Badwell Ash & Long Thurlow Neighbourhood Plan

Landscape and Biodiversity Evaluation

July 2024

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Prepared by:	***Checked and approved by:***	***Date:***
Samantha Smith BSc, MSc	Johanna Green, BSc Hons, PG Cert, CSci, MCIEEM	July 2024

Wilder Ecology
Part of SWT Trading Ltd

Prepared by:
SWT Trading Ltd: Wilder Ecology
Brooke House
Ashbocking
Ipswich
Suffolk
IP6 9JY

Prepared for:
Badwell Ash Parish Council

A company limited by guarantee: number 2221844
VAT registration no 496810803

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. 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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1. EXECUTIVE SUMMARY

1.1 Wilder Ecology, a part of SWT Trading Ltd, the consultancy of Suffolk Wildlife Trust, was instructed by Badwell Ash Parish Council to undertake an assessment of biodiversity in the parish as part of their new Neighbourhood Plan. This document seeks to provide the Neighbourhood Plan Working Group with an evaluation of the green spaces and ecological networks as a rich source of biodiversity.

1.2 There are three different landscape character types within the parish. The largest area, covering the eastern area of the parish, is defined as 'Plateau Claylands'. The next largest area is defined as 'Ancient Plateau Claylands' and is located within the middle of parish. Lastly, the smallest area is defined as 'Valley Meadows & Fens' and is located to the west of the parish, a linear stretch that runs along the western boundary. Overall, these landscape character types help define the different habitats across the parish and also the species within them.

1.3 There are no statutory or non-statutory designated sites within the parish. The Gardens, Great Ashfield Site of Special Scientific Interest is immediately adjacent the parish to the north, within the parish of Great Ashfield.

1.4 Seven Priority Habitats have been identified within the Parish, including hedgerows, mixed deciduous woodland, ponds, wood pasture and parkland, traditional orchards, and rivers and streams and open mosaic. Across the Parish, 16 UK and Suffolk Priority Species have been recorded, as well as two Suffolk Rare Plant species which complement and help define the biodiversity value of the locality.

1.5 The principal ecological network throughout the parish is associated with the hedgerows and water courses, including the stream along the western boundary and the disused quarry pits and its associated habitat. There is direct connectivity between woodland parcels and areas of semi-natural habitat via ditches and hedgerows and some stepping stone habitat is also present.

1.6 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.

2. INTRODUCTION

2.1 Brief and terms of reference

2.1.1 SWT Trading Ltd: Wilder Ecology, the consultancy of Suffolk Wildlife Trust, was commissioned by Badwell Ash Parish Council to undertake a landscape and ecological evaluation of the parish as part of their Neighbourhood Plan preparation.

2.1.2 Badwell Ash Parish Council made an application to Mid Suffolk District Council in accordance with the Neighbourhood Planning (General) Regulations 2012 (as amended), to designate a Neighbourhood Area which was approved in September 2022. The entire parish of Badwell Ash, within its formal parish boundary, is the 'Neighbourhood Area' for the purposes of the Plan [1].

2.1.3 The Badwell Ash & Long Thurlow Neighbourhood Plan is now being prepared.

2.1.4 This report will provide the Badwell Ash Parish council with an evaluation of landscape character across the parish and highlight specific habitats and associated ecological networks within this landscape as a rich source of biodiversity.

2.2 Parish location and statistics

2.2.1 Badwell Ash parish is located in the Mid Suffolk District of Suffolk, c.19km from Bury St Edmunds. It covers roughly 750 hectares, and its central point grid reference is close to TM 00479 69092. The parish also shares boundaries with the Suffolk civil parishes of Wyverstone, Westhorpe, Walsham-Le-Willows, Langham, Hunston and Great Ashfield.

2.2.2 The built-up areas of the parish are largely concentrated to the west of the parish where the village of Badwell Ash lies, with scattered dwellings in the middle and the small village of Long Thurlow to the southeast. Data from the 2021 census shows that the village has a population of 1015, with 442 households [2].

3. 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:

3.1 Localism Act (2011)

3.1.1 The Department of Communities and Local Government promoted the Localism Act (2011). The subsequent Neighbourhood Planning (General) Regulations (2012) provide the statutory framework for Neighbourhood Development Plans [3]. 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'.

3.2 National Planning Policy Framework

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

3.2.2 Of particular relevance to this project is Paragraph 180, 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.

3.2.3 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.

3.3 Babergh and Mid Suffolk District Local Plan

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

3.3.2 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

3.4 Biodiversity Net Gain

3.4.1 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. Mandatory now for all sites as of April 2024, 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.

3.4.2 A key part of the process is demonstrating measurability and the Statutory Metric [6], developed by Defra [7], 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.

3.4.3 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.

4. METHODOLOGY

4.1 Field survey

4.1.1 An ecological survey and audit of the parish was undertaken on 29th April 2024 by Samantha Smith. 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 20%) of the parish land area. Much of the parish is in arable and therefore only a small percent of the arable fields was surveyed from available public footpaths.

4.2 Desktop survey

4.2.1 A variety of existing source material was consulted including:

- Suffolk County Council website and other documents
- Babergh and Mid Suffolk District Council website and other documents
- Suffolk Biodiversity Information Service website and databases [8, 9]

- 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) [10]
- Suffolk Wildlife Trust databases
- Suffolk Hedgerow Survey – County Report [11]
- Suffolk Bird Atlas 2007-11 [12]

4.3 Evaluation of landscape and wildlife assets

4.3.1 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 5. These are then followed in Section 6 by wildlife elements, from protected sites through to wider ecological networks habitats.

4.3.2 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.

4.4 Competence

4.4.1 Samantha Smith, BSc, MSc, is an Ecologist with over three years' experience in habitat assessment using UK Habitat Classification, undertaking GIS mapping and protected species surveys to include bats, reptiles and badger. Samantha holds a CSCS card and is a qualifying membership of CIEEM.

4.5 Constraints

4.5.1 This survey was designed to provide a preliminary assessment of the site's wildlife value. The wildlife and habitats present in any area are subject to change over time. All single-visit surveys of this kind can only record the situation as it is at the time, rather than providing a comprehensive analysis of the site's ecology.

5. EVALUATION OF LANDSCAPE ASSETS

5.1 Protected Landscapes

5.1.1 The parish of Badwell Ash & Long Thurlow does not lie within or close to any National Landscapes [13].

5.2 Local Landscape policy

5.2.1 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 [14].

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

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

5.2.3 Looking at available maps within the old 1998 Local Plan, it appears that the land to the west of the built-up area along Hunston Road and The Street of the Badwell Ash village was likely within an SLA [15]. This area is made up of a stream and meadows.

5.2.4 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.

5.2.5 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 180 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)".

5.3 Suffolk Landscape Character Assessment

5.3.1 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). 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.

5.3.2 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.

5.3.3 It is highly appropriate for the Badwell Ash & Long Thurlow Neighbourhood Plan to acknowledge and make full use of both the descriptions and the land management guidelines [16] related to the three Landscape Types that exist within the parish.

5.3.4 The main Landscape Character Types (LCT) which cover Badwell Ash Parish are:

- Valley Meadows & Fens [17]
- Ancient Plateau Claylands [18]
- Plateau Claylands [19]

5.3.5 For each of these Landscape Character Types, Suffolk County Council has produced written guidance found at suffolklandscape.org.uk involving detailed descriptions of:

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

5.3.6 Suffolk County Council 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.

5.3.7 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.

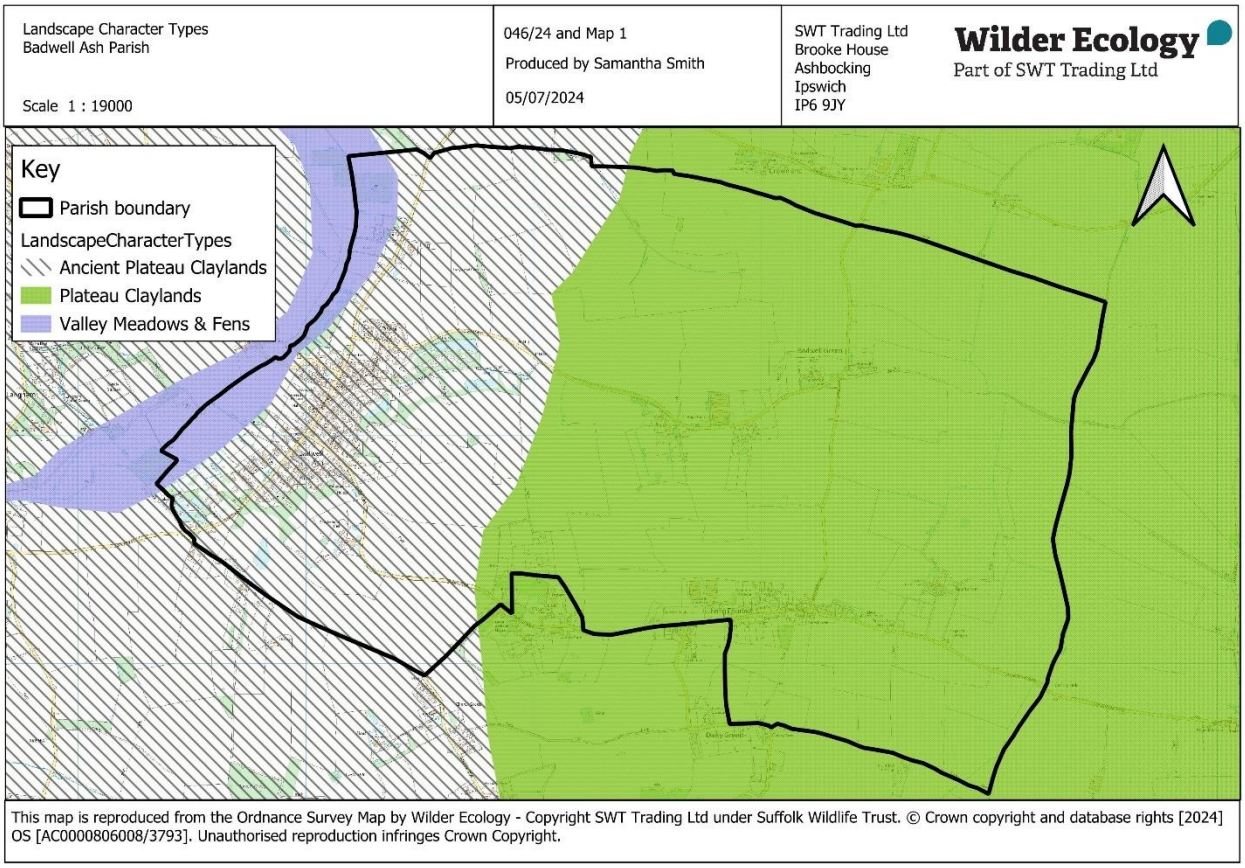


Figure 1: Suffolk Landscape Character Types ascribed to Badwell Ash Parish (Source: Suffolk County Council)

5.4 Landscape Character Assessment of Badwell Ash

5.4.1 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

5.5 The significance of the Landscape for the Neighbourhood Plan

5.5.1 Landscape Character Assessment is increasingly underpinning development management guidance. In the case of Badwell Ash Parish, the importance of sensitive development and the retention and enhancement of existing features typical of the three Landscape Character Types is imperative.

5.5.2 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.

6. EVALUATION OF WILDLIFE ASSETS

6.1 Local Biodiversity Policy

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

6.1.1 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.

6.1.2 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.

6.1.3 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.

6.2 Statutorily designated sites for biodiversity

6.2.1 The quality of the natural environment in Suffolk is reflected by the extent of its land area with statutory protection for its wildlife. In Suffolk 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.

<u>Sites of European and International Importance</u>

6.2.2 There are no sites of European or International Importance within the parish itself, the closest are Waveney & Little Ouse Valley Fens SAC, and Redgrave & South Lopham Fens Ramsar which lie c.8.4km north of the parish, and Breckland SPA 13.6km northwest of the parish boundary.

Sites of Special Scientific Interest

6.2.3 The above-mentioned designated areas also have the national designation of SSSI. There are no Sites of Special Scientific Interest within the parish itself. There is one within 2km of the parish. The Gardens, Great Ashfield SSSI is immediately adjacent the parish to the north, within the parish of Great Ashfield. The site consists of floristically rich ancient meadows and is traditionally managed by grazing and cutting for hay. It is one of the remaining examples of unimproved calcareous clay and neutral grassland in Suffolk [20].

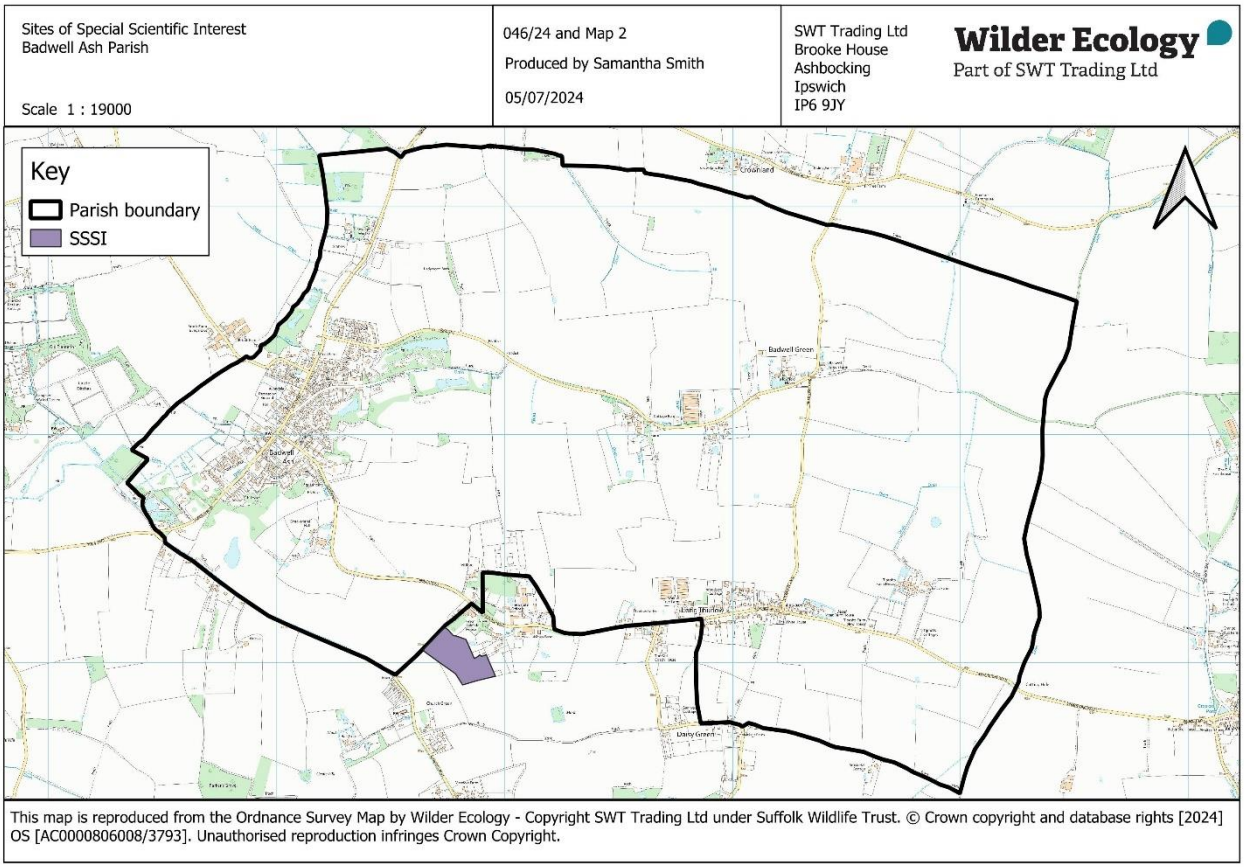


Figure 2: Location of Sites of Special Scientific Interest for biodiversity

6.3 County Wildlife Sites

Rationale behind this non-statutory designation

6.3.1 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 [21]. 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.

6.3.2 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 SSSIs, 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.

6.3.3 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.

6.3.4 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.

6.3.5 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.

6.3.6 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.

6.3.7 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.

6.3.8 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.

<u>County Wildlife Sites in Badwell Ash Parish</u>

6.3.9 There are no County Wildlife Sites (CWS) associated with Badwell Ash Parish. The closest CWS to the parish are Brown's Wood and Parker's Grove c.700m south of the parish.

6.3.10 Further monitoring of the Parish and species present can provide an indicator into whether any sites in the Parish have the potential to be designated as a County Wildlife Site. Sites have to meet a number of primary and secondary habitat selection criteria, occasionally sites can be designated for the presence of a particular species. This information can be found on the Suffolk Biodiversity Information Service website [22]. The disused pits of Black Lane, being a habitat mosaic, may be a potential site where it would benefit from more detailed monitoring and surveying to assess its suitability against the habitat criteria.

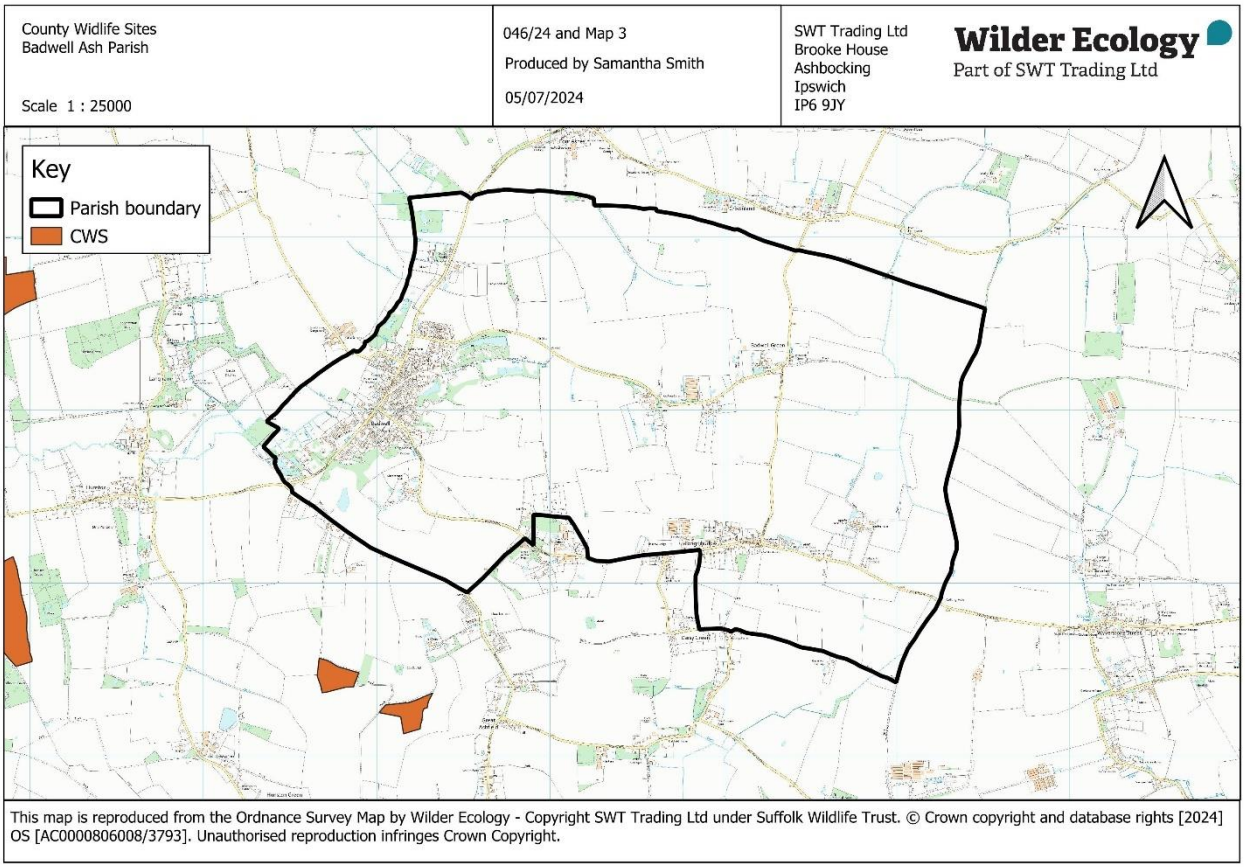


Figure 3: Location of County Wildlife Sites for biodiversity

6.4 Biodiversity Action Plans and Priority habitats

6.4.1 The UK Biodiversity Action Plan (UK BAP, 1994) [23] 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.

6.4.2 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.

6.4.3 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, 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.

6.4.4 The following section deals with the Priority Habitats that are present in Badwell Ash Parish. 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.

6.5 Suffolk Priority habitats in Badwell Ash Parish

6.5.1 Of the 21 Suffolk Priority habitats, seven are known to be present in Badwell Ash Parish:

i. Hedgerows
ii. Lowland Mixed Deciduous Woodland
iii. Ponds
iv. Wood Pasture and Parkland
v. Traditional Orchards
vi. Rivers and Streams
vii. Open Mosaic

6.5.2 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 Badwell Ash Parish 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 Badwell Ash Parish.

i. Hedgerows

Hedgerow Priority habitat in the context of Suffolk

6.5.3 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.

6.5.4 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.

6.5.5 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.

6.5.6 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 Badwell Ash Parish

6.5.7 Badwell Ash was one of the many parishes covered by the Suffolk Hedgerow Survey, 1998-2012, surveyed in January 2011 [11].

6.5.8 The 2012 report on this project shows that, although access was not granted to some landholdings, out of the 102 hedges surveyed for woody species:

- 14 contained 4 species or fewer
- 20 contained 5, 6 or 7 species
- 68 contained 8 species or more

Therefore at least 86.3% of the sampled hedgerow resource within the parish can be deemed species rich.

6.5.9 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.

6.5.10 Hedgerows are fairly widespread across the parish, with the main areas of hedgerows being along the footpaths and boundaries of arable fields. The field pattern remains largely the same with old maps of the parish from the late 1800s, therefore it is likely that some hedgerows could be considered ancient hedgerows [24].

6.5.11 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.

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

6.5.13 For the most past, hedgerows were higher and wider than 1.5m in average along their lengths, with no significant gasp (>0.5m) in the base or canopy and there was little evidence of damage or disturbance through human intervention.

6.5.14 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 one of the public footpaths.

Hedgerow along arable field boundary.

6.5.15 <u>Activities and developments most likely to affect Hedgerow Priority habitat in Badwell Ash Parish</u>

- 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.

6.5.16 In order to improve the condition of the hedgerows, encouragement could be given to farmers and landowners to plug gaps in the hedgerows with native species of local provenance. A field margin of more than 1m to act as a buffer should generally be left untouched either side of a hedgerow, which, for the most-part is already the case.

ii. Mixed Deciduous Woodland

Mixed Deciduous Woodland Priority habitat in the context of Suffolk

6.5.17 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.

6.5.18 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 Badwell Ash Parish

6.5.19 There are a number of unnamed woodland blocks within the parish which are classed as Priority Habitat on the MAGIC website. These areas were not accessible by public footpaths and therefore were not visited. No records of ancient woodland within the Parish were returned in the desk study [25]

6.5.20 The woodlands within the parish appear to be semi-natural deciduous woodland with species such as maple, oak, ash, hawthorn, hazel and elder present and a mixture of mature and semi-mature specimens and coppiced hazel. The woodland areas within the parish provide high quality habitat for many species, with potential for bat roosts and providing good bird nesting opportunities. These woodlands are likely to support Priority species which have been recorded in the parish including dunnock and house sparrow.

6.5.21 Activities and developments most likely to affect the Mixed Deciduous Woodland Priority habitat in Badwell Ash Parish

- 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.

iii. Ponds

6.5.22 *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 Badwell Ash Parish

6.5.24 Information provided by Suffolk Biodiversity Information Service and from aerial photographs indicate that there are approximately at least 67 ponds within the parish of Badwell Ash. This may be an underestimate as this does not include all ponds within individual gardens, or those not mapped on MAGIC maps. The ponds are largely within the west of the parish, with a cluster associated with the Badwell Ash Holiday Lodges, and the disused quarry pits. The rest are scattered throughout the parish.

6.5.25 A density of 9 ponds/km^2 shows that Badwell Ash contains around the same as 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 [26].

6.5.26 Many of these ponds are associated with the settlements and large dwellings and arable fields throughout the parish. Due to disused sand and gravel quarries and pits, there are large ponds within these areas, of Westley Way and Black Lane:

- The sand and gravel pit off Westley Way is used as an angling pond, with provision for anglers around the perimeter. The perimeter of the pond is border by large trees and scrub habitat,

with willow dominant. The pond itself is largely open with vegetation focused on the outer edgers. A large development is currently being built to the west of the pond, with further plans to build to the east; however, the pond remains, and will remain, open for public access and anglers.

- There are two other ponds located at the sand and gravel quarry, one to the north and one to the south of Black Lane. These ponds looked to have good water quality, not overshaded, and good terrestrial habitat surrounding it. These ponds are considered in good condition for wildlife, and it is likely that many of the ponds within the parish are similar.
- There are currently no records of great crested newt in the parish, however there are records within neighbouring parishes, some 300m away. Therefore, it is not unlikely, that suitable ponds within the parish could support great crested newt, with plenty of connecting habitat aiding their dispersal to such ponds.
- 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 area of greenspace.

Disused quarry south of Back Lane.

Angling pond of Westley Way.

Pond within village hall amenity grassland space.

6.5.27 *<u>Activities and developments that could affect the Ponds Priority habitat in Badwell Ash Parish</u>*

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 (Crassula helmsii), least duckweed or ornamental fish;
- Neglect and/or lack of management resulting in heavy shading and drying out.

6.5.28 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.

iv. Wood Pasture and Parkland

6.5.29 *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.

6.5.30 *Wood Pasture and Parkland habitat in Badwell Ash Parish*

There are two areas of wood pasture and parkland within the parish listed on Natural England's Priority Habitat Inventory on MAGIC – although these have been identified from historic map/aerial photo only. One to the south of The Broadway located within private grounds, the other is mainly within the Great Ashfield Parish but extends into Badwell Ash, off Long Thurlow Road.

6.5.31 *Activities and developments most likely to affect Wood pasture and parkland Priority habitat in Badwell Ash 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;
- Unsympathetic tree surgery including removal of fallen deadwood or standing deadwood (unless required for safety reasons);
- Cessation of grazing by cattle or sheep leading to changes to grassland habitat.

v. Traditional Orchard

6.5.32 *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.

6.5.33 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.

6.5.34 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 Badwell Ash Parish

6.5.35 There is one traditional orchard listed on Natural England's Priority Habitat Inventory on MAGIC, located off of The Street, which was not visited due to lack of access and concealed from the road behind a hedgerow.

6.5.36 *Activities and developments most likely to affect Traditional orchards Priority habitat in Badwell Ash Parish*

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

6.5.37 Consultation has revealed an expressed interest for a community orchard within the village. With appropriate care and management, orchards can become havens for wildlife from birds to invertebrates and mammals. An orchard with the space for planting of fruit trees on vigorous rootstocks will allow trees to grow larger and live longer and provide habitat and food sources for an extended period of time. Deadwood within an orchard provides habitat and food source for many invertebrates. Unless the tree presents a safety risk, deadwood should be left on trees for this purpose. If this is not possible, piles of deadwood on the ground will also be beneficial and suitable for small mammals. Planting new trees whilst retaining old trees will provide successional habitat. An ideal orchard will have a mosaic of habitats, with a mixture of tree ages, deadwood, grassland – with areas of long grass as well as areas of short grass, boundary hedgerows and scrub and a water source such as a pond. The government provides case studies of successful community gardens and there are charities and campaigns (e.g. The Orchard Project) that the parish can get involved with to achieve a successful community orchard [27, 28]. More information on establishing a community orchard can be found in Appendix 1.

vi. Rivers and Streams

General description of this Priority Habitat in the context of Suffolk

6.5.38 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 [29] 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.

6.5.39 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.

6.5.40 *Rivers and Streams Priority Habitat in Badwell Ash Parish*

The stream along the west boundary of the parish and ditches throughout the parish are an important feature of the landscape.

6.5.41 Although the first five criteria above do not apply to these water courses, comparison between the list of Suffolk Priority Species and records for Badwell Ash held by Suffolk Biodiversity Information Service shows the presence of otter and water vole. Various bat species are also recorded in the parish and will most likely feed along the wooded margins of the stream, particularly the species which tend to be associated with river valleys such as soprano pipistrelle and also Daubenton's. The ditches also form part of the ecological connectivity network throughout the parish.

Stream along western boundary of parish.

Activities and developments that could affect the Rivers and Streams Priority habitat in Badwell Ash Parish

6.5.42 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.

vii. Open Mosaic

General description of this Priority Habitat in the context of Suffolk

6.5.43 Open mosaic habitat, as described on the Suffolk Biodiversity Information Services website, refers to any piece of vegetated land of at least 0.25ha, which has been altered by human activity. These areas are also referred to as brownfield. These habitats can be extremely varied, from former industrial estates to quarries, spoil heaps, disused railway lines, landfill sites and disused airfields. Unvegetated areas, loose bare substrate and pools may be present with spatial variation, forming a mosaic of early successional communities.

6.5.44 Sites experiencing periodic disturbance and abandonment combined with low-nutrient soils give rise to a wide variety of habitats and different successional stages. This open mosaic landscape provides a variety of habitats required for many species. For example, many invertebrates have complex life cycle, often requiring two or more habitats close to each other, therefore a 'mosaic' of habitats in one area is essential.

Open Mosaic Priority Habitat in Badwell Ash Parish

6.5.45 The disused quarries to the north and south of Back Lane, have left large water filled pits and a mosaic of habitat, with bare ground, scrub and woodland providing a valuable habitat for wildlife. This provides valuable high-quality habitat from foraging habitat for bats, and a key water source for birds. The exposed habitat can benefit many species of wildflowers including orchid and provide home to many invertebrate species. Although no records of reptiles are known in the parish, they are notably under recorded, and this is area provides high quality potential habitat for them.

Disused quarry north of Back Lane.

Activities and developments most likely to affect Open Mosaic Priority habitat in Badwell Ash Parish

- Often areas considered a priority for development;
- Inappropriate management;
- 'Greening' – being restored for use as public open space;
- Neglect

6.5.46 Open mosaic habitat has high biodiversity value and the acknowledgment of these sites to be wildlife-rich is growing. A key vision for Suffolk is to improve the knowledge of extent and quality of open mosaic habitats and to maintain the existing extent of open mosaic habitats. Some sites may require management to prevent site succession to scrub or woodland and the loss of open habitats. Rigid management schemes should be avoided and based on a reactionary manner and site monitoring with rotational management to maintain a mosaic.

Other habitats of note in Badwell Ash Parish

6.5.47 There are two areas of good quality semi-improved grassland. One of these areas is within the water meadows present to the west of the parish, situated adjacent to the stream that borders the parish's west boundary. Two of these fields are dissected by a ditch running through the middle and contain long grassland meadow, with mown paths as public right of way access going through. Species present throughout include crested dog's tail, wood rush, dandelion, cocksfoot, germander speedwell, mouse eared chickweed, thistle, cow parsley, and reeds. Areas of newly planted trees are present within both of the fields, with plastic guards in place for the trees to establish. There are further meadows that are used for sheep grazing and presence of pyramidal orchid have been noted, although the area was not accessed at the time of the survey due to lambing.

Areas of grassland within the wet meadows, with newly planted trees.

Ditch dividing two of the wet meadows. *Sheep grazed fields.*

6.5.48 The village hall is situated centrally within the village and the amenity grassland to the north of the hall includes modified grassland with a play area/park bordered by trees and hedgerow. Species present within the trees and hedgerow include sycamore, hazel, elder, wild cherry, ash, hornbeam, field maple, oak, elm, plane, dog rose, lime, and alder. A ditch borders the field with the hedgerow and areas underneath the canopy are left more natural with creeping buttercup, nettles, comfrey, elder, cleavers, cow parsley, garlic mustard, ground ivy and cuckoo pint.

Amenity grassland of the village hall, with tree belt at boundary.

Play area at the village hall.

Ditches along the boundary of the village hall amenity grassland.

6.5.49 The cemetery provides high quality grassland habitat with species to include meadow buttercup, foxtail, yarrow, germander speedwell, daisy, cocksfoot, field woodrush, creeping buttercup. With silver birch tree and areas of scrub along the boundaries including bramble, meadowsweet, elder, hawthorn, privet, ivy, green alkanet and buddleia.

Grassland within the cemetery.

Scrub along boundary of cemetery.

6.5.50 Located at the junction of Westley Way and Hunston Road is a toad crossing. This area is marked with signs and has been patrolled by volunteers for Froglife's Toads on the Roads campaign since 2009. Volunteers patrol along Westley Way and Hunston Road between c.mid-February and April, collecting toads trying to cross the road and deposit them by their breeding ponds located within Badwell Ash Holiday Lodges, or to a drop off point after breeding (as indicated on Figure 4 below). Toads move after dark, during busy periods of road traffic so volunteers aim to save as many from being run over as possible. Figures provided by the Toads on Roads show that 143 toads were saved in 2024. This figure is down from the 495 saved in 2022, where it was thought the population was increasing. Red and Amber Zones noted on Figure 4 indicate area of casualty areas, with red being the busiest crossing and highest deaths and amber having casualties, but less than the red zones.

6.5.51 Toads will migrate between 50m and 5km from breeding sites to where they spend most of its year in shaded, moist habitats such as woodlands. Toads will follow the same migratory routes back to their ancestral breeding ponds regardless of any developments or roads in the way [30]. The direction toads appear from at this crossing are indicated on Figure 4. There are various pockets of woodland within Badwell Ash and surrounding the toads' migratory routes and crossings. It is vital that these areas are protected from any ongoing or future developments in the Parish. New developments within the parish threaten this species, by reducing suitable habitat, fragmenting the habitat, disrupting migration routes and increasing mortality on roads.

6.5.52 Proposals for new developments and roads can include protection for this species and other amphibians, such as amphibian ladders, tunnels, dropped kerbs and fencing. It is already known that toads and frogs are getting trapped in the open storm drains on Westley Way and Hunston Road (locations noted on Figure 4), therefore, ladders can be built into the open drains to aid amphibians to climb out. Drop kerbs and/or amphibian tunnels can aid toads crossing and reduce risk of mortality.

Toad crossing signs along Westley Way.

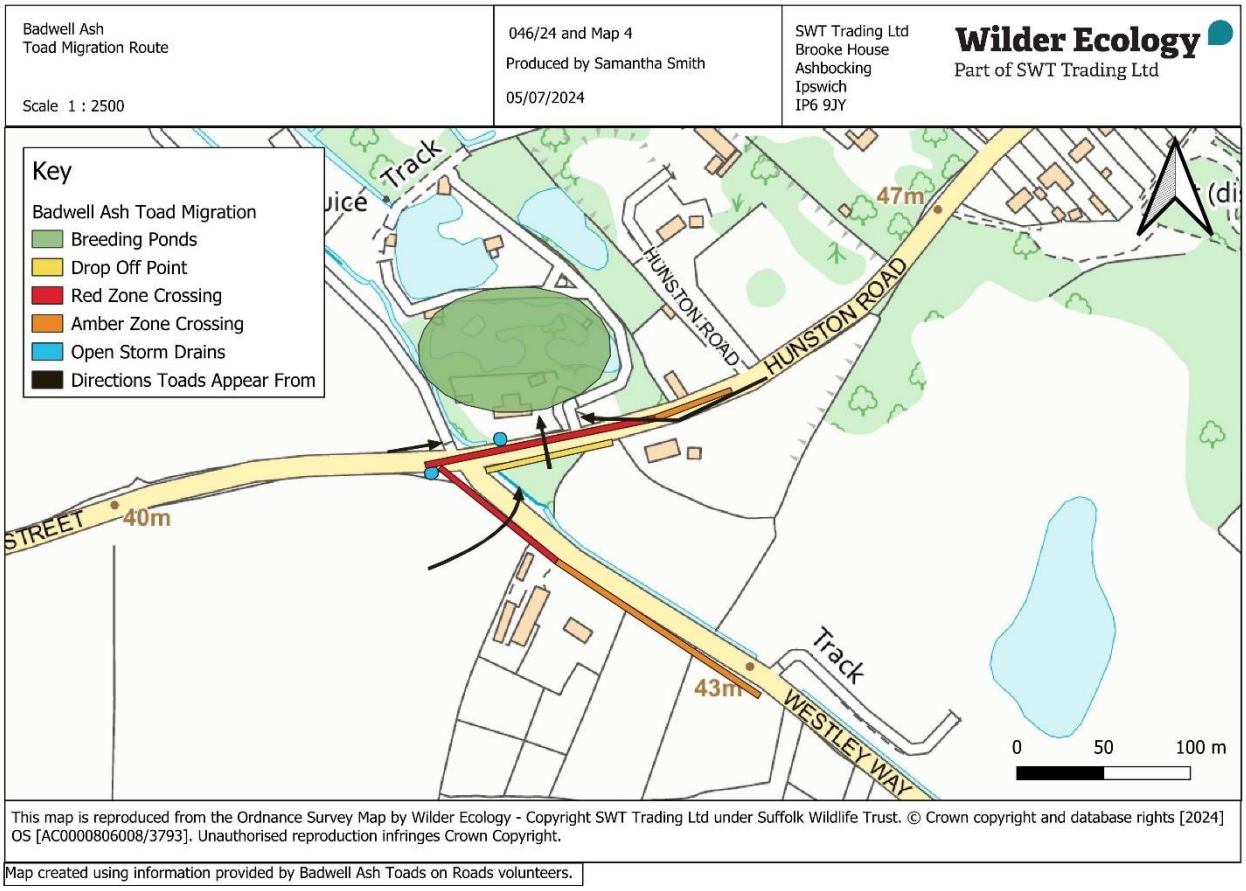


Figure 4: Toads on Roads, toad migration route.

6.6 Suffolk Priority species in Badwell Ash Parish

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

6.6.2 Mammals: Bats including common pipistrelle, brown long-eared, serotine and natterers. There are a number of hedgehog records for the urban areas and brown hare records for the arable farmland as well as polecat. Additionally, otter and water vole have been recorded.

6.6.3 Birds: A number of Red List and Amber List Birds of Conservation Concern 5 (BoCC5) [31] have been recorded, most of which are also Priority Species.

6.6.4 Key species likely to be associated with woodland, hedgerows, scrub, farmland and settlements include house sparrow, dunnock, starling, greenfinch, wren, swift and song thrush.

6.6.5 Barn owls 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).

6.6.6 Invertebrates including small heath butterfly, ridge-saddled carpenter bee and musk beetle have been recorded.

6.6.7 Three amphibian and reptile species have been recorded in the parish: common toad, common frog and smooth newt. No records of great crested newt are present within the parish. Records are present within neighbouring parishes, with the nearest 360m south of the parish boundary.

6.6.8 In addition, two of Suffolk Rare Plant species have been recorded: Lizard orchid and sainfoin. No schedule 9 invasive plant have been recorded in the parish.

6.6.9 We note that this is a relatively low number of species records and is likely due to under-recording rather than an absence of species. Community activities such as organising a

'Bioblitz'[32], utilising local skills, encouraging residents to log biological records and seeking expert advice could help better represent the species present in the parish.

6.6.10 It is noted that hares, muntjac deer and roe deer are very prevalent within the parish. Together with toads they are seen as the parishes defining wildlife. Hare and common toad are Suffolk priority species; however, muntjac deer are classed as an invasive species.

6.7 Built environment and associated habitats

Built environment habitat in the context of Suffolk

6.7.1 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.

6.7.2 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.

Built environment habitat in Badwell Ash Parish

6.7.3 The name Badwell Ash means Bada's steam near the field with ash trees. According to Heritage Suffolk the earliest record for Badwell Ash is St Mary's church from 1086, and the first population was recorded in 1327 which included 29 taxpayers. The main settlement in Badwell Ash is located westerly and along The Street, with scattered farm steadings throughout and the small village of Long Thurlow to the southeast. The earliest evidence of settlement is likely from nomadic peoples, with later evidence showing a more permanent settlement in the Iron Ages [33, 34].

6.7.4 There are listed buildings and structures within the parish, along The Street. These include Flint Barn, Lavender Cottage and the White Horse Inn all Grade II. The Wurlie is Grade II* and St Mary's Church is Grade I listed and is the oldest building in the village.

6.7.5 The village of Badwell Ash has facilities including a church, pub, fish and chip shop, post office/village shop and a village hall. Badwell Ash Holiday Lodges encourages tourism to the village.

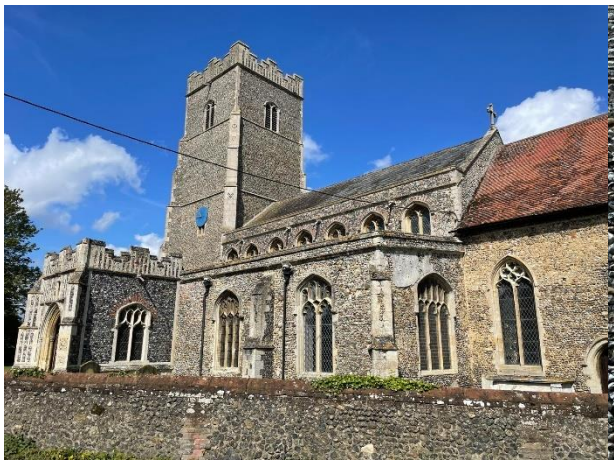
6.7.6 There are a number of green spaces amongst the areas of housing, along with gardens associated with many of the dwellings, such as the greens at St Mary's Cresent, and in Richer Close. The greens are under active management and are largely mown short. The green at St Mary's Crescent, in particular is a large area of short-mown grassland with around 30 scattered trees including chestnut, pine, oak, lime, willow, beech, sycamore, and cherry. To improve this habitat, leaving a longer sward throughout the year would be highly valuable for wildlife, as it offers over-wintering habitat for invertebrates and small mammals, as well as offering winter seed heads as forage for birds. A change of management to include leaving sections dedicated to this will deliver the best ecological outcome. The trees are also of a good size that bird boxes could be mounted. During the site visit, one bird box was noted on a tree.

6.7.7 The parish also has many road verges that are currently managed and cut short. A small change to management, to include not mowing until later in the summer, at least mid-July, can help provide important habitat, nectar and pollen during the spring and summer and allows for seeds to set. Road verges can support a diversity of plants and animals. These areas help contribute to vital habitat for pollinators such as bees, beetles and butterflies and create networks of corridors. Signage can be used to state that the verges are not being cut until late summer and can inform and provide reinsurance that the area is being managed. It may be suitable once cut to remove cuttings after a few days if there is a substantial amount. This will allow invertebrates to move and seeds to drop to the ground and then reduce any build-up of organic matter. In areas where verges may need to be kept short for safety reasons, leaving an area uncut at the back of the verge to allow taller vegetation can still benefit wildlife.

St. Mary's crescent, short mown grassland and scattered trees.

St. Mary's crescent, short mown grassland and scattered trees.

6.7.8 St Mary's church is located centrally within the main street of Badwell Ash village. The church is surrounded by a small area of grassland with meadow buttercup, white dead nettle, daffodil, daisy, speedwell, thistle, cinquefoil, forget me nots and an ash tree. Jackdaws were observed utilising gaps in flint walls, notably on the northern aspect, and were seen with nesting material. The church is also likely to support roosting bats.



St Mary's Church.

Jackdaws utilising the church.

6.7.9 There are several housing developments in progress throughout the parish, with a large housing development to the east of Westley Way, and a part complete large new build development at Land North of The Broadway.

<u>Activities and developments that could affect this habitat in Badwell Ash Parish</u>

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

- Creating ponds and mini wildflower meadows;
- Putting up swift boxes on buildings;
- Putting up bat/bird boxes on mature trees within green spaces;
- Creating hedgehog highways between gardens;
- Composting and creating deadwood areas;
- Harvesting rainwater;
- Avoiding garden chemicals.

6.8 Ecological networks and connectivity

The significance of ecological networks and connectivity

6.8.1 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.

6.8.2 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.

6.8.3 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

6.8.4 As already noted, the National Planning Policy Framework (NPPF) 2023 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.

6.8.5 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'.

Ecological networks in Badwell Ash Parish

6.8.6 The principal ecological network in the parish is along the stream bordering the west boundary of the parish and its associated habitats of water meadows, ditches, and hedgerows.

6.8.7 Although much of the land throughout the remainder of the parish is in arable production, the network of hedgerows and small woodland blocks also provide local habitat connectivity.

6.8.8 It is notable that these networks extend beyond the parish into neighbouring parishes such as Greater Ashfield, Langham and Hunston.

6.8.9 Figure 5 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.

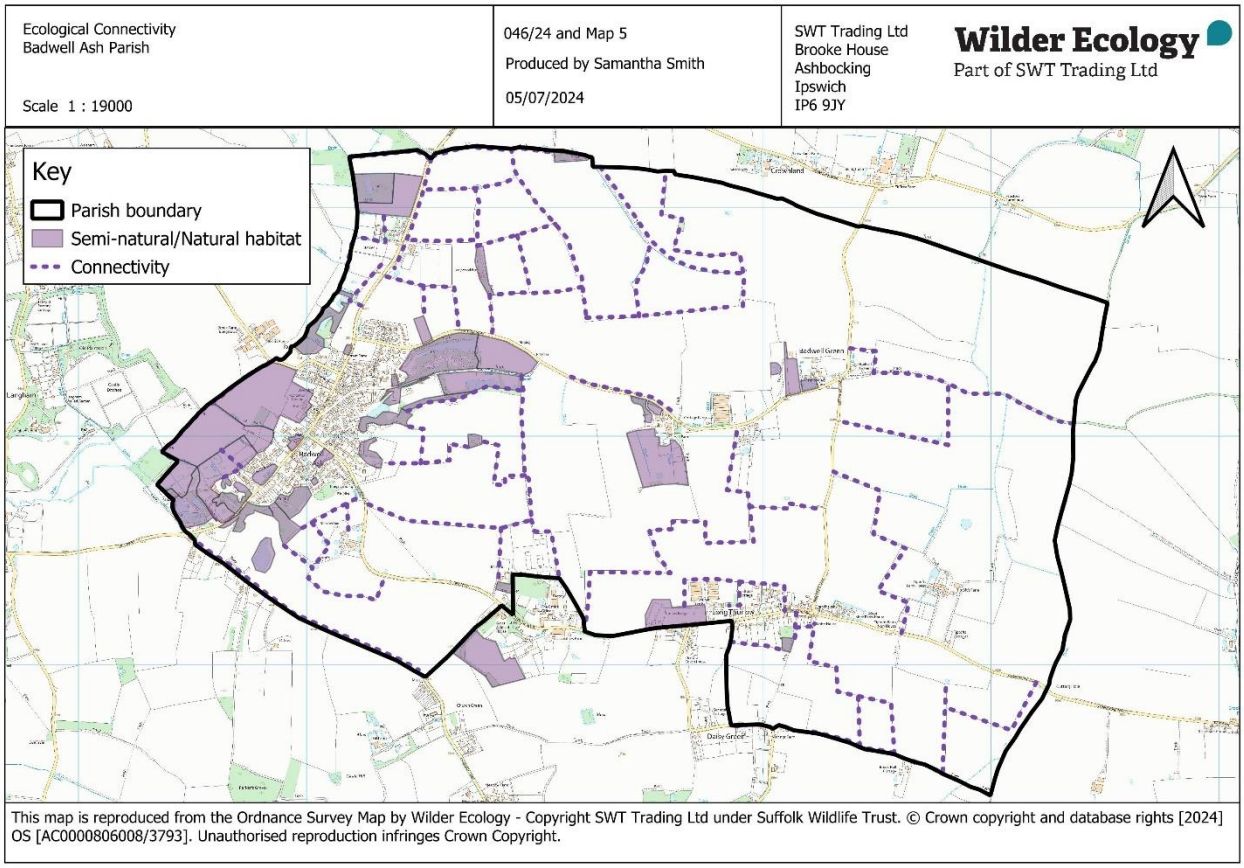


Figure 5: Ecological Connectivity and semi-natural spaces

6.8.10 These ecological linkages should be safeguarded from deterioration or loss due to developments and also strengthened whenever such opportunities arise. Creating buffers between these habitats and developments, such as the meadows and trees surrounding the stream and boundary habitat. Additional habitat creation in the wider landscape such as new hedgerows will enhance the network, particularly in areas where such connections are less defined. Ensuring village amenities such as open green spaces within the village and areas such as the new cemetery are managed sympathetic to wildlife can enhance their biodiversity value and create stepping stone habitat between areas highlighted in Figure 5.

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

6.9.1 Although the parish of Badwell Ash does not contains any Sites of Special Scientific Interest or County Wildlife Sites, the parish provides some high-quality habitat that helps provide connectivity to the wider landscape. In addition to the above, seven Priority habitats have been identified within the parish and two Suffolk Rare Plants were recorded. Hedgerows and

ponds within the parish have local significance for wildlife. Badwell Ash Parish contains a higher-than-average number of ponds per km^2, providing habitat for protected species such as bats, and with the potential to great crested newts and other amphibian species. Several hedgerows in the parish are quite mature and some may be ancient hedgerows.

6.9.2 These habitats support a range of species including Suffolk Priority species (common toad, barn owl, dunnock, house sparrow, song thrush, starling, swift, small heath butterfly, bats, brown hare, hedgehog, otter). Any records are likely to under-represent the true number of species within the parish.

6.9.3 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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8. APPENDIX 1 – POSSIBLE FUTURE ACTION

The following is a summary of possible future action that has been recommended within the main body of the report, collated here with respective paragraph numbers.

(6.5.16) In order to improve the condition of the hedgerows, encouragement could be given to farmers and landowners to plug gaps in the hedgerows with native species of local provenance. A field margin of more than 1m to act as a buffer should generally be left untouched either side of a hedgerow, which, for the most-part is already the case.

(6.5.28) A pond survey based on a standard procedure can do much to inform management decisions.

(6.5.37) Establishing a community orchard. With appropriate care and management, orchards can become havens for wildlife from birds to invertebrates and mammals. An orchard with the space for planting of fruit trees on vigorous rootstocks (such as M25) will allow trees to grow larger and live longer, so produce veteran features and provide habitat and food sources for an extended period of time. They also compete with grass and do not require staking once established. Deadwood within an orchard provides habitat and food source for many invertebrates. Unless the tree presents a safety risk, deadwood should be left on trees for this purpose. If this is not possible, piles of deadwood on the ground will also be beneficial and suitable for small mammals. Planting new trees whilst retaining old trees will provide successional habitat. They should be planted with wide spacing, c.7-10m to allow for wildflower meadow to develop or be retained. Community orchards may benefit from a small proportion of trees on semi-dwarfing rootstocks to fruit at a younger age and are shorter as mature trees. An ideal orchard will have a mosaic of habitats, with a mixture of tree ages, deadwood, grassland – with areas of long grass as well as areas of short grass, boundary hedgerows and scrub and a water source such as a pond.

Further information can be found on the Suffolk Biodiversity Information Service website for Traditional Orchards Advice Notes | Suffolk Biodiversity Information Service (suffolkbis.org.uk), the Suffolk Traditional Orchard Group, and Orchards East project https://www.uea.ac.uk/groups-and-centres/orchards-east, which provide details of example orchards and advice regarding species, planning and planting. The Peoples' Trust for Endangered species have further information and

annually offer packs for a short window of time, Traditional Orchards - People's Trust for Endangered Species (ptes.org).

(6.5.46) Open mosaic habitat within the pits - rigid management schemes should be avoided and based on a reactionary manner and site monitoring with rotational management to maintain a mosaic.

(6.5.52) Proposals for new developments and roads can include protection for this species and other amphibians, such as amphibian ladders, tunnels, dropped kerbs and fencing. It is already known that toads and frogs are getting trapped in the open storm drains on Westley Way and Hunston Road (locations noted on Figure 4), therefore, ladders can be built into the open drains to aid amphibians to climb out. Drop kerbs and/or amphibian tunnels can aid toads crossing and reduce risk of mortality.

(6.6.9) Species records in the parish are relatively low, likely due to under-recording rather than an absence of species. Community activities such as organising a 'Bioblitz', utilising local skills, encouraging residents to log biological records and seeking expert advice could help better represent the species present in the parish. A 'Bioblitz' is usually a 24-hour event that focuses on identifying as many species as possible in a specific area, which can involve community members. Information on 'Bioblitz' can be found https://www.bnhc.org.uk/bioblitz/national-bioblitz-network or https://education.nationalgeographic.org/resource/bioblitz/.

(6.7.6) Communal green spaces, such as at St Mary's Crecent and Richer Close are under active management and are largely mown short. To improve this habitat, leaving a longer sward throughout the year would be highly valuable for wildlife, as it offers over-wintering habitat for invertebrates and small mammals, as well as offering winter seed heads as forage for birds. A change of management to include leaving sections dedicated to this will deliver the best ecological outcome. The trees are also of a good size that bird boxes could be mounted.

(6.7.7.) A small change to management of road verges, to include not mowing until later in the summer, at least mid-July, can help provide important habitat, nectar and pollen during the spring and summer and allows for seeds to set.

(6.7.10) There is a wide range of positive actions than individual gardeners can consider include; Creating ponds and mini wildflower meadows; Putting up swift boxes on buildings; Putting up bat/bird boxes on mature trees within green spaces; Creating hedgehog highways between gardens; Composting and creating deadwood areas; Harvesting rainwater; Avoiding garden chemicals.

(6.8.9) Figure 5 (map of ecological connectivity) indicates areas of where current habitat and green corridors are, such as the watercourse on the western boundary among others. 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.