

**OXFORDSHIRE WILDLIFE**

**and**

**LANDSCAPE STUDY**

**completed by**

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**and sponsored by: Oxfordshire County Council**

**English Nature**

**Countryside Agency**

**Northmoor Trust**

# Landscape Types:

## River Meadowlands



### 10. RIVER MEADOWLANDS

#### Regional Character Areas

Northamptonshire Uplands, Northamptonshire Vales, Cotswolds, Upper Thames Vale, Vale of White Horse and Vale of Aylesbury.

#### Location

This landscape type covers the flood plains and valley floors of the rivers Cherwell, Thames, Thame, Evenlode, Windrush, Swere and Sor Brook.

#### Overview

This is a linear riverine landscape with a flat, well-defined alluvial floodplain. It has pastoral character with meadows, wet and semi-improved pasture.

#### Key characteristics

- Flat, low-lying topography with seasonally flooded alluvial floodplains.
- Meandering river channels.
- Grazing meadows and small fields of permanent pasture.
- Riparian character with a strong pattern of riverside willows and tree-lined

ditches.

- Sparsely settled with a few roads.

### **Geology and landform**

The landscape type includes the flat, low-lying flood plains of main rivers. A thin strip of alluvium underlies the river corridors, giving rise to heavy soils with naturally impeded drainage. Many areas are still liable to flooding and are predominantly under permanent pasture. The transition between the floodplain and the surrounding landscape is subtle, with no obvious valley shape, particularly along the southern length of the River Thames where it passes through clay. In the northern part of the landscape type, there is a clear break in slope between the flat valley bottom and the steep rising valley sides.

### **Land use and vegetation**

This landscape type is dominated by flood meadows, particularly along parts of the Upper Cherwell and Upper Thames. Small fields of permanent pasture, consisting mainly of wet and semi-improved grassland and some neutral and marshy grassland, give a sense of visual and ecological unity. This unity is interrupted in places by arable farming, particularly adjoining the river Ock and the lower Thames. Tree cover is a notable element in this landscape type, with tree-lined corridors dominated by willows, often pollarded, being characteristic throughout the landscape. White willow is more common along the upper Cherwell, the river Swere and Evenlode, with crack willow common elsewhere. Other tree and shrub species include alder, poplar, ash and hawthorn. Small deciduous plantations, frequently dominated by poplar, and small blocks of wet and semi-natural woodland also add to the tree cover along the river valleys.

### **Cultural pattern**

The small pasture fields are enclosed by hawthorn hedges and associated ditches. In places it is the ditches, often bordered by pollarded willows, that form the main field boundaries. Hedges often include scattered ash, willow and oak trees, and this is particularly prominent along parts of the rivers Evenlode and Windrush, around Standlake. Overall, there is a strong sense of unity resulting from the extensive open views along the river corridors, except in those areas where the views are filtered by tree-lined ditches and scattered riverside and hedgerow trees.

This landscape type has historically been subject to annual flooding and this is reflected in the relative lack of settlements and buildings. The main buildings are water mills, scattered barns and farmhouses. The absence of settlements and roads generates a tranquil and remote character. There are a few settlements, including Asthall, Binsey and Wolvercote. They all retain a strong vernacular character with the possible exception of Wolvercote, where there is more recent residential development. Generally speaking, the main

building materials are stone and stone tiles. The corridor of the Oxford Canal is also a strong landscape feature bordering the edge of the floodplain.

## **BIODIVERSITY**

### **Overview**

This landscape type includes a wide range of habitats which are typically associated with the rivers and watercourses, along with the adjacent pastures and fields of the River Thames and its tributaries.

### **Key Characteristics**

- There is a wide range of bioscores from low to very high
- There is a large number of locally important and priority habitats particularly neutral, wet and marshy grassland bordering the rivers and watercourses.

### **General Description**

This is a relatively large, linear landscape type, occupying around 5.5% of the rural county. It includes areas with very high bioscores including parts of the Thames upstream of Oxford, the Cherwell south of Banbury, the upper reaches of the River Windrush and the River Swere to the west of Banbury. By contrast, a number of the rivers and watercourses to the south and east of Oxford, apart from the Thames, have much lower bioscores. These include parts of the rivers Ray, Ock and Thame, and this may be linked to the fact that they traverse some of the most intensively managed areas of arable farming in the county with the resultant loss of habitat. Overall, the landscape type supports a wide range of locally important habitats including deciduous woodland, plantations, semi-improved grassland, scrub, species-poor hedges with trees and tree-lined watercourses. There are also examples of parkland, with their associated mature trees and lakes, and a little ancient semi-natural woodland. Priority habitats include flood meadows, unimproved neutral and marshy grassland. There are also species-rich ponds and lakes, reedswamp and species-rich watercourses and some species-rich hedges with trees. A significant part of the Lower Windrush Valley between Witney and the Thames at Newbridge is dominated by flooded gravel pits. Most of these are used for different types of water-based recreation, but some of the larger and least disturbed pits are notable for their bird interest, particularly overwintering wildfowl.

add to the tree cover. In areas of intensive arable farming that extend down to the river bank, there are no watercourse trees and the hedges are lower with fewer hedgerow trees. The large area of open water at Farmoor Reservoir, which is also used for water sports, is a dominant landscape feature in the locality.

### **Biodiversity**

Bioscore/bioband: 205/VH

This upper part of the River Thames, from Oxford to the Gloucestershire county boundary, supports locally important habitats such as deciduous woodland, plantations, semi-improved grassland, species-poor hedges with trees and trees bordering the river and other watercourses. However, its importance for other priority habitats such as flood meadows and unimproved neutral grassland cannot be underestimated. It includes several internationally important meadows including Pixey-Yarnton meadows near Oxford and Chimney Meadows near Cote. There are also examples of reedswamp, fen, species-rich marginal vegetation bordering the river and other watercourses, as well as wet grassland and wet woodland. Reedbeds are associated with old gravel pits at Cassington and a pond near Wolvercote. The large reservoir at Farmoor is important for wintering wildfowl.

## **O. Lower Cherwell (UT/35)**

### **Landscape Character**

The area has small semi-improved grass fields, wet grassland, some unimproved neutral grassland and flood meadows at Marston and Iffley Lock. There is some arable farming around Islip. Fields are enclosed by hedges of hawthorn, blackthorn and goat willow. Hedges are generally overgrown and gappy but, in some places, tall and thick. Around Hinksey, the main field boundaries are ditches bordered by dense pollarded willows. A dense corridor of crack willow, hawthorn, ash and poplar borders the river, although trees are much sparser around Islip. There are poplar plantations alongside Hinksey stream and scattered hedgerow trees including ash, willow and some oak, add to the tree cover.

### **Biodiversity**

Bioscore/bioband: 151/VH

This length of the River Cherwell runs from east of Kidlington and through the centre of Oxford. Locally important habitats include plantations, semi-improved grassland, species-poor hedges with trees, and trees bordering the river and other watercourses. However, it is particularly important for priority habitats such as the flood meadows at Iffley and neutral grassland next to the river near Marston. Parts of the river and other watercourses support species-rich marginal vegetation and there are also examples of wet woodland and wet grassland.

flooded pits will be restored to accommodate a range of after-uses including angling, sailing, nature conservation and general amenity.

## **Landscape strategy**

**Conserve and enhance the tranquil, small-scale, intimate pastoral character and visual unity of the river corridors.**

### **Guidelines**

- Conserve the surviving areas of permanent pasture and promote arable reversion to grassland particularly on land adjacent to rivers and other watercourses.
- Strengthen the field pattern by planting up gappy hedges using locally characteristic species such as hawthorn, and hedgerow trees such as oak and ash.
- Promote environmentally-sensitive maintenance of hedgerows, including coppicing and layering when necessary, to maintain a height and width appropriate to the landscape type.
- Enhance and strengthen the character of tree-lined rivers and other watercourses by planting willows and alders and, where appropriate, pollarding willows.
- Promote small-scale planting of deciduous woodland blocks using locally characteristic species such as willows and alders.
- Minimise the visual impact of intrusive land uses at the fringes of towns with the judicious planting of appropriate tree and shrub species characteristic of the landscape type. This will help to screen the development and integrate it more successfully with its surrounding countryside.
- Maintain high standards of restoration at gravel pits to accommodate a range of after-uses that integrate successfully with the character of the surrounding landscape.

## **Biodiversity Strategy**

**Ensure that all surviving priority habitats are safeguarded, in favourable condition and management, and enhanced to satisfy the actions and targets identified within the relevant habitat and species action plans. Safeguard, maintain and enhance all locally important habitats in a way that is appropriate to the landscape character of the area.**

## Guidelines

- There is a range of priority habitats bordering the river corridors including neutral, marshy and floodplain grasslands. Most of these have statutory and non-statutory wildlife designations and the prime objective must be to ensure that all these sites are in favourable condition and management through agreement with the landowner and the appropriate targeting of agri-environment schemes.
- Opportunities for the expansion of these habitats are considerable along all the main river corridors, but particularly in the Upper Thames and its tributaries where there is already a successful Environmentally Sensitive Areas scheme in operation. Other organisations such as the Environment Agency, the R.S.P.B., with their new nature reserve on Otmoor, and B.B.O.W.T., the local Wildlife Trust, can all make significant contributions to the protection, management and expansion of these very important grassland habitats as part of the agreed actions and targets in the Oxfordshire Biodiversity Action Plan.
- Similarly, other priority habitats, such as species-rich rivers and watercourses, can also be maintained and enhanced by the work and advice of the organisations outlined above.
- Species-poor wet grassland is another important habitat which has declined through land drainage and conversion of land to arable. This habitat type is particularly important for wading bird species such as redshank, curlew, snipe and lapwing, and opportunities for maintaining and expanding this resource can again be promoted by the targeting of agri-environment schemes and the work and advice of the various organisations highlighted above.
- Manmade habitats, such as restored gravel pits, can also make a significant contribution to the biodiversity of an area. The majority of flooded pits throughout the landscape type are used for water-based recreation and this has limited their interest, particularly from an ornithological point of view. A small number of undisturbed pits have non-statutory wildlife designation and the priority must be to ensure that they are in favourable condition and management.
- Opportunities for safeguarding and expanding the biodiversity interest of these pits, including the establishment of new reedbeds, can be promoted through agreement with landowners and the establishment of new nature reserves. This can be achieved through policies in the Minerals and Waste Local Plan and the Lower Windrush Valley Project which are both administered through Oxfordshire County Council.
- Species-rich hedgerows, although scarce, are distributed throughout different parts of the landscape type. Priority should be given to safeguarding, maintaining and expanding this resource particularly in those local character areas where they remain a significant feature.
- Tree-lined watercourses are a feature throughout the landscape type. They should be safeguarded and enhanced by planting species such as alder and willows, pollarding willows where appropriate, and establishing buffer strips/field margins on adjacent arable land to potentially benefit small mammals, invertebrates and birds.
- Opportunities for the establishment of other locally important habitats, such as semi-improved grassland and small deciduous woodlands, should be

promoted in a way to strengthen wildlife corridors and enhance the local landscape character.

### **Key Recommendations**

- **Conserve and enhance the tranquil, small-scale, intimate pastoral character and visual unity of the river corridors through safeguarding existing grassland and the promotion of arable reversion to grassland.**
- **Ensure that all priority habitats are in favourable condition and management particularly those surviving areas of floodplain, neutral and marshy grassland.**
- **Promote the expansion of these habitat types through the targeting of agri-environment schemes particularly within appropriate parts of the Upper Thames and its Tributaries.**



# Landscape Types:

## Wooded Estatelands



### 19. WOODED ESTATELANDS

#### Regional Character Areas

Cotswolds, Northamptonshire Uplands, Midvale Ridge and Upper Thames Vale.

#### Location

The landscape type includes parklands at the eastern end of the Cotswolds, ranging from the area around Blenheim Park, Steeple Barton, Middleton Park and as far as Shelswell Park to the north of Bicester. Further south it includes Eynsham Hall Park and Bladon Heath Wood and it also covers the majority of the wooded and parkland areas in the undulating landscape of the Corallian Ridge.

#### Overview

A wooded estate landscape characterised by arable farming and small villages with a strong vernacular character.

#### Key Characteristics

- Rolling topography with localised steep slopes.
- Large blocks of ancient woodland and mixed plantations of variable sizes.
- Large parklands and mansion houses.
- A regularly-shaped field pattern dominated by arable fields.
- Small villages with strong vernacular character.

### **Geology and landform**

The geology of the landscape type varies according to the locality. Much of the landscape across the Cotswold area is underlain by a mix of Cornbrash and Great Oolite limestone. The geology in the area around Bicester and further south is dominated by Oxford Clay, whilst the landscape across the Corallian Ridge is underlain by Corallian beds, which are a mix of sands and sandy limestones.

The landform is generally rolling, ranging from gently rolling to undulating. Across the Corallian Ridge the landform is strongly undulating, and is steeply sloping in places resulting in small valleys. At the junction of the Corallian beds and the clay vale, springlines emerge and small streams flow through the valleys.

### **Land use and vegetation**

The landscape has a mix of land uses but is largely dominated by arable farming. On the steeper slopes there is some semi-improved grassland, as well as pockets of calcareous grassland, acid grassland and gorse. This is a well-wooded landscape with large, prominent blocks of ancient semi-natural woodland often located on the steeper slopes. In addition, there is a significant number of smaller, mainly mixed plantations that are scattered throughout much of the area and this adds to the overall sense of enclosure. Dense corridors of willows and poplars, and belts of semi-natural woodland bordering the valley streams are other locally prominent features.

### **Cultural pattern**

The field pattern is generally characterised by a geometric pattern of medium to large-sized fields, with arable cropping in the larger fields. A less regular pattern of enclosure is associated with the strongly undulating landform across the Corallian Ridge close to places like Faringdon, Cumnor and Boar's Hill and around Beckley and Shotover Country Park. Fields are generally enclosed by woodland, as well as thorn and elm hedges. There are also a number of species-rich hedges bordering roads and close to woods. Although there are only a few mature oak and ash hedgerow trees, they still contribute to the wooded character of the landscape. They are more obvious in the vicinity of ancient woodland and quite sparse where arable cropping is dominant. Views are generally filtered through trees and framed by woodland blocks. Large parklands with their distinctive country houses, extensive woodland and ornamental lakes at Blenheim, Middleton, Eynsham Hall and Buscot are also very typical of this landscape type and underline its estate character.

The settlement pattern is characterised by small settlements as well as scattered farmhouses in the wider countryside. The vernacular character is strong in most of the villages and this is reinforced by features such as stone walls. The most widely used building materials are limestone, stone and clay tiles. There are also limestone houses with thatched roofs at Fyfield, Tubney, Hatford, Beckley and Stanton St. John. Stone with bricks around the windows is characteristic in villages such as Sunningwell, Cumnor and South Hinksey. Red bricks with clay tiles can be seen at Nuneham Courtenay, timber framed houses with thatched roofs at Horton-cum-Studley and ironstone houses at Duns Tew.

## **BIODIVERSITY**

### **Overview**

This landscape type is associated with parklands and their associated estatelands. It has a wide range of both locally important and priority habitats.

### **Key Characteristics**

- Predominantly medium to very high bioscores.
- Priority and important habitats include ancient semi-natural woodland, species-rich hedgerows with trees, unimproved grassland, fen, reedswamp and species-rich ponds and watercourses.

### **General Description**

This is a very large landscape type occupying around 11.2% of the rural county. It includes a large part of the Midvale Ridge and a significant part of the Cotswolds character area. It is a diverse area and supports a wide range of locally important and priority habitats. Within the Midvale Ridge and on the corallian limestone there are many substantial blocks of ancient semi-natural woodland including Stanton Great, Brasenose and Waterperry Woods to the east of Oxford. To the west of Oxford, around Frilford, there are significant areas of acid grassland, heath and calcareous fen. There are also areas of limestone grassland within Chilswell Valley to the west of the City and in the Cotswolds near Fawler and Charlbury. The many parklands support a wide range of habitats including mature and veteran trees, species-rich lakes and semi-improved grassland, with Blenheim probably being the best example. In addition, there are smaller areas of neutral and wet grassland and reedswamp. There are also a number of important geological sites including Stratton Audley and Shellingford quarries.

Tubney Wood and parkland habitat is found at places such as Sheepstead Park and Kingston Bagpuize House.

## **L. Cumnor Hill (CR/9)**

### **Landscape Character**

The area has a mix of land uses including medium-sized, semi-improved grass fields and larger arable fields. There are remnants of calcareous grassland on the steeper slopes adjacent to the Thames floodplain. Woodland dominates the landscape, particularly towards the east where there are very large blocks of ancient woodland including Kennington and Radley woods. The minor valleys and small streams, bordered by belts of dense scrub and wet woodland, are distinctive features that add diversity to the landscape. The streams are often species-rich, with significant patches of reedswamp vegetation. Fields are enclosed by thorn and elm hedges, but there are also some species-rich hedges with shrubs such dogwood, spindle and wayfaring tree close to the ancient woodland. Hedgerow trees of oak, ash and dead elm are also more prominent in the vicinity of ancient woodland, but are almost absent towards the west, where arable cropping predominates. Hedges are generally taller and in better condition in the eastern part of the area and are very low, fragmented or replaced by fences in the west.

### **Biodiversity**

Bioscore/bioband: 166/VH

Again, this area supports a wide range of locally important and priority habitats. There is deciduous woodland, plantations, semi-improved grassland, species-poor hedges with trees and tree-lined watercourses. There are several large blocks of ancient semi-natural woodland, including Bagley and Radley Woods, and species-rich hedges with trees. A number of valleys, including Chilswell Valley, have been created by springlines draining the corallian ridge to the west of Oxford. These support a range of priority habitats such as calcareous grassland, fen, species-rich watercourses and wet woodland.

## **P. Nuneham Courtenay (CR/15)**

### **Landscape Character**

The area is dominated by large geometrically-shaped arable fields. Large blocks of ancient woodland and mixed plantations are prominent throughout the area. There are a few hedgerow trees, but they are not a significant landscape feature. Fields are enclosed by woodland and gappy thorn hedges. The parkland surrounding Nuneham Park is dominated by arable farming.

## **Biodiversity**

Bioscore/bioband: 100/MH

A number of locally important habitats have been recorded in this area, including deciduous woodland, plantations, semi-improved grassland, species-poor hedges with trees and tree-lined watercourses. There are blocks of ancient semi-natural woodland, parkland and some acid grassland associated with the arboretum at Nuneham Courtenay.

## **FORCES FOR CHANGE**

- Overall, the hedges are in good condition but intensive agriculture has led to the fragmentation of field boundaries, particularly in areas dominated by arable farming. In such areas the hedges are very intensively maintained, fragmented, and in places removed altogether and replaced by fences.
- The vernacular character is strong in most of the villages and there is generally a low impact from residential development, especially within the wider countryside. However, in some villages new residential development is out of character, even though it is contained within the village envelope. There is also sprawling development along some of the main roads, particularly the A420 and A338, although this is mitigated to some extent by woodland and mature garden trees.
- In very intensive areas of arable farming some of the new, large-scale barn complexes are visually intrusive.
- Some large-scale business parks using inappropriate building materials are also visually intrusive.
- There is a localised visual impact from operational quarries and partially restored landfill sites, particularly around places such as Stanford-in-the-Vale.
- The golf course next to the A420 close to Buckland is visually prominent. Frilford Heath golf course, by comparison, blends well with the surrounding countryside by integrating successfully with existing woodlands and heath.
- Overhead pylons are very intrusive in the more open areas where intensive arable farming predominates. This is evident in areas near Nuneham Park, Cumnor and Harcourt hills and to the north of Cuddesdon.
- In the flat, open area near Weston-on-the-Green, the large airfield is visually prominent, in spite of the dense screen planting.

## **Landscape Strategy**

**Safeguard and enhance the characteristic landscape of parklands, estates, woodlands, hedgerows and unspoilt villages.**

## Guidelines

- Conserve and maintain semi-natural and ancient semi-natural woodland. Where appropriate, replace non-native conifer species with native species such as oak and ash. Promote the establishment and management of medium to large-scale deciduous and mixed plantations in areas where the landscape structure is particularly weak.
- Strengthen the field pattern by planting up gappy hedges using locally characteristic species such as hawthorn and hedgerow trees such as oak and ash.
- Promote environmentally-sensitive maintenance of hedgerows, including coppicing and layering when necessary, to maintain a height and width appropriate to the landscape type.
- Conserve and sympathetically maintain species-rich hedgerows and, where appropriate, replant gappy hedges using species such as hawthorn, blackthorn, wayfaring tree, dogwood and spindle.
- Conserve parklands and their associated landscape features such as stone walls, lakes, mature trees and woods.
- Conserve the surviving areas of permanent pasture and promote arable reversion to grassland, particularly within parklands.
- Enhance and strengthen the character of tree-lined watercourses by planting willows and ash and where appropriate, pollarding willows.
- Minimise the visual impact of intrusive land uses such as quarries, landfill sites, airfields and large-scale development, such as new barns and industrial units, with the judicious planting of tree and shrub species characteristic of the area. This will help to screen the development and integrate it more successfully with its surrounding countryside.
- Maintain the nucleated pattern of settlements and promote the use of building materials and a scale of development and that is appropriate to this landscape type.

## Biodiversity Strategy

**Ensure that all surviving priority habitats are safeguarded, in favourable condition and management, and enhanced to satisfy the actions and targets identified within the relevant habitat and species action plans. Safeguard, maintain and enhance all locally important habitats in a way that is appropriate to the landscape character of the area. Promote agri-environment schemes, which will benefit biodiversity in general and protected species and farmland birds in particular.**

## Guidelines

- Parts of this landscape type support a range of important priority habitats including acid grassland, heath, limestone grassland and fen. The majority of these habitats are associated with sites that have been designated as sites of

special scientific interest or county wildlife sites. The priority must be to ensure that all these sites are in favourable condition and management. With S.S.S.I.s this can be achieved, where appropriate, through formal agreement between the landowner and English Nature. For county wildlife sites this can be promoted with advice from organisations such as the Farming and Wildlife Advisory Group, and the targeting of agri-environment schemes.

- The acid grassland, heath, fen and ponds at Frilford, including part of the golf course, are particularly important within the landscape type and a priority must be to ensure that they are in favourable condition and management.
- Within the valleys to the west of Oxford achieve a balance between species-rich limestone grassland and scrub. Prevent scrub encroachment in areas of species-rich grassland by grazing, as exemplified by the work of Oxford City Council in Chilswell Valley. Opportunities for expanding this habitat include the establishment and management of field margins/buffer strips adjacent to existing limestone grassland habitat using native wildflower species appropriate to the area.
- Opportunities for extending the range of these habitats is feasible, particularly acid grassland, on suitable land adjacent to existing similar habitats across the Corallian ridge. Oxford City Council has been successfully restoring acid grassland and heath within Shotover Country Park, and the techniques applied here can be used on soils with a similar fertility and acidity.
- Expansion of these habitats should be promoted through the use of agri-environment schemes and the restoration of mineral workings.
- Ancient semi-natural woodland is an important and characteristic feature throughout the landscape type. A priority is to ensure that it is sustainably maintained so that it remains in favourable condition and management. A substantial amount has been replanted with conifers, and where practicable these should be replaced with native tree and shrub species appropriate to the landscape type.
- Species-rich hedgerows are distributed throughout different parts of the landscape type. Priority should be given to safeguarding, maintaining and expanding this resource, particularly in those local character areas where they remain a significant feature.
- Parklands, and their associated habitats of woodlands, trees, lakes and grassland, make a significant contribution to the biodiversity resource of the landscape type and a priority must be to ensure that they remain in favourable condition and management.
- Tree-lined watercourses are a feature throughout the landscape type. They should be safeguarded and enhanced by planting species such as ash and willows, pollarding willows where appropriate, and establishing buffer strips/field margins to potentially benefit small mammals, invertebrates and birds.
- Conserve the surviving areas of permanent pasture and promote arable reversion to grassland, particularly on land adjacent to watercourses.
- Opportunities for the establishment of other locally important habitats, such as semi-improved grassland and medium to large-size deciduous woodlands, should be promoted in order to strengthen wildlife corridors and enhance the local landscape character.
- Promote the use of agri-environment schemes such as conservation headlands, overwintered stubbles and winter-sown crops to benefit farmland

birds such as skylarks and yellowhammers.

- Parts of the Corallian limestone ridge are notable for their rare arable weeds, and every opportunity should be sought to safeguard and expand this interest through the use of agri-environment schemes and the restoration of mineral workings.

### **Key Recommendations**

- **Safeguard and enhance landscape character of the ancient woodlands, parklands, species-rich hedgerow network and tree-lined watercourses.**
- **Ensure that all priority habitats are in favourable condition and management, and opportunities for expanding this resource should be promoted through agri-environment schemes and the restoration of mineral sites.**