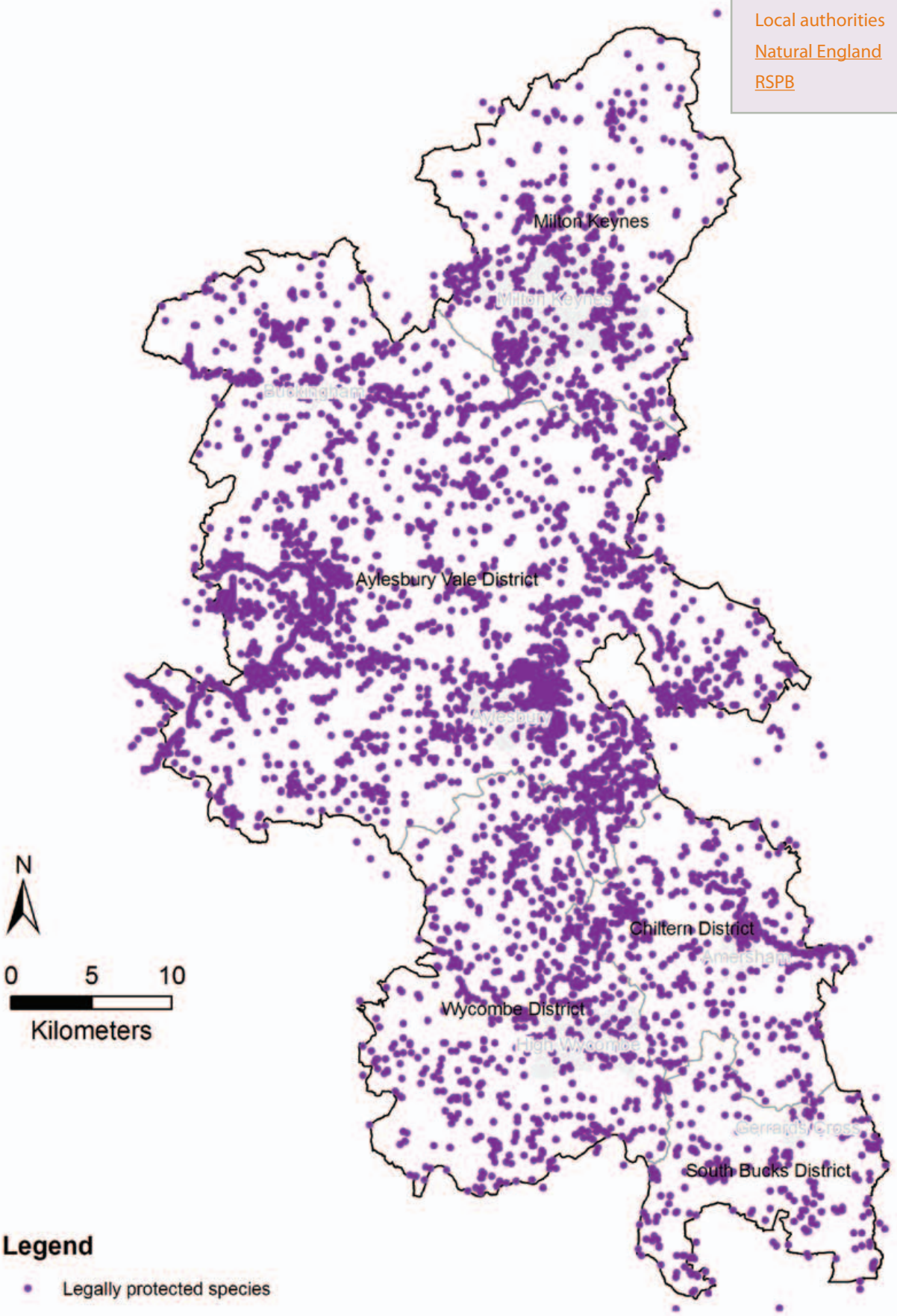
An up-to-date badger survey and report will be needed if a development is likely to impact on a badger sett, and appropriate mitigation will need to be put in place if impacts cannot be avoided.

Map 2: Legally Protected Species in Buckinghamshire

This map is only an example – for up-to-date information contact BMERC

KEY ORGANISATIONS

Buckinghamshire Badger Group
Environment Agency
Local authorities
Natural England
RSPB



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(http://www.buckinghamshirepartnership.gov.uk/environmental-records/)

2b Legally protected species

Where are protected species likely to occur?

As **Map 2** demonstrates, there are many records for protected species across the county.

More detailed information on the known distribution and location of many protected species can be obtained from the Buckinghamshire & Milton Keynes Environmental Records Centre (BMERC). Please note for certain enquiries there is a charge to extract the information. Many local authorities, statutory agencies and other interested organisations regularly use this information to inform work on planning applications, development proposals and species conservation works. Where survey information suggests that protected species are likely to be impacted by a development proposal a licensing process must be followed.

More information on how to determine when a protected species survey is required has been produced by Natural England in a Standing Advice Note.

It is important to bear in mind that protected species surveys can usually only be undertaken at certain times of year. For example, surveys of ponds for great crested newts must be undertaken between mid-March and mid-May when newts return to ponds to breed.

THE THREE TESTS

The 'Three Tests' (extract from Natural England website):

Wildlife licences permit otherwise unlawful activities, and can only be granted for certain purposes. Natural England has published guidance on how we apply the three tests set out in Regulation 53 of the Habitats Regulations 2010 when granting licences.

These tests are:

- The consented operation must be for 'preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment'; and
- There must be 'no satisfactory alternative'; and
- The action authorised 'will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.'



Pipistrelle bat (Amy Lewis)

THE MORGE CASE

R (Vivienne Morge) v Hampshire County Council [2011] UKSC 2 and [2011] UKSC 2 (Morge)

Local Planning Authorities have a duty to have regard to the requirements of the Habitats Directive (See Regulation 9(5) of the 2010 Habitats Regulations). The judgement in the recent case of Morge (FC) (Appellant) v Hampshire County Council [2011] UKSC 2 considered the application of this duty. It came to the conclusion that, if the Planning Authority concludes that the carrying out of the development for which permission has been applied for even if it were to be conditioned, would be likely to offend Article 12(1), by for instance, causing the disturbance of a species with which that Article is concerned, then it must consider the likelihood of a licence being granted.



Water vole (Terry Longley/seeing.org.uk)

FURTHER INFORMATION

- ALGE – Biodiversity Planning Toolkit
- British Standard BS 42020:2013 Biodiversity. Code of practice for planning and development.
- British Standard BS 5837:2012 Trees in relation to design, demolition and construction. Recommendations.
- Badgers and Development (Natural England)
- Bat Mitigation Guidelines (Natural England)
- Circular 06/05: Biodiversity and Geological Conservation – Statutory Obligations and Their Impact Within the Planning System
- Dormouse Conservation Handbook (Natural England)
- Great Crested Newts Mitigation Guidelines (Natural England)
- Natural England Standing Advice on Protected Species
- Reptile Mitigation Guidelines (Natural England)
- Water Voles (Natural England advice)

3 Local sites and priority habitats and species



Chalk grassland, Buckinghamshire (Cathie Hasler)

Protection through the planning system

Legal protection for the following biodiversity features varies, but all are protected through the planning system:

- Local Wildlife Sites (LWS)
- Biological Notification Sites (BNS)
- Milton Keynes Wildlife Corridors (MKWC)
- Local Geological Sites (LGS)
- Priority Habitats
- Priority Species
- Irreplaceable Habitats (e.g. Ancient Woodland)
- Veteran trees

Development which would adversely affect these features is not normally acceptable. Only in special cases, where the importance of a development outweighs the impact on the feature, would an adverse affect be permitted. In such cases, planning conditions or obligations would be used to mitigate the impact.

Where a development has the potential to impact on a local site, or a priority habitat or species, a biodiversity survey and report will be required; in some circumstances an Environmental Impact Assessment (EIA) may be needed.

The following pages give information on these features as they occur in Buckinghamshire.



Chilterns woodland, Buckinghamshire (Gavin Hageman)

3a Local Sites

Valuable sites for Buckinghamshire's local wildlife

Local Sites are sites of substantive nature conservation value or geological interest. In Buckinghamshire, Local Sites consist of Local Wildlife Sites (LWS) and Local Geological Sites (LGS). There are over 400 Local Wildlife Sites in Buckinghamshire; these are shown on **Map 3**.

All Local Sites which meet the necessary criteria are designated; this differs significantly from the process of identifying SSSIs, as the latter are a representative sample of sites. Thus, Local Sites can be equal in quality to SSSIs. Local Sites do not have statutory status, but do receive protection through the planning system (see right).

The identification of LWSs is an ongoing process including monitoring and review which is undertaken by the Local Sites Partnership (see below). As the number of LWSs is always changing with new site selections and de-designations, Buckinghamshire and Milton Keynes Environmental Records Centre (BMERC) should be contacted for the most up-to-date information.

Before formal selection, proposed LWSs are identified for survey; if a development is likely to affect a proposed LWS, ecological surveys will be necessary. Ideally the site should be visited by the Wildlife Sites Survey Officer, and survey information presented to the LWS Selection Panel before a planning application that is likely to affect a proposed LWS is considered. In any case, a biodiversity survey and report will be necessary to establish any likely impacts.

Biological Notification Sites (BNS)

In addition to LWSs, there is a category of sites that are in the process of being reviewed and assessed against the LWS criteria. These sites are known as Biological Notification Sites (BNSs) and until the programme of review has been completed, it is important they are treated in the same way as LWSs.

Milton Keynes Wildlife Corridors (MKWC)

Wildlife Corridors in Milton Keynes are a specific designation to Milton Keynes and represent linear pathways of habitats that encourage movement of plants and animals between other important habitats. These are treated in the same way as LWSs in Milton Keynes.

LEGISLATION

Local Sites are non-statutory sites: no additional legislation applies.

PLANNING POLICY

National Planning Policy Framework paragraph 113:

'Local planning authorities should set criteria based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged. Distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks.'

Check the relevant District Council's Local Plan for local policy.

FURTHER INFORMATION

- Local Sites, Guidance on their Identification, Selection and Management (DEFRA)
- Single Data List
- Buckinghamshire LWSs



Local Wildlife Sites include important habitats like wetlands (BBOWT)

BUCKINGHAMSHIRE'S LOCAL SITES PARTNERSHIP

Local Sites are selected at a county level and the process is overseen by Buckinghamshire & Milton Keynes Biodiversity Partnership Steering Group. The Buckinghamshire & Milton Keynes Wildlife Sites Project is jointly run by Buckinghamshire County Council and Aylesbury Vale District Council, with support from Buckinghamshire and Milton Keynes local authorities, Natural England and local organisations.

The performance of local authorities for biodiversity is measured by assessing the number of Local Sites in positive conservation management; this forms part of the Single Data List, a set of data that local authorities send to government. It is reported on by Buckinghamshire County Council.

KEY ORGANISATIONS

Buckinghamshire & Milton Keynes Biodiversity Partnership

Buckinghamshire & Milton Keynes Environmental Records Centre

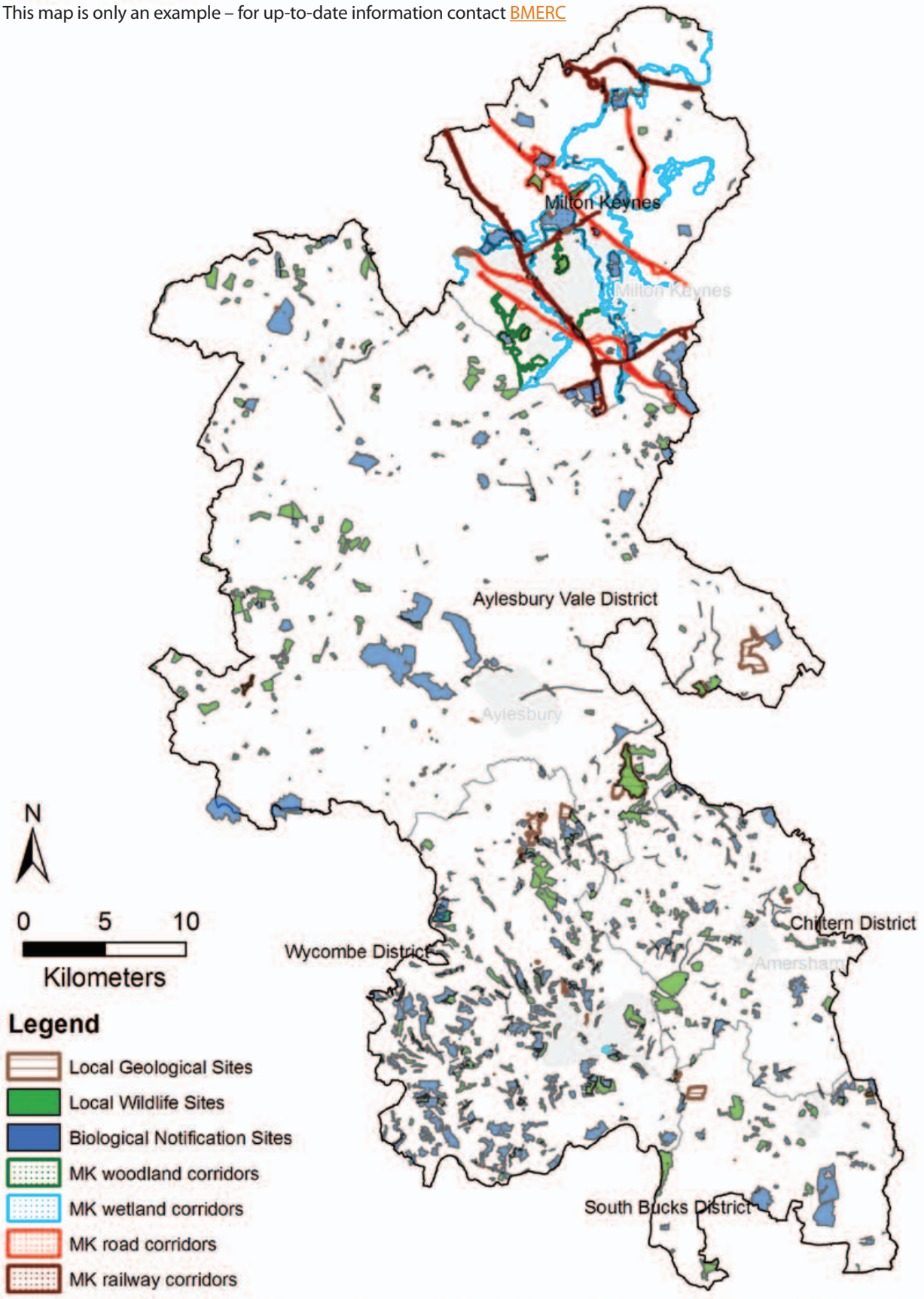
Local authorities



Local Wildlife Site, Buckinghamshire (Wendy Tobitt)

Map 3: Local Wildlife Sites (LWSs), Local Geological Sites (LGSs) and Biological Notification Sites (BNSs) in Buckinghamshire; Wildlife Corridors in Milton Keynes

This map is only an example – for up-to-date information contact BMERC



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3b Irreplaceable Habitats

National Planning Practice Guidance states that the significance of irreplaceable habitats may be derived from '… habitat age, uniqueness, species diversity and/or the impossibilities of re-creation. For example, research suggests that it can take up to 150 years to create species-rich grassland'. There is no currently agreed list of irreplaceable habitats, but if it is taken as referring to any habitat of principal importance for which the timescale involved in completely recreating it would go beyond the period of the strategic planning cycle, then the following habitats in Buckinghamshire could be considered irreplaceable:

- Ancient Woodland
- Ancient/veteran trees (which are often outside of ancient woodlands)
- Ancient Hedgerows
- Traditional unimproved meadows/ancient grasslands
- Fens

Ancient woodland and veteran trees as examples of irreplaceable habitats

Ancient woods are those that are known to have had continuous tree cover since at least 1600 AD. They are found throughout Buckinghamshire, although there are particular concentrations in the Chilterns and in Southern Buckinghamshire and the Bernwood area in the West of Buckinghamshire. The Natural England ancient woodland inventory only mapped ancient woods over 2 ha in size. There are 9230 ha of these woodlands mapped in Buckinghamshire; these are identified on **Map 4.** More detailed mapping has recently been completed for the Chilterns.

Ancient and veteran trees are old trees that may be associated with woodlands, wood pasture and parkland, traditional orchard UK priority habitats or stand alone; for example, old trees are often found on old parish boundaries. Ancient trees are often in the third and final stage of their life and are old relative to other trees of the same species. Veteran trees on the other hand are usually in the second or mature stage of their life and contain important wildlife features such as holes, deadwood and wounds.

Ancient woodlands, and ancient and veteran trees, are likely to have biodiversity interest, as well as cultural and historical significance. They may be protected by tree preservation orders, but they are also protected by planning policy (see right).

When assessing the potential impact of a development on trees and woodlands, potential impacts on tree roots, as well as the above ground features, must be taken into account as issues such as compaction or alterations to drainage could have significant impacts on trees.



Rushbeds Wood Nature Reserve, Buckinghamshire (Jim Asher)

BIODIVERSITY OF ANCIENT WOODLANDS AND VETERAN TREES

Ancient woodlands are likely to have greater biodiversity interest than more recently planted woodlands; some ancient woodlands will also be UK priority habitats. Many woodland plants with limited dispersal abilities are associated with ancient woodlands – some of these are used to help identify the presence of an ancient woodland and are known as ancient woodland indicators. In addition to ground flora interest, ancient woodlands are likely to support protected species, such as bats and dormice, as well as woodland birds and butterflies.

It has been estimated that Britain supports 80% of Europe's veteran trees, veteran trees are particularly important for the invertebrate communities they support, as well as providing good roosting habitat for bats and nesting sites for birds. Old trees are also likely to support a rich variety of lichens and mosses.

LEGISLATION

Town and Country Planning Act 1990: Tree Preservation Orders

PLANNING POLICY

National Planning Policy Framework paragraph 118:

'When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles: ...

- planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; ... '

Check the relevant District Council's Local Plan for local policy.



Lowland meadow, Buckinghamshire (BBOWT)

FURTHER INFORMATION

- Natural England Standing Advice for Ancient Woodland

KEY ORGANISATIONS

Chilterns Woodland Project

Forestry Commission

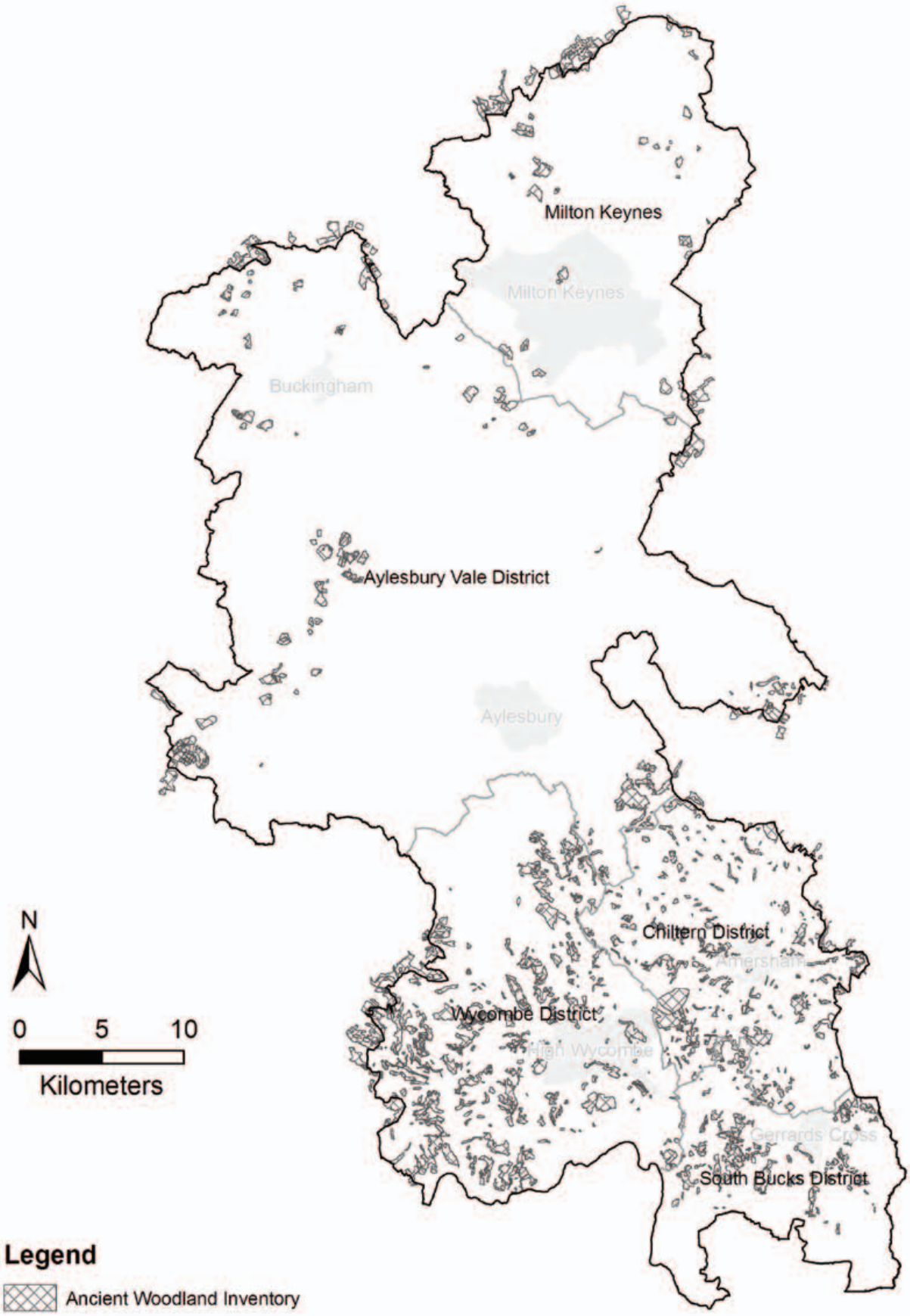
Local authorities

Natural England

Woodland Trust

Map 4: Ancient Woodland in Buckinghamshire

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3c Priority Habitats

Habitats of principal importance

The UK Post-2010 Biodiversity Framework replaces the UK Biodiversity Action Plan (BAP); it is the UK's response to the 'Aichi' strategic goals agreed by the Convention on Biological Diversity in Nagoya in 2010. The lists of priority species and habitats agreed under the UK BAP (BAP priority habitats and species) still form the basis of much of the country-led biodiversity work. England's approach is set out in Biodiversity 2020: A strategy for England's Biodiversity and Ecosystem Services which describes how the quality of the environment will be improved and follows on from policies in the Natural Environment White Paper.

The distribution of known priority habitats in Buckinghamshire is identified on **Map 5**. These habitats do not receive statutory protection, but are protected by planning policy (see right). They will be found both within and outside designated sites, and may occur in areas outside of those identified on Map 5. Priority habitats correspond to those identified under Section 41 of the NERC Act as habitats of principal importance for the conservation of biodiversity in England and have to be considered under planning policy.

UK PRIORITY HABITATS IN BUCKINGHAMSHIRE

(The UK definitions for each of these priority habitats can be downloaded from the JNCC website)

GRASSLANDS

- **Lowland Calcareous Grassland:** a key habitat, associated with areas of chalk and limestone geology, found particularly in the Chilterns. Flower-rich, important for invertebrates (particularly butterflies). Sensitive to changes in nutrient status.
- **Lowland Dry Acid Grassland:** associated with sandy soils like those on the Greensand Ridge. Important for rare plants and invertebrates. Sensitive to changes in nutrient status.
- **Lowland Meadows:** a key habitat, important for flowers, invertebrates and ground-nesting birds. Sensitive to changes in hydrology and nutrient status.
- **Purple Moor Grass and Rush Pastures:** restricted and rare distribution; associated with poorly drained, usually acidic soils. Important for rare plants, invertebrates and birds.

WOODLANDS

- **Lowland Beech and Yew Woodland:** a key habitat in Buckinghamshire, found mainly in the Chilterns and also Burnham Beeches.
- **Lowland Mixed Deciduous Woodland:** can have rich ground flora. Also important for bats, woodland birds and butterflies, occasionally support dormice.
- **Wet Woodland:** restricted distribution, likely to be adjacent to waterbodies or part of a mosaic of wetland habitats. May support otter or rare invertebrates.
- **Wood-pasture and Parkland:** important for veteran trees, invertebrates and bats. Found mainly on old estates.

WETLANDS

- **Coastal and Floodplain Grazing Marsh:** a key habitat associated with river floodplains. Sometimes flower-rich, important for wading birds. Particularly sensitive to changes in hydrology and nutrient status.
- **Eutrophic Standing Waters:** likely to be found in old gravel pits and reservoirs, often important for waterbirds.
- **Lowland Fens:** a key habitat, important for rare invertebrates and plants. May support water vole and otter. Sensitive to changes in hydrology and nutrient status.
- **Ponds:** may be rich in plants and invertebrates. Likely to be breeding sites for amphibians. Sensitive to changes in hydrology and nutrient status.
- **Reedbeds:** restricted distribution. Important for birds, may support water voles or rare plants. Sensitive to changes in hydrology.
- **Rivers:** provide important wildlife corridors. Likely to support water vole, otter, and a variety of invertebrates. Chalk rivers are a key habitat of the Chilterns AONB.

OTHER

- **Arable Field Margins:** where managed to provide benefits for wildlife, can provide important food sources for birds and invertebrates.
- **Hedgerows:** an important linking habitat used by foraging birds and bats, dormice and a range of invertebrates. (Subject to the Hedgerow Regulations 1997).
- **Lowland Heathland:** of restricted distribution, important for reptiles and invertebrates.
- **Open mosaic habitats on previously developed land:** examples in Bucks include former quarries – important for birds, invertebrates and specialist plants.
- **Traditional Orchards:** unknown distribution, dependent on traditional management methods. Important for bats, invertebrates, mosses, lichens.

LEGISLATION

Natural Environment and Rural Communities Act 2006, Section 41 lists habitats of principal importance for the conservation of biodiversity in England (this replaces the list under Section 74 of the CRoW Act 2000).

PLANNING POLICY

National Planning Policy Framework paragraph 117:

'To minimise impacts on biodiversity and geodiversity, planning policies should: ... promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan; ...'

Many UK priority habitats are 'irreplaceable habitats', as described in paragraph 118 of the National Planning Policy Framework. Paragraph 118 states:

'When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles: …

- planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; ...'

Check the relevant District Council's Local Plan for local policy.

KEY ORGANISATIONS

Buckinghamshire & Milton Keynes Biodiversity Partnership

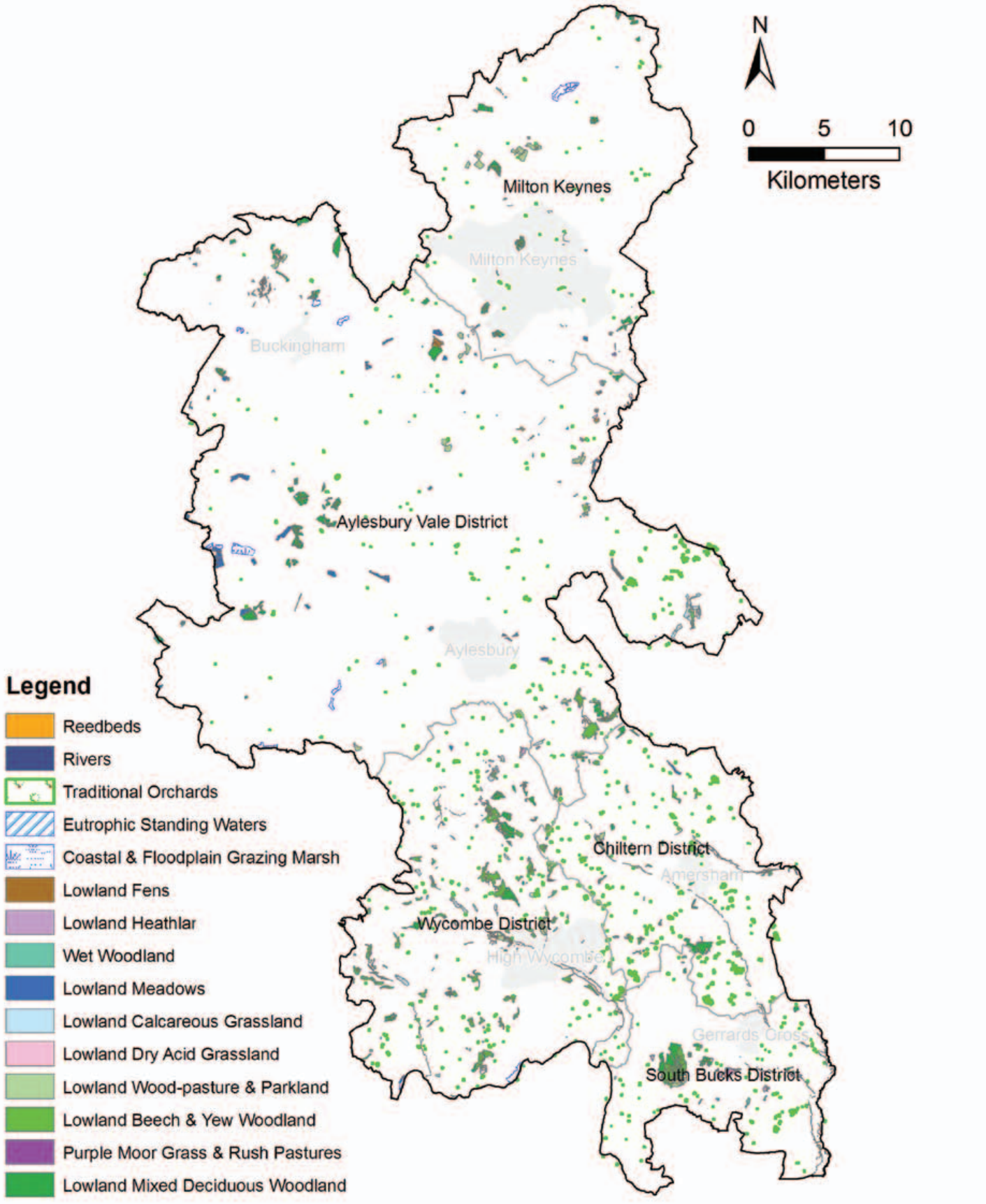
Buckinghamshire and Milton Keynes Natural Environment Partnership

FURTHER INFORMATION

- UK Biodiversity Strategy
- UK Post-2010 Biodiversity Framework (2012)

Map 5: Priority Habitats in Buckinghamshire

This map is only an example – for up-to-date information contact BMERC



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3d Priority Species

Species of principal importance

In addition to listing priority species, Section 41 of the Natural Environmental and Rural Communities (NERC) Act 2006 also identifies UK priority species (formerly called UK BAP priority species). There are 1,149 priority species; locations where priority species have been recorded in Buckinghamshire are identified on **Map 6**. Priority species are likely to be found both within and outside of designated sites, many priority species will be associated with priority habitats, but not exclusively so. Priority species include rare and declining species of mammals, birds, reptiles, amphibians, fish, plants, mosses, lichens and liverworts.

Inclusion on the list of priority species does not imply legal protection although some priority species are also protected under law (see Section 2b). Priority species correspond to those identified under Section 41 of the NERC Act as species of principal importance for the conservation of biodiversity in England and have to be considered under planning policy.

PRIORITY SPECIES IN BUCKINGHAMSHIRE

Buckinghamshire and Milton Keynes Environmental Records Centre (BMERC) hold the most up-to-date information on priority species found in Buckinghamshire. Examples of priority species that could be protected or enhanced through the planning system in Buckinghamshire include:

- **BROWN HAIRSTREAK BUTTERFLY:** A small species, not easily seen as it spends much of its time in the tree canopy, or hidden in hedgerows. This species is rare in the UK; its distribution is restricted to localities in southern Britain and mid-west Ireland. The brown hairstreak has undergone severe declines due to hedgerow removal and annual flailing, which removes their eggs.

An area in the west of Buckinghamshire and over the border into Oxfordshire is a hotspot for this species, which lays its eggs in the blackthorn hedges found here. Planning applications should avoid the removal or fragmentation of hedgerows where brown hairstreak occur, and existing and new hedgerows should be incorporated into the design of developments and managed to maintain and enhance brown hairstreak populations.

- **FARMLAND BIRDS,** including skylark, linnet, yellowhammer, reed-bunting, curlew, tree sparrow, grey partridge, bullfinch, starling, song thrush and turtle dove, have shown dramatic declines within the last 30 years. All individual birds are protected under the Wildlife and Countryside Act 1981, however, opportunities should be taken to maintain and enhance the populations of these farmland birds wherever possible.

Development could impact on these species by direct loss of habitat, but also through increased recreational disturbance, especially associated with residential developments. Ground-nesting birds, such as skylark, can be protected by restricting access to areas they use during the breeding season. Species such as tree sparrow can benefit from the provision of suitable nest sites.

Wet grasslands along river valleys such as the Thame and Ray provide important remnant habitat for curlew and other wetland birds such as lapwing, snipe and redshank. Development should avoid habitat fragmentation and impacts on the hydrology of these areas. Opportunities should be taken to improve and extend suitable habitat; this may be combined with areas needed to provide flood protection.



Yellowhammer
(Sherie New/seeing.org.uk)

LEGISLATION

Natural Environment and Rural Communities Act 2006, Section 41 lists species of principal importance for the conservation of biodiversity in England (this replaces the list under Section 74 of the CRoW Act 2000).

PLANNING POLICY

National Planning Policy Framework paragraph 117:

'To minimise impacts on biodiversity and geodiversity, planning policies should: ...

- promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan; ...'

Check the relevant District Council's Local Plan for local policy.

KEY ORGANISATIONS

Bat Conservation Trust

North Bucks Bat Group

Berkshire and South Bucks Bat Group

Buckinghamshire & Milton Keynes Biodiversity Partnership

Buckinghamshire and Milton Keynes Natural Environment Partnership

Bucks Rare Plant Recording Group

Butterfly Conservation

Chilterns Conservation Board

Environment Agency

Local authorities

Mammal Society

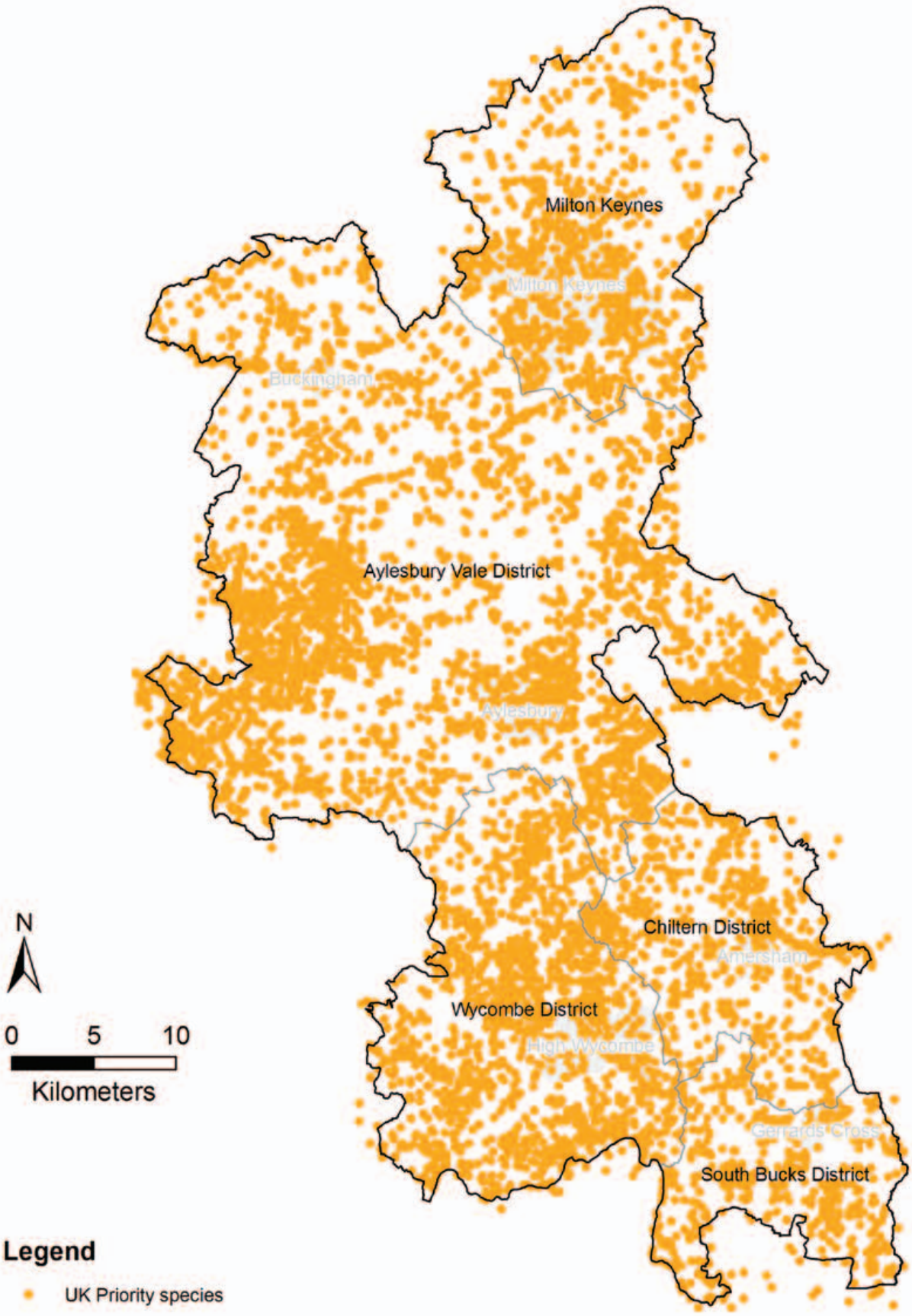
Natural England

RSPB

Water Vole Recovery Project, c/o BBOWT

Map 6: Priority Species in Buckinghamshire

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3e Other areas of importance to biodiversity

There are a number of areas and sites of importance to biodiversity within the county which are identified in addition to (and via other mechanisms to) the biodiversity planning policy and legislation covered by this document. These include various forms of nature reserve, as well as Chilterns Area of Outstanding Natural Beauty – further information is provided below with regard to these areas in the context of biodiversity and planning.

Nature Reserves

The term 'nature reserve' is used to describe a range of different types of site important for wildlife and people. Some of these nature reserves have a statutory designation in their own right; in other cases, the term 'nature reserve' does not in itself imply any special protection. However, most of these sites will receive another form of designation (SAC, SSSI, LWS) and most, if not all, support protected species or priority habitats or species. See **Map 7** for the range of nature reserves found in Buckinghamshire.

National Nature Reserves (NNRs) protect sensitive biodiversity or geological features, provide sites for ecological research and offer opportunities for people to experience the natural environment. NNRs are a statutory designation made by Natural England. Buckinghamshire has two NNRs:

- *Aston Rowant* is also a SAC and SSSI and is owned and managed by Natural England
- *Burnham Beeches* is also a SAC and SSSI and is owned and managed by the City of London

Local Nature Reserves (LNRs) are important for people and wildlife; they have features of local biodiversity or geological interest and offer opportunities for learning. LNRs are a statutory designation made by local authorities. There are 17 LNRs in Buckinghamshire.

Berks, Bucks & Oxon Wildlife Trust (BBOWT) Nature Reserves: : BBOWT own or lease 25 nature reserves within Buckinghamshire to protect important biodiversity, and to provide opportunities for people to enjoy local wildlife. Many BBOWT Nature Reserves have SAC, SSSI or LWS status.

Royal Society for the Protection of Birds (RSPB), Church Wood: The RSPB own and manage this nature reserve in the south-east of Buckinghamshire.

Butterfly Conservation (BC), Upper Thames Branch, Holtspur Bottom: BC lease this site and Upper Thames Branch manage it in the South of Buckinghamshire.

Woodland Trust Woods: There are 30 woods owned and managed by the Woodland Trust in Buckinghamshire and Milton Keynes, some of these have SSSI or LWS status, and most are ancient woodland.

LEGISLATION

National Nature Reserves are designated under the Wildlife and Countryside Act (Section 35) and the National Parks and Access to the Countryside Act 1949

Local Nature Reserves are designated under the National Parks and Access to the Countryside Act 1949

PLANNING POLICY

Policies described in Sections 2 and 3 of this document should be applied according to the wildlife interest and any statutory designation that applies to the nature reserve, and biodiversity enhancements should be sought in line with National Planning Policy Framework and local policies as described in Section 4.

Check the relevant District Council's Local Plan for local policy.

FURTHER INFORMATION

- Chilterns AONB Management Plan

Areas of Outstanding Natural Beauty (AONBs)



Chilterns AONB, Buckinghamshire (Jim Asher)

AONBs are landscapes designated for the purpose of conserving and enhancing the natural beauty (including conservation of flora, fauna and geological and physiographical features) of an area. The Chilterns AONB stretches over the borders into Oxfordshire, Hertfordshire and Bedfordshire.

The Chilterns AONB supports a large number of designated nature conservation sites and priority habitats. A significant proportion of Buckinghamshire's Biodiversity Opportunity Areas are within the AONB (see Section 4a).

The Chilterns AONB has an active Management Plan (2014–2019) (a statutory plan) which includes a detailed chapter on biodiversity with specific policies and actions.

LEGISLATION

AONBs are designated under the Countryside and Rights of Way Act 2000 and the National Parks and Access to the Countryside Act 1949

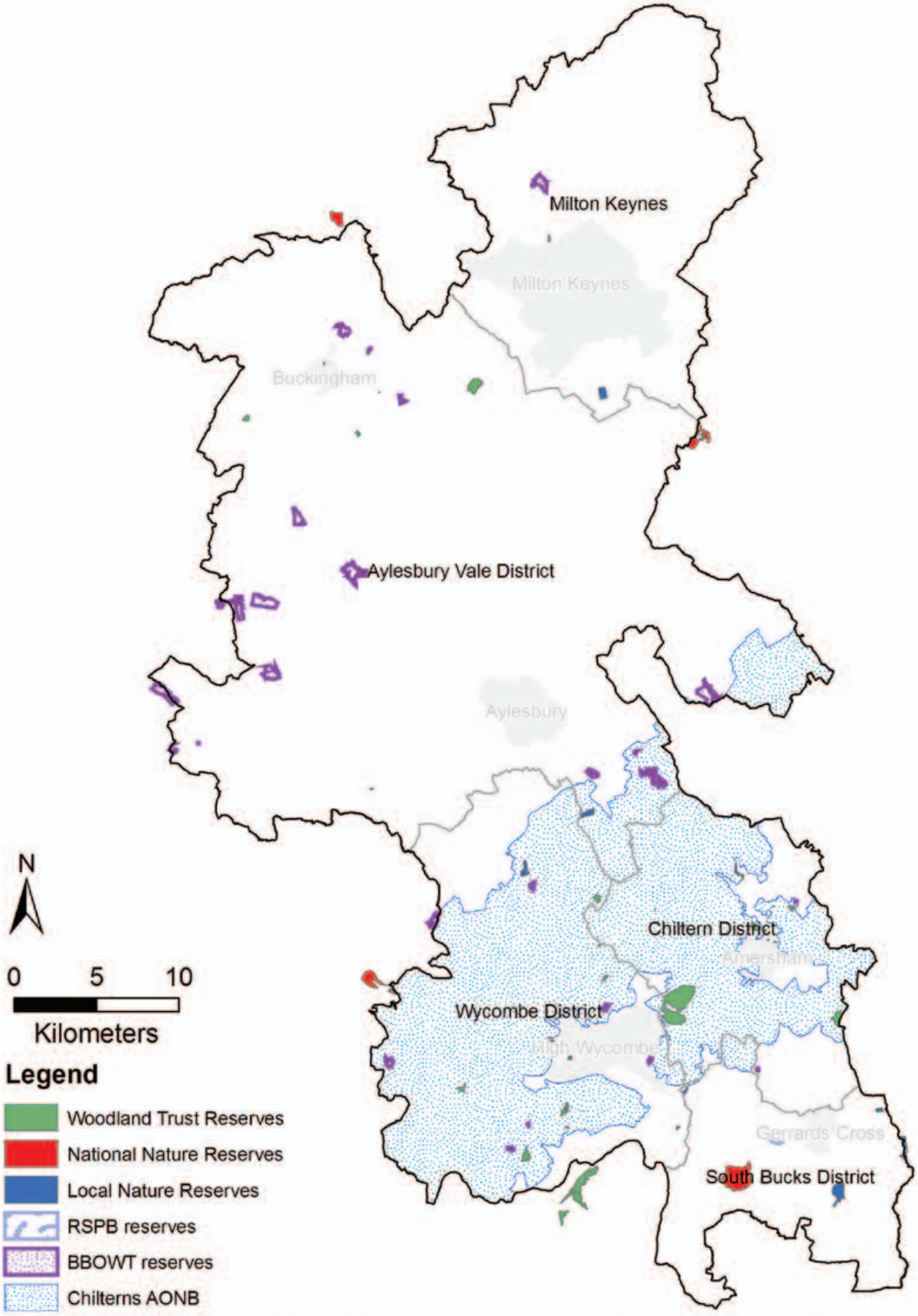
PLANNING POLICY

Policies described in Sections 2 and 3 of this document should be applied according to the wildlife interest and any statutory designation that applies to land within an AONB, and biodiversity enhancements should be sought in line with National Planning Policy Framework and local policies as described in Section 4.

Check the relevant District Council's Local Plan for local policy.

Map 7: Nature Reserves and The Chilterns Area of Outstanding Natural Beauty (AONB)

This map is only an example – for up-to-date information contact BMERC



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4a Biodiversity Opportunity Areas (BOAs)

Important areas for wildlife conservation

Biodiversity Opportunity Areas (BOAs) identify the most important areas for wildlife conservation in Buckinghamshire, where targeted conservation action will have the greatest benefit. The main aim within BOAs is to restore biodiversity at a landscape scale through the maintenance, restoration and creation of priority habitats. These areas have a crucial role to play in climate change mitigation, allowing wildlife to freely move along corridors when necessary. BOAs are identified on **Map 8**, they are equivalent to the BOAs that have been mapped across South East England. The map also highlights local BOAs which have importance at the county scale but which have not been mapped to the same criteria as those for the regional scale BOAs.

The local planning approach to BOAs is being developed in emerging Local Plans across the county, in accordance with paragraph 117 of the National Planning Policy Framework (see right).

In general, development that would prevent the achievement of the aims of a BOA should be avoided. In many cases this involves protecting the designated and priority habitats and species in the BOA (see Sections 2 and 3), but consideration should also be given to whether development will affect habitat connectivity, either positively or negatively.

The NPPF requires development to 'provide net gains in biodiversity where possible'. As with all development, proposals within or adjacent to a BOA will be expected to deliver biodiversity enhancements, but within a BOA such enhancements will be most effective when they are tailored to meet the aims of a BOA. The scale of enhancements should be proportional to the size of the development. Examples include:

- suitable habitat management secured by planning obligations;
- habitat creation to link fragmented habitats;
- funding of conservation initiatives, secured by planning conditions/obligations;
- and provision of capital items needed to secure biodiversity enhancements.

Where a development has the potential to impact, either positively or negatively, on the known biodiversity interest of a BOA, a biodiversity survey and report will be required, to identify both constraints and opportunities. In some circumstances an Environmental Impact Assessment may be needed.

DELIVERING BIODIVERSITY GAINS IN BUCKINGHAMSHIRE'S BOAS

The BOAs were mapped by the Buckinghamshire and Milton Keynes Biodiversity Partnership (BMKBP) a partnership of local authorities, statutory agencies and local conservation organisations in Buckinghamshire. They were identified by taking into account existing concentrations of priority habitat and important areas for priority species. The potential for habitat restoration and creation, as well as geology, topography and hydrology was also considered. Archaeological interest and public access were also taken into account.

A statement has been produced for each BOA, identifying the features of biodiversity importance and targets for maintenance, restoration and creation of habitats.

The BOAs provide a focus for coordinated biodiversity action in the county, including:

- Biodiversity project work by a range of organisations
- Delivery of agri-environment schemes
- Provision of biodiversity enhancements through the planning system

Delivery of BOA aims is coordinated by a number of organisations within the Buckinghamshire and Milton Keynes Natural Environment Partnership (the NEP).

PLANNING POLICY

National Planning Policy Framework paragraph 109:

The planning system should contribute to and enhance the natural and local environment by: ... minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

National Planning Policy Framework paragraph 117:

'To minimise impacts on biodiversity and geodiversity, planning policies should:

- plan for biodiversity at a landscape-scale across local authority boundaries;
- identify and map components of the local ecological networks, including
- the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by local partnerships for habitat restoration or creation;
- promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan…'

BOAs are recognised in a number of Local Plans within Buckinghamshire. Reference should be made to these for further details of the approach taken.

KEY ORGANISATIONS

Berks, Bucks & Oxon Wildlife Trust

Buckinghamshire & Milton Keynes Biodiversity Partnership

Buckinghamshire & Milton Keynes Environmental Records Centre

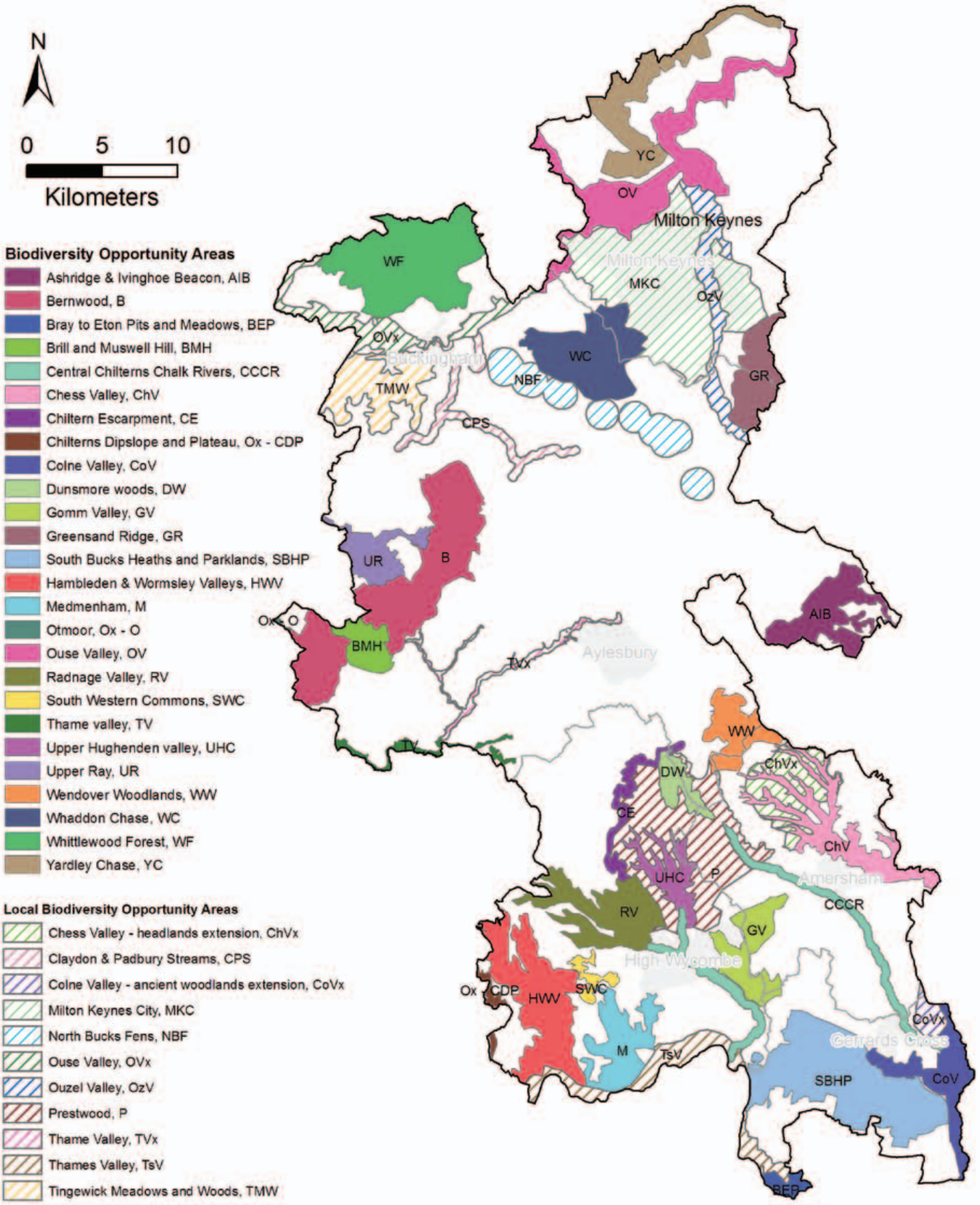
Environment Agency

Local authorities

Natural England

Map 8: Biodiversity Opportuntiy Areas in Buckinghamshire

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4b Green Infrastructure

Buckinghamshire's green spaces, rights of way, rivers, lakes, canals, commons and wildlife habitats are important assets at the heart of our Green Infrastructure networks that intersperse and connect our villages and towns. They have a wide range of benefits not just for wildlife but also for people, e.g. quality of life, recreation, access to nature, attracting businesses and visitors, maintaining land value, and climate change adaptation. In new developments Green Infrastructure can help deliver attractive and innovative places that people want to live, work and play in.

Green Infrastructure and biodiversity

Planning and delivering Green Infrastructure has a significant role to play in maintaining and restoring the natural environment – not just habitats and species but also ecosystem services and functioning ecological systems. Ecosystem Services are the 'benefits people obtain from ecosystems, such as food, water, flood and disease control and recreation' (National Planning Policy Framework 2012). Multi-functionality is central to the green infrastructure approach, which recognises these many benefits. This does not mean that every site or feature has to be multi-functional, but that sites, routes and links taken together should seek to create a multifunctional and connected network.

Green Infrastructure should provide a network of interconnected habitats to enable dispersal of species across the wider environment. Open spaces within developments should be linked to biodiversity in the wider countryside, including on designated sites, priority habitat and BOAs. Green Infrastructure should also be planned to provide ecosystem services such as flood protection, microclimate control and filtration of air pollutants.

Green Infrastructure in Buckinghamshire

Policies 99 and 114 of the National Planning Policy Framework require Local Plans to recognise the need for green infrastructure provision. Supporting this requirement, the Buckinghamshire Green Infrastructure Strategy (2009) and the Buckinghamshire Green Infrastructure Delivery Plan (2013) identify an overview of strategic priority projects for the county.

The Green Infrastructure Delivery Plan (2013) develops the content of the Green Infrastructure Strategy to include a costed action plan with priority projects for specific areas. The Milton Keynes Green Infrastructure Plan also identifies priority projects for the surrounding area. Green Infrastructure in Buckinghamshire is now championed through the Buckinghamshire and Milton Keynes Natural Environment Partnership (NEP). The NEP works to ensure the natural environment is embedded in growth strategies for the area and explores opportunities to implement priorities set out in the Green Infrastructure strategies and Delivery Plan. Delivery of Green Infrastructure priorities should be sought through new development, investment and funding opportunities.

PLANNING POLICY

National Planning Policy Framework paragraph 99:

Local Plans should take account of climate change over the long term, including factors such as flood risk, coastal change, water supply and changes to biodiversity and landscape. New development should be planned to avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure.

National Planning Policy Framework paragraph 109:

The planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

National Planning Policy Framework paragraph 114:

Local planning authorities should ... set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure.

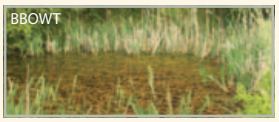
EXAMPLES OF GREEN INFRASTRUCTURE ASSETS IN BUCKINGHAMSHIRE:



Local: Ashridge Estate, Black Park, Brill Hill, Claydon House, College Lake Nature Reserve, Combe Hill, Denham County Park, Emberton County Park, Hughenden Manor, Linford Lakes, Salcey Forest, Shabbington Wood, Waddesdon Manor, Wendover Woods, West Wycombe Park, Willen Lake, connected networks of Rights of Way, greenways and cycle paths.



Landscape/strategic: Bernwood, Chilterns, Greensand Ridge, Whaddon Chase, Whittlewood Forest, Yardley Chase, Chess Valley, Colne Valley, Ouse Valley, Thame Valley, Upper Ray Valley, Grand Union Canal, The Ridgeway National Trail, Icknield Way, Thames Path, Milton Keynes Wildlife Corridors.



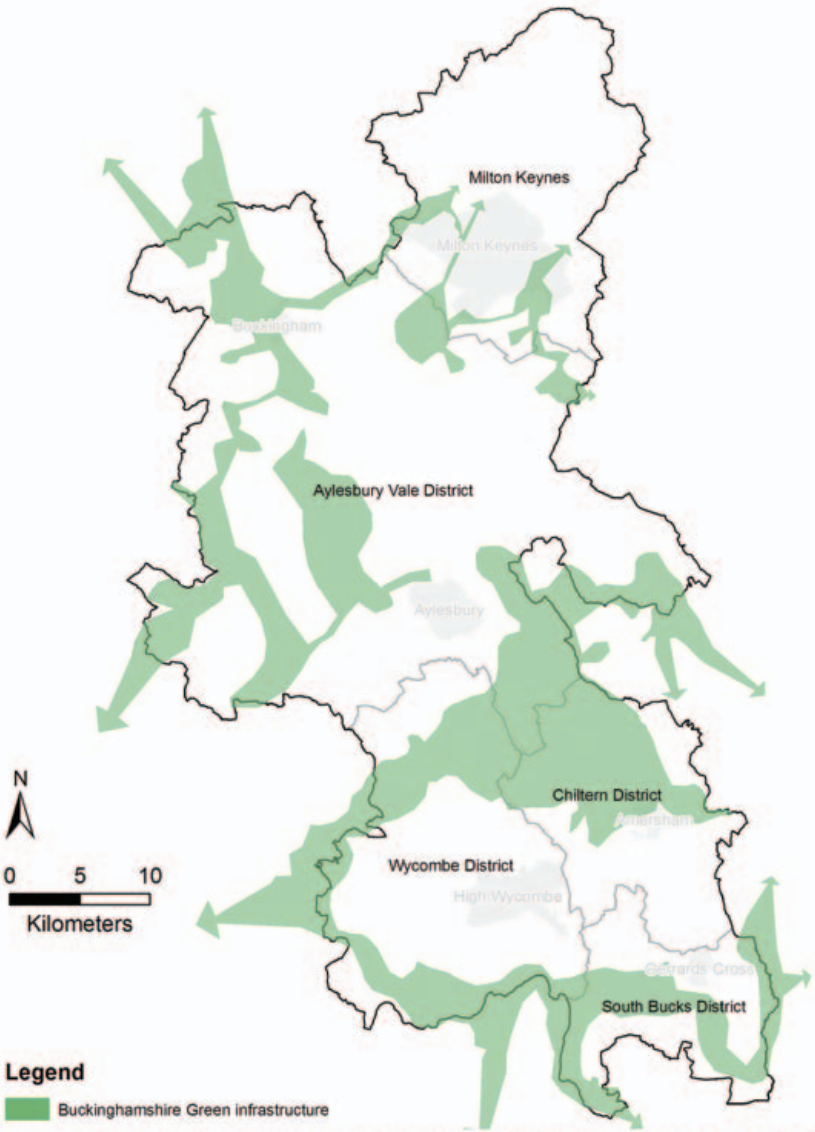
Town/village: Street trees, green roofs, hedgerows, local parks and gardens, village greens, local routes and walks, cemeteries, churchyards, ponds and streams, woodlands, play areas, Local Nature Reserves, school grounds, sustainable urban drainage schemes.

FURTHER INFORMATION

- Good practice guidance for green infrastructure and biodiversity (2012)
- Natural England: Green Infrastructure Guidance
- Local Green Infrastructure: helping communities make the most of their landscape

Map 9: Green Infrastructure in Buckinghamshire

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Urban flowers (Paul Hobson)

KEY ORGANISATIONS

Local authorities:

Aylesbury Vale District Council
Buckinghamshire County Council
Chiltern District Council
Milton Keynes Council
South Bucks District Council
Wycombe District Council

AONBs:

Chilterns AONB

Other:

Berks, Bucks and Oxon Wildlife Trust
Natural England
Buckinghamshire and Milton Keynes Natural Environment Partnership

EXAMPLES OF NATIONAL GREEN INFRASTRUCTURE STANDARDS: ANGST

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

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


College Lake Nature Reserve (Rachel Hudson)

SOME LOCAL GREEN INFRASTRUCTURE PLANS

- Buckinghamshire Green Infrastructure Strategy (2009)
- Buckinghamshire Green Infrastructure Delivery Plan (2013)
- Milton Keynes Green Infrastructure Plan
- Aylesbury Vale Green Infrastructure Strategy

4c Biodiversity in built development

Biodiversity can be proactively planned into new developments of all kinds and at all scales, from individual houses or new roads, to masterplans for large development sites. Features for biodiversity within the site should be planned to link up to habitats and features in the surrounding landscape. The following checklist suggests steps that should be followed to achieve best practice. The ecologist for the determining authority should also be consulted early in the process, ideally at pre-application stage.

Checklist:

Pre-application:

- Have appropriate ecological surveys and assessments been undertaken to understand the habitats and species present and the direct and indirect impacts of development?
- Can different options be pursued in the siting, scale and location of development to reduce impacts?
- How will the adverse impacts of development be mitigated?

Planning /masterplanning:

- Can existing biodiversity habitats and features be incorporated into the site design?
- What measures can be taken to ensure an overall gain in biodiversity? How will net gain be quantified?
- Consider the creation of new habitats – can these link or buffer existing habitats?
- Will the scheme provide people with access to nature – at home, at work or school?
- Have the impacts of people on biodiversity sites and features been considered?
- Is there enough publicly accessible natural greenspace?
- Is new green infrastructure linked to the rights of way network?

Design of buildings, roads & sites:

- Do the detailed designs include specifications for biodiversity features and areas? [See below].
- Have the impacts of lighting been considered?

Long term management:

- Has a long-term management plan been prepared to set out how sites will be managed?
- Have capital and annual management costs been properly estimated?
- Who will manage the assets, and where will the money come from?

Biodiversity is not only found in the countryside and special nature reserves; the built environment also provides opportunities to deliver enhancements for biodiversity. Bringing nature into the built environment can also increase land values by making developments more attractive. Increasing the amount of vegetation, water bodies and 'natural' surfaces (rather than non-porous, hard surfaces) also improves the resilience of built areas to extreme weather events such as drought, heavy rainfall and flooding.

PLANNING POLICY

National Planning Policy Framework paragraph 109:

The planning system should contribute to and enhance the natural and local environment by: ... minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

National Planning Policy Framework paragraph 118:

When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles: ... opportunities to incorporate biodiversity in and around developments should be encouraged.

KEY ORGANISATIONS

Bat Conservation Trust

Berks, Bucks and Oxon Wildlife Trust

Buckinghamshire County Council

District authorities

Freshwater Habitats Trust

RSPB

Swift Conservation

UK Green Building Council

Smarter building: from grey to green

Engineered solutions
- Bollards
- Security fences
- Paved courtyards
- Traditional roofs


OCC

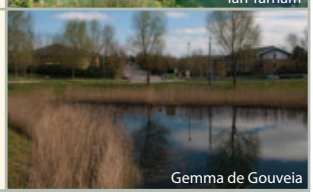
Natural solutions
- Street trees
- Green walls
- Rain gardens
- Green roofs


Ian Yarham

Single function
- Wildlife and business kept in separate 'zones'.
- Amenity grassland and 'rec' grounds
- Single function flooding solutions


barneyboogles/Fotolia.com

Multi-functional
- Landscaped business parks with nature areas
- Wildlife-friendly mixed-use parks
- Sustainable Urban Drainage


Gemma de Gouveia

From grey to green: ideas for buildings, roads and outdoor spaces

INFO	IDEAS	HELP
Buildings		
Modern buildings can be tightly sealed to conserve energy, but leave little room for the species that have traditionally lived in our roof spaces and outbuildings, such as bats and birds. Building in biodiversity features can contribute to design guides and standards and corporate social responsibility objectives.	- There are a wide range of boxes, bricks, tubes, and tiles that can be incorporated into the building design or attached to the outside to benefit some species of bats, and birds such as swifts and house martins. - Green roofs on buildings or sheds can provide foraging opportunities for birds, and support a range of native plants. Green walls can also support biodiversity. - Thought should also be given to the impact of lighting on wildlife, especially bats; areas of no or low level lighting along bat foraging routes should be considered. - Even small gardens can be wildlife-friendly and provide valuable habitats.	Bats in Buildings Fitting swift nest places Green Roof Guide UK Green Building Council Portal CIRIA Advice on gardens
Roads and streets		
Roads can provide a barrier to wildlife, and collisions with animals such as deer can also pose a safety threat. Street trees can be used as natural traffic calming measures. They can increase land values, and improve air quality.	- Mammal fencing can be used to exclude mammals from the road, and underpasses can be created for a range of species including badger, otter, hedgehog and amphibians. - Green bridges can be created in order to provide a safe crossing for both people and animals. - Street trees can be built into design specifications. In rural areas hedgerows, trees and small copses can be planted or semi-natural grasslands created along verges. - Balancing ponds and Sustainable Urban Drainage schemes can be designed to enhance biodiversity.	Design Manual for Roads and Bridges Working with wildlife: guidance for the construction industry (C691) Sustainable Urban Drainage
Landscape design		
Appropriate landscaping within developments can help reduce fragmentation of habitats by allowing wildlife to live within and move through built areas to the wider countryside.	- Landscaping should aim to retain and enhance existing biodiversity features, and link up habitats. For example, native hedgerows and strips of species-rich grasslands provide routes along which species such as hedgehogs, butterflies and bats can move. - Native plant species, particularly those of local provenance, will be of most benefit to wildlife as they are likely to support a wider range of native animals. Consider incorporating plants that provide sources of food and nectar for birds, bees and insects. - Ponds can provide an important habitat for wildlife. They should be designed with gently sloping edges to allow animals easy access in and out, and a variety of depths. A series of ponds can link with wetland features in the wider countryside. - Biodiversity can be built into many other greenspaces, such as staff picnic areas, dipping ponds in school grounds. Allotments and playing fields can be designed with biodiversity-rich grass margins, mown less frequently.	Pond Creation Tool Kit Biodiversity by Design How to encourage biodiversity in urban parks Rain Garden Guide
Long term management		
Positive management is needed in perpetuity for sites and features to contribute to biodiversity objectives and to be enjoyed by communities. Neglected spaces can have a negative impact on biodiversity value, land values, crime, health and social cohesion. Local organisations are unlikely to take on responsibilities for land if costs and funding are not agreed upfront.	- Estimate what the annual land management costs may be at an early stage, including any capital that may be needed to replace/repair features. - Agree funding and governance arrangements. Who will manage the land, and where the money will come from? - Will new council tax precepts cover costs, or realistically is more money needed? Consider setting up a legally binding residents association, ground rents or business precepts. - Are there opportunities to set up a management trust, funded by revenue-generating assets such business rents, cafés or carparks?	Paying for parks: eight models for funding greenspace Eco-towns green infrastructure Worksheet

5 Further information

Key legislation and policy

Legislation	
Conservation of Habitats and Species Regulations 2010 (as amended)	http://www.legislation.gov.uk/uksi/2010/490/contents/made
Countryside and Rights of Way Act 2001	www.opsi.gov.uk/acts/acts2000/ukpga_20000037_en_1
EC Birds Directive	www.jncc.gov.uk/page-1373
EC Habitats Directive	www.jncc.gov.uk/page-1374
EIA Regulations	www.opsi.gov.uk/si/si1999/19990293
National Parks and Access to the Countryside Act 1949	www.opsi.gov.uk/RevisedStatutes/Acts/ukpga/1949/cukpga_19490097_en_4#pt3
Natural Environment and Rural Communities Act 2006	www.opsi.gov.uk/acts/acts2006/ukpga_20060016_en_1
Protection of Badgers Act 1992	www.opsi.gov.uk/ACTS/acts1992/ukpga_19920051_en_1
The Conservation of Habitats and Species (Amendment) Regulations 2012	http://www.legislation.gov.uk/uksi/2012/1927/made
Wildlife and Countryside Act 1981	www.jncc.gov.uk/page-3614

National Planning Policy	
Circular 06/05: Biodiversity and Geological Conservation – Statutory Obligations and Their Impact Within the Planning System	www.communities.gov.uk/documents/planningandbuilding/pdf/147570.pdf
National Planning Policy Framework	https://www.gov.uk/government/publications/national-planning-policy-framework--2
Local Planning Policy Local Planning Policy is updated regularly on local authority websites. Links to the Planning pages of local authority websites are below	
Aylesbury Vale District Council	http://www.aylesburyvaledc.gov.uk/residents/planning-building/
Buckinghamshire County Council	http://www.buckscc.gov.uk/environment/planning/
Chiltern District Council	http://www.chiltern.gov.uk/planning
Milton Keynes Council	http://www.milton-keynes.gov.uk/planning-and-building
South Buckinghamshire District Council	http://www.southbucks.gov.uk/planning
Wycombe District Council	http://www.wycombe.gov.uk/council-services/planning-and-buildings.aspx

Glossary

ANGSt	Accessible Natural Greenspace Standard	GI	Green Infrastructure
AONB	Area of Outstanding Natural Beauty	HRA	Habitat Regulations Assessment (also known as Appropriate Assessment)
ASNW	Ancient Semi-Natural Woodland	IROPI	Imperative Reasons of Over-riding Public Interest
BAP	Biodiversity Action Plan	LDF	Local Development Framework
BBOWT	Berkshire, Buckinghamshire & Oxfordshire Wildlife Trust	LNR	Local Nature Reserve
BMERC	Buckinghamshire & Milton Keynes Environmental Records Centre (BMERC)	LGS	Local Geological Site
BOA	Biodiversity Opportunity Areas	LWS	Local Wildlife Site
BOS	Banbury Ornithological Society	NE	Natural England
CABE	Commission for Architecture and the Built Environment	NERC	Natural Environment and Rural Communities Act 2006
CIEEM	Chartered Institute of Ecology and Environmental Management	NNR	National Nature Reserve
CIRIA	Construction Industry Research and Information Association	NPPF	National Planning Policy Framework
CRoW	Countryside and Rights of Way Act (2000)	RSPB	Royal Society for the Protection of Birds
CTA	Conservation Target Area	RVNR	Road Verge Nature Reserve
CWS	County Wildlife Site – this term has now been replaced by Local Wildlife Site	SAC	Special Area of Conservation
DEFRA	Department of the Environment, Food and Rural Affairs	SLINC	Sites of Local Importance for Nature Conservation (an Oxford City designation)
EA	Environment Agency	SPA	Special Protection Area
EcIA	Ecological Impact Assessment	SSSI	Site of Special Scientific Interest
EIA	Environmental Impact Assessment	TCPA	Town and Country Planning Association
EPS	European Protected Species (under the EC Habitats Directive)	TPO	Tree Preservation Order
GCN	Great Crested Newt	WCA	Wildlife and Countryside Act (1981)

6 Contacts

Bat Conservation Trust
15 Cloisters House, 8 Battersea Park Road, London SW8 4BG
T: 020 7501 3635
E: enquiries@bats.org.uk
W: www.bats.org.uk

Bat Groups:
Berkshire and South Buckinghamshire
E: info@berksbats.org.uk
W: www.berksbats.org.uk

North Bucks
E: info@northbucksbatgroup.org.uk
W: www.northbucksbatgroup.org.uk

Berks, Bucks & Oxon Wildlife Trust
College Lake Nature Reserve, Upper Icknield Way, Bulbourne, Tring, Herts, HP23 5QG
T: 01442 826774
E: conservation@bbowt.org.uk
W: www.bbowt.org.uk

Butterfly Conservation
Manor Yard, East Lulworth, Wareham, Dorset BH20 5QP
T: 01929 400209
E: info@butterfly-conservation.org
W: www.butterfly-conservation.org

Buckinghamshire and Milton Keynes Biodiversity Partnership
c/o BMERC, County Hall, Walton Street, Aylesbury, Bucks HP20 1UY
T: 01296 696012
E: bap@buckscc.gov.uk
W: www.buckinghamshirepartnership.gov.uk/bmkbp

Buckinghamshire and Milton Keynes Environmental Records Centre
County Hall, Walton Street, Aylesbury, Bucks HP20 1UY
T: 01296 382431
E: erc@buckscc.gov.uk
W: www.buckinghamshirepartnership.co.uk/environmental-records

Buckinghamshire and Milton Keynes Natural Environment Partnership (NEP)
Place Services 9th Floor, County Hall, Walton Street, Aylesbury, Bucks HP20 1UY
T: 01296 382992
W: www.buckscc.gov.uk/environment/green-infrastructure

Buckinghamshire Badger Group
Haydon Mill, Rabans Lane, Aylesbury, Bucks HP19 8RU
W: www.bucks-badgers.org.uk

Buckinghamshire County Council
County Hall, Walton Street, Aylesbury, Bucks HP20 1UA
T: 0845 3708090
W: www.buckscc.gov.uk
W: www.buckscc.gov.uk/sites/bcc/environment/Environment.page

Buckinghamshire Rare Plant Recording Group
W: http://sites.google.com/site/bucksplantrecorders

Chilterns Conservation Board
The Lodge, Station Road, Chinnor, Oxon OX39 4HA
T: 01844 355500
E: office@chilternsaonb.org
W: www.chilternsaonb.org

Design Council
Angel Building, 407 St. John Street, London, EC1V 4AB
T: 02074205200
E:info@designcouncil.org.uk
W: www.designcouncil.org.uk/our-services/built-environment

Environment Agency
Red Kite House, Howbery Park, Crowmarsh Gifford, Wallingford, Oxon OX10 8BD
T: 01491 828346
E: enquiries@environment-agency.gov.uk
W: www.gov.uk/government/organisations/environment-agency

Freshwater Habitats Trust
First Floor, Bury Knowle House, North Place, Headington, Oxford OX3 9HY
T: 01865 595505
E: info@freshwaterhabitats.org.uk
W: www.freshwaterhabitats.org.uk

Forestry Commission
Berks Bucks & Oxon Area Office, Forestry Commission, SE England Region, Upper Icknield Way, Aston Clinton, Aylesbury, Bucks HP22 5NF
E: fc.seeng.cons@forestry.gsi.gov.uk
W: http://www.forestry.gov.uk/england

Mammal Society
3 The Carronades, New Road, Southampton SO14 0AA
T: 02380 237874
E: info@themammalsociety.org
W: www.mammal.org.uk

Natural England
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T: 0845 600 3078
E: enquiries@naturalengland.org.uk
W: www.naturalengland.gov.uk

Royal Society for the Protection of Birds
46 The Green, South Bar, Banbury, Oxon OX16 9AB
T: 01295 253330
W: www.rspb.org.uk

The Parks Trust
Campbell Park Pavilion, 1300 Silbury Boulevard, Milton Keynes MK9 4AD
T: 01908 233600
E: info@theparkstrust.com
W: www.theparkstrust.com

Town and Country Planning Association
17 Carlton House Terrace, London SW1Y 5AS
T: 0207 930 8903
W: www.tcpa.org.uk

Woodland Trust
Autumn Park, Dysart Road, Grantham, Lincs NG31 6LL
T: 01476 581111
E: england@woodlandtrust.org.uk
W: www.woodlandtrust.org.uk

Local Authority Contacts:

Aylesbury Vale District Council
T: 01296 585858
W: www.aylesburyvaledc.gov.uk

Chiltern District Council
T: 01494 729000
W: www.chiltern.gov.uk

South Bucks District Council
T: 01895 837200
W: www.southbucks.gov.uk

Wycombe District Council
T: 01494 461 000
W: www.wycombe.gov.uk

Milton Keynes Council
T: 01908 353636
W: www.milton-keynes.gov.uk







Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust (BBOWT)

College Lake Nature Reserve, Upper Icknield Way, Bulbourne, Tring, Herts HP23 5QG

01442 826774

conservation@bbowt.org.uk

www.bbowt.org.uk

Buckinghamshire County Council

County Hall, Walton Street, Aylesbury, Bucks HP20 1UA

0845 3708090

www.buckscc.gov.uk

Buckinghamshire and Milton Keynes Environmental Records Centre (BMERC)

Place Services 9th floor, County Hall, Walton Street, Aylesbury, Bucks HP20 1UY

01296 382431

erc@buckscc.gov.uk

www.buckinghamshirepartnership.gov.uk/environmental-records

Berkshire
Buckinghamshire
Oxfordshire

THE wildlife TRUSTS

BUCKINGHAMSHIRE COUNTY COUNCIL

Environmental Records Centre

MILTON KEYNES COUNCIL

NATURAL ENGLAND