Landscape and Biodiversity Evaluation
Baylham, Mid Suffolk

December 2023

Project no.	***Report***	***Date***
097/23	Final	8th December 2023
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DISCLAIMER

This report has been compiled in accordance with BS 42020:2013 Biodiversity - Code of practice for planning and development, as has the survey work to which it relates.

The information, data, advice and opinions which have been prepared and provided are true and have been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional *bona fide* opinions.

This survey was carried out and an assessment made of the site at a particular time. The evidence of the report can be used to draw conclusions as to the likely presence/absence of protected species and the impacts of any future development works. This survey is a snapshot in time and further work may be necessary, for instance, if there is a delay, or when applying for a Natural England European Protected Species Licence, or the requirement for a Habitat Regulations Assessment.

Every effort has been made to date to provide an accurate assessment of the current situation, but no liability can be assumed for omissions or changes after the survey has taken place.

It is our policy to submit biological records to Suffolk Biodiversity Information Service (SBIS), for the purposes of increasing knowledge of the distribution of species within Suffolk. If you wish to discuss this, please contact us within three months of submission of this report.

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EXECUTIVE SUMMARY

SWT Trading Ltd: Wilder Ecology, the consultancy of Suffolk Wildlife Trust, was instructed by Ian Poole of Places4People Planning Consultancy to undertake a landscape and ecological evaluation of the parish of Baylham as part of their preparation for a new Neighbourhood Plan. This document seeks to provide the Neighbourhood Plan Working Group with an evaluation of landscape and in particular, to highlight specific habitats and associated ecological networks as a rich source of biodiversity.

There are three different landscape character types within the parish. The largest area, covering the middle area of Baylham parish, is defined as 'Rolling Valley Farmlands'. The next largest area is defined as 'Ancient Plateau Claylands' and is located to the west of Baylham parish. Lastly, the smallest area is defined as 'Valley Meadows' and is located to the east of the parish, a linear stretch that runs along the River Gipping corridor. Overall, these landscape character types help define the different habitats across the parish and also the species within them.

There are two statutory designated sites within the parish: Barking Woods SSSI and Great Blakenham SSSI, and eight non-statutory designated sites, seven County Wildlife Sites and one Roadside Nature Reserve.

Seven Priority habitats have been identified within the Parish, including hedgerows, lowland mixed deciduous woodland, ponds, wood pasture and parkland, traditional orchards, wet woodland and rivers and streams. Across the Parish, several Suffolk Priority Species (one amphibian, one reptile, 15 birds, five mammals, four invertebrates, four rare Suffolk plants) have been recorded which complement and help define the biodiversity value of the locality.

The principal ecological network within the parish is associated with the River Gipping and associated habitats. Continuous riparian habitat is associated with the river corridor demarcating the western boundary of the parish.

On a smaller scale, the network of hedgerows and woodland within the remainder of the parish also provide local connectivity.

Development Management guidance for any new developments within the area covered by this Neighbourhood Plan should seek to protect existing landscape and ecological assets and restore, enhance and reconnect the ecological network.

1. INTRODUCTION

1.1 Brief and terms of reference

SWT Trading Ltd: Wilder Ecology, the wholly-owned consultancy of Suffolk Wildlife Trust, was instructed by Ian Poole of Places4People Planning Consultancy to undertake a landscape and ecological evaluation of the parish of Baylham as part of their preparation for a new Neighbourhood Plan.

The Civil Parish of Baylham, within its formal parish boundary, is the 'Neighbourhood Area' for the purposes of the Plan.

This document seeks to provide the Neighbourhood Plan Working Group with a consideration of landscape character and use this as a basis to highlight key habitats and associated ecological networks as a rich source of biodiversity.

1.2 Parish location and statistics

Baylham Parish is located north-west of the town of Ipswich and covers around 545 hectares, with the central point grid reference close to TM 10110 51649. The parish also shares boundaries with the Suffolk civil parishes of Darmsden, Needham Market, Coddenham, Barham, Great Blakenham, Little Blakenham, Nettlestead and Willisham.

Data from the UK Census 2021 [1] indicates a population of around 303 residents, averaging 55 persons per square kilometre, with approximately 111 households.

Built up areas represent about 15% of the parish, largely concentrated in the centre with scattered dwellings nearer the boundaries.

Outside of the River Gipping, the road network, buildings and gardens, arable and pasture farmland is the most frequent and extensive land use.

2. PLANNING AND DEVELOPMENT CONTEXT

An outline of elements of the current planning system and associated strategic documents will help to place this present evaluation in context:

2.1 Localism Act (2011)

The Department of Communities and Local Government promoted the Localism Act (2011) [2]. The subsequent Neighbourhood Planning (General) Regulations (2012) [3] provide the statutory framework for Neighbourhood Development Plans. These allow communities to establish the general planning policies for the development and use of land in a neighbourhood. 'Neighbourhood Plans allow local people to get the right type of development for their community, but the plans must still meet the needs of the wider area'.

2.2 National Planning Policy Framework

The National Planning Policy Framework (NPPF) is statutory guidance published by the Department for Levelling Up, Housing and Communities (September 2023), which provides national planning policy [4].

Of particular relevance to this project is Paragraph 174, under Section 15 'Conserving and Enhancing the Natural Environment', which states

Planning policies and decisions should contribute to and enhance the natural and local environment by:

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
b) recognising the intrinsic character and beauty of the countryside, and the wider benefits of from natural capital and ecosystem services - including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

The NPPF also sets out the plan-making framework in Paragraph 17, in that development plans must include strategic policies to address each local planning authority's priorities for the development and use of land in its area. These can be contained in a local plan and/or a spatial development strategy. Policies to address non-strategic matters are also included in local plans and in neighbourhood plans. These set out more detailed policies for specific areas, neighbourhoods or types of development. Neighbourhood plans must be in general conformity with the strategic polies in the development plan that covers the area.

2.3 Babergh and Mid Suffolk District Local Plan

The Babergh and Mid Suffolk Joint Local Plan Part 1 [5] was adopted by both Babergh and Mid Suffolk District Councils in November 2023. This replaces the existing Babergh Local Plan (2006) and the Mid Suffolk Local Plan (1998) and Mid Suffolk District Core Strategy (2008).

Relevant policies within these documents included:

- Strategic Policy SP09 – Enhancement and Management of the Environment
- Local Policy LP16 – Biodiversity and Geodiversity
- Local Policy LP17 – Landscape

2.4 Biodiversity Net Gain

Net gain in planning terms describes an approach to development that leaves the natural environment in a measurably better state than it was before. The approach to delivering net gain still requires the application of the mitigation hierarchy, in that impacts on biodiversity should be first avoided, then minimised and only as a last resort be compensated. Where losses cannot be compensated within a development footprint then biodiversity losses may be offset by delivery of gains elsewhere. Although not yet mandatory, a minimum target of 10% net gain should be sought as specified in the Environment Act 2021. However, it should be noted that impacts on irreplaceable habitat cannot be offset to achieve no net loss or net gain.

A key part of the process is demonstrating measurability and the Statutory Metric, designed by Natural England, provides the means to account for the ecological value of a site and how changes arising from development or management will impact on this value over time.

Achieving the best outcomes for biodiversity requires credible evidence derived from ground-truthing and justifiable choices based on ecological knowledge. In addition, the delivery of net gain is

dependent upon the financial means to undertake the necessary habitat management, in order to secure a long-term biodiversity benefit.

2.5 Competence

Samantha Smith, BSc, MSc, a qualifying member of CIEEM, is an Ecologist with over two years' experience in habitat assessment using UK Habitat Classification, undertaking GIS mapping and protected species surveys to include bats, reptiles and badgers.

Jill Wyllie BSc Hons, ACIEEM is highly experienced in landscape evaluation and habitat assessment using UK Habitat Classification and Phase 1, and protected species surveys with a specialist interest in water voles and holds a Natural England Survey licence for great crested newts and a Class licence for water vole displacement. She has extensive experience of implementing mitigation schemes for water vole and badger. Jill also undertakes GIS mapping and holds a CSCS card.

3. METHODOLOGY

3.1 Field survey

An ecological survey and audit of the parish was undertaken on 30th November 2023 by Samantha Smith and Jill Wyllie. The objective of the field survey was to investigate and record land use, habitat types and notable plant and animal species and take digital images to illustrate these features. Using public highways, bridleways and footpaths it was possible to view and comment upon all but a small percentage (around 10%) of the parish land area.

3.2 Desktop survey

A variety of existing source material was consulted including:

- Suffolk County Council website and other documents
- Mid Suffolk District Council website and other documents
- Suffolk Biodiversity Information Service website and databases
- The MAGIC website (provides geographic information about the natural environment from across a range of government sources) including Sir Dudley Stamp 1933-1949 Land Use Inventory)
- Suffolk Wildlife Trust databases
- Suffolk Hedgerow Survey – County Report
- Suffolk Bird Atlas 2007-11

3.3 Evaluation of landscape and wildlife assets

The descriptions and evaluation that follow in the report draw on information collected during the field and desktop surveys. For convenience and clarity, elements concerned with the wider landscape are considered first in Section 4. These are then followed in Section 5 by wildlife elements, from protected sites through to wider ecological networks habitats.

However, these two sections should be considered together as there is integration of significant landscape and wildlife elements, resulting in a network of landscape and wildlife features.

4. EVALUATION OF LANDSCAPE ASSETS

4.1 Protected Landscapes

Baylham does not lie within or close to any National Landscapes. However, the previously known Gipping Valley Special Landscape Area (SLA) runs along the east of the built-up area of Baylham and extends to the north and south along the River Gipping.

4.2 Local Landscape policy

Previously, many local authorities in England have used Local Landscape Designations (LLDs) to protect locally important landscapes. In different authorities LLDs are variously termed 'Areas of Great Landscape Value', 'Areas of Special Landscape Importance' or here, in the case of Suffolk, 'Special Landscape Areas' (SLA). Unlike National Parks and National Landscapes, Special Landscape Area is a non-statutory designation. However, it was created to categorise sensitive landscapes to assist their protection from development or other man-made influences. In 1987 Suffolk County Council identified a number of broad areas of land for designation as SLAs. They considered that these areas possessed a quality of landscape that was of countywide significance. District Councils were made responsible for the precise delineation of each SLA boundary, a process that entailed a careful assessment of each using aerial photographs and site surveys.

Mid Suffolk Local Plan (1998) Proposal 6 described SLAs as:

a. River valleys which still possess traditional grazing meadows with their hedgerows, dykes, and associated flora and fauna;
b. Areas of Breckland including remaining heathland, and the characteristic lines and belts of Scots Pine;
c. Historic parklands and gardens;

d. Other areas of countryside where undulating topography and natural vegetation, particularly broad-leaved woodland, combine to produce and area of special landscape quality and character.

Policy LP17 – Landscape within the Babergh and Mid Suffolk Joint Local Plan Part 1 sets out the landscape policy for Mid Suffolk District. This replaces the existing Special Landscape Areas (SLAs) as defined in the earlier Mid Suffolk District plans and policies. The Plan seeks to conserve and enhance the landscape, taking account of its natural beauty, characteristics and features of natural, archaeological or historic interest. All new development proposals need to ensure they respond to and reinforces the local distinctiveness of the area in scale, form, design, materials and location.

Although the Babergh and Mid Suffolk Joint Local Plant Part 1 no longer uses the designation of SLA, it can be reasonably argued that paragraph 174 of the NPPF 2023 (Section 2.2 above) continues to give some weight to areas which have or formerly had a Local Landscape Designation such as SLAs, in the context of a 'valued landscape':

"Planning Policies and decisions should contribute to and enhance the natural and local environment by

- protecting and enhancing valued landscapes, sites of biodiversity and geological value and soils (in a manner commensurate with their statutory status or identifies quality in the development plan).

4.3 Suffolk Landscape Character Assessment

In 2008, Suffolk County Council completed a project to describe landscapes throughout Suffolk in detail and assess what particular character and qualities make up the different landscape areas of the county. This is known as the Level 2 Suffolk Landscape Character Assessment (LCA), [6]. The guidance required the preparation of landscape character assessments in order to review and/or replace local landscape designations. The results of these assessments could then be used as supplementary planning guidance and to help produce landscape management guidelines.

Suffolk County Council worked in partnership with the Living Landscapes Project based at Reading University, private consultants and all District and Borough Councils in Suffolk, using methodology in which discrete 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, landcover and cultural pattern, which in turn were derived from six mappable datasets: relief, geology, soils, tree cover, farm type and settlement. Application of this methodology maintained a consistent approach across Suffolk.

It is highly appropriate for the Baylham Rural Neighbourhood Plan to acknowledge and make full use of both the descriptions and the land management guidelines related to the three Landscape Types that exist within the parish.

The main Landscape Character Types (LCT) which cover Baylham parish are:

- **Ancient Plateau Claylands**
- **Rolling Valley Farmlands**
- **Valley Meadowlands**

For each of these Landscape Character Types, Suffolk County Council has produced written guidance involving detailed descriptions of:

- key characteristics
- sensitivity to change
- key forces for change
- development management guidelines
- land management guidelines

SCC notes highlight that the guidance documents have been written principally to address the needs of development management. That is, to provide a summary of the forces that have been and are at work in the landscape and the key forces for change operating in the landscape at the time of writing.

However, the caveat is added that guidance cannot be considered to be definitive for a particular site, nor is it exhaustive. Rather it is intended to give a clear indication of the issues raised and principles to be followed when dealing with a particular type of development.

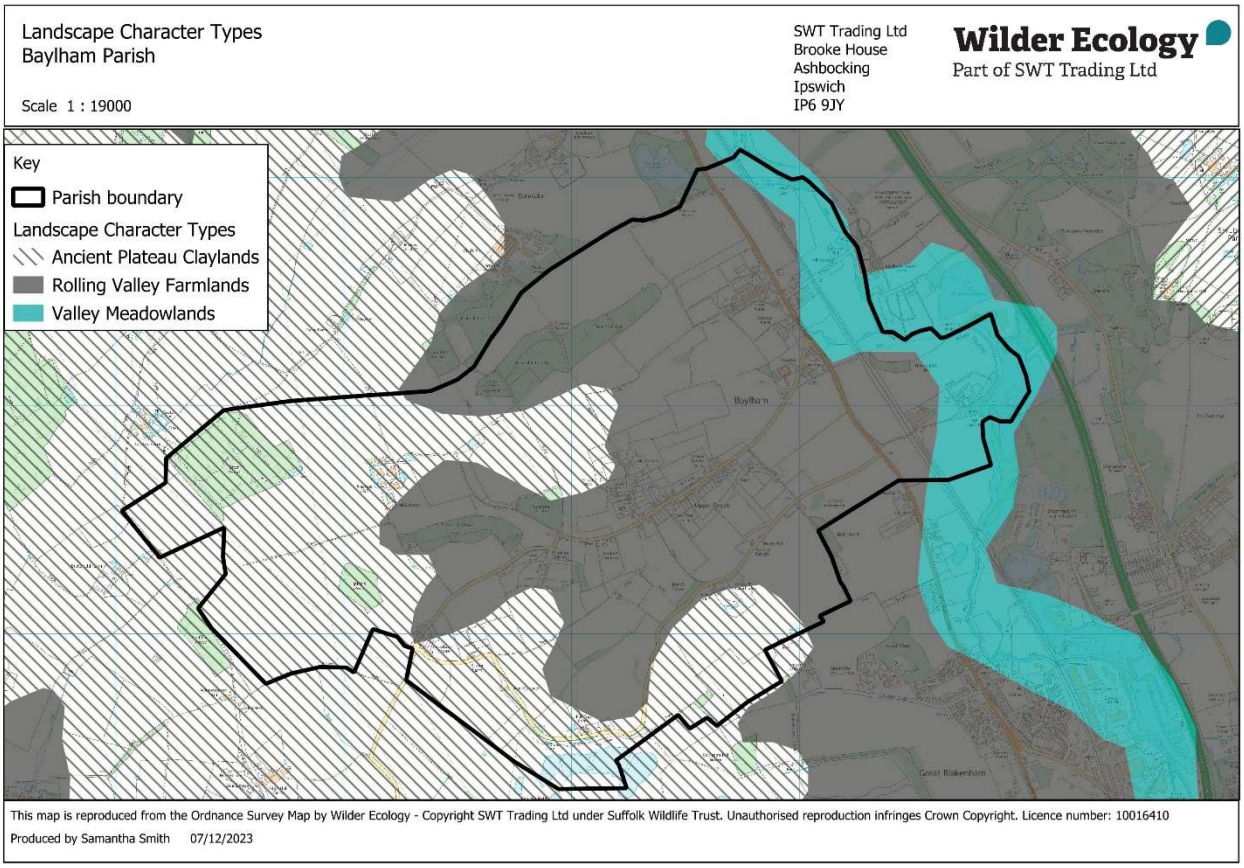


Figure 1: Suffolk Landscape Character Types ascribed to Baylham (Source: Suffolk County Council)

4.3 Landscape Character Assessment of Babergh and Mid Suffolk

As part of the Joint Babergh and Mid Suffolk District Council Landscape Guidance document, August 2015, a Landscape Character Assessment was prepared. Section 1 of the document provides background information for both Babergh and Mid Suffolk Districts, outlines the reasons for the Landscape Guidance Document and highlights the Designated Landscapes. Section 2 is focused on guidance for development in the countryside, and Section 3 describes the Landscape Character Types found in Babergh (10 typologies) and Mid Suffolk (12 typologies) and their respective locations.

Table 1. Landscape Character Types in Babergh Mid Suffolk

Babergh	**Mid Suffolk**
Ancient Estate Claylands	Ancient Estate Claylands
Ancient Estate Farmlands	Ancient Plateau Claylands
Ancient Plateau Claylands	Ancient Rolling Farmlands
Ancient Rolling Farmlands	Plateau Claylands
Plateau Estate Farmlands	Rolling Estate Farmlands
Plateau Farmlands	Rolling Valley Claylands
Rolling Estate Farmlands	Rolling Valley Farmlands
Rolling Valley Farmlands	Rolling Valley Farmlands & Furze

Undulating Ancient Farmlands	Valley Meadowlands
Valley Meadowlands	Valley Meadowlands and Fens
	Wooded Valley Meadowlands
	Wooded Valley Meadowlands and Fens

4.4 The significance of the Landscape for the Neighbourhood Plan

Landscape Character Assessment is increasingly underpinning development management guidance. In the case of Baylham parish, the importance of sensitive development and the retention and enhancement of existing features typical of the Baylham Landscape Character Types is imperative.

As well as adherence to Local Plan Policy, development management guidance for any new developments within the area covered by this Neighbourhood Plan should consistently reflect the Development Management and Land Management Guidelines drawn up within the Suffolk Landscape Character Assessment and the Joint Babergh and Mid Suffolk District Council Landscape Guidance.

5. EVALUATION OF WILDLIFE ASSETS

5.1 Local Biodiversity Policy

The Babergh and Mid Suffolk Joint Local Plan Part 1 includes the following policies that apply:

Policy LP17 – Landscape

1. To conserve and enhance landscape character development must:
    a. Integrate with the existing landscape character of the area and reinforce the local distinctiveness and identity of individual settlements;
    b. Be sensitive to the landscape and visual amenity impacts (including on dark skies and tranquil areas) on the natural environment and built character; and
    c. Consider the topographical cumulative impact on landscape sensitivity.

2. Where significant landscape or visual impacts are likely to occur, a Landscape and Visual Appraisal (LVA) or a Landscape and Visual Impact Assessment (LVIA) must be prepared to identify ways of avoiding, reducing and mitigating any adverse effects and opportunities for enhancement.

Strategic policy SP09 – Enhancement and Management of the Environment

1. The Councils will require development to support and contribute to the conservation, enhancement and management of the natural and local environment and networks of green infrastructure, including landscape; biodiversity, geodiversity and the historic environment, and historic landscapes.

2. Development within the identified Protected Habitats Sites Mitigation Zone should seek to avoid harm in the first instance. Where this is not possible, development will be required to demonstrate adverse effects on site integrity will be avoided from increased recreational pressure. Development consisting of over 50 dwellings will be required to demonstrate well-designed open space/green infrastructure, proportionate to its scale. Development will also be required to make appropriate contributions through legal agreements towards management projects and/or monitoring of visitor pressure and urban effects on Habitats Sites and be compliant with the HRA Recreational Disturbance and Avoidance Mitigation Strategy. Development will otherwise need to submit separate evidence of compliance with the HRA regarding predicted impacts upon relevant designated sites.

3. All development that would have an impact on a Protected Habitats Site, will be required to embed mitigation measures to avoid adverse effect on integrity.

4. Through biodiversity net gain, all development will be required to protect and enhance biodiversity ensuring the measures are resilient to climate change.

5. Where the monitoring of air quality from traffic on roads within 200 metres of Protected Habitats Sites demonstrates an adverse effect on their integrity, then the Councils will address any mitigation measures required in the Part 2 Plan.

Local Policy LP16 – Biodiversity & Geodiversity

1. All development must follow the biodiversity mitigation hierarchy.

2. Development must:

a) Protect designated and, where known, potentially designated sites. Proposed development which is likely to have an adverse impact upon designated and potentially designated sites, or that will result in the loss or deterioration of irreplaceable biodiversity or geological features or habitats (such as ancient woodland and veteran/ancient trees) will not be supported;

b) Protect and improve sites of geological value and in particular geological sites of international, national and local significance;

c) Conserve, restore and contribute to the enhancement of biodiversity and geological conservation interests including Priority habitats and species. Enhancement for biodiversity should be commensurate with the scale of development;

d) Where possible plan positively for the creation, protection, enhancement and management of local networks of biodiversity with wildlife corridors that connect areas. This could include links to existing green infrastructure networks and areas identified by local partnerships for habitat restoration or creation so that these ecological networks will be more resilient to current and future pressures;

e) Identify and pursue opportunities for securing measurable net gains, equivalent of a minimum 10% increase, for biodiversity. The Councils will seek appropriate resources from developers for monitoring of biodiversity net gain from developments. Where biodiversity assets cannot be retained or enhanced on site, the Councils will support the delivery of net gain in biodiversity off-site; and;

f) Apply measures to assist with the recovery of species listed on S41 of the NERC Act 2006.

3. Development which would have an adverse impact on species protected by legislation, or subsequent legislation, will not be permitted unless there is no alternative, and the LPA is satisfied that suitable measures have been taken to:

a) Reduce disturbance to a minimum;

b) Maintain the population identified on site; and

c) Provide adequate alternative habitats to sustain at least the current levels of population.

4. Where appropriate, the LPA will use planning obligations and/or planning conditions to achieve appropriate mitigation and/or compensatory measures and to ensure that any potential harm is kept to a minimum.

5.2 Statutorily designated sites for biodiversity

The quality of the natural environment in Suffolk is reflected by the extent of its land area with statutory protection for its wildlife. 8% of the county has national designation as Sites of Special Scientific Interest (SSSI), reflecting the importance of habitats and species found here. Many of these areas are also of European or international importance, with designations as Special Areas for Conservation (SAC), Special Protection Areas (SPA) and Ramsar Site. Large areas of the nearby estuaries and coastline are protected in this way.

5.2.1 Sites of European and International Importance

There are no sites of European or International Importance within the parish itself, the closest is the Stour and Orwell Estuaries SPA and Ramsar Site which lies 10.5km south of the parish boundary, with the Deben Estuary SPA and Ramsar Site being 15.7km to the east.

5.2.2 Sites of Special Scientific Interest

The above-mentioned designated areas also have the national designation of SSSI and are named as Orwell Estuary SSSI and Deben Estuary SSSI respectively. There are two Sites of Special Scientific Interest within Baylham parish itself: Barking Woods SSSI and Great Blakenham Pit SSSI. Barking Woods SSSI is an inter-related group of ancient woodlands, whose history has been well documented since 1251 [7]. The parcel of woodland associated with this SSSI within Baylham is known as Ditch Wood. Great Blakenham Pit SSSI exposes a sequence through Early and Middle Pleistocene sediments and soils [8].

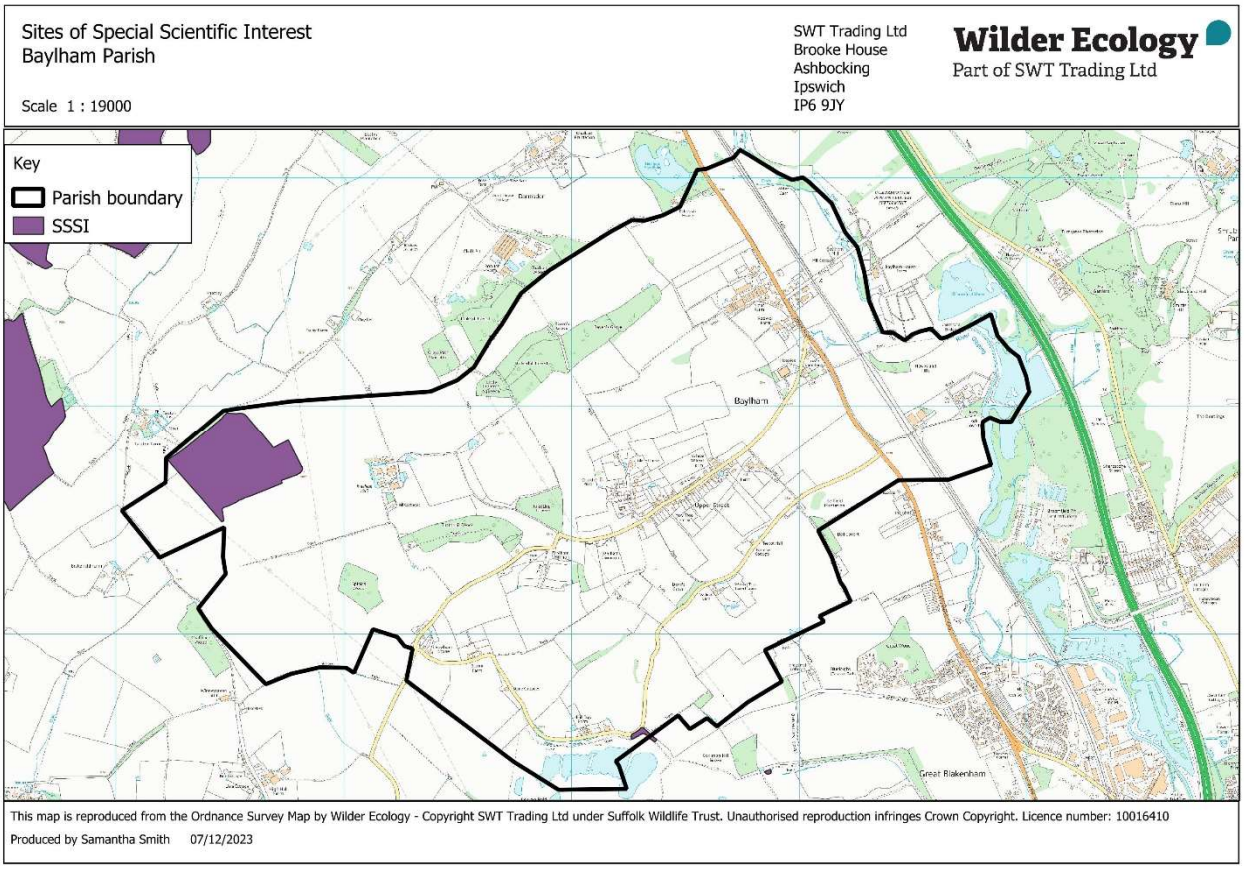


Figure 2: Location of Sites of Special Scientific Interest for biodiversity

5.3 County Wildlife Sites

5.3.1 Rationale behind this non-statutory designation

County Wildlife Sites (CWSs) are areas known to be of county or regional importance for wildlife. They have a key role in the conservation of Suffolk's biodiversity and are important links in Suffolk's 'Living Landscape', as described on the Suffolk Wildlife Trust website [9]. CWS designation is non-statutory but is recognition of a site's high value for biodiversity. Suffolk currently has over 900 County Wildlife Sites representing approximately 2.6% of the county's land area.

CWSs have been identified throughout Suffolk and range from small meadows, green lanes, dykes and hedges through to much larger areas of ancient woodlands, heathland, greens, commons and marsh. Outside of areas with statutory protection (such as SSSSIs, Local and National Nature Reserves), CWSs are therefore the most important areas for wildlife in Suffolk and can support both locally and nationally threatened wildlife species and habitats.

Many County Wildlife Sites support UK Priority Habitats and Species (see 5.3 and 5.4 below). They complement the statutory protected areas and nature reserves by helping to buffer and maintain habitat links between these sites.

It is important to note that the designation of a site as a CWS does not confer any new rights of access either to the general public or conservation organisations.

Suffolk Wildlife Trust, Suffolk County Council, Suffolk Biodiversity Information Service and Natural England manage the Suffolk County Wildlife Site system in partnership. This CWS system involves:

- Maintaining an up to date database of CWSs in Suffolk. Partners and local authorities have copies of the database.
- Designating new CWSs, extending existing CWSs and modifying information held on existing sites when changes occur. New sites and site extensions are notified in accordance with selection criteria.
- Supplying information on wildlife interest of CWSs to landowners and other organisations whose work may affect CWSs. The importance of CWSs is recognised by local authorities in Suffolk and they have all developed policies that give CWSs some protection in line with national planning policy. If a CWS is likely to be affected by development the views of the CWS partners is normally sought as part of the consultation process.

CWSs are implicitly recognised by the NPPF as having a fundamental role to play in meeting overall national biodiversity targets. In the NPPF 2023 they are described as 'Locally Designated Sites'. CWS are not protected by legislation, but their importance is recognised by local authorities when considering planning applications. Under current planning policy there is a presumption against granting permission for development that would have an adverse impact on a CWS. Suffolk Wildlife Trust assesses planning applications for potential impacts on County Wildlife Sites.

The high wildlife value of many CWSs has developed through land management practices that have allowed wildlife to thrive, for example traditional and historical management such as rotational coppicing of woodland, hay cutting or grazing of grasslands. Ensuring the continuation of such appropriate management is vital to maintain the wildlife value of a site. Establishing and maintaining good working relationships with landowners and managers is therefore essential.

The CWS partnership appreciates the difficulties that achieving the conservation management of CWSs can present and is therefore happy to offer advice on management and on potential sources of funding. Free advice is available from Suffolk Wildlife Trust to CWS owners and managers and includes:

- Information on the wildlife and nature conservation interest of the site;
- Advice and site visits can be made to establish the best management to maintain and enhance wildlife value.

5.3.2 County Wildlife Sites in Baylham

There are seven County Wildlife Sites associated with Baylham parish, and one Roadside Nature Reserve.

River Gipping (Sections) 10 – Mid Suffolk 10: TM 114522

1.12ha: River flora and fauna

There are several stretches of the River Gipping between Stowmarket and Ipswich which are of considerable conservation value. The emergent fringe vegetation offers habitat for water birds including breeding reed bunting, grey wagtail and tufted duck. Some uncommon plants such as arrowhead and spiked water-milfoil are also found. The river is used for recreational fishing and has populations of roach, dace, eel, trench, perch and pike.

River Gipping looking north.

Spink's Wood – Mid Suffolk 21: TM 091 512

2.56ha: Ancient woodland

An ancient woodland with a wood bank, probably medieval in origin, enclosing the entire wood. Two woodland stand types are present within the woodland. The eastern and southern sections are dominant in mature ash standards and large coppice, with an understorey of hazel coppice. The remainder of the wood is dominant in suckering elm – some of which has been affected by Dutch elm disease. The wood remains largely unmanaged. A small pond located at the southern tip of the wood has been subject to a recent excavation.

Little Pendles – Mid Suffolk 160: TM 099 513

2.17ha: Habitat mosaic

A private nature reserve to the southwest of Baylham village. It is a habitat mosaic of mixed woodland to include mature/semi-mature oak and sweet chestnut with ground flora to include bluebell and moschatel, hedgerows, grasslands, embankments and scrub. The site has good structural diversity with different stages of scrub, hedgerow and grassland present and has good connectivity to land to the south, west and east to include neighbouring land and woodland in close proximity.

Baylham Churchyard – Mid Suffolk 22: TM 103 516

0.46ha: Species-rich grassland

Baylham Churchyard contains an important plant assemblage typical of lowland hay meadow, with species-rich unimproved neutral grassland abundant in meadow saxifrage. The site also contains hedgerow and tree belt and has good connectivity with grassland to the west and south.

Baylham Church.

Column Field Upper Quary – Mid Suffolk 185 TM 10355020

47.45ha: Habitat mosaic

Quarrying has left exposed sand and chalk in close proximity and steep sand cliffs which has resulted in an unusual mosaic of habitats. This includes areas of rank grassland, ponds, scrub and successional vegetation. The site supports a range of species: breeding little ringed plover, skylark, bullfinch, linnet and reed bunting, sand martins are confirmed to be breeding in the sand cliffs, and the ponds are known to support breeding populations of great crested newt and grass snake. In addition, the pit is also part of the important foraging corridor for bats, the Gipping Valley, and Daubenton's have been regularly recorded. The site also provides valuable habitat for a range of invertebrates.

Column Field Upper Quary.

Barham Pits – Mid Suffolk 11 TM 120 514

32.06ha: Ornithological interest

Barham Pits are a series of steep sided flooded gravel pits. They are well used by local anglers but are also provide food and shelter in winter and are also used for breeding in summer for significant numbers of wildfowl. In addition, the pits provide a regular stop-over for passing birds such as common tern, common sandpiper and osprey.

Baylham Fishpond – Mid Suffolk 20 TM 105 530

7.14ha: Habitat mosaic and invertebrate species

This site is a mosaic habitat consisting of woodland, open water, marsh, dense scrub and tall fen vegetation. The lake is colonised by tall fen and a small area of open water in the southeastern corner is well used by water birds. The mixed woodland contains alder, ash, oak and Scots pine and provides habitat for a good range of woodland birds. The site is also important for invertebrates with many species of butterfly and dragonfly observed onsite.

Roadside Nature Reserve 220 – Mid Suffolk 207: TM 11006 52191 to TM 11022 52285

0.02ha

This RNR is designated for the legally protected rare fungus, the Sandy Stiltball. It occupies a length of 95m and is located in Upper Street, West.

RNR 220.

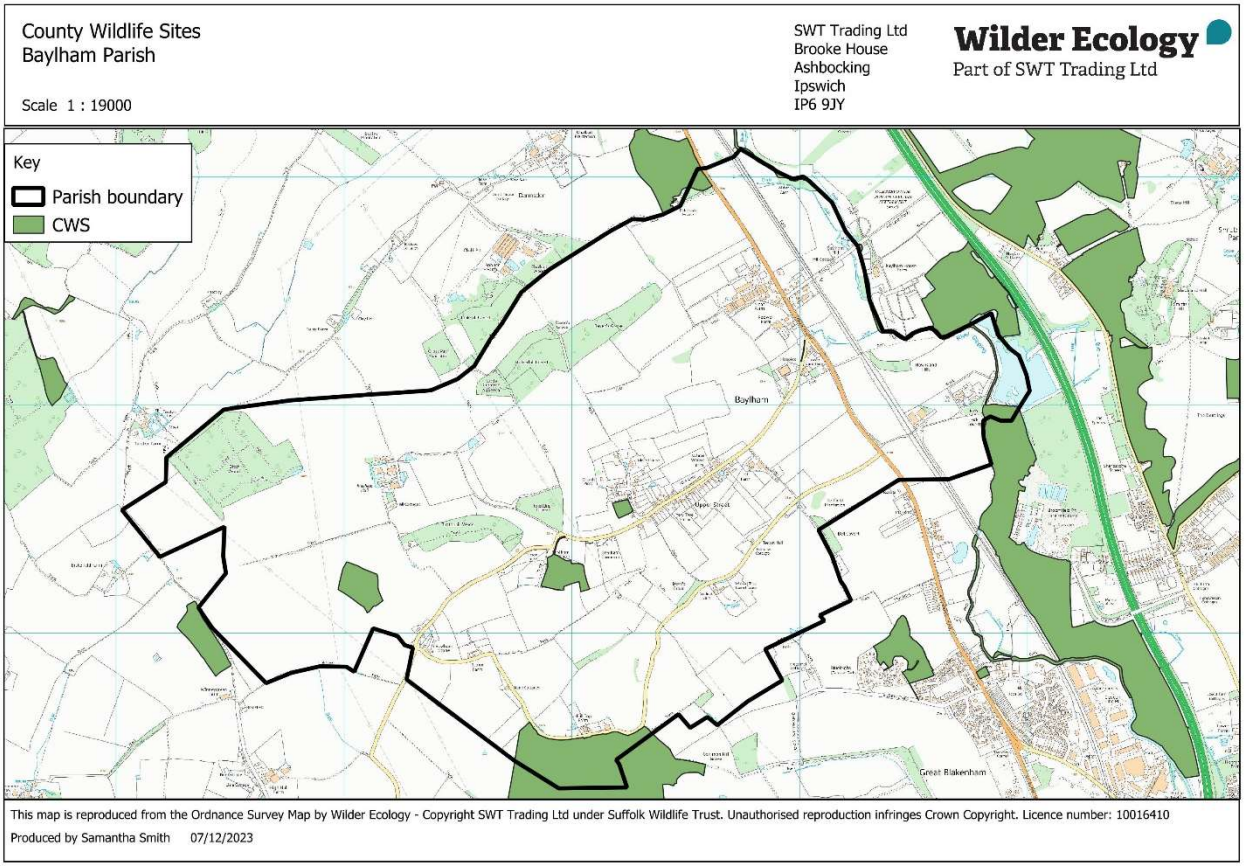


Figure 3: Location of County Wildlife Sites for biodiversity

5.4 Biodiversity Action Plans and Priority habitats

The UK Biodiversity Action Plan (UK BAP, 1994) was the UK Government response to the 1992 International Convention on Biological Diversity. The UK BAP listed a range of habitats, plus a number of birds and species from other taxa of conservation interest. National targets and priorities were set in order to address the particular needs of those species. The list was amended in August 2007 to include additional species and habitats to reflect concerns over continuing declines. Much of the work previously carried out under the UK BAP is now focused through from country level down to local level through the creation of local biodiversity strategies. However, the UK BAP lists of priority species and habitats remain important and valuable reference sources.

In addition, Section 40 of the 2006 Natural Environment and Rural Communities Act states that 'Every public body must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity'. UK Priority habitats and species, listed within Section 41 of the Act, are normally taken as a good benchmark for demonstrating biodiversity duty.

In January 2014, Suffolk Biodiversity Partnership (SBP) - a consortium of over 20 organisations working for wildlife within the county - published revised statutory lists of Priority Habitats and Species occurring in Suffolk, [10] and these have been subsequently updated and amended. In a small number of cases where previously no national BAP existed, certain species are described as Suffolk Character Species to reflect their particular importance within the county.

The following section deals with the Priority Habitats that are present in Baylham. In most cases the habitat descriptions include Priority Species and other notable species as supporting evidence. For the majority of species, they are only referenced if they were noted during the field survey or are recent records (post 2000) held by Suffolk Biodiversity Information Service.

5.5 Suffolk Priority habitats in Baylham

Of the 20 Suffolk Priority habitats, seven are known to be present in Baylham parish:

- Hedgerows
- Lowland Mixed Deciduous Woodland
- Ponds
- Wood Pasture and Parkland
- Traditional Orchards

- Wet woodland*
- Rivers and Streams

*Although there are no areas of wet woodland shown on Defra's MAGIC maps [11], the Valley Meadow landscape character type includes this priority habitat, and it was recorded in locations along the River Gipping.

The Priority Habitats are described in more detail below to highlight the significance of these ecological assets within the parish. The format is in three parts:

1. General descriptions of the habitats as they relate to Suffolk
2. These are followed by descriptions of the Priority habitat as found in Baylham during the field survey, noting any associated UK and Suffolk Priority species
3. Finally, reference is made from the Suffolk BAPs (or other sources) to those development activities that are most likely to affect the Priority Habitat as it exists in Baylham.

5.5.1 Hedgerows

Hedgerow Priority habitat in the context of Suffolk

Hedgerows are boundary lines of trees and/or shrubs, sometimes associated with banks, ditches and grass verges. Those considered ancient or species-rich or both are an important reservoir of biodiversity in the farmed landscape as well as being of cultural, historical and landscape importance. Hedges act as wildlife corridors, linking habitats of high biodiversity value such as woodland and wetland, thus enabling bats, other small mammals and invertebrates to move around under cover from predators.

Ancient hedgerows, which support a greater diversity of plants and animals than subsequent hedges, may be defined as those that were in existence before the Enclosure Acts, passed between 1720 and 1840.

Species-rich hedgerows contain five or more native woody species on average in a 30-metre length. Those which contain fewer woody species, but a rich basal flora may also be considered as important. The Hedgerow Regulations 1997 define 'important' hedgerows as those with seven woody species, or six woody species in a 30m length, plus other defined features.

Key Priority species in Suffolk which use hedges and associated grassy verges include: brown hare, grey partridge, song thrush, linnet, turtle dove, corn bunting, tree sparrow, bullfinch and various species of

bats. Hibernating reptiles and amphibians and invertebrates such as white-letter hairstreak butterfly on elm hedges also all make use of this Priority Habitat.

Hedgerow Priority habitat in Baylham parish

Baylham was one of the many parishes covered by the Suffolk Hedgerow Survey, 1998-2012, surveyed in January 2011. Valley Meadowlands landscape character type was not assessed during the hedgerow survey. The results have been taken from the other two Landscape Types.

The 2012 report on this project [12] shows that, although access was not granted to some landholdings, out of the 119 hedges surveyed for woody species:

8 contained 4 species or fewer

33 contained 5, 6 or 7 species

78 contained 8 species or more

Therefore at least 93.3% of the sampled hedgerow resource within the parish can be deemed species rich.

It must be noted that this summary is based on data collected early 2011 and that changes will have occurred since that time, both positive and negative. However, it remains broadly true that the hedgerows in the parish are an important reservoir for wildlife.

Hedgerows are fairly widespread across the parish, with the main areas of hedgerows being along the smaller lanes. The parish contains many sunken lanes with hedgerows either side. There are also hedgerows along many boundaries of arable fields. The field pattern remains largely the same with old maps of the parish from the late 1800s [13], therefore it is likely that some hedgerows could be considered ancient hedgerows.

During the survey, many hedgerows across the parish were noted to be typically well managed for wildlife, being allowed to grow wide and tall where space allows. Where hedgerows are being more intensively managed, they are less valuable for wildlife. Hedgerows offer commuting habitat for many species such as bats, hedgehogs, reptiles and amphibians. Tall hedgerows lining roadsides can help prevent road injuries for nocturnal flying species such as owls.

Hedgerows are generally moderately species-rich: with field maple, hawthorn, hazel, with oak as standard trees most common.

Hedgerows are important for a number of bird Priority Species and the Suffolk Bird Atlas 2007-11 recorded several species typical of this habitat: dunnock, yellowhammer, linnet, bullfinch and also redwing and fieldfare in winter.

Hedgerow along arable field boundary. *Small lanes with hedgerows either side.*

Activities and developments most likely to affect Hedgerow Priority habitat in Baylham parish

- Removal to facilitate development, subsequent fragmentation of the hedgerow network arising from development;
- Under-management and neglect of hedges leads to a reduction of their biodiversity value and structural coherence (and occasionally leads to their complete disappearance);
- Too-frequent flailing can lead to structural incoherence and – if carried out in successive years - loss of hedgerow fruit in autumn, as flowering and fruiting normally takes place on second year growth;
- Mature hedges with a minimum grass strip separating them from arable land may suffer damage to tree and shrub roots through ploughing;
- Fertiliser and other agro-chemical drift may degrade plant and invertebrate populations, especially where a crop extends to the hedge base.

5.5.2 Mixed Deciduous Woodland

Mixed Deciduous Woodland Priority habitat in the context of Suffolk

This Priority habitat includes all broadleaved stands and mixed broadleaved and coniferous stands which have more than 80% of their cover made up of broadleaved species. It also includes patches of scrub of above 0.25 hectares forming a continuous canopy, areas of recently felled woodland and other successional types, along with the other integral features of woodland such as glades and rides.

These woodlands may be ancient (where cover existed before c 1600) or recent (where cover has been created since c 1600). Both these age designations may have semi-natural cover or plantation cover, depending on past management. Management can vary from coppice or coppice with standards to

wood-pasture, high forest or minimum intervention. The latter, when found in ancient semi-natural woodland, contains some of the most important wildlife assemblages of any habitat.

Mixed Deciduous Woodland Priority habitat in Baylham parish

There are two known ancient woodland sites [14] within Baylham parish, and there are a number of woodland blocks which are classed as Priority Habitat on the MAGIC website. This includes 19 areas of deciduous woodland located within the parish.

The largest area of this woodland is Ditch Wood at approximately 14.89ha. This woodland is one of the inter-related groups of ancient woodland that makes up the Barking Woods SSSI, whose history has been well documented since 1251. Ditch Wood is a native woodland with oak, ash, hazel, hornbeam, beech and alder, with coppice stools. There is a network of ditches throughout the woodland and a ditch and earth bank along the road, which is characteristic of ancient woodland, and also contains ground flora typical of ancient woodland.

Raven's Grove and Hulverhill Covert are the next largest area at 11.64ha. The woods are dominated by sycamore and English oak, with elder, hazel, beech and box thickets. The woodland provides good habitat for many species, from invertebrates to bats with the presence of a good amount of deadwood on the ground and veteran trees providing roosting features for bats. The woods appear to have had some management at some point, with brash piles located on the outskirts of the woodland to the north. However, there are large patches of rhododendron present, a non-native invasive species which lowers the condition of the woodland. Additionally, deer pressure is notable, and this limits the ground flora and sapling vegetation growth and therefore it is dominated by less palatable species. At the most northern section of the woodland, pheasant rearing pens are present. This can impact the areas where these pens are located by enriching the soil, increasing soil disturbance and causing a decline in characteristic woodland flora.

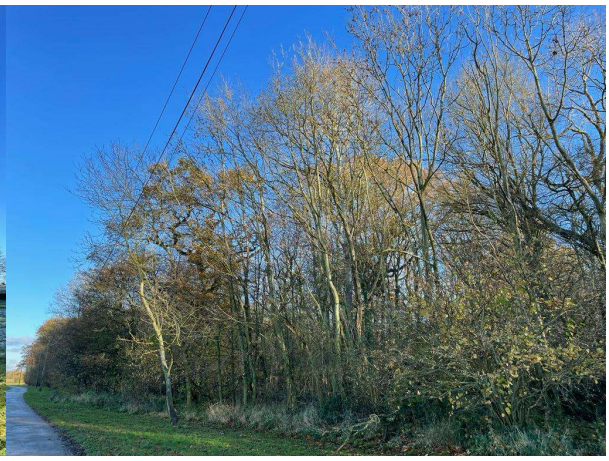
Knotting Grove is a smaller area of woodland located by a roadside, it is approximately 2.47ha and is similar to Raven's Grove in species composition, however the presence of bracken is more prevalent. The rest of the areas of deciduous woodland are small parcels within arable fields. Named parcels of this woodland type include: Spink's Wood (the second ancient woodland in the parish), Tuttonhill Wood, Bell Covert, Hawks and Hills, Lock Covert and Alder Carr. They are also several smaller unnamed areas of woodland mapped as Priority habitat within fields.

These woodlands are likely to support Priority species which have been recorded in the parish including stag beetle, bullfinch and house sparrow.

Raven's Grove / Hulverhill Covert.

Knotting Grove.

Tuttonhill Wood.



Ditch Wood.

There are three areas of woodland along the River Gipping which are also classified as this habitat type on the MAGIC website, however, they are more suited to 'Wet Woodland' Priority Habitat and will be discussed in Section 5.5.6.

<u>Activities and developments most likely to affect the Mixed Deciduous Woodland Priority habitat in Baylham parish</u>

- Further fragmentation of and within the existing woodland areas;
- Intensification of management between woodland fragments reduces the ecological value; of edge habitats and the connectivity between woodland blocks in the landscape;
- Overgrazing and over-browsing by expanding deer populations changes woodland structure through reduced regeneration;
- Lack of canopy management leading to over-shading and decrease in quality of ground flora.

5.5.3 Ponds

General description of this Priority habitat in the context of Suffolk

For the purposes of classifying this Priority Habitat, ponds are defined as permanent or seasonal standing water bodies up to 2 hectares 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

Ponds Priority habitat in Baylham parish

Information provided by Suffolk Biodiversity Information Service and from aerial photographs indicate that there are approximately 36 ponds within the Parish of Baylham. This may be an underestimate as this does not include all ponds within individual gardens. The largest cluster of these ponds is associated with Baylham Hall on the Ancient Plateau Claylands landscape character type, and the rest are scattered throughout the parish.

A density of 6.5 ponds/km^2 shows that Baylham contains two thirds of the average of 9.6 ponds/km^2 throughout the rest of the Mid Suffolk District and is more than the entire County average of 5.9 ponds/km^2 [15].

The ponds visited during the survey included a mix of roadside ponds and a pond located centrally within arable fields. The pond located amongst arable fields was not over shaded, had good water quality and good terrestrial habitat surrounding it. This pond is considered in good condition for wildlife, and it is likely that many of the ponds within the parish are similar. The location of several records of great created newt in the parish indicate there are two distinct clusters of ponds which are particularly suitable for newts. These are located around Baylham Hall and a cluster of garden ponds in close proximity to Baylham Church. The ponds visited located nearer the roadside were more shaded by trees and more sterile with less emergent vegetation. They also appeared under more pressure from wildfowl.

As access was limited it was only possible to visit very few of these ponds during the walkover survey, but reference to Google Earth imaging suggests that the majority still exist. There may also be an additional network of garden ponds, which it was not possible to identify during the field survey.

Pond within arable field. *Pond within garden, viewed from roadside.*

Activities and developments that could affect the Ponds Priority habitat in Baylham parish

Ponds are dynamic systems, being both lost and created over time. However, loss or degradation of ponds - even if they are at low densities within a landscape network - may lead to a reduced diversity of wildlife as ponds become more isolated from one another, compromising species that may rely on a network of ponds for their survival. Examples of how such changes may occur include:

- Complete infilling due to loss of economic value or new development;
- Loss of terrestrial buffer zones in areas of intensive land use;
- Diffuse or point source pollution from nutrients or other chemicals;
- Inadvertent or deliberate introduction of non-native species such as New Zealand pygmyweed (*aka* Australian swamp stonecrop), least duckweed or ornamental fish;
- Neglect and/or lack of management resulting in heavy shading and drying out.

It should be noted that some apparently neglected ponds and many ephemeral ponds are of great interest for biodiversity and that a pond survey based on a standard procedure can do much to inform management decisions.

5.5.4 Wood Pasture and Parkland

General description of this Priority Habitat in the context of Suffolk

Lowland wood pastures and parkland are the products of historical land management systems and represent a vegetation structure rather than being a particular plant community. Typically, this structure is one of large open-grown or high forest trees (often pollarded) at various densities, in a matrix of grazed grassland, heathland and/or woodland floras. It can include non-native species introduced as part of a designed landscaping scheme.

Historic landscapes can provide a wealth of habitats and niches for wildlife, especially fungi, invertebrates, bats and woodland birds.

Wood Pasture and Parkland Priority habitat in Baylham parish

There is one area of Wood Pasture and Parkland Priority Habitat listed on Natural England's Priority Habitat Inventory on MAGIC: west of Knotting Grove. Situated in the Rolling Valley Farmlands landscape. The area is small, and it is noted on MAGIC that the reliability of interpretation is low and it is 'probably the priority habitat but some uncertainty of interpretation and not mappable'. This area was visited on the survey and the area is contained by a minor road on the west and hedgerow to the east, so does not have the wood pasture/parkland feel.

Additional areas within the parish not mapped as wood pasture and parkland provide a better feel of the habitat type with a number of veteran oaks spread throughout the landscape. This is shown in the photograph below, where veteran trees are present within an open grassland habitat (location grid reference: TM 11029 52655). Trees such as these provide valuable habitat for wildlife, for example, providing ideal roosting habitat for bats.

Area mapped as Wood Pasture and Parkland.

Veteran tree within grassland landscape.

Activities and developments most likely to affect Wood Pasture and Parkland Priority habitat in Baylham parish

- Reduction in structural and age diversity of woody species, including lack of replanting to replace lost mature/veteran trees or damage to young trees by cattle and horses;
- Unsympathetic tree surgery including removal of fallen deadwood or standing deadwood (unless required for safety reasons);
- Loss of structure via field partitioning into paddocks;
- Cessation of grazing by cattle or sheep leading to changes to grassland habitat

5.5.5 Traditional Orchard

General description of this Priority habitat in the context of Suffolk

Traditional orchards are structurally and ecologically similar to wood pasture and parkland, with open-grown trees set in herbaceous vegetation. However, they are set apart by a number of factors as follows:

- Species composition - trees grown for fruit or nut production, such as apple, pear, plum, damson, walnut, cherry and cobnut;
- Management – low intensity grafting and pruning with little or no use of chemicals;
- Spacing – denser arrangement with good ground flora structure;
- Scale – small individual habitat patches;
- Dispersion and frequency – wider and greater occurrence in the countryside.

Traditional orchards are hotspots for biodiversity supporting a range of wildlife, particularly when associated with other features such as ponds, hedgerows, scrub, fallen deadwood and streams. The minimum size of a traditional orchard is defined as five trees with crown edges less than 20m apart.

Traditional orchards are not to be confused with commercial orchards which tend to be much larger in size, have more of a monoculture and are much more intensively managed.

Traditional Orchard Priority habitat in Baylham parish

There are three areas of traditional orchards listed on Natural England's Priority Habitat Inventory on MAGIC: two of the areas are either not present, or no longer present. One of these areas is associated with a dwelling on Mill Lane and has recently been felled but was likely to have cherry spp. present. The second area is mapped along a stretch of the River Gipping. The survey visit revealed this area to be wet woodland and therefore the mapping is likely to be inaccurate and no orchard is present.

The third mapped area is located within private garden and was obscured from view by tall hedgerows encompassing the orchard. From a footpath it was determined that the orchard is present and species such as cherry could be noted.

A newly planted orchard, not mapped on MAGIC, was identified during the survey associated with Chalky Bottom Orchard (grid reference: TM 10675 51296).

Newly planted orchard at Chalky Bottom Orchard, viewed from roadside.

Activities and developments most likely to affect Traditional Orchards Priority Habitat Baylham parish

- Inappropriate management;
- Use of pesticides;
- Pressure from land development;
- Neglect;
- Intensification of agriculture.

5.5.6 Wet Woodland

General description of this Priority Habitat in the context of Suffolk

Wet woodlands occur on land that has waterlogged or seasonally waterlogged soils, where the water table is correspondingly high and drainage poor. They are frequently associated with river valleys, floodplains, flushes and plateau woodlands.

Typical tree species include grey willow, alder and downy birch. The habitat supports a number of important Priority species in Suffolk. These include mammals such as otter and various bat species, birds such as marsh tit and various scarce beetle and weevil specie.

Wet Woodland Priority habitat in Baylham parish

The wet woodland in the parish is associated with the River Gipping riparian corridor, within the Valley Meadowlands landscape character type. It is largely willow directly adjacent the river.

Activities and developments most likely to affect Wet woodland Priority Habitat in Baylham parish

- Changes in the flow patterns in the land drainage systems causing changes to woodland hydrology;
- Inappropriate management causing changes in the structure and flora, leading to poor regeneration and changes in the floristic diversity;
- Poor water quality leading to changes in the flora and invertebrate communities;
- Colonisation of the woodland by non-native species, for example Himalayan balsam;
- Direct loss of the habitat through a change to other land uses;
- Climate change may have a significant impact on the hydrology and biology of these woods.

5.5.7 Rivers and Streams

General description of this Priority Habitat in the context of Suffolk

During a 2007 national review of BAP Habitats and species by Joint Nature Conservation Committee (JNCC) it was considered appropriate to create a new BAP specifically for rivers. The criteria for a Rivers BAP were published by JNCC in July 2010 and include:

- Headwater reaches;
- Presence of specific vegetation communities;
- Chalk rivers;
- Active shingle rivers;
- Sites of Special Scientific Interest designated for riverine features or species;
- Presence of priority BAP (Priority) Species or other indicator species.

Suffolk Biodiversity Partnership is currently in the process of drawing up a rationale, criteria and management prescriptions for rivers in Suffolk identified as Priority Habitat.

Rivers and Streams Priority Habitat in Baylham parish

Although the first five criteria above do not apply to the River Gipping, comparison between the list of Suffolk Priority Species and records for Baylham held by Suffolk Biodiversity Information Service shows the presence of otter recorded along the river channels. Various bat species are also recorded in the parish and will most likely feed along the wooded margins of river channels, particularly the species which tend to be associated with river valleys such as soprano pipistrelle and also Daubenton's. It is also designated as a County Wildlife Site and is probably the most prominent landscape feature of the parish.

Areas of grassland along the River Gipping are prone to flooding. During the survey, an area of the river had flooded on to grassland, where a flock of geese were present.

River Gipping, looking south from Mill Lane.

Flooded area of grassland adjacent River Gipping.

Activities and developments that could affect the Rivers and Streams Priority habitat in Baylham parish

Inappropriate management of and adverse events within the river channel would include:

- Extensive dredging or channel re-alignment;
- Passage of major infrastructure schemes without mitigation of effects;
- Extensive removal of bankside trees;
- Severe point source pollution events.

5.5.8 Other habitats of note in Baylham

There are three areas of good quality semi-improved grassland. One of these areas is associated with Baylham Churchyard and is recognised as a County Wildlife Site. The grassland is typical of lowland hay meadow and is abundant in meadow saxifrage. The other two areas are within Little Pendles County Wildlife Site, a private nature reserve. The grassland varies with the areas at the bottom of slopes being wetter and supporting cuckoo flower and ragged robin, and on the higher slopes the dry soils support a varied sward to include green-winged orchid and pyramidal orchid.

The parish contains a notable number of sheep and horse grazing within fields throughout the landscape.

Sheep grazing, adjacent the River Gipping.

Horse and sheep grazed fields.

There are also several veteran trees in the parish, with features such as crevices and staghorn branches providing potential bat roost habitat.

Causeway Lakes is located within the parish. This is a private fishing lake for use by the Gipping Angling Preservation Society which is fed directly by the River Gipping. The lake contains a large number of fish to include carp, pike, bream, trench, roach, and rudd and is managed with weed cutting [16].

Causeway Lake.

A railway track runs parallel between the B1113 and the River Gipping to the east of the parish. Railways are often considered valuable for wildlife providing habitat suitable for reptiles.

Railway track running through east of Baylham, looking south.

Proposed development within the parish should consider impacts to several protected and Priority species including bats, breeding birds, reptiles, great crested newts and Priority invertebrates (stag beetle).

5.6 Suffolk Priority species in Baylham parish

Suffolk Biodiversity Information Service has provided records of species within the Parish. Those that are listed as protected or Priority species are as follows:

Mammals: Bats including soprano pipistrelle, common pipistrelle, pipistrelle sp., brown long-eared and chiroptera species. There are a number of hedgehog records for the urban areas and brown hare records for the arable farmland as well as harvest mouse. Additionally, otter have been recorded along the River Gipping. N.B. Badger is also recorded and whilst is not a Priority species, it is protected under its own specific legislation. There is a fairly even spread across the parish.

Birds: A number of Red List and Amber List Birds of Conservation Concern (BoCC[5]) have been recorded, most of which are also Priority Species.

Key species likely to be associated with woodland, hedgerows, scrub and farmland include yellowhammer, skylark, linnet, dunnock, and bullfinch. There are also records of the exceedingly rare turtle dove. The species also associated with settlements include starling, song thrush and house sparrow.

Various birds are associated with riverine habitats including herring gull, lapwing, marsh tit, reed bunting and cuckoo.

Barn owl are also recorded and are a Suffolk Priority Species. Barn owl is listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).

Invertebrates including small heath and white letter hairstreak butterflies, white ermine moth and stag beetle have been recorded.

Three amphibian and reptile species have been recorded in the parish: grass snake and great crested newt, smooth newt.

In addition, four rare plant species have been recorded: crossword, green winged orchid, yellow-wort and common cow wheat. One rare fungus is also record: sandy stiltball.

5.7 Built environment and associated habitats

5.7.1 Built environment 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, houses, gardens, allotments and waste land. These built-up areas, gardens and associated spaces can form a significant proportion of the land use within a settlement, but still provide a wide range of habitats with significant biodiversity value. All provide opportunities and in some case refuges for a wide range of species to complete their life cycles.

The conservation importance of the built environment and its associated habitats also lies as much in the opportunities they provide for people to have close contact with wildlife as in the protection of common and scarcer species. Becoming familiar with the wildlife in a garden often stimulates interest in species and habitats within the wider countryside.

5.7.2 Built environment habitat in Baylham parish

The name Baylham means meadow/enclosure near bend. According to Heritage Suffolk [17] the earliest record for Baylham is the manorial from 1066, and the first population was recorded in 1086. The main settlement in Baylham is located centrally and along Upper Street, with scattered dwellings extending out to the parish boundaries, with scattered farm steadings throughout.

There are around 20 listed buildings and structures within the parish. The parish has several listed buildings to include the Grade II* listed Baylham Hall, and early 17th Century manor house with alterations from the later 17th Century to mid-19th Century. The Church of St Peter is a Grade II* listed medieval church dating back the 11th Century, with several additions and restorations over the centuries. The Baylham Watermill and Mill House is Grade II* listed and is in two sections, dated early 16th Century or earlier and mid-19th Century.

5.7.3 Activities and developments that could affect this habitat in Baylham parish

Rather than note adverse actions, there is a wide range of information and websites generally available on wildlife gardening. Some of the positive actions than individual gardeners can consider include:

- Creating ponds and mini wildflower meadows;
- Putting up swift boxes on buildings;
- Creating hedgehog highways between gardens;
- Composting and creating deadwood areas;
- Harvesting rainwater;
- Avoiding garden chemicals.

5.8 Ecological networks and connectivity

5.8.1 The significance of ecological networks and connectivity

Maintaining and improving connectivity between habitats is important in ensuring the longer-term survival of biodiversity in an increasingly fragmented landscape and with a changing climate.

An ecological network is the basic natural infrastructure that enables biodiversity assets (both habitats and species) to become re-established if damaged or in decline and become resilient to the impacts of climate change. Integrated with the natural cycling of water, soil and nutrients, biodiversity provides what are increasingly recognised as vital 'ecosystem services'. These services are not only of intrinsic of social and economic value but will create social and economic problems if they fall too far into deficit.

The major components of an ecological network can be identified as:

- Core Areas: existing areas/features/resources of importance for biodiversity
- Corridors: existing linear features providing structural connectivity between Core Areas and into the wider landscape

- Stepping Stones: existing habitat patches providing functional connectivity between Core Areas and into the wider landscape
- Restoration Areas: areas/features/resources with the potential to become future Core Areas, or to improve connectivity, if they are enhanced or restored
- Buffer zones: can be included around all these elements to lessen the likelihood of direct or indirect impacts upon them

As already noted, the National Planning Policy Framework (NPPF) 2019 states that Plans should take a strategic approach to biodiversity. It includes a range of requirements to conserve and enhance the natural environment, among them requiring Local Plans (and by association Neighbourhood Plans) to: '…promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species.' Consequently, it is essential that decision makers have access to high quality ecological advice in order to meet these requirements.

In addition, Biodiversity 2020: A strategy for England's wildlife and ecosystems services also features a number of Priority Actions, including to 'establish more coherent and resilient ecological networks on land that safeguards ecosystem services for the benefit of wildlife and people'.

5.8.2 Ecological networks in Baylham parish

The principal ecological network in the parish is along the River Gipping and its associated habitats. The river demarcates the eastern boundary of the parish with wet woodland along much of the length. The river is lined with continuous riparian habitat to the north, and to the south-east until it reaches the centre of Ipswich town.

Although much of the land throughout the remainder of the parish is in arable production or sheep / horse grazed, the network of hedgerows and woodland blocks also provide local habitat connectivity.

It is notable that these networks extend beyond the parish into neighbouring parishes such as Darmsden and Great Blakenham.

Figure 4 broadly identifies where there are existing wildlife corridors within the landscape which contribute to the ecological networks. This is not a full map of connectivity, and the absence of lines should not be taken as absence of connectivity as parts of the parish have not been fully accessed.

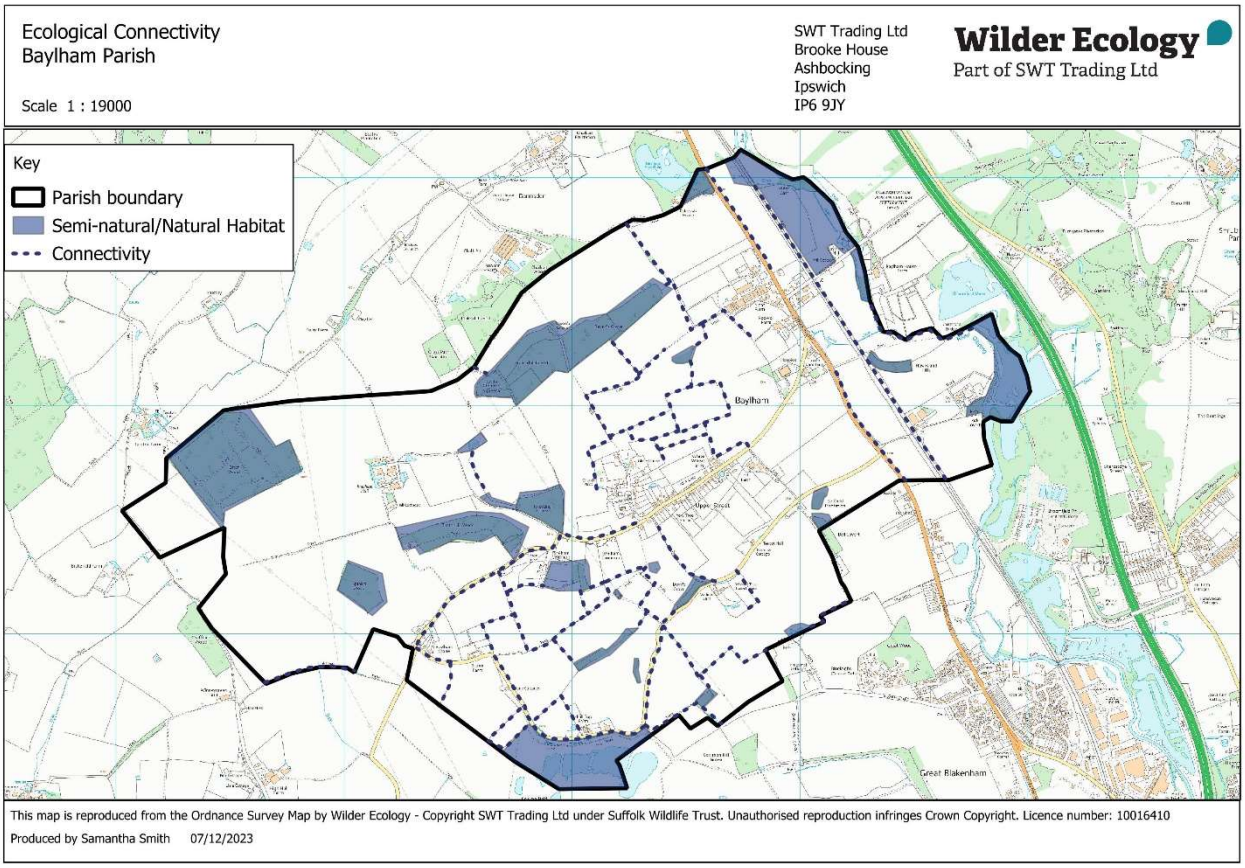


Figure 4: Ecological Connectivity and semi-natural spaces

These ecological linkages should be safeguarded and also strengthened whenever such opportunities arise. Additional habitat creation in the wider landscape such as new hedgerows will enhance the network, particularly in areas where such connections are less defined.

5.9 The significance of wildlife and ecological assets for the Neighbourhood Plan

Baylham parish contains two Sites of Special Scientific Interest, seven County Wildlife Sites and one Roadside Nature Reserve. In addition to the above, seven Priority habitats have been identified within the parish. In addition, four Suffolk Rare Plants were recorded. Hedgerows and ponds within the parish have local significance for wildlife. Baylham contains a higher-than-average number of ponds per km^2, providing habitat for protected species such as great crested newts and other amphibian species. Several hedgerows in the parish are quite mature and some may be ancient hedgerows.

These habitats support a range of species including Suffolk Priority species (one amphibian, one reptile, 15 birds, five mammals, four invertebrates). Any records are likely to under-represent the true number of species within the parish.

Development Management guidance for any new developments within the area covered by the Neighbourhood Plan should seek to protect existing ecological assets and restore, enhance and reconnect the ecological network.

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