Redgrave Parish - Biodiversity Audit & Action Plan

Version 5

Contents

Version No	Date of Issue	Issued By
Draft Version 1	November 2023	Andy Warnes
Draft Version 2	May 2024	Andy Warnes
Version 3	October 2024	Andy Warnes
Version 4	December 2024	Andy Warnes

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1. Introduction

1.1 Purpose

This Biodiversity Audit and Action Plan (BAAP) aims to assess and evaluate the biodiversity of Redgrave Parish and its ecosystem, record the findings and put in place a series of actions to improve the biodiversity of the Parish going forward. The BAAP is based on a systematic study and analysis of the flora and fauna present in the area. The primary objective is to identify and document the various species, their population levels, and their interactions within the ecosystem. The information gathered in this audit will serve as a foundation for future conservation efforts and management strategies. It also helps meet the obligation placed upon each Council by the Government to meet its "Biodiversity Duty" as detailed at https://www.gov.uk/guidance/complying-with-the-biodiversity-duty . This Biodiversity Duty, introduced as a strengthening of the Environment Act 2021, places a statutory duty on each Public Authority to:

- "Consider what you can do to conserve and enhance biodiversity.
- Agree policies and specific objectives based on your consideration.
- Act to deliver your policies and achieve your objectives."

In addition, this document aims to:

- Assist in the Government's stated aim to move from aspiring for 'no net loss' of biodiversity to requiring a 'biodiversity net gain'; this is in line with the Government's 25-Year Environment Plan, as strengthened by the requirement for a minimum 10% net gain under the Environment Act (2021) and changes to the Town and Country Planning Act (1990). Redgrave Parish Council, and the Green Redgrave Group acting on its behalf, aims to do this by improving the biodiversity of the village as a whole and seeking to ensure that new housing and other developments meet their "Biodiversity Net Gain" obligations.
- And inform the emerging initiatives such as the Suffolk Local Nature Recovery Strategy (LNRS) in its attempts to agree priorities for nature recovery and propose actions in the locations where it would make a particular contribution to achieving those priorities.

The BAAP noted above will be a significant undertaking and an ongoing task. The BAAP's basic structure and early recordings are now in place. But we welcome input from all interested residents with recordings or photos of all types of creatures such as birds and mammals, butterfly and other insect reporting. If there are any readers who would like to learn more about this or contribute to the document please get in touch.

1.2 Methodology

The biodiversity audit has evidence-based approach to ensure accurate and consistent data collection. The study area was divided into smaller sub-sections for detailed analysis. The following methods were employed:

- Collation and examination of available evidence to understand what habitats and species are present in the Parish.

- Definition and assessment of the conservation priority species present in the village by comparing with available national and local conservation statuses and lists of priority species.
- Assessment and prioritization of measures necessary to protect and enhance the priority species in particular.
- Definition of how to conduct and use Biodiversity Net Gain monitoring within the Parish going forward.
- Identification of recommendations to help parishioners enhance, support and maintain their natural environment for future generations.

1.3 Background Information about Redgrave

Redgrave is a pretty village situated just inside the Suffolk border with Norfolk, a few miles west of Diss. The village is centred on a large green known as the Knoll, ringed by attractive thatched cottages. The name Redgrave is derived from the Anglo-Saxon language meaning Reed Ditch. Earlier development of the parish occurred prior to written record, with recorded prehistoric, Roman and Anglo-Saxon finds and burial monuments. Topographically, valley sides were favourable for early occupation, and Redgrave offers land over tributaries of the Little Ouse and River Waveney, and Redgrave Fen, as well as dry valleys.

Much of the village of Redgrave is covered by a conservation area originally designated by East Suffolk County Council in 1973 and inherited by Mid Suffolk District Council at its inception in 1974. A map of this Conservation area is shown in Section 2.2.4 of this document.

Redgrave is set within a heavy clay, largely flat landscape with ancient woodlands, although some areas have a light sandy, free draining soil. To the east and west of the Parish the landscape is characterised by large agricultural fields with rather depleted hedge boundaries and tree lines with long views towards and away from the main built-up part of the village.

Redgrave sits on a spur of slightly higher ground, just south of the watershed between the westerly flowing Little Ouse and the easterly flowing River Waveney that forms the boundary with Norfolk. Much of the area in the north of the Parish is dominated by the Redgrave and Lopham Fen, a National Nature Reserve and Site of Special Scientific Interest (SSSI) that spans 163 hectares and is managed by the Suffolk Wildlife Trust. The south-western sector of the Parish is occupied by Redgrave Park, a privately-owned landscape park with woodlands, pasture and 45 acres of fishing lake.

The boundaries of the parish of Redgrave are shown at Figure 1 below. This plan deals with the biodiversity issues within this boundary.

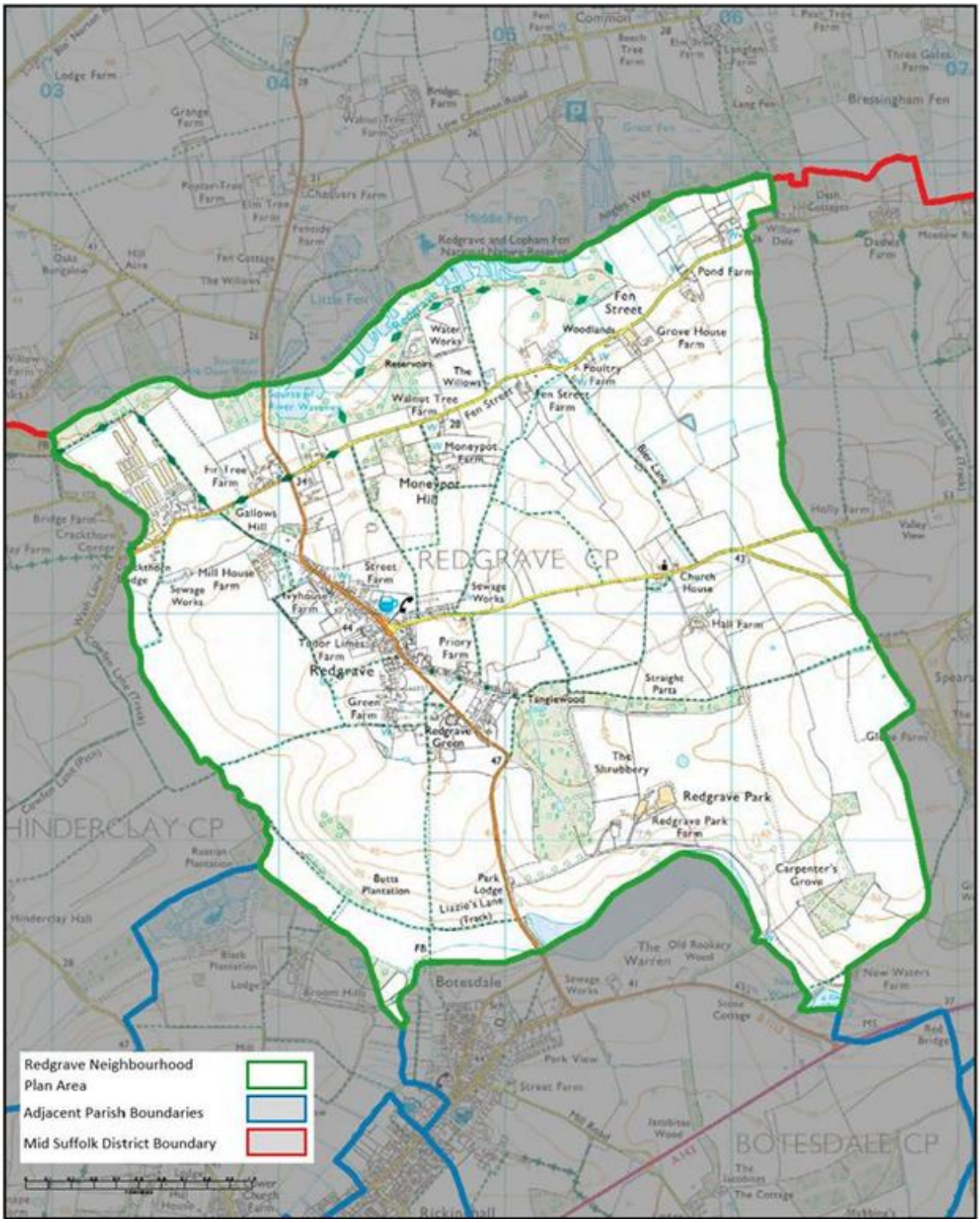

Figure 1: *Boundaries of the Parish of Redgrave*
Source: Suffolk County Council and Redgrave Neighbourhood Plan

2 Landscape Assets of the Parish

2.1 Suffolk Landscape Character Assessment

Acting on Government guidance, in 2008 Suffolk County Council (SCC) completed a project to describe in detail the landscapes throughout Suffolk and assess what particular character and qualities make up different landscape areas of the county. This is known as the Level 2 Suffolk Landscape Character Assessment (LCA). Suffolk County Council worked in partnership with the Living Landscapes Project based at Reading University, private consultants and all the District and Borough Councils in Suffolk, using methodology in which discreet units of broadly homogeneous land were identified according to a set of physical and cultural characteristics. These characteristics were defined by four principal attributes: physiography, ground type, land cover and cultural pattern, which in turn were derived from six mappable datasets: relief, geology, soils, tree cover, farm type and settlement. Details of this assessment can see at https://suffolklandscape.org.uk/

Application of this methodology maintained a consistent approach across Suffolk. Development Control Officers, Forward Planners and other staff at County and District level is now using the Suffolk Landscape Character Assessment to manage landscape change and development across the county and to produce local detailed studies as appropriate.

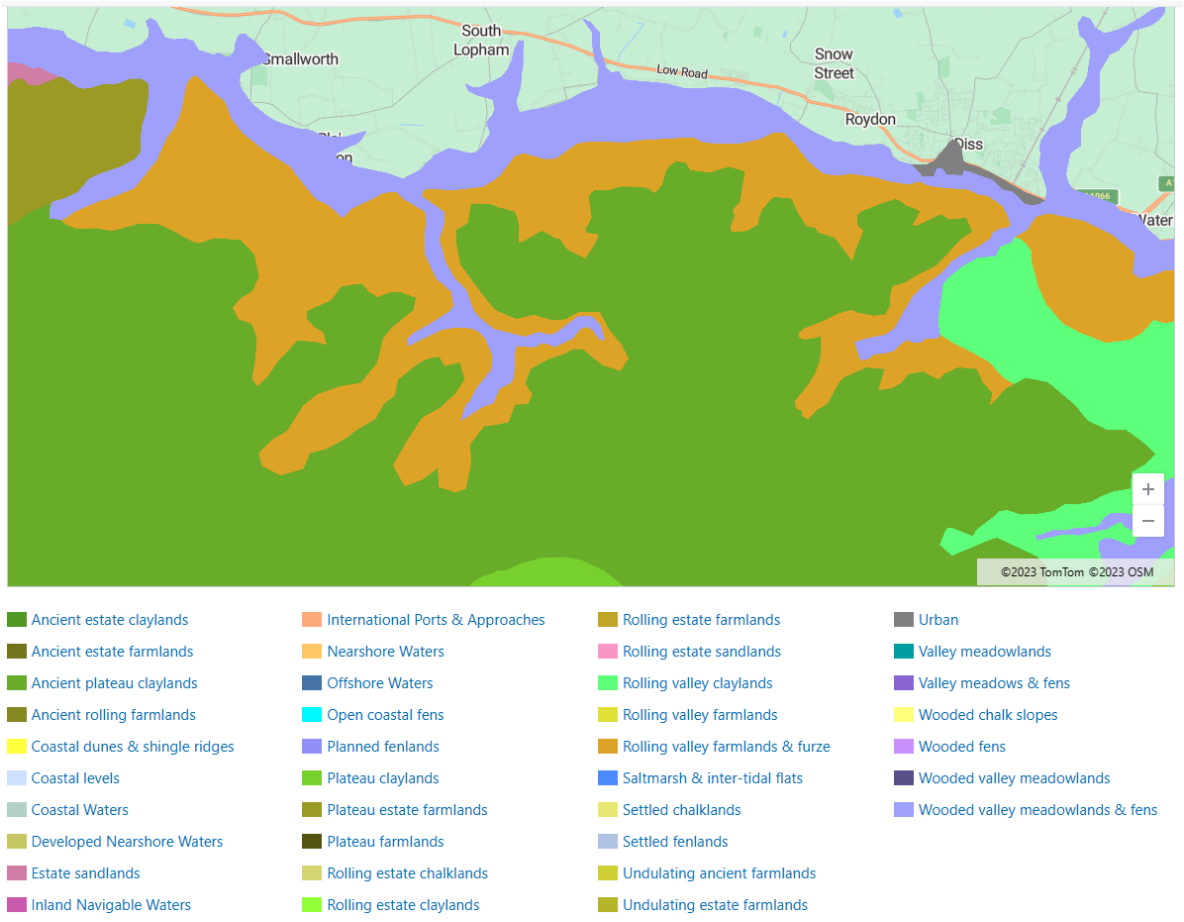

Figure 2: *Landscape Character types covering Redgrave Parish*
Source: Suffolk County Council https://suffolklandscape.org.uk/map/

Redgrave can be found close to the centre of a large area defined by Natural England as the 'South Norfolk and North Suffolk Claylands' National Character Area. The Joint Babergh and Mid Suffolk District Council Landscape Guidance, produced in August 2015 to support the review of the Joint Local Plan, provides some more in-depth assessment of the particular character and qualities of landscape areas and identifies Redgrave as falling within the 'Ancient Plateau Claylands'.

The landscape is a gently rolling heavy clay plateau with ancient woodlands. On the north side of the Gipping Valley, the character sweeps up in an arc on the north-east edge of the central clay plateau and westwards from Creeting St Peter and Stowupland through to Haughley, Elmswell, Walsham-le-Willows, crossing the district boundary into St. Edmundsbury and then eastward to Wattisfield, Wortham, Mellis, Burgate and the western side of Eye in the Dove Valley.

The top of the plateau is generally flat or only gently undulating, with attractive small valleys. Towards the edges it is more dissected with greater more complex slopes. Land cover is predominantly arable farmland retaining much of the older field patterns of irregular partitions, along with numerous areas of pastureland with substantial blocks of woodland and established hedgerows. Some areas have experienced large losses of hedgerow due to changing agricultural practices resulting in the creation of open arable "prairie" landscapes. There are occasional landscape parks within this Landscape type such as at Redgrave, Thornham Magna and Stowlangtoft. Unlike the Plateau Clayland, landscape blocks of ancient woodland are visibly present in the landscape.

Redgrave village sits on a spur of slightly higher ground just south of the watershed, between the westerly flowing Little Ouse and the easterly flowing river Waveney, that here forms the county boundary with Norfolk and sits in a wider landscape that is characteristic of the 'High Suffolk Claylands' amid good arable farming land.

Ancient woodlands and old existing hedge lines are to be protected and maintained within this landscape character.

In 2022 the Redgrave Neighbourhood Plan was formally adopted and this reinforced the value that the residents of Redgrave place on their surrounding rural environment and landscape. There were high levels of support for the protection of rural character, landscape and wildlife evidenced in both the questionnaire and in the feedback from the Policy Ideas Exhibition. The peace and tranquillity of the area was identified by almost everyone who responded to the questionnaire as either important or essential. The feedback from the Policy Ideas Exhibition also indicated that the protection of Redgrave's rural character, landscape and important views should be a priority for the Neighbourhood Plan.

2.2 Protected Landscapes & Irreplaceable Habitats

There are a number of different types of protected landscapes and irreplaceable habitats within the Redgrave Parish boundaries[1]. These include:

[1] https://www.suffolk.gov.uk/planning-waste-and-environment/suffolks-countryside-and-wildlife/designated-areas-of-wildlife-and-landscape

- Sites of Special Scientific Interest (SSSI)/Special Areas of Conservation/Ramsar[2] Site
- County Wildlife Sites (CWS)
- Ancient Woodland
- Areas of Local Landscape Sensitivity (ALLS)
- Conservation Area
- Other Non-Statutory Designated Sites

These are detailed below.

2.2.1 Sites of Special Scientific Interest (SSSI)/Special Areas of Conservation (SAC)/Ramsar Sites

Suffolk contains 8% of sites with the national designation as Sites of Special Scientific interest (SSSI), reflecting the importance of habitats and species found in the county. Redgrave contains one of the most important of these sites: the Redgrave and Lopham Fen. The Fen is also included as a Special Area of Conservation and a Ramsar site.

The Parish is home to the Redgrave and Lopham Fen which is a 163-hectare biological Site of Special Scientific Interest (SSSI). It also has designations as a National Nature Reserve (NNR), and as a Ramsar internationally important wetland site, a Nature Conservation Review site, Grade I, and part of the Waveney and Little Ouse Valley Fens Special Area of Conservation (SAC). It is managed by the Suffolk Wildlife Trust. (see Figure 3)

Redgrave & Lopham Fen is the largest remaining area of river valley fen in England and consists of a number of different fen types including saw sedge beds, open water, heathland, shrub and woodland. It is famous for the Great Fen Raft Spider, one of only 3 places in the UK where it is found and the site where a population was first discovered in the UK in 1956.

2.2.2 Ancient Woodland

There are no areas of ancient woodland registered in the Parish although the Shrubbery in Redgrave Park shows evidence of perhaps being such an ancient wood; there are plenty of dog's mercury and primrose in the wood and there is what looks like a medieval wood bank and coppices stools. Sadly, the landowner has refused access to check further. More work to look at ancient maps is required to see if this is indeed an ancient wood.

2.2.3 County Wildlife Sites (CWS)

County Wildlife Sites (CWS)[3] are areas known to be of county or regional importance for wildlife that have a key role in the conservation of Suffolk's biodiversity. This is non-statutory but recognises the site's high value for biodiversity. Redgrave Lake, at the southern extent of the Parish and included in Redgrave Park, is designated a County Wildlife Site (See Figure 3). Again, the landowner has refused access for more detailed examination.

[2] The Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat is an international treaty for the conservation and sustainable use of Ramsar sites (wetlands). It is named after the city of Ramsar in Iran, where the convention was signed in 1971.

[3] https://www.suffolkwildlifetrust.org/countywildlifesites

2.2.4 Special Landscape Areas/Areas of Local Landscape Sensitivity (ALLS)

Land to the south and east of village has been designated as a Special Landscape Area since the first Mid Suffolk Joint Local Plan (MSJLP) was adopted in 2008. The Special Landscape Area comprises a river valley with traditional grazing meadows and the area of Redgrave Park. The Pre-Submission Version of the BMSJLP does not retain the designation and instead moved to a character-based approach. However, the importance of this high-quality landscape in the Neighbourhood Plan area, is recognised and therefore a new local designation, the Area of Local Landscape Sensitivity (ALLS) was proposed. This ALLS designation does not seek to prevent development from taking place but instead seeks to ensure that development within the area should be designed to be in harmony with the special characteristics of the area and follows the broad design objectives and principles referred to above.

Redgrave Park kas been designated by Mid-Suffolk District Council as a SLA/ALLS due to its high landscape value. Redgrave Park is an ancient piece of land, built as a hunting ground in the early 13th Century and then in the 18th century Lancelot "Capability" Brown created the parkland and formed a serpentine lake. The old Hall was taken down in the 1950's but three listed buildings within the Parkland, much of which remains as laid out in the 18th Century.

Although not strictly relevant to biodiversity or wildlife assets, the SLA/ALLS within the Redgrave Parish Boundaries is shown on the map at Figure 3. (Speak further to CWS staff at Suffolk Wildlife Trust https://www.suffolkwildlifetrust.org/countywildlifesites)

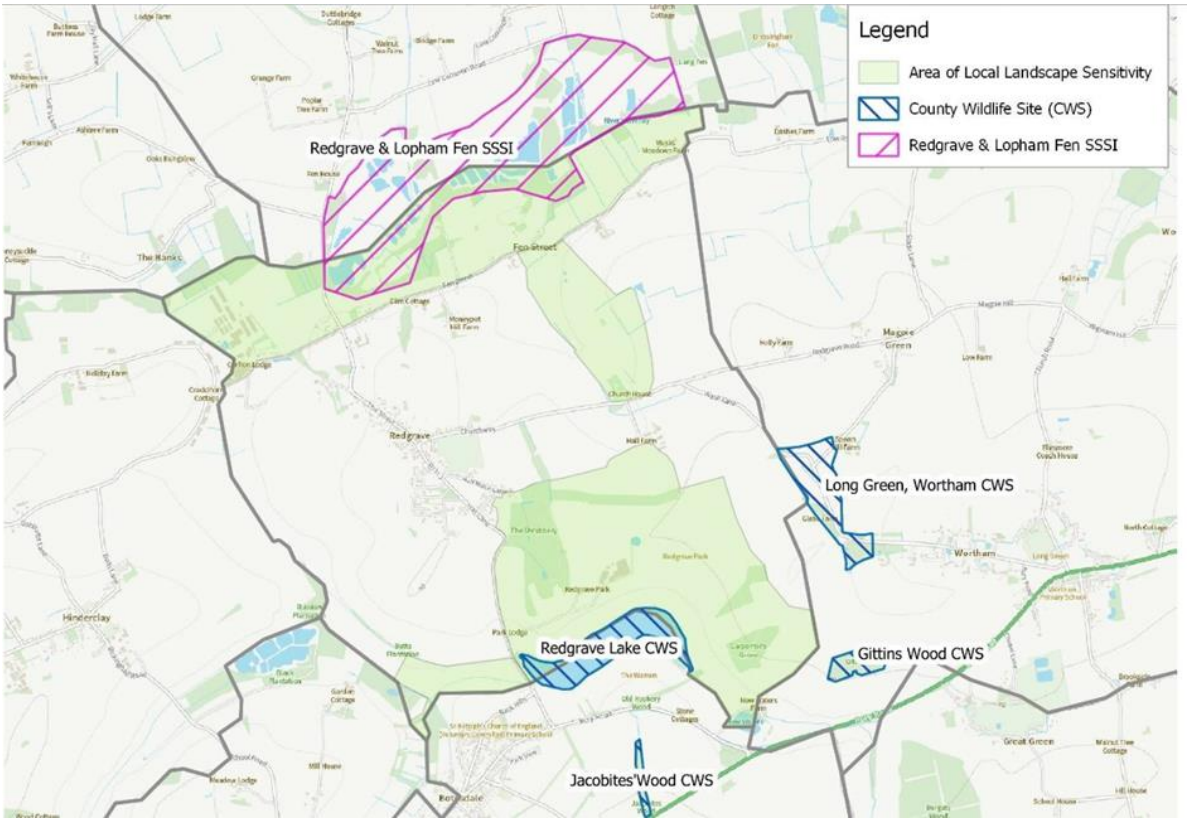

Figure 3: Locations of SSSI, CWS and ALLS
Source:

2.2.5 Conservation Area

The historic core of the built-up area of the village was designated as a Conservation Area by East Suffolk County Council in 1973. Mid-Suffolk produced an Appraisal for the area in 2011 to satisfy the requirement to review Conservation Areas from 'time to time'. The Conservation Area is extensive and covers almost the entire built settlement and includes The Street, Half Moon Lane, Hall Lane and Redgrave Green. Its extent is shown in Figure 4.

While the Conservation area is primarily a device for controlling planning activities, there are ecological and biodiversity implications imposed by the provisions in section 211 of the Town and Country Planning Act 1990. So, for example, approval is required for cutting down (or pruning certain sizes of trees).

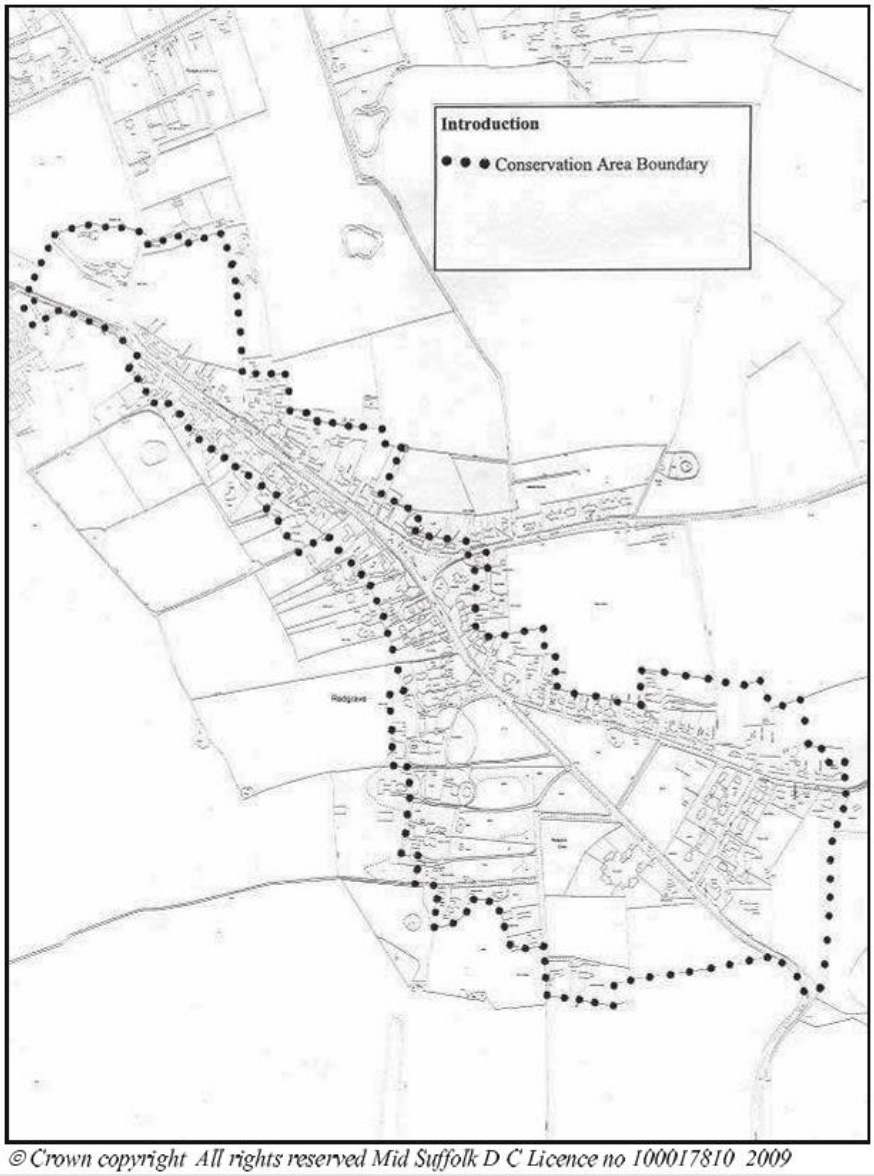

Figure 4: Redgrave Conservation Area Map

Source:

2.2.6 Other Non-Statutory Designated Sites

No other non-statutory designated sites (such as Sites of Importance for Nature Conservation (SINCs), Local Wildlife Sites (LWS), Local Nature Reserves (LNRs) Roadside Nature Reserves (RNRs)) have been identified in the Parish.

3.Evaluation of Wildlife Assets

3.1 Methodology

The following steps were taken to evaluate wildlife assets in the parish:

- **Habitat Assessment:** The assessment of different habitats within the ecosystem was carried out. This involved identifying and recording the different types of vegetation, including forests, grasslands, wetlands, and water bodies. The habitat conditions and quality were also assessed, taking into consideration factors such as soil health, water availability, and pollution levels.
- **Species Inventory:** A comprehensive inventory of plants and animals was conducted. This involved recording the presence and abundance of each species, including both native and non-native species. Species identification was done using appropriate field guides, expert consultations, and other reference materials including reference to iRecord as appropriate.
- ***Population Sampling:*** *To determine population levels, a systematic sampling approach was adopted. Transect lines or plot-based sampling methods were used to measure the abundance and density of representative species. This data was extrapolated to estimate the overall population within the study area. (Yet to be done)*
- ***Ecological Interactions:*** *The audit also focused on understanding the ecological interactions among species. This included studying food webs, predator-prey relationships, and mutualistic symbiotic associations. Observations and recordings were made to document the interdependencies and ecological dynamics within the ecosystem. (yet to be done)*

3.2 Priority Habitats

The Suffolk Biodiversity Information Service (SBIS)[4] defines 21 priority habitats where priority species may be located in Suffolk.

[4] Suffolk Biodiversity Information Service https://www.suffolkbis.org.uk/

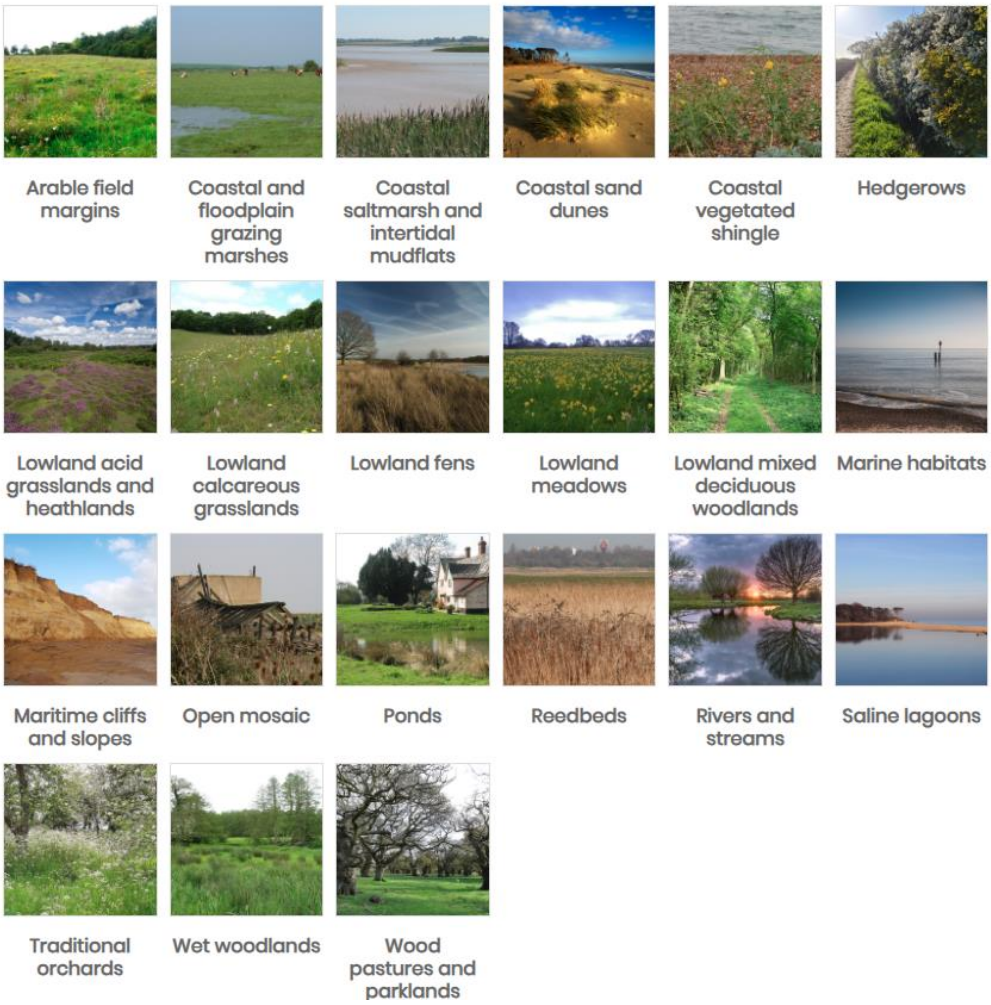

Figure 4: Suffolk Priority Habitats

Source: Suffolk Biodiversity Information Service https://www.suffolkbis.org.uk/habitat

Suffolk supports 40,770 ha of priority habitats, accounting for 10.7% of the total area[5]. Of these habitats the following types have been identified in Redgrave from field survey.

1. Arable field margins
2. Hedgerows
3. Lowland fens
4. Lowland Meadows
5. Lowland mixed deciduous woodland
6. Ponds
7. Reedbeds
8. Rivers and streams
9. Wet woodland
10. Wood pastures and Parkland

[5]Biodiversity Net Gain Interim Planning Guidance Note for Suffolk dated May 2023 https://www.eastsuffolk.gov.uk/assets/Planning/Design-and-Conservation/Trees-and-Landscape/Biodiversity-Net-Gain-Interim-Planning-Guidance-for-Suffolk-2023.pdf#:~:text=Suffolk%20supports%2040%2C770%20ha%20of%20priority%20habitats%2C%20accounting,lowland%20fen%20and%20heathland%20are%20also%20regionally%20important.

In addition, the following habitats of interest in the Redgrave Parish are considered:

11. Farmland
12. Quarries
13. Road verges
14. Built environment and associated habitats

The Redgrave Priority Habitats are described in more detail in this report with reference to specific sites, where possible, thus highlighting the ecological assets within Redgrave. *The general description is taken from the Local Biodiversity Action Plan, written and endorsed by the Suffolk Biodiversity partnership. In most cases the habitat descriptions also include references to Priority Species as supporting evidence. These are listed if they have been recorded within the parish in 2019/2020 or are recent records on the Suffolk Biodiversity Information Service database. (NBN database). The habitats are dealt with alphabetically and not in any order of value.*[6]

3.2.1 Arable Field Margins

General description of Arable Field Margins as a priority habitat in Suffolk
These herbaceous strips between an arable crop and the field boundary are counted as a priority habitat in the county if they are managed specifically to provide benefits for wildlife. The field may be cropped, left fallow, managed as a temporary grassland habitat or as a more permanent tussocky grassland strip. Up to 75% of the biodiversity within an arable field is found in the margins, regardless of the farming practice. They provide nesting sites for ground-nesting birds and hunting areas for barn owls and other birds of prey. The margins create over-wintering habitat for insects and spiders. Wild flower strips within margins attract important pollinators such as bees and hoverflies. They are important refuges for wildlife and conservation sites for rare arable plants.

There are several such strips managed for wildlife in the village with the farmers including them in the government's Countryside Stewardship schemes. Examples are in the margins of arable land farmed to the south and west of the Parish, generally the subject of Government Countryside Stewardship schemes. Typically, these contain a mix of annual and perennial wildflowers. In addition, an area of about half an acre has been put aside as an agreement with the local farmer for a wildflower seed site specifically aimed at the encouragement Turtle Doves, which have been declining in the area in recent years.

Generally, these sites are poorly served by accompanying mature hedges and encouragement of farmers to provide such hedging is an ambition.

There is a reasonable selection of wildflowers observed in these margins including clovers, bird's-foot-trefoil, vetch, poppies, thistle, dandelions, wild rat-tailed radish, field pansy, sun spurge, yarrow, ox-eye daisy, red and white deadnettle. Skylarks are seen in abundance on the adjoining arable fields.

[6] https://hub.jncc.gov.uk/assets/2829ce47-1ca5-41e7-bc1a-871c1cc0b3ae#:~:text=The%20priority%20habitats%20within%20this%20broad%20habitat%20type,7%20Lowland%20Mixed%20Deciduous%20Woodland%208%20Upland%20Birchwoods

3.2.2 Hedgerows

General description of Hedges as a priority habitat in Suffolk
Hedges are defined in the SBIS to be a boundary of trees or shrubs over 20m long and less than 5m wide with gaps of less than 20m between trees or shrubs. Banks, walls, ditches, trees and herbaceous vegetation within 2m of the centre of the hedgerow are part of the habitat. Climbers such as honeysuckle and bramble are important, but woody plants must be present to form a distinct woody boundary feature. Hedgerows act as wildlife corridors, linking habitats and providing cover for safer movement. A mix of hedgerow types provides habitats for a greater variety of species. F

Sadly, most of the hedges in the Parish of Redgrave are now in a depleted state. Many were grubbed up in the sixties and seventies and few have been restored since. Few are now ancient or species rich in Redgrave, although the hedges to the north and west of the village are generally in better condition and contain more species than elsewhere in the Parish. Current landowners/farmers are reluctant to start replanting without the assurance of appropriate compensation through the Government's promised Environmental Land Management schemes (ELMS) funding arrangements. Some limited work is ongoing with one landowner to improve some of the hedges but this will need to be continued with greater planting effort where possible.

Where hedgerows have been left in place there is consistent evidence of poor cutting regimes. This is typically the use of flail hedge cutters which, in the past decades, has made maintenance easier for their owners but it has been a disaster for wildlife and the health of those hedgerows. The problem is that hedgerows are flailed back every year and to the same height and this causes them to become knuckled, thin and unhealthy. Earlier generations of landowners and farmers, with their manual practices, knew better how to manage hedges in a sustainable fashion. Their ancient techniques are reflected in best practice guidance issued by, for example, the Peoples Trust for Endangered Species (PTES): trim mature hedges every 2 or, better, 3 years and do it incrementally by leaving some of the growth and allowing the hedge to keep growing slightly in height and width after each cut; then after about 25 to 30 years rejuvenate the hedgerow completely by laying it or coppicing. The PTES website provides full details https://ptes.org/hedgerow/managing-hedgerows-top-tips/ .

A full hedgerow survey needs to be conducted, and this will be included in this BAAP as Appendix 1 to Annex A, but an initial analysis shows that of the older hedges in the areas identified above there is a good mix of:

- Acer campestre (Field Maple)
- Crataegus monogyna (Hawthorn)
- Helix hedera (Ivy)
- Ulmus minor (Field Elm)
- Quercus ruber (Oak)
- Rubus fruticosus (Bramble)
- Ilex aquifolium (Holly)
- Corylus avellana (Hazel)
- Cornus sanguinea (Cornus)

In other areas of the village there is also evidence of the following in hedgerows:

- Euonymus europaeus (Spindle)

- Ligustrum vulgare (Wild privet)
- Ligustrum ovalifolium (Garden privet)
- Bryonia dioica (White)Bryony
- Humulus lupulus (Hop)
- Clematis vitalba (Old Man's Beard)
- Rosa arvensis (Field Rose)
- Rosa canina (Dog Rose)
- Symphoricarpos spp (Snowberry)

3.2.3 Lowland Fens

General description of Fens as a priority habitat in Suffolk
The UK is thought to host a large proportion of the fen surviving in the EU. As in other parts of Europe, fen vegetation has declined dramatically in the past century. Fens are peatlands which receive water and nutrients from the soil, rock and ground water as well as from rainfall. The word 'fen' is derived from the old English 'fenn' meaning marsh, dirt or mud. It is estimated that there was 3,400km2 of fen in England in 1637. Today there is thought to be only 10km2.

The Waveney and Little Ouse Valley Fens were formed 300,000 years ago, when glaciers carved out large river valleys as far south as East Anglia. Filled with chalk, clay, sand and gravel, they flooded when the glaciers retreated leaving a mosaic of large lakes along the valleys. Over time, these filled with thick layers of peat which, depending on the nature of the underlying deposits, are sometimes acidic and sometimes lime-rich. Only 43 of these fen mires survive in the UK. People also shaped the landscape here, with centuries of digging for peat and cutting reeds for thatching. More recently, drainage and water abstraction nearly brought an end to the fens, but many have now been saved. As water levels have returned, so has the wildlife which is thriving once more. Fen habitats support a diversity of plant and animal communities. Some can contain up to 550 species of higher plants, a third of our native plant species; up to and occasionally more than half the UK's species of dragonflies, several thousand other insect species, as well as being an important habitat for a range of aquatic beetles. Plantlife has declared the Waveney and Little Ouse Valley Fens, which include both the Redgrave and Lopham Fen, Important Plant Areas (IPA).

The major area of fenland in Redgrave is the Redgrave and Lopham Fen. It is the largest remaining area of river valley fen in England and consists of a number of different fen types, including saw-sedge beds, as well as having areas of open water, heathland, scrub and woodland. It is also one of only three sites in the UK where the fen raft spider, Dolomedes plantarius, is known to be found.

The habitats present at Redgrave and Lopham are characteristic of areas of valley mire. This ecosystem creates a zonation of vegetation types, producing a diverse range of habitat. Dry marginal woodland becomes fen grassland, dominated by purple moor-grass, which grades into mixed fenland of reed and sedge beds. This grassland is particularly notable at Redgrave and Lopham for its areas of saw sedge, Cladium mariscus. Into these areas of fenland protrude sandy ridges covered in heath vegetation. Without management these communities become invaded by sallow and develop into scrubland. To maintain site diversity, this has been allowed to occur in some areas of the Fen.

Redgrave and Lopham Fen was the first site in the UK at which a population of the fen raft spider was recorded. Following their discovery in 1956, a number of new pools were dug to encourage population expansion. However, water extraction from the borehole and a series of droughts in the 1980s reduced the population to only two isolated areas on the reserve. Throughout this period,

irrigation of the pools, inhabited by the spider, enabled the continuation of the population. The removal of the borehole in 1999 was expected to trigger an increase in population as water levels returned to normal. However, a study carried out in 2006 showed that no noticeable change had occurred. The population of the fen raft spider remains small and restricted in distribution. Recommendations for future management of the population include increasing the depths of turf pool, creating more pool habitats and greater, more focused use of water management in the reserve.

The fen habitats maintain a community of plants and animals, with the site being particularly known for its diversity of invertebrate species. Surveys have identified 19 species of dragonfly and 27 species of butterfly at the Fen. Further surveys have also found 26 species of mammals, including otter, pipistrelle bats and introduced species such as the Chinese water deer. The site has also recorded 4 species of amphibian and 4 species of reptile and a 2006 survey recorded 96 species of bird visiting the Fen.

Other Fen meadow features are present in the Redgrave parish including some land between Redgrave and Botesdale. Small Egret, cuckoo, reed buntings, reed warblers, sedge warblers and, pied wagtails have all been spotted in this area.

The Redgrave and Lopham Fen is managed by the Suffolk Wildlife trust and no actions are required under this BAAP.

3.2.4 Lowland Meadows

General description of Lowland Meadows as a priority habitat in Suffolk

Hay meadows and unimproved grasslands on well-drained neutral soils with grassy swards and an abundance of herbs. Home to some uncommon plant species and are an important food source for grazing mammals, invertebrates and birds. Developed from, and maintained by, grazing and/or mowing. Lowland meadows are important for wildlife as the vast majority of this habitat has been lost. They are species-rich with a wide range of plants and grasses, which generally occur in a relatively small area. The sward is characterised by fine-leaved grasses including Sweet Vernal grass, which gives hay its distinct sweet scent. The variety and abundance of flowering plants within semi-natural habitats provide good sources of pollen and nectar for many of our pollinating insects such as bumblebees, hoverflies, butterflies and moths. The rich population of invertebrates provide food for birds, bats and other small mammals.

3.2.5 Lowland Mixed Deciduous Woodland

General description of Lowland Mixed deciduous Woodland as a priority habitat in Suffolk
In Suffolk this includes all semi-natural woodland – except wet woodlands and wood pastures and parklands – growing on the full range of soil conditions. Many are ancient woods and tend to be small, less than 5 ha. Often there is evidence of past coppicing, particularly on moderately acid to base-rich soils. On very acid sands the type may be represented by former wood-pastures of oak and birch. Woodlands support a great variety of species and are a rich food source. Plants such as native Bluebell, Early Purple Orchid, Wood Anemone, Herb-Paris and Unspotted Lungwort can be found, and nectar attracts many insects. The Hazel Dormouse often uses tree cavities to hibernate. Deadwood is a food source for stag beetle larvae. Woodlands are an important habitat for fungi, with c.420 species recorded in just one woodland.

The main area of lowland mixed deciduous woodland in the Parish of Redgrave is the Shrubbery, part of the old Redgrave Park estate. This has a good selection of deciduous trees including lime and beech; they include considerable evidence of coppicing having been conducted in the woods. Muntjac deer also graze in the wood and limit the regeneration of new trees. Dead wood is lift in the wood and provide a good basis for fungi and invertebrates. There is a raised ditch surrounding the wood. Native wildflowers in the area include prolific dog's mercury (Mercurialis perennis) and primula vulgaris; this may indicate that the wood is older than the assumed dating to the 18th century.

So far it has not been possible to conduct a full survey of this area as the landowner has refused access. It is hoped that some form of agreement can be reached in future to allow such access to allow a full survey.

3.2.6 Ponds

General description of this priority habitat in the context of Suffolk Ponds, for the purpose of UK BAP priority habitat classification, are defined as permanent and seasonal standing water bodies up to 2ha in extent, which meet one or more of the following criteria:

- *Habitats of international importance*
- *Species of high conservation importance, for example ponds supporting*
- *Priority Species*
- *Ponds of high ecological quality, as determined by standard survey*
- *techniques*

Other important ponds: Individual ponds or groups of ponds with a limited geographic distribution recognised as important because of their age, rarity of type or landscape context (e.g., pingos) It has been suggested that the ponds on Market Weston Fen are pingos.

Beyond those present in the Redgrave & Lopham Fen, Redgrave has relatively few remaining ponds. There is a small pond in the centre of the village next to the Knoll; there are also 2 medium sized ponds adjoining Norman's Field. One of which tends to dry out completely during the year then fill up again later. Another small pond is located on the southern edge of the village settlement previously a part of Green Farm.

Garden ponds are of conservation value within the parish. Several sizeable and well-maintained ponds are present throughout the village, including 3 good sized ones in the Green and a good-sized pond on the Flatiron. Other ponds are also scattered throughout the village and are recorded to have good insect and other life present in and on them. Such ponds are both a lifeline and a back-up water body for aquatic animals, especially as we experience the effects of climate change causing erratic weather patterns with extreme heat during the summer months.

Once a very common species within the parish, frogs are now rarely observed in Redgrave, although frog spawn was recorded in the village pond in 2023. There are also records of smooth newts within garden ponds in the parish and great crested newts are known to be present.

Activities and developments that could affect the pond priority habitat Ponds are dynamic systems that are both lost and created over time. However, pond loss or degradation can lead to a reduced diversity of wildlife. Examples of factors that could affect ponds are:

- Pollution from nutrients or other chemicals
- Succession/lack of management
- Infilling due to development or loss of economic value.
- The introduction of non-native plants and animals including fish. In recent years there has been a campaign to ban the sale of a number of non-native aquatic plants which are seriously threatening the biodiversity of our wetland ecosystems. In particular, New Zealand pigmy weed which has been found countywide on many wetland sites. Carried on the feet of birds and in the tread of tyres of boots, this plant can regenerate from only a 5mm piece. The plant grows rapidly and out competes native plants, thus destroying the pond ecosystem.
- A rise in temperature will produce wide ranging effects e.g., acceleration of plant growth.

An in-depth survey of the parish's pond flora and fauna would greatly increase our understanding of parish biodiversity and would be a useful future project.

3.2.7 Reedbeds

General description of reedbeds as a priority habitat in Suffolk
A fen community dominated by reeds occurring in waterlogged areas, which are mostly freshwater, but can also be brackish or tidal. Made up of reedbed, fen, eutrophic open water, ditches and wet woodland, they may also include small areas of wet grassland and carr woodland. Most of the UK's reedbeds are in East Anglia, with the three largest being on the Suffolk coast. They contain over fifty-six species of conservation concern and are also an extremely important habitat for invertebrates with fifty-four notable invertebrates associated with Suffolk's reedbeds.

Most of the reedbeds present in Redgrave are included in the Redgrave & Lopham Fen, and these are plentiful. In addition, residual reed beds are present in the south western segment of the Parish along the Butts Plantation. These reedbeds provide breeding habitats for rare and migratory birds and important wintering habitats. Site is habitats for otters, water voles, water shrews and harvest mice and help to support a broad range of amphibians and reptiles. The bittern is a recent return to the Redgrave and Lopham Fen and Marsh Harriers and Bearded Tits are common in the site.

3.2.8 Rivers and Streams

General description of rivers and streams as a priority habitat in Suffolk
This habitat type encompasses all near natural and natural water in the County. The geology, topography, substrate, gradient, flow, channel profile and catchment all influence the ecology, in addition to human activity. To qualify as a priority habitat the river or stream must: be natural or near natural and of high ecological value; a headwater; recognised as a special area of conservation as a river; a chalk river, a shingle river, a designated SSSI for the river, or contain priority species from the rivers as a priority habitat.

Redgrave is the source of 2 rivers, the Waveney and the Little Ouse and is bordered in the north by both rivers. The Little Ouse River and is also fed by the Grundle stream which runs along the parish boundary between Redgrave and Hinderclay.

The Little Ouse starts at Redgrave and flows west through, Hinderclay, Blo Norton, Thelnetham and Hopton to eventually join the Great Ouse (37miles). Along with the Waveney it forms the parish boundary for Redgrave to the North.

The source of the River Waveney is a ditch on the east side of the B1113 road and forms the boundary of the Parish of Redgrave to the North. It heads through Bressingham, Diss and eastwards to Bungay and Beccles. The Environment Agency measured the water quality of the river system to include its biological status, which looks at the quantity and varieties of invertebrates, angiosperms and fish. Chemical status, which compares the concentrations of various chemicals against known safe concentrations, is rated good or fail. The water quality of the River Waveney system was as follows in 2019 was shown in its headwaters starting in Redgrave as being of ***Moderate*** ecological status and ***Fail*** on the Chemical Status.

The Grundle stream also forms the boundary between Redgrave and Hinderclay as it meanders towards the Little Ouse. It has good recorded wildlife associated with it. A Kingfisher is seen by the stream most years. Swallows nest under Ladies Bridge each year and reed warblers and reed buntings are also regular visitors.

The stream is becoming congested with overgrowth and suffers from run-off of topsoil from the adjoining arable farmland. Work with the farmer is ongoing to try and ameliorate some of these issues.

3.2.9 Wet Woodland

General description of this habitat in the context of Suffolk
These occur generally on poorly drained or seasonally waterlogged soils and frequently associated with river valleys, flood plains, flushes, plateau woodlands, lakes and ponds. Wet woodland habitats contain a range of National Vegetation Classification (NVC) stand types. Typically, they contain alder, birch and willows as the predominant tree species, and sometimes ash, oak, pine and beech in drier areas. Wet woodlands provide diverse conditions which support a wide range of plants, invertebrates, birds and mammals. The high humidity and presence of damp bark support a range of mosses and liverworts. An extremely large number of invertebrates are associated with alder, birch and willow and fallen dead wood in streams or fens provides specialised habitats.

Again, most of these habitats exist in the Redgrave and Lopham Fen, where they are abundant.

This site and its habitats are well managed by Suffolk Wildlife Trust and requires no action from the Parish or the Green Redgrave.

3.2.10 Wood Pastures and Parkland

General description of this habitat in the context of Suffolk
This habitat refers typically to those areas that Wood-pasture and parkland are mosaic habitats valued for their trees, especially veteran and ancient trees, and the plants and animals that they support. Grazing animals are fundamental to the existence of this habitat. Specialised and varied habitats within wood pasture and parkland provide a home for a wide range of species, many of which occur only in these habitats, particularly insects, lichens and fungi which depend on dead and

decaying wood. Individual trees, some of which may be of great size and age, are key elements of the habitat and many sites are also important historic landscapes.
The main area identified in the Parish for this type of habitat is Redgrave Park, originally a hunting "forest" and then converted to a landscaper parkland by Capability Brown; it also has 3 listed buildings present on the site. The estate is now used for mixed use: woodland; parkland alongside a large lake and arable farming. There are fine examples of open grown trees present, particularly some magnificent oaks. Recent tree planting has been undertaken in the parkland and more plantings and a possible wildflower meadow are planned for the near future.

3.2.11 Farmland

General description of this habitat in the context of Suffolk
Redgrave is surrounded by arable farmland, most of which is categorised as Grade 3 in accordance with the Agricultural Land Classification (ALC) system; some, next to the Old Recreation Ground is categorised Grade 2. All is intensively farmed using pesticides and herbicides. None of the local farmers have yet adopted regenerative farming practices although some land is set aside under Stewardship Schemes. Although not being of the highest quality land it is fairly rich in species seen on and around the farmland. Skylarks are seen in abundance on the land to the south and west of the village as are hares in season; muntjac deer are also frequent visitors. Kestrels are regularly seen hovering above the land and buzzards, linnets and other birds are seen frequently.

3.2.12 Quarries

General description of this habitat in the context of Suffolk
Quarries can be important sites for biodiversity because they can be created to support a diverse mix of habitats, wetlands and substrates that do not exist elsewhere. Exposed rock faces, nutrient-poor soils, a diverse range of available niches, and closeness to large areas of semi-natural habitat also contribute to the potential wildlife value of quarries.

The main quarry identified in the parish lies to the north of the old allotment site (GPS location ??). It has been left untended for many years. Currently weed and refuse filled, it needs a full survey and possible restoration work.

3.2.13 Road verges

General description of this habitat in the context of Suffolk
The value of road verges as a haven for wildlife, both plants and animals, is often overlooked and undervalued. They cover a large area of the UK and are crucial habitats for many rare and declining native species. Nearly half of the UK's wildflower species grow in verges, over 700 species in the UK. These roadside spaces are refuges for many rare meadow wildflowers, which is crucial since the UK has lost 97% of its meadows since the 1930s[7].

Redgrave has two main areas of road verge; Churchway on route to St Mary's Church and along Hall Road toward Botesdale. Early surveys of these two verges have shown the following wildflowers:

[7] https://www.nhm.ac.uk/discover/why-road-verges-are-important-wildlife-habitats.html

- **Churchway.** Typical plants found in these verges include devil's bit scabious, toadflax, common knapweed, yarrow, cornflower, mallow. They are however heavily dominated for much of the length on the southern side with bramble and bracken.
- **Hall Lane.** The verges along Hall Lane are also reasonably rich in species. Cow parsley, rose campion, lesser trefoil, common sorrel, meadow foxtail, creeping cinquefoil, oxeye daisy, common daisy, dandelion, bristly ox tongue and various grasses as well as mixed native hedging plants such as hawthorn and field maple have been seen.

A complete survey of the species in this habitat remains to be undertaken; but as yet no species of Particular Interest (SPI) have been identified.

3.2.14 Built Environment and Associated Habitats

General description of this habitat in the context of Suffolk
This habitat refers broadly to the wide range of structures, materials and microhabitats found in the built environment, including (though not exclusively) farm buildings, gardens, allotments and waste land. These built-up areas, gardens and spaces can provide a wide range of semi natural habitats with a significant biodiversity value. Buildings can mimic natural cliff faces and gardens the equivalent to woods, scrub, hedgerow, species rich meadows, ponds and streams. All provide opportunities and in some cases refuges for a wide range of species to complete their life cycle.

Built environment in Redgrave
The general description underlines the importance of the built environment to wildlife in the parish. The village acts as a natural corridor between the biodiversity hotspots that are the Redgrave and Lopham Fen and Redgrave Park to the north and south respectively. And it is surrounded to the east and west by farmed land, each with their biodiversity features. The area supports quite a variety of wildlife including, most obviously, hedgehogs, sparrows, greenfinches, swifts, various types of bat and a number of other species.

3.3 Species Inventory

An inventory of all of the species identified thus far as part of the BAAP is shown at Annexes A to F. They detail and record all species under the following generic groupings:

- Trees
- Other flora
- Mammals
- Birds
- Reptiles & Amphibians
- Insects
- Fungi & Lichen

3.3.1 Trees

Annex A shows a summary of the tree species identified in the Parish and the results of a survey undertaken in late 2023 of the most significant Ancient, Veteran and Notable (AVN) specimens of those trees. It also shows those trees that have had a Tree Preservation Order (TPO) placed upon

them. The work to continue improving the AVN survey will be an ongoing task to be taken forwards in 2024 (and beyond).

The most prominent trees in Redgrave are those within Redgrave Park, to the east, outside of the conservation area. Here there is a mixture of parkland and plantation. However, the majority of the trees with TPOs placed upon them are on and around Searchlight and along Lizzie's Lane towards Botesdale; these include a number of Oak, Ash, Scots Pine, Hornbeam and Field Maple south of the village off Hall Lane and Lizzies Lane (TPOs 2 and 36) and another group of Oak and Ash adjoining Church Way to the east (TPO 46). (see details in the Appendix to Annex A).

Within the conservation area near the centre of The Green, a small area of woodland sits either side of the drive serving The Cottage and other dwellings to the west. South of here, mature trees line the unmade access tracks to the scattered houses.

An oak tree graces the centre of the village, planted on the Knoll, the small triangular green adjoining the Churchway junction. Nearby, other trees can be found skirting the pond and just over the road outside Tudor Limes, a single Lime tree is the subject of a Tree Preservation Order no.138 One other old Oak tree has a TPO in the village.

In 2019, approximately 300 new native trees were planted in the Parish-owned land on Fen Street known as 'The Town Pit'. These trees were donated by the Woodland Trust. A further 120 trees were planted there in November 2023 largely to replace those that had not survived from the earlier planting.

In late 2022 and early 2034 some 3,000 tree saplings were planted using the Miyawaki planting methodology in the one-acre Old Allotments site to the north-west of the Parish, and a further 1,000 tree saplings were planted in the Old School Village Hall in the middle of the village.

No tree Species of Principal Importance (SPI) were identified in the village.

3.3.2 Other Flora

Annex B shows those plants (other than trees and major shrubs) that have been identified in the Parish. Good progress has been achieved on this survey (as at early Autumn 2024) and a fairly comprehensive picture of the flora in the parish is now recorded. Further work will be ongoing to maintain this inventory.

The only Suffolk Priority Species identified in the parish is Cornflower (also a Priority Species under the UK Post-2010 Biodiversity Framework). Haughley is apparently the only site in Suffolk where there is a self-sustaining colony in its traditional arable environment – see https://www.suffolkbis.org.uk/sites/default/files/images/species/Cornflower.pdf . The specimens seen in Redgrave are patchy an along roadside verges; they have probably escaped from gardens.

A few invasive species were identified – see para 3.3.10 below.

3.3.3 Mammals

Annex C records mammals identified in the Parish. Mammals commonly seen in Redgrave include:

- Brown long-eared, barbastelle and common pipistrelle bats, hedgehogs, common shrew, field voles, house mice, wood mice, grey squirrel, brown rat, mole, muntjac deer

The results of a survey of mammals in the Parish is shown at Annex C.

Seven Species of Principal Importance (SPI) have been recorded in the Parish. These include:

- West European Hedgehog
- Brown Hare
- Harvest Mouse
- Polecat
- Barbastelle bat
- Brown long-eared bat
- Otter

A separate survey of hedgehogs in the village has been conducted and the results are shown in Appendix 1 to Annex C to this document. A survey of bats undertaken in 2024 is also included at Appendix 2 to Annex C.

3.3.4 Birds

The Parish is blessed with a wide range of birds resident or visiting within its boundaries. Many of these are on the Red List of Endangered Species, including for example an abundance of skylarks seen particularly on the arable land to the south and west of the Parish. Turtle doves have also been seen but in increasingly small numbers.

A survey of these birds has been undertaken throughout the year (2023) and the results of this survey is shown at Annex D to this document.

Of the over 100 species identified in the Parish, 32 are categorised as being on the Red List of endangered birds. Some of these, such as the Skylark, are plentiful in the village.

3.3.5 Herptiles

Annex E shows those herptiles (reptiles and amphibians) seen in the Parish. This includes:

- grass snake, common lizard
- toads, great crested newts, smooth newt.
- Common frogs have not been seen or recorded in recent years but in 2023 their frog-spawn was seen in the village pond

Of the 7 species of herptile identified to date, 5 are listed on the Governments Species of Principal Importance index and the Suffolk Priority Species listing. More work should be undertaken to make sure that the Parish enhances habitats to provide support for these species.

3.3.6 Invertebrates

Annex F shows the range of invertebrates found in the Parish. The butterfly count is fairly comprehensive. The moth count, well over 200 different species by Autumn 2024, is based on separate moth trapping sessions in 2023 and up to early Autumn in 2024; further trapping sessions are planned for the remainder of the year and subsequent years when a greater range of moths may be discovered. The remaining invertebrates are based on a survey of casual recordings made in the village by interested parishioners; a more comprehensive and systemic survey of these other invertebrates will be undertaken in the remainder of 2024 and beyond.

Of the 59 species of (diurnal) butterflies recognised to be present in the UK we have spotted 27; and of these 5 are Species of Principal Importance and Suffolk Priority Species.

By contrast with the types of butterfly species in the UK there are around 900 species of (mostly nocturnal) large moths and even more small ones. The surveys of moths conducted so far in the village have identified more than 200 species so far with 17 of these being Species of Principal Importance and 5 as Suffolk Priority Species – see Annex F for details of these. More moth trapping work will be undertaken in 2024 and beyond to extend the moth inventory.

Of the other around 100 invertebrate species identified so far as being present there is in key protected species, namely the now famous Fen Raft Spider. Ongoing work to extend this database of invertebrate species will continue in the coming years.

3.3.7 Fungi, Algae & Lichen

Annex G (survey yet to be completed) records the fungi found to date in the village. A more detailed study of local fungi is being undertaken in the Autumn of 2024 with the aid of a local mycologist and the results will be included in Annex G is due course. As yet we have not identified a phycologist able to assist with the algae identification task. This is work for a future date.

3.3.8 Species Richness

The survey undertaken of the Redgrave Parish shows that there is a considerable and significant species richness present, with a diverse range of plants and animals recorded. The area supported a variety of ecosystems, including woods, grasslands, arable farmland, wetlands, and water bodies, as well as the built-up areas; these provide a good variety of niche habitats for numerous species as reflected in the survey results.

Of particular note:

- There is a broad variety of tree species, most of which seem in good health.
    - There are abundant examples of Ash trees present most of which seem unaffected by Ash Dieback
    - There are many old specimens of Pedunculate Oak, many of which are veteran although no Ancient Oaks have been recorded to date.
- There is a good number and type of mammals including rare species, particularly of bats.
- More than 100 bird species have been recorded, some of which are thriving in the Redgrave Parish despite their appearance on BTO and other conservation watch lists.
- Good numbers of butterflies, moths and other invertebrates are present.

3.3.9 Threatened Species

Several species of plants and animals identified during the audit were found to be threatened or endangered as identified on various conservation watch lists. This highlighted the need for conservation efforts and the implementation of protective measures to safeguard their habitats. In particular

- **Trees, Flowering Plants and Ferns.** According to the Royal Forestry Society there are 15 endangered tree species in the United Kingdom[8]. The Vascular Plant Red Data List of Great Britain provides a full and recent survey of the status of all such species on the UK and this has led to the recent revised version of the Suffolk Rare Plant Register.[9] To date there are no species identified from this listing in Redgrave that are Critically Endangered or Endangered. The following Endangered or Vulnerable species are noted on this Register as being present in Redgrave or the Redgrave Fen but have not been seen as yet as part of this audit.
    - Great Water Parsnip (*Sium latifolium*), an endangered species.
    - Whirled Water-milfoil (*Myriophyllum verticillatum*), a vulnerable species.
    - Petty Whin (*Genista anglica*), a near threatened species.
    - Fen Pondweed (*Potamogeton coloratus*), a nationally scarce species.
    - Marsh Sow-thistle (*Sonchus palustris*), a nationally scarce species.
    - Other local scarce species are also recorded as being present in the Redgrave Fen.
- **Mammals.** 30 species of mammal have been identified to date in the Redgrave Parish and of these 16 are Suffolk BAP species and, of these 16, some 10 are also listed as Species of Principal Importance (SPI).

Common Name	***Scientific Name***	**Species of Principal Importance**	**Suffolk Priority Species**
Brown Hare	*Lepus europaeus*	**Listed**	**Listed**
Brown long-eared bat	*Plecotus auritus*	**Listed**	**Listed**
Common pipistrelle	*Pipistrellus pipistrellus*	**Not Listed**	**Listed**
Daubenton's bat	*Myotis daubentonii*	**Not Listed**	**Listed**
Harvest Mouse	*Micromys minutus*	**Listed**	**Listed**
Hedgehog	*Erinaceus europaeus*	**Listed**	**Listed**
Leisler's bat	*Nyctalus leisleri*	**Not Listed**	**Listed**
Nathusius' pipistrelle	*Pipistrellus nathusii*	**Not Listed**	**Listed**
Natterer's bat	*Myotis nattereri*	**Not Listed**	**Listed**
Noctule	*Nyctalus noctula*	**Listed**	**Listed**
Otter	*Lutra lutra*	**Listed**	**Listed**
Polecat	*Mustela putorius*	**Listed**	**Listed**
Serotine	*Eptesicus serotinus*	**Not Listed**	**Listed**
Soprano pipistrelle	*Pipistrellus pygmaeus*	**Listed**	**Listed**
Water Vole	*Arvicola amphibius*	**Listed**	**Listed**
Western Barbastelle Bat	*Barbastella barbastellus*	**Listed**	**Listed**

[8] https://rfs.org.uk/learning/schools-and-outdoor-ed/tremendous-trees/endangered-trees/
[9] https://www.suffolkbis.org.uk/sites/default/files/images/species/rpr.pdf

- **Birds.** Of the more than 110 species of birds recorded in the Parish:
    - 24 species are noted on the current Birds of Conservation Concern 5 Red List (and/or IUCN Red List of Threatened Species)
    - 38 species are noted on the current Birds of Conservation Concern 5 Amber List.
    - 22 of the Species of Principal Interest documented by the government are recorded in Redgrave
    - Of the 36 Suffolk Priority Species of birds noted by the SBIS, Redgrave has recorded 21 of them within its Parish boundaries.

Common Name	*Scientific Name*	Conservation Status	Species of Principal Importance	Suffolk Priority Species
Barn Owl	*Tyto alba*	Green	Not Listed	Listed
Bullfinch	*Pyrrhula pyrrhula*	Amber	Listed	Listed
Common Cuckoo	*Cuculus canorus*	Red	Listed	Listed
Curlew	*Numenius arquata*	Red	Listed	Listed
Dunnock	*Prunella modularis*	Amber	Listed	Listed
Fieldfare	*Turdus pilaris*	Red	Not Listed	Not Listed
Grasshopper Warbler	*Locustella naevia*	Red	Listed	Listed
Great Bittern	*Botaurus stellaris*	Amber	Listed	Listed
Greenfinch	*Chloris chloris*	Red	Not Listed	Not Listed
Grey Partridge	*Perdix perdix*	Red	Listed	Listed
Herring Gull	*Larus argentatus*	Red	Listed	Listed
House Martin	*Delichori urbica*	Red	Not Listed	Not Listed
House Sparrow	*Passer domesticus*	Red	Listed	Listed
Linnet	*Linaria cannabina*	Red	Listed	Listed
Marsh Tit	*Poecile palustris subsp. palustris/dresser*	Red	Listed	Listed
Mistle Thrush	*Turdus viscivorus*	Red	Not Listed	Not Listed
Nightingale	*Luscinia megarhynchos*	Red	Listed	Not Listed
Northern Lapwing	*Vanellus vanellus*	Red	Listed	Listed
Pochard	*Aythya ferina*	Red	Not Listed	Not Listed
Reed Bunting	*Emberiza schoeniclus*	Amber	Listed	Listed
Scaup	*Aythya marila*	Red	Listed	Not Listed
Skylark	*Alauda arvensis subsp. arvensis/ scotica*	Red	Listed	Listed
Song Thrush	*Turdus philomelos*	Amber	Listed	Listed
Spotted Flycatcher	*Muscicapa striata*	Red	Listed	Listed
Starling	*Sturnus vulgaris subsp. Vulgaris*	Red	Listed	Listed
Swift	*Apus apus*	Red	Not Listed	Listed
Turtle Dove	*Streptopelia turtur*	Red	Listed	Listed
White-fronted Geese	*Anser albifrons*	Red	Listed	Not Listed
Woodcock	*Scolopax rusticola*	Red	Not Listed	Not Listed
Yellowhammer	*Emberiza citrinella*	Red	Listed	Listed

- **Herptiles.** On a small and fairly superficial survey has been undertaken to date (Dec 23); a more comprehensive study will be required in 2024. But of the 7 species identified in that study, 5 are Species of Principal Importance and Suffolk BAP Priority Species).
- **Invertebrates.**
    - **Butterflies.** Five of the 27 species of butterfly identified in the village during the year were on the Species of Principal Importance listing and Suffolk Priority Species listings: these were the Small Heath, Small Blue, Marsh Fritillary, Grizzled Skipper

and White Hair-streak. All of the typical plants used by these butterflies are found commonly throughout the Parish.

- **Moths.** More than 220 species of moth have been identified in the village to date and of these 17 are on the Species of Principal Importance and 5 on the Suffolk Priority Species listings. These are shown in the table below. Generally, there is plenty of foodstuff for these species in the village; only some of the grasses have yet to be seen and identified.

Moth	Larval Food
Ear Moth	The base of various grasses and low plants
Garden Tiger	Stinging nettles, dock leaves and many garden plants
Centre-barred Sallow	Ash (Fraxinus)
Mottled Rustic	Various herbaceous plants, especially Nettle and Dandelion
Latticed Heath	Lucerne (Medicago sativa) and clover (Trifolium)
Dusky Thorn	Ash tree leaves
Garden Dart	A range of herbaceous plants, including clover and plantain
The Rustic	A wide range of low growing plants.
Brindled Beauty	Trees and shrubs including Birch, Hawthorn, Limes, Elms, Sallow) and Alder
White Ermine	Herbaceous plants including stinging nettle and docks
Buff Ermine	Herbaceous plants, bushes and trees, especially stinging nettle, Honeysuckle, Hop and birches
Hedge Rustic	Various grasses including mat-grass and hair-grass
Feathered Gothic	Hard-bladed grasses including mat-grass and sheep's fescue
Cinnabar	Common ragwort and occasionally other ragworts and groundsels
Oak Hook-tip	Pedunculate Oak and Sessile Oak
Dark-barred Twin-spot Carpet	Variety of low plants
Heath Rustic	Heather

- **Other Invertebrates.** The one other species of invertebrates identified as being present in the parish is the now famous Fen Raft Spider (*Dolomedes plantarius).* A full protection programme is in place for this already and no action required as part of this plan. No other Species of Principal Importance (or Suffolk Priority Species) have been identified to date, although a more thorough set of studies needs to be undertaken to provide a more comprehensive picture of these other invertebrates.

- **Fungi and Lichen.** Initial work on identifying fungi has started. As yet no survey undertaken on lichens.

3.3.10 Invasive Species

The Government has defined 36 types of non-native invasive species that are species of special concern because of their invasiveness and ability to establish in several nations across Europe, including the UK. These are defined at https://www.gov.uk/guidance/invasive-non-native-alien-plant-species-rules-in-england-and-wales#list-of-invasive-plant-species . The government has defined specific controls on their importation, keeping, breeding, transporting, selling, cultivation or reproduction. These species of invasive alien plants. None of these non-native invasive species

likely to pose a significant threat to the native biodiversity have been identified as being present in Redgrave in this audit as yet, although it is possible that there may be some present that have yet been identified. If found these will need to be monitored for their impact on the ecosystem and suitable management processes will need to be identified to prevent such impact.

The RHS has also produced a wider list of non-native invasive species. There is no mandatory set of controls for this wider set of invasive species but some recommendations. These are defined at https://www.rhs.org.uk/prevention-protection/invasive-non-native-plants . Of these the following have been identified in Redgrave:

- Cotoneaster horizontalis
- Lamiastrum galeobdolon subsp. Argentatum (variegated yellow archangel)
- Rosa Rugosa

It is an offence to plant or cause these to grow in the wild.

Japanese Knotweed, while not listed under the above regulations, is legally classed as a controlled plant under the Wildlife and Countryside Act 19811. It has been identified as being present in Redgrave. It is not illegal to have Japanese knotweed on your property, but it is against the law to cause or allow the plant to spread in the wild.

4 Conclusions

This biodiversity audit has provided a reasonably comprehensive understanding of the species composition and population levels within the study area. The results underscore the importance of conservation efforts to protect and enhance the biodiversity of the area. The findings and recommendations of this audit will serve as a crucial resource for conservation planning and the development of sustainable management strategies. Continued monitoring and assessment are necessary to ensure the long-term preservation of the biodiversity and ecosystem health in the area.

5 Recommendations

This Redgrave BAAP is a dynamic document to cover the continually evolving biodiversity status of Redgrave Parish. It is intended to be a living document with input from parishioners as a means of refining, updating and improving it over the years. It is also hoped that these records will be used to update data held on wider county and national databases such as the Suffolk Biodiversity Information System (SBIS) and iRecord.

Redgrave is particularly blessed with its remaining wildlife and biodiversity, having within its boundary the SSSI of the Redgrave Fen and also agricultural land and other habitats with endangered or increasingly rare species. *It has a large number of footpaths, sites recognised for their biodiversity, areas traditionally managed in a way to enhance species richness and a compact development area that reflects the natural resources of the parish. This is a valuable strength in a rural community and should be nurtured.*

There are different ways by which we can achieve this. We can encourage more biodiversity, protect the unique qualities in the parish, and build on the work of this report by engaging with the community. It is by raising awareness of the natural assets in the parish that we can secure local

support for measures to increase ecological connectivity and biodiversity, as well as helping residents and visitors to responsibly enjoy and care for the environment around them.

6 Action Plan

The Action Plan will be set out in a separate Annex. It will cover the following elements.

6.1 Set Goals and Objectives

The intention is to collate data from the BAAP assessment phase in order to set clear goals and objectives for the Biodiversity Action Plan. These goals would be based on the needs of the environment, and would be as specific as possible. The Action Plan should ensure that there is a clear understanding of what needs to be done, why it needs to be done, and how it will be done and this needs to be documented and actions recorded in a clear and methodical fashion.

6.2 Develop Strategies

This BAAP will then define and develop strategies that will help to meet its stated goals and objectives. This may involve developing new conservation programs, strengthening existing ones or adopting alternative management practices. Different strategies could be developed to address the various threats to biodiversity.

6.3 Determine the Resources Required

The BAAP will go on to determine what resources would be required to implement its strategies and provisions. This includes identifying the financial, technical, and human resources needed to ensure the plan can be implemented effectively. The BAAP will also identify any partners who could provide resources and support or information-sharing opportunities.

6.4 Implement and Monitor the Plan

The implementation of the Redgrave BAAP will require expert assistance to track activities and progress over time, assess any challenges or changes that may have arisen or become apparent, and make adjustments as necessary to meet the goals and objectives of the plan. We are blessed with considerable ecological, botanical and avian expertise in within the village and these have been extremely helpful in framing this BAAP to date. We will, hopefully, be able to continue to call on their expertise as the implementation phase of this programme continues.

We will require this expertise to will monitor the metrics regularly to assess progress, identify gaps, and opportunities. Additionally, the plan needs to be reviewed periodically to evaluate its effectiveness and update it, if necessary.

6.5 Encouraging Ecological Connectivity

Ecological Connectivity is defined by the World-Wide Fund for Nature (WWF) as follows[10]:
"Ecological connectivity is the ability for animals on land or in water to move freely from place to place. Movement allows them to find food, breed, and establish new home territories. The unimpeded movement of animals and the flow of natural processes sustain life on Earth."

The WWF goes on to note that "Habitats that allow for this unobstructed movement have what we call 'high connectivity,' meaning that all living things can freely move and access the resources they need to thrive. If connectivity is lost, landscapes, river systems, and seascapes become fragmented, the movement of wildlife becomes limited or ceases, and ecological systems can begin to break down."

It identifies the greatest threats to such Ecological Connectivity. For Redgrave these include:

- Development and infrastructure
- Climate crisis
- Agriculture
- Energy

Actions identified to improve the current situations and to be undertaken as and when possible, include:

- Restore/maintain parish hedgerows with appropriate species.
- Encourage the planting of native and non-invasive species in gardens, perhaps with recommendations published in the parish magazine.
- Liaise with local landowners and county maintenance crews to ensure the timing of verge, footpath and hedge cutting allowing native flora flowering and seed setting time.
- Establish some wildlife verges using local seed mixes, perhaps using a community or education event to spread seeds and monitor their growth.
- Review the development of small wooded areas and copses, in consultation with the Suffolk tree warden who has planted significant numbers of trees across the county and apply from grant aid from the County Council.
- Develop a long-term plan to preserve our green lanes and trackways for future generations.

6.6 Maintaining Biodiversity

The maintenance of biodiversity is of crucial importance, not least for its role in combatting the current climate crisis. It is also now being recognised as a key obligation for all tiers of local government, including down to parish council level. Indeed, the UK Government has now placed a "Biodiversity Duty" on all local authorities to put in place policies and objectives to conserve and enhance biodiversity in their respective areas – see https://www.gov.uk/guidance/complying-with-the-biodiversity-duty . This BAAP is the means by which the Redgrave Parish Council is meeting its obligations under this new Biodiversity Duty.

Key actions which we see as being within the remit of the parish include:

- *Ensure robust consideration of the land management guidelines for landscape characteristics and priority habitats when reviewing planning applications before Redgrave Parish Council.*

[10] https://www.worldwildlife.org/stories/why-connectivity-matters-to-wildlife-and-people

- *Consider ways to ensure dead timber, standing or fallen, is left for saprophytic plants and animals, as it is often true that the most biodiverse areas are the least tidy.*
- *Support landowners in the traditional management of site, in order to maintain their value. This might include signposting to resources provided by the County Council, Wildlife Trust, or the Department for Environment, Food and Rural Affairs.*

6.7 Involving the Parishioners

Encouraging active participation in this activity is seen as being key to its success. To this end the following measures have been adopted and will be extended as necessary:

- The Parish Council has endorsed and supported the establishment of the Green Redgrave Group (GRG) which focuses on improving the biodiversity within the parish.
- Raising awareness of local assets in the community with engagement events. These include:
    - The establishment of a series of regular talks on the environment and related issues.
    - Visits to sites of environmental and ecological interest
    - Running local wildlife identification and recording sessions.
    - The encouragement of local people to volunteer as environmental wardens for the parish (this includes the establishment of a tree warden and specific functions within the GRG).
    - Environmental projects undertaken by the GRG on behalf of the village include:
        - The planting by volunteers of more than 4,000 trees in the past 2 years on Parish-owned land.
        - The creation of a “pollinator friendly” wildflower meadow in the Old School Playing Field.
        - The planting by volunteers of fruit trees to create a community orchard in the Old School Playing Field.
        - The founding, together with other local groups, of the Suffolk Green Cluster to promote, encourage and enable “green” activities in the area to include green energy, biodiversity, green transport and green farming.
        - The planting of native trees to create corridors on land not owned by the parish (with the landowners permission) to include on the farm to the west of the village and along the Green.
        - The planting, using volunteers, of dense thickets to encourage birdlife in the Old Allotments and the Old School Playing Field.
        - The creation of a hibernaculum for herptiles in one garden using volunteer help.
        - The purchasing and siting of bird and bat boxes around the village.
        - The sponsoring and subsidising of hedgehog boxes around the village.
- *Involve the school in the parish environmental projects, such as wildlife identification and recording, seed planting, and local history.*
- *Raise awareness of sites and encourage responsible walking/cycling/riding and dog ownership.*

Other possible future activities/projects include:

- Creation of garden ponds
- Harvesting rainwater
- Avoiding or reducing the use of garden chemicals

- Composting and developing deadwood areas

Annexes:

A. Redgrave Parish Tree & Woody Species Inventory.
B. Redgrave Parish Other Flora Inventory.
C. Redgrave Parish Mammal Inventory.
D. Redgrave Parish Bird Inventory.
E. Redgrave Parish Herptile Inventory.
F. Redgrave Parish Insect Inventory.
G. Redgrave Parish Fungi, Lichen and Algae Inventory.

References:

1. UK Biodiversity Action Plan
2. UK Biodiversity Action Plan Priority Habitat Descriptions - Wood-Pasture and Parkland https://data.jncc.gov.uk/data/2829ce47-1ca5-41e7-bc1a-871c1cc0b3ae/UKBAP-BAPHabitats-65-WoodPastureParkland-2011.pdf

Abbreviations:

BAAP	-	Biodiversity Audit & Action Plam
LNR	-	Local Nature Reserve
LWS	-	Local Wildlife Site
NVC	-	National Vegetation Classification
RNR	-	Roadside Nature Reserve
SINC	-	Site of Importance for Nature Conservation
SPI	-	Species of Principal Interest
SSSI	-	Site of Special Scientific Interest
SWT	-	Suffolk Wildlife Trust
WWF	-	World Wide Fund for Nature