

## **Ray CTA (Conservation Target Area)**

The alluvial floodplain of the River Ray extending along a number of small tributary streams and including some areas of land between these streams. This area extends into Buckinghamshire. The area extends onto the clay to include known areas of wet grassland and the main areas of ridge and furrow.

**Joint Character Area:** Thames and Avon Vales

**Landscape Types:** Alluvial Lowland with some areas of Clay Vale.

**Geology:** Mainly alluvium along the Ray. Alluvium is also present in narrow bands along the small streams and there are Oxford Clay mudstones away from the streams and river.

**Topography.** Flat riverside land. **Area of CTA:** 1192 hectares

### **Biodiversity:**

- Lowland Meadow. The key habitat in this area. It is found in a number of SSSIs and Local Wildlife Sites mainly at least partly on the alluvium. North-west of Blackthorn Hill there is a larger group of meadows which are largely on the Oxford Clay. Remnants of this habitat are found elsewhere especially between Bicester and Blackthorn Hill and in some meadows in Buckinghamshire including BBOWT's recent addition to their Upper Ray Meadows Reserve at Leaches Farm.
- Wet Grassland/Floodplain Grazing Marsh. Wet grassland is found in meadows along with lowland meadow habitat with remnants elsewhere. Parts of the BBOWT Upper Ray Reserves have been restored to floodplain grazing marsh.
- Hedgerows. Some rich and well structured hedgerows with brown and black hairstreak.
- Ponds at Leaches Farm BBOWT reserve.
- Other Species: true fox sedge is found in a number of sites in the area.

**Access:** Largely restricted to bridleways and footpaths. There are a number of BBOWT nature reserves. Dorothy Bolton Meadow & Leaches Meadow currently have no public access, whilst Long Herdon & Grange are accessed via a public footpath. Access routes to a further two BBOWT reserves at Cow Leys and Leaches Farm are by existing public footpaths.

**Archaeology:** Extensive ridge and furrow.

### **Oxfordshire Biodiversity Action Plan Targets associated with this CTA:**

1. Lowland meadow – management<sup>1</sup>, restoration and creation (with a focus on MG4 hay meadows).
2. Floodplain grazing marsh - management, restoration and creation (with a focus on breeding waders).
3. Reedbed – creation.
4. Ponds – creation (particularly of pond complexes).
5. Hedgerows – management (good management of existing hedgerows on short and long-term rotation, which will benefit brown and black hairstreaks and other wildlife).
6. Rivers – management and restoration (resource protection of watercourses to maintain and improve water quality).

<sup>1</sup> "Management" implies both maintaining the quantity, and maintaining and improving the quality of existing BAP habitat and incorporates the following target definitions: "Maintaining extent" and "Achieving Condition".

# **GUIDANCE ON THE VARIOUS STATUTORY AND NON-STATUTORY WILDLIFE SITE DESIGNATIONS**

## **SITE DESIGNATIONS THAT PROTECT THE UK'S NATURAL HERITAGE THROUGH STATUTE**

### **LOCAL NATURE RESERVES (LNRs) (IN ENGLAND, SCOTLAND AND WALES)**

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

### **NATIONAL NATURE RESERVES (NNRS)**

NNRs contain examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats or to provide special opportunities for scientific study of the habitats communities and species represented within them.

NNRs are declared by the statutory country conservation agencies under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981. In Northern Ireland, Nature Reserves are designated under the Amenity Lands Act (Northern Ireland) 1965.

### **RAMSAR SITES**

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. Originally intended to protect sites of importance especially as waterfowl habitat, the Convention has broadened its scope over the years to cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. The Convention adopts a broad definition of wetland, namely "areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres". Wetlands "may incorporate riparian and coastal zones adjacent to the wetlands, and islands or bodies of marine water deeper than six metres at low tide lying within the wetlands".

There is only one Ramsar site in Berkshire or Oxfordshire, South West London Waterbodies.

### **SITES OF SPECIAL SCIENTIFIC INTEREST (SSSI) (ENGLAND, SCOTLAND AND WALES)**

The SSSI series has developed since 1949 as the national suite of sites providing statutory protection for the best examples of the UK's flora, fauna, or geological or physiographical

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features. These sites are also used to underpin other national and international nature conservation designations. Most SSSIs are privately-owned or managed; others are owned or managed by public bodies or non-government organisations.

Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs have been renotified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and the Nature Conservation (Scotland) Act 2004.

## **SPECIAL AREAS OF CONSERVATION (SAC) AND SITES OF COMMUNITY IMPORTANCE (SCI)**

SACs are designated under the EC Habitats Directive. SACs are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs in terrestrial areas and territorial marine waters out to 12 nautical miles are designated under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended). New and/or amended Habitats sites which have been submitted to the European Commission by Government, but not yet formally adopted by the Commission, are referred to as candidate Special Areas of Conservation (cSACs). Sites which have been adopted by the EC, but not yet formally designated by governments of Member States are known as Sites of Community Importance (SCIs). In the UK, designation of SACs is devolved to the relevant administration within each country.

SACs, together with SPAs, form the Natura 2000 network.

## **SPECIAL PROTECTION AREAS (SPA)**

SPAs are classified by the UK Government under the EC Birds Directive. SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union. SPAs in terrestrial areas and territorial marine waters out to 12 nautical miles are classified under the Wildlife and Countryside Act 1981.

SPAs, together with SACs, form the Natura 2000 network.

## NON-STATUTORY NATURAL HERITAGE CONSERVATION DESIGNATIONS

### LOCAL WILDLIFE SITES

Local authorities for any given area may designate certain areas as being of local conservation interest. The criteria for inclusion, and the level of protection provided, if any, may vary between areas. Most individual counties have a similar scheme, although they do vary.

Most Local Wildlife Sites systems involve a panel of ecologists and others in the development of local criteria and the selection of the sites. Panels usually include a local government ecologist, an Natural England representative, the Local Wildlife Trust, the Local Environmental Record Centre and sometimes include a representative of local landowners and local naturalists.

These sites, which may be given various titles such as 'County Wildlife Sites' (CWS), 'Local Wildlife Sites' (LWS), 'Local Nature Conservation Sites' (LNCS), 'Sites of Importance for Nature Conservation' (SINCs), or Sites of Nature Conservation Importance' (SNCIs), together with statutory designations, are defined in local plans under the Town and Country Planning system and the National Planning Policy Framework and are a material consideration when planning applications are being determined.

As part of a national standardisation process these sites have recently been renamed as Local Wildlife Sites in Oxfordshire and Berkshire. Previously they were known as County Wildlife Sites in Oxfordshire and Wildlife Heritage Sites in Berkshire. Although the use of these names, especially in citations and descriptions, is being edited and replaced with Local Wildlife Sites or LWS it is likely that some references will remain to these former names until this is complete.

### PROPOSED LOCAL WILDLIFE SITES AND EXTENSIONS

These are also included on designated sites maps. They are areas thought to include important areas of UKBAP habitat or priority or protected species populations. Extensions are likely to have similar habitats to the adjacent Local Wildlife Sites. Local Authorities are made aware of these sites. They will not have been fully surveyed and taken to the selection panel as yet.

### NGO PROPERTIES / NATURE RESERVES

A variety of non-governmental organisations such as the John Muir Trust, Plantlife, the Royal Society for the Protection of Birds, Wildlife Trusts and Woodland Trust own or manage nature reserves or other areas of land that are important for biodiversity. These sites may be intended primarily for nature conservation, or for other purposes such as protection of landscape features or the provision public access to the countryside. These areas of themselves have no statutory basis, but a large number are also designated SSSIs / NNRs / SPAs / SACs / Ramsar sites, etc.

In Berkshire and Oxfordshire, BBOWT (Berks, Bucks & Oxon Wildlife Trust), Woodland Trust and RSPB sites fall into this category.

### LOCAL GEOLOGICAL SITES (LGS)

Local Geological Sites formerly known as Regionally Important Geological and Geomorphological Sites (RIGS) are the most important places for geology and geomorphology outside statutorily protected land such as Sites of Special Scientific Interest (SSSI). As part of a national

standardisation process these sites have recently been renamed as Local Geological Sites in Oxfordshire and Berkshire. Sites are selected under locally-developed criteria, according to their value for education, scientific study, historical significance or aesthetic qualities. Whilst not benefiting from statutory protection, LGS are equivalent to Local Wildlife Sites, and *"...consideration of their importance becomes integral to the planning process"*.

## OTHER SITES

Occasionally other sites might be shown on maps. These are likely to be sites with some wildlife interest, usually managed by local groups, local authorities or town councils but which do not have a specific statutory or non-statutory designation.

Some local authorities within Oxfordshire and Berkshire have identified other sites which are protected through policies in their local plans, including Oxford Local Wildlife Sites in Oxford City and district wildlife sites in Cherwell.

## CONSERVATION TARGET AREAS/ BIODIVERSITY OPPORTUNITY AREAS

These landscape scale areas have been identified as supporting high concentrations of UKBAP habitats and species populations and the potential to restore habitats at a landscape scale. These areas act as a focus for targeting resources into habitat management and restoration.

## ANCIENT WOODLAND

Ancient woodland areas within Bracknell Forest and Wokingham Borough are from an updated layer of ancient woodland produced by TVERC for Bracknell Forest Council and Wokingham Borough Council in 2015-16. This data has been provided to Natural England but has not yet been made available and thus differs from that shown on the Magic Map Interactive Map. For information of the methodology for selecting ancient woodland areas please contact TVERC.

## **APPENDIX 2**

### **Information obtained from Magic**

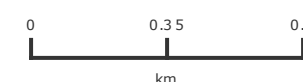




## Legend

- Local Nature Reserves (England)
- National Nature Reserves (England)
- Ramsar Sites (England)
- Sites of Special Scientific Interest (England)
- Special Areas of Conservation (England)
- Special Protection Areas (England)

Projection = OSGB36  
 xmin = 455100  
 ymin = 222200  
 xmax = 463300  
 ymax = 227600



Map produced by MAGIC on 26 June, 2018.  
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**APPENDIX 3**  
**NVC Quadrat Data**



Quadrat 1

Species		Percentage Cover
Common Name	Latin Name	
Upright Brome	<i>Bromopsis erecta</i>	70
Yarrow	<i>Achillea millefolium</i>	60
Red Fescue	<i>Festuca rubra</i>	60
Bird's-foot Trefoil	<i>Lotus corniculatus</i>	40
Meadow Fescue	<i>Schedonorus pratensis</i>	30
Cock's-foot	<i>Dactylis glomerata</i>	30
Lesser Trefoil	<i>Trifolium dubium</i>	20
Ribwort Plantain	<i>Plantago Lanceolata</i>	15
Lady's Bedstraw	<i>Galium verum</i>	15
Meadow Buttercup	<i>Ranunculus acris</i>	10
Perennial Rye-grass	<i>Lolium perenne</i>	10
Red Clover	<i>Trifolium pratense</i>	10
Dandelion	<i>Taraxacum agg.</i>	10
Greater Plantain	<i>Plantago major</i>	5
Common Vetch	<i>Vicia sativa</i>	5
Field Bindweed	<i>Convolvulus arvensis</i>	5
Common Sorrel	<i>Rumex acetosa</i>	5
Springy Turf-moss	<i>Rhytidiadelphus squarrosus</i>	5
Bare Ground		5

Quadrat 2

Species		Percentage Cover
Common Name	Latin Name	
Red Fescue	<i>Festuca rubra</i>	70
Upright Brome	<i>Bromopsis erecta</i>	60
Cock's-foot	<i>Dactylis glomerata</i>	40
Field Bindweed	<i>Convolvulus arvensis</i>	40
Yarrow	<i>Achillea millefolium</i>	40
Ribwort Plantain	<i>Plantago Lanceolata</i>	40
Lesser Trefoil	<i>Trifolium dubium</i>	40
Yellow Oat-grass	<i>Trisetum flavescens</i>	30
Common Mouse-ear	<i>Cerastium fontanum</i>	10
Smaller Cat's Tail	<i>Phleum bertolonii</i>	5
Meadow Buttercup	<i>Ranunculus acris</i>	5
Red Clover	<i>Trifolium pratense</i>	5
Thyme-leaved Sandwort	<i>Arenaria serpyllifolia</i>	5
Springy Turf-moss	<i>Rhytidiadelphus squarrosus</i>	5
Bare Ground		5

Quadrat 3

Species		Percentage Cover
Common Name	Latin Name	
Upright Brome	<i>Bromopsis erecta</i>	60
Yellow Oat-grass	<i>Trisetum flavescens</i>	60
Red Fescue	<i>Festuca rubra</i>	60
Red Clover	<i>Trifolium pratense</i>	40
Bird's-foot Trefoil	<i>Lotus corniculatus</i>	40
Crested Dog's-tail	<i>Cynosurus cristatus</i>	30
Smaller Cat's Tail	<i>Phleum bertolonii</i>	30
Field Bindweed	<i>Convolvulus arvensis</i>	30
Oxeye Daisy	<i>Leucanthemum vulgare</i>	20
Cock's-foot	<i>Dactylis glomerata</i>	10
Common Bent	<i>Agrostis capillaris</i>	10
Lesser Trefoil	<i>Trifolium dubium</i>	10
Common Vetch	<i>Vicia sativa</i>	5
Black Meddick	<i>Medicago lupulina</i>	5
Meadow Buttercup	<i>Ranunculus acris</i>	5
Bare Ground		5

Quadrat 4

Species		Percentage Cover
Common Name	Latin Name	
Upright Brome	<i>Bromopsis erecta</i>	70
Cock's-foot	<i>Dactylis glomerata</i>	50
Red Fescue	<i>Festuca rubra</i>	45
Lady's Bedstraw	<i>Galium verum</i>	40
Thyme-leaved Sandwort	<i>Arenaria serpyllifolia</i>	35
Perennial Rye-grass	<i>Lolium perenne</i>	30
Greater Knapweed	<i>Centaurea scabiosa</i>	25
Common Vetch	<i>Vicia sativa</i>	25
Ribwort Plantain	<i>Plantago lanceolata</i>	20
Crested Dog's-tail	<i>Cynosurus cristatus</i>	15
Common Mouse-ear	<i>Cerastium fontanum</i>	10
Lesser Trefoil	<i>Trifolium dubium</i>	10
Yarrow	<i>Achillea millefolium</i>	10
Smooth Meadow-grass	<i>Poa pratensis</i>	10
Burnet Saxifrage	<i>Pimpinella saxifraga</i>	5
Meadow Buttercup	<i>Ranunculus acris</i>	5
Great Lettuce	<i>Lactuca virosa</i>	5
Bare Ground		10

Quadrat 5

Species		Percentage Cover
Common Name	Latin Name	
Yarrow	<i>Achillea millefolium</i>	70
Rough Meadow-grass	<i>Poa trivialis</i>	65
Red Fescue	<i>Festuca rubra</i>	60
Crested Dog's-tail	<i>Cynosurus cristatus</i>	50
Meadow Fescue	<i>Schedonorus pratensis</i>	40
Upright Brome	<i>Bromopsis erecta</i>	40
Cock's-foot	<i>Dactylis glomerata</i>	40
Lady's Bedstraw	<i>Galium verum</i>	40
Ribwort Plantain	<i>Plantago Lanceolata</i>	30
Common Mouse-ear	<i>Cerastium fontanum</i>	30
Creeping Cinquefoil	<i>Potentilla reptans</i>	30
Bird's-foot Trefoil	<i>Lotus corniculatus</i>	25
Dandelion	<i>Taraxacum agg.</i>	25
Thyme-leaved Sandwort	<i>Arenaria serpyllifolia</i>	15
Lesser Trefoil	<i>Trifolium dubium</i>	10
Smooth Hawksbeard	<i>Crepis capillaris</i>	5
Scarlet Pimpernel	<i>Anagallis arvensis</i>	5
Sticky Mouse-ear	<i>Cerastium glomeratum</i>	5
Common Vetch	<i>Vicia sativa</i>	5
False Oat-grass	<i>Arrhenatherum elatius</i>	5
Perennial Rye-grass	<i>Lolium perenne</i>	5
Black Meddick	<i>Medicago lupulina</i>	5
Common Restharrow	<i>Ononis repens</i>	5
Eyebright sp.	<i>Euphrasia sp.</i>	2
Wild Mignonette	<i>Reseda lutea</i>	2
Prickly Sow-thistle	<i>Sonchus asper</i>	2
Daisy	<i>Bellis perennis</i>	1
Perforate St. John's Wort	<i>Hypericum perforatum</i>	1
Great Lettuce	<i>Lactuca virosa</i>	1
Springy Turf-moss	<i>Rhytidiadelphus squarrosus</i>	1

#### Quadrat 6

Species		Percentage Cover
Common Name	Latin Name	
Upright Brome	<i>Bromopsis erecta</i>	70
Red Fescue	<i>Festuca rubra</i>	60
Rough Meadow-grass	<i>Poa trivialis</i>	60
Yarrow	<i>Achillea millefolium</i>	60
Yellow Oat-grass	<i>Trisetum flavescens</i>	40
Field Bindweed	<i>Convolvulus arvensis</i>	40
Ribwort Plantain	<i>Plantago Lanceolata</i>	30



Meadow Buttercup	<i>Ranunculus acris</i>	30
False Oat-grass	<i>Arrhenatherum elatius</i>	20
Dandelion	<i>Taraxacum agg.</i>	15
Cock's-foot	<i>Dactylis glomerata</i>	10
Common Mouse-ear	<i>Cerastium fontanum</i>	10
Cow Parsley	<i>Anthriscus sylvestris</i>	10
Springy Turf-moss	<i>Rhytidiadelphus squarrosus</i>	10
Common Vetch	<i>Vicia sativa</i>	5

#### Quadrat 7

Species		Percentage Cover
Common Name	Latin Name	
Upright Brome	<i>Bromopsis erecta</i>	70
Red Fescue	<i>Festuca rubra</i>	50
Ribwort Plantain	<i>Plantago lanceolata</i>	50
Yellow Oat-grass	<i>Trisetum flavescens</i>	40
Cock's-foot	<i>Dactylis glomerata</i>	40
Rough Meadow-grass	<i>Poa trivialis</i>	30
Lady's Bedstraw	<i>Galium verum</i>	30
Smaller Cat's Tail	<i>Phleum bertolonii</i>	20
Meadow Fescue	<i>Schedonorus pratensis</i>	20
Yorkshire Fog	<i>Holcus lanatus</i>	20
Common Mouse-ear	<i>Cerastium fontanum</i>	15
Common Knapweed	<i>Centaurea nigra</i>	15
Lesser Trefoil	<i>Trifolium dubium</i>	10
Yarrow	<i>Achillea millefolium</i>	10
Meadow Buttercup	<i>Ranunculus acris</i>	10
Sticky Mouse-ear	<i>Cerastium glomeratum</i>	10
Oxeye Daisy	<i>Leucanthemum vulgare</i>	10
Greater Knapweed	<i>Centaurea scabiosa</i>	5
Field Wood-rush	<i>Luzula campestris</i>	5