

Wherstead Neighbourhood Plan

Landscape and Biodiversity Evaluation 2021

Project No:	Report:	Date:
017/21	Final	07/05/21
Prepared by:	Checked:	Date:
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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 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 surveys have taken place.

It is our policy to submit any biological records to the Suffolk Biodiversity Information Service, in accordance with BS42020 (6.4.7). We will do this 3 months after the submission of this report. If you wish to discuss this, please contact us within this time period.

Executive Summary

SWT Trading Ltd: Ecological Consultants, the consultancy of Suffolk Wildlife Trust, was instructed by Wherstead Parish Council to undertake a landscape and ecological evaluation of the parish as part of their review of the existing Neighbourhood Plan. This document seeks to provide the Neighbourhood Plan Working Group with an evaluation of landscape character and in particular, highlight specific habitats and associated ecological networks as a rich source of biodiversity.

The eastern part of the parish lies within the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB), a statutory landscape designation. There are four principal landscape character types within the parish with the majority of the parish being defined as 'Ancient Estate Farmlands'. As the land falls away northwards, the Landscape Character Type transitions to 'Rolling Estate Farmlands' and then 'Coastal Levels' and 'Saltmarsh and Intertidal Flats' adjacent to the River Orwell. Overall, these landscape character types help define the different habitats across the parish and also the species within them. A fifth Landscape Character Type: 'Valley Meadow Lands' is represented as a very small area on the northern boundary close to where the Belstead Brook enters the River Orwell.

The River Orwell itself is designated as a Site of Special Scientific Interest (SSSI) and is also part of the Stour and Orwell Estuary Special Protection Area and Ramsar Site, designated for its overwintering bird interest. Holbrook Park, part of Freston and Cutlers Wood SSSI lies in the south of the parish. There are also four non-statutorily designated sites within or on the parish boundary: Spinney/Wherstead Wood with Southern Linear Woodland and Hill Covert which are both designated for ancient woodland, also Wherstead Heath and Bourne Bridge grassland. The amount of ancient woodland habitat within the parish is particularly notable.

Nine Priority Habitats have been identified within the Parish. Three are well distributed across the parish: Lowland Deciduous Woodland, Hedgerows and Ponds. Wet Woodland is found in four separate locations and there are also scattered patches of Wood Pasture and Parkland. Areas of Lowland Dry Acid Grassland occur in the west and south of the parish and there is also a small area of Coastal and Floodplain Grazing Marsh is present on the north-eastern boundary. Bordering the River Orwell is Coastal Saltmarsh and Mudflats.

Across the Parish, 58 UK and Suffolk Priority Species have been recorded which complement and help define the biodiversity value of the locality. However, this is likely to be an under-representation of the likely total. There are also notable numbers of nightingale, a Bird of Conservation Concern 'Red Listed' species, within the woodland and scrub habitats of the parish.

The River Orwell and tributaries including Freston Brook and Belstead Brook and other smaller streams represent a key part of the ecological network. Other significant blocks of habitat including Cutlers Wood and the Stalls Valley, Wherstead/Spinney Woods and the linear woodland to the south, link to into the network which extends beyond the parish into Tattingstone, Bentley, Belstead and Freston. The hedgerow network and other features also provide local ecological 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.

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1. Introduction

1.1 Brief and Terms of Reference

SWT Trading Ltd: Ecological Consultants, the consultancy of Suffolk Wildlife Trust, was instructed by Wherstead Parish Council on 18th March 2021 to undertake a landscape and ecological evaluation of the parish as part of their Neighbourhood Plan.

Wherstead Parish Council have made an application to Babergh District Council in accordance with the Neighbourhood Planning (General) Regulations 2012, to designate a Neighbourhood Area, for the purposes of developing a Neighbourhood Plan 2018-2037. This was designated a Neighbourhood Area by Babergh District Council on 14th September 2020. The Civil Parish of Wherstead, within its formal parish boundary, is the 'Neighbourhood Area' for the purposes of the Plan.

Wherstead Parish Council indicate that one of the main purposes of their Neighbourhood Plan is to provide an evaluation and overview of Wherstead's landscape and biodiversity assets as an evidence base to support its preparation of a Neighbourhood Plan.

Wherstead Parish Council has particular regard to our duty of care to the Suffolk Coasts and Heaths AONB and the SSSI along the Orwell estuary within the parish and adjacent lands. This report will provide the Neighbourhood Plan Working Group with an evaluation of landscape character across the parish and in particular, highlight specific habitats and associated ecological networks within this landscape as a rich source of biodiversity.

The Parish Council aims to

- retain, encourage and enhance local natural habitats including woodlands, hedgerows, ponds, water meadows
- increase biodiversity wherever possible
- promote habitat connectivity
- maintain and enhance the mixed ecology of the rural, suburban housing and business environments which make up Wherstead parish.

1.2 Parish Location and Statistics

Wherstead is a settlement located in the south-east of the county within Babergh District Council, three miles south of Ipswich on the Shotley peninsular. It covers around 988 hectares and its central point grid reference is close to TM 152 402. The parish also shares boundaries with the Suffolk civil parishes of Pinewood, Belstead, Bentley, Tattingstone, Freston and also a tiny boundary with Holbrook. The parish extends over the River Orwell so also includes a boundary with Ipswich and where the parish boundary centres on the River Orwell it also abuts a small part of the parish of Nacton. The eastern part of the parish lies within the Suffolk Coast and Heaths Area of Outstanding Natural Beauty.

Data based on the UK Census 2011 [1] indicate a population of around 342 people with approximately 127 households. The parish has a history of ancient settlement with evidence of occupation by Romans and early Britons. In the Domesday Book the place is described under the names Querstede and Wervesteda and had only five households, making it one of the smallest

settlements recorded at that time. The settled areas are in two broad areas: One centred on Bourne Hill and along the Strand with a second area associated with Wherstead Park where the parish church is located. Elsewhere the land is farmed, with both arable and grazing land present. A series of scattered but ecologically connected ancient woodlands are a particular feature of the parish.

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) 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 Ministry of Housing, Communities and Local Government (February 2019), which provides national planning policy [3].

Of particular relevance to this project is Paragraph 170, under Section 15 'Conserving and Enhancing the Natural Environment', which states

The planning system 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 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 policies in the development plan that covers the area.

2.3 Babergh Local Plan (including reference to Babergh-Mid Suffolk Joint Local Plan

The emerging Babergh and Mid Suffolk Joint Local Plan is in its development stages, with the Pre-Submission (Reg 19) Document submitted in November 2020 [4]. This will replace the existing Babergh Local Plan (2006) and Babergh Local Plan 2011-2031 Core Strategy and Policies (February 2014) [5].

Relevant existing 'saved' policies [6] from the Local Plan 2006 and also the Core Strategy 2014 documents include:

Core strategy Policy CS14: Green infrastructure
Core strategy Policy CS15: Implementing Sustainable Development in Babergh
Local Plan Policy: CR02: AONB Landscape
Local Plan Policy: CR08: hedgerows

The documents are to be superseded by the following policies proposed in the Pre-Submission Document (November, 2020):

- Strategic policy SP09 – Enhancement and Management of the Environment
- Local Policy LP18 – Biodiversity & Geodiversity
- Local Policy LP19 – Landscape is also applicable with regards to protecting and enhancing landscape character.
- Local Policy LP20 – Area of Outstanding Natural Beauty

There are two allocations in the emerging Joint Local Plan:

Wherstead – Bourne Hill (Ipswich Fringe)

This area is located south and adjacent to the Ipswich boundary linked by Bourne Bridge. Wherstead – Bourne Hill is classified as a Hinterland Village within the Ipswich Fringe. LA016 is a proposed allocation for 75 dwellings in the Joint Local Plan but a planning application for this site is already consented and is being developed.

Wherstead Park is located south of the A14 and is classified as a Hinterland Village within the Ipswich Fringe. Here there is a mix of employment and residential properties with a number of listed buildings identified. Wherstead Business Park is shown as a Strategic Employment Site (included in Policy SP05).

2.4 Biodiversity Net Gain

Following the consultation on mandating biodiversity net gain in development, it was confirmed in March 2019 that the government will use the forthcoming Environment Act to mandate 'biodiversity net gain' – meaning that new developments must deliver an overall increase in biodiversity.

Net gain in planning terms describes an approach to development that leaves the natural environment in a measurably better state than it was beforehand. 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 the development footprint then biodiversity losses may be offset by delivery of gains elsewhere. As a very minimum a target of 10% net gain should be sought as currently specified in the emerging Environment Bill. 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 Biodiversity Metric (3.0 being the latest version) 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.

3. Methods

3.1 Field Survey

A 'Phase 1 type' field survey and ecological audit of the parish was undertaken on 26th April 2021. The objectives 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 of the parish land area. Access was also granted to specific areas of private land.

3.2 Desktop Survey

A variety of existing source material was consulted including:

- Suffolk County Council website and other documents
- Babergh 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 Hedgerow Survey – County Report (2012)
- Suffolk Pond Survey (1999)

3.3 Evaluation of Landscape and biodiversity 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: Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB).

The eastern part of the parish lies within the Suffolk Coast and Heaths Area of Outstanding Natural Beauty (AONB) [7]. The area was designated in 1970 with the purpose of conserving and enhancing the protected landscape. The wildlife rich estuaries are a particular feature of this AONB landscape as well as shingle beaches and heathland.

Originally, it was the part of the Parish bordering the Stour and Orwell Estuary that was included within the AONB, but on 7th July 2020 an extension to the AONB was confirmed by the Secretary of State for Environment, Food and Rural Affairs and amongst other areas, this includes the Freston Brook which rises as the Stalls Valley within the Parish of Wherstead. The extension also encompasses the ancient woodland of Holbrook Park and additional areas of Cutlers Wood (part of the Freston and Cutlers Wood with Holbrook Park SSSI – see 5.1.2).

The strategic objectives of AONBs are defined as:

1. **Conserve and enhance** the natural and cultural heritage of the UK's Areas of Outstanding Natural Beauty, ensuring they can meet the challenges of the future;
2. **Support** the economic and social well-being of local communities in ways which contribute to the conservation and enhancement of natural beauty;
3. **Promote** public understanding and enjoyment of the nature and culture of Areas of Outstanding Natural Beauty, and encourage people to take action for their conservation;
4. **Value, sustain and promote** the benefits that the UK's Areas of Outstanding Natural Beauty provide for society, including clean air and water, food, carbon storage and other services vital to the nation's health and wellbeing.

The statutory duty to conserve and enhance natural beauty within the AONB is fully recognised both within the NPPF and in the Babergh Local Plan and also the emerging Babergh-Mid Suffolk Joint Local Plan.

4.2 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), [8]. 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 Wherstead Neighbourhood Plan to acknowledge and make full use of both the descriptions and the land management guidelines related to the four main Landscape Types that exist within the parish.

- **Ancient Estate Farmlands** (coloured ochre with hatching in Figure 2)
- **Rolling Estate Farmland** (coloured ochre in Figure 2)
- **Coastal levels** (coloured pale blue in Figure 2)
- **Saltmarsh and intertidal flats** (coloured blue in Figure 2)

In addition, a fifth Landscape Character Type: **Valley Meadowlands** (coloured teal in figure 1) is just included within the northern edge of the parish, associated with low-lying habitats adjacent to Belstead Brook.

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.

This evaluation for the Neighbourhood Plan therefore distils the essence of the information provided - as it applies to Wherstead - as a guide for any future development here. Much of the discussion on development guidance is taken verbatim from the documents, but linkages and comments are added that make it relevant to this parish.

4.2.1 Ancient Estate Farmlands

This landscape character type covers most Wherstead and is particularly associated with the Shotley Peninsula in south-east Suffolk. An elongated, elevated and relatively flat central spine with sloping sides is dissected by river valleys running towards the River Orwell. The central plateau is capped by fine-grained loess deposits that originated as wind-blown sediments from glacial sources creating fertile, deep loams. The area has a substantial number of ancient woodlands, most of which are either designated as a SSSI (see 5.1.2.2) or a County Wildlife Site (see 5.2.2).

Key characteristics of this landscape type as they refer to Wherstead are:

- Large-scale arable blocks divided into rectilinear fields
- Substantial number of ancient woodlands
- Network of parks and designed landscapes
- The settlement pattern in this landscape Character Type has a strong tendency towards clustered villages, surrounded by a scattering of individual farmsteads. Wherever possible this clear distinction should be maintained.

Key potential changes and Development Management guidance related to this landscape type:

- Changes in the management and use of landscape parklands which could have a negative impact on these historic features and their biodiversity. An overarching management plan or strategy should be in place to guide any proposed changes, covering the maintenance, preservation and management of existing features, as well as the restoration or creation of new or lost ones.
- New agricultural techniques necessitating larger buildings: The right choice of siting, form, orientation and colour of large-scale agricultural buildings in open countryside can make a considerable contribution to mitigating their impact.
- Conversion and expansion of farmsteads for residential uses. Unless the site is well hidden, it may be necessary to impose clear conditions relating to lighting and the extent of garden curtilage and how this is screened from the wider landscape. Any new building should usually be close to the existing cluster of buildings, should be subordinate in size to the principal buildings and the design should be appropriate for the style of buildings present.
- Impact of deer on the condition of woodland cover: Large-scale deer control should be supported and individual woodlands may require deer fencing. New woodland and hedgerow plantings, including for screening and mitigation schemes, will require effective protection from deer to support their establishment.
- Leisure as a driving force for changes in economic activity: in respect of visual impact, to accept these developments effective design and mitigation measures will be vital to avoid an undesirable change to landscape character.
- A location for mineral workings due to the localised sand deposits in parts of the parish. Careful design and mitigation proposals during extraction, together with effective management and oversight of the restoration of sites, can minimise the impact of mineral extraction



Typical view across this landscape character type

Land Management guidelines for this Landscape Type relevant to Wherstead include:

- Reinforce the historic pattern of regular boundaries
- Restore, maintain and enhance the network of tree belts and pattern of small plantations found across much of this landscape type.
- Restore, maintain and enhance the historic parklands and the elements within them.
- Restore and enhance the condition of ancient woodlands including the effective control of deer grazing and browsing.

4.2.2 Rolling Estate Farmland

This landscape character type is found in a series of valley-side locations in south and east Suffolk. It occurs in a narrow band to the north of the Parish as the land falls away from the plateau towards the Orwell Estuary and the Belstead Brook.

Key characteristics of this landscape type as they refer to Wherstead are:

- Gently sloping valley sides and plateau fringes
- Generally deep loamy soils
- An organic pattern of fields modified by later realignment
- Coverts and plantations with some ancient woodlands

- Landscape parks with a core of wood pasture (although the majority of parks are present in Ancient Estate Farmland)



Typical view across this landscape character type

Key potential changes and Development Management guidance related to this landscape type:

- Expansion of settlements: Settlement extension in a valley side landscape is likely to have a significant visual impact and adversely affect the character of the landscape, including that of the adjoining valley floor.
- Changes of land management:

Land Management guidelines for this Landscape Type relevant to Wherstead include:

- Reinforce the historic pattern of sinuous field boundaries
- Recognise localised areas of late enclosure hedges when restoring and planting hedgerows.
- Maintain and increase the stock of hedgerow trees
- Maintain the area of woodland cover

4.2.3 Coastal Levels

This low-lying, flat marshland landscape with underlying alluvial deposits of marine origin is found beside estuaries and coastal valleys along the whole of Suffolk's coast. Ancient settlement was limited to the edges of the marshes, with virtually no domestic buildings actually within the landscape. In Wherstead there is a very narrow strip of this landscape type bordering the River Orwell in the area known as 'The Strand'.

Key characteristics of this landscape type as they refer to Wherstead are:

- Flat marshland adjacent to the coast or estuaries
- Marine alluvium soils
- Important wildlife conservation areas
- Unsettled landscape with domestic buildings on the fringes

Key potential changes and Development Management guidance related to this landscape type:

- Changes of land management and land use adjacent to this landscape, especially the changes to the quantity, scale and style of built development. Due to its flat, open nature, this landscape is highly sensitive to any interruption of the horizon by built structures. Therefore, if any development is permitted, high standards of design and effective mitigation strategies should be applied, including reduced height structures, the use of sympathetic and unobtrusive materials and appropriate planting schemes.
- Sea level rises. Manage coastal realignment to retain and enhance the local landscape character. Minimise the use of structures for flood or sea defence, but where required, use sympathetic material and low, unobtrusive structures bearing in mind the potential increased need for ecological management if natural processes have been restricted.
- Management of land for nature conservation should be undertaken sensitively with consideration for the historic landscape and wider visual landscape impacts, along with the issues raised by increased visitor pressure.

Land Management guidance for this Landscape Type as relevant to Wherstead include:

- Restore and retain the historical pattern of drainage ditches and dykes, delivering ecological benefit;



Typical view across this landscape character type

4.2.4 Saltmarsh and Intertidal Flats

These wild, unimproved landscapes are found on the larger of the east flowing rivers in the county, This landscape type consists mainly of marine alluvium with some outcrops of clay forming mud flats, with a comparatively few small areas of saltmarsh. The inter-tidal flats are dissected by creeks and covered with primarily cord grass and samphire. The landscape is a key characteristic of the Suffolk Coast and Heaths Area of Outstanding Natural Beauty and is part of protected and ecologically sensitive sites, including European Designated Sites. A narrow band of Saltmarsh and Intertidal Flats exists along the shore of the River Orwell in the area known as 'The Strand'.

Key characteristics of this landscape type as they refer to Wherstead are:

- Marine and alluvium and some outcrops of clay, forming mud flats
- Inter-tidal flats dissected by creeks
- A few small areas of saltmarsh
- Wild unimproved land
- Unsettled landscape
- Powerful sense of isolation and wilderness
- Integral to the setting of notable features
- Suffering from coastal squeeze and the associated erosion

Key potential changes and Development Management guidance related to this landscape type:

- Sea level rise will inevitably impact this landscape, changing the physical and chemical conditions of the substrate. Any installation of flood or sea defence structures should use sympathetic materials and be low and unobtrusive in stature.
- Changes of land management and land use adjacent to this landscape especially the changes to the quantity, scale and style of built development can have an impact on the setting of and views from, this landscape. The highest standards of design, using sympathetic and unobtrusive materials, along with effective mitigation strategies are required for any planning applications which may have an impact upon this landscape.

Land Management guidance for this Landscape Type as relevant to Wherstead include:

- Wherever possible maintain the processes that allow the formation of this landscape type.
- Maintain the structural diversity of upper, lower and middle saltmarsh habitats within this landscape.
- Minimise disturbance on important wader feeding areas within estuaries.
- Minimise the impact of erosion caused by boat wash.



Typical view across this landscape character type along The Strand

4.2.5 Valley Meadowlands

Found principally in the floors of the river valleys of south and south-east Suffolk, Valley Meadowlands are made up of seasonally wet clays overlying alluvial deposits and peat. The damp nature of the land and tree-lined wet dykes support good meadow habitat, although much of this is now used as animal pasture rather than for hay production. Settlement tends to be limited to

occasional farmsteads and any woodland tends to be alder carr in the wetter areas. However, in the 20th century plantations of poplar and cricket-bat willows were introduced.

A tiny area of this low-lying landscape is found on the northern boundary of the parish, close to where the Belstead Brook flows into the River Orwell, in an area known as 'Bourne Bridge Grassland' (see 5.2.2).

Key characteristics of this landscape type as they refer to Wherstead are:

- Flat landscapes of alluvium or peat on valley floors with a network of drainage dykes
- Occasional small reedbeds
- Unsettled

Key potential changes and Development Management guidance related to this landscape type:

- Development and land use change adjacent to this landscape type
- The creation of new woodlands
- The introduction of horse grazing
- Neglect of the characteristic ditch and hedgerow networks
- The conversion of grassland to arable production

Land Management guidelines for this Landscape Type relevant to Wherstead include:

- Restore and retain the pattern of drainage via meadows divided by ditches and dykes and maintain levels of grassland
- Encourage appropriate planting and management of woodlands (both wet and plantation)

4.3 The Significance of the Landscape for the Neighbourhood Plan

The eastern section of the parish lies within the Suffolk Coast and Heaths AONB. Originally, it was the part of the Parish bordering the Stour and Orwell Estuary that was included within the AONB, the recent extension to the AONB now includes the Freston Brook which rises as the Stalls Valley within the Parish. The extension also encompasses the ancient woodland of Holbrook Park and additional areas of Cutlers Wood.

The main landscape character type is Ancient Estate Farmland, which is specifically found on the Shotley Peninsula in south-east Suffolk. The landscape represents an elongated, elevated and relatively flat central spine with sloping sides is dissected by river valleys, such as the Stalls Valley and Freston Brook on the eastern parish boundary and the un-named stream on the southern parish boundary. The area has a substantial number of ancient woodlands. As the land falls away northwards, the Landscape Character Type transitions to 'Rolling Estate Farmlands' and then a very narrow band of 'Coastal Levels' and Saltmarsh and Intertidal Mudflats adjacent to the River Orwell.

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.

5. Evaluation of Wildlife Assets

5.1 Statutory 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. The locations of these sites are shown in Figure 3.

5.1.1 European and International Designations

Stour and Orwell Estuary Special Protection Area (SPA) and Ramsar Site

The Stour and Orwell Estuaries Special Protection Area (SPA) [9] and Ramsar site [10] overlaps with the parish boundary on the eastern side. It is designated for supporting breeding avocet (*Recurvirostra avosetta*) which feed upon the intertidal mudflats and use the grazing marshes to nest. The SPA also supports important numbers of overwintering water birds including dark-bellied brent geese (*Branta bernicula bernicula*), ringed plover (*Charadrius hiaticula*), grey plover (*Pluvialis squatarola*), shelduck (*Tadorna tadorna*), cormorant (*Phalacrocorax carbo*), great-crested grebe (*Podiceps cristatus*), curlew (*Numenius arquata*), wigeon (*Anas penelope*), pintail (*Anas acuta*), goldeneye (*Bucephala clangula*), gadwall (*Anas strepera*) oystercatcher (*Haematopus ostralegus*), lapwing (*Vanellus vanellus*), knot (*Calidris canutus islandica*), dunlin (*Calidris alpina alpina*), black-tailed godwit (*Limosa limosa islandica*), redshank (*Tringa totanus*) and turnstone (*Arenaria interpres*) which feed extensively on the intertidal mudflats.

5.1.2 Site of Special Scientific Interest

5.1.2.1 Orwell Estuary SSSI

In addition to the SPA and Ramsar site designation, the River Orwell is also designated as the Orwell Estuary SSSI [11]. This is also primarily designated for its breeding and overwintering waterbirds as described above. However, the SSSI designation also covers vascular plants and the intertidal mud habitats. The site supports a nationally important vascular plant community, including at least nine nationally scarce plants. They are characteristic of intertidal mud, saltmarsh, shingle and coastal grazing marsh habitats. The plants listed are eelgrass, dwarf eelgrass, slender hare's ear, golden samphire, lax-flowered sea-lavender, shrubby sea-blite, small cord-grass, perennial glasswort and divided sedge. The intertidal mudflats have a very high invertebrate richness within the sediments. The estuary also supports a nationally important tide swept algae community with sponges, ascidians and red algae.

5.1.2.2 Freston and Cutlers Woods with Holbrook Park SSSI

Holbrook Park and Cutlers Wood, the northern part of which is included within the parish are both part of the Freston and Cutlers Woods with Holbrook Park SSSI [12].

Together these woodlands comprise one of the largest areas of ancient woodland in Suffolk. They have a long history of management and the coppice stools in Holbrook Park are among the largest

recorded in Britain with many stools exceeding 3m in diameter. They contain a variety of woodland types typical of light, sandy soil and spring-fed valleys. The woods support a distinctive ground flora and are among the best bluebell woods in Suffolk. The upper slopes are dominated by oak, hornbeam and hazel, with significant stands of sweet chestnut in places. Silver birch, downy birch, field maple, ash and elm are also present in smaller quantities, particularly along the woodland boundaries. Other understorey species present in the drier areas include holly, rowan, crab apple, hawthorn and wild service tree. In the valleys spring-line alder woods occur.

The ground vegetation on the dry soils is dominated by a mixture of bluebell, bracken and bramble. Other woodland plants include dog's mercury, wood anemone, wood sorrel, yellow archangel and greater stitchwort. The vegetation contains a number of calcifuge (lime-avoiding) species including climbing white fumitory, wood sage and butchers broom. In the wet valleys (including the Stalls Valley) a different vegetation is found containing species such as opposite leaved golden saxifrage, alternate leaved golden saxifrage, marsh marigold and a number of ferns and mosses.



Bluebells in the Ancient Woodland of Cutlers Wood, part of Freston and Cutlers Woods with Holbrook Park SSSI

5.2 County Wildlife Sites

5.2.1 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 [13]. 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 2019 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 monitors 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.

5.2.2 County Wildlife Sites in Wherstead

There are four County Wildlife Sites associated with Wherstead: Spinney/Wherstead Wood with southern linear woodland, Wherstead Heath, Hill Covert and Bourne Bridge grassland. The locations of these sites are shown in Figure 3.

Spinney/Wherstead Wood – Babergh 9: TM 135 400

35.25 ha: Ancient Woodland

This large ancient woodland site is bisected by the main Ipswich to London railway line. Spinney Wood, north-west of the railway line, has largely been replanted with conifers. The plantation is bordered by semi-natural broad-leaved woodland dominated by oak, ash, sweet chestnut and cherry with a hazel understorey. Wherstead Wood, south-east of the railway line, is predominantly an oak woodland with field maple, birch, holly, hazel, elm and rowan present in the understorey. The woodland has been extensively cleared in the past and has a substantial area of re-generating birch.



Wherstead Wood with an exceptional display of bluebells

The ground flora contains species typical of woodlands on light soils with species including bluebell, wood anemone, wood sorrel, red campion and climbing corydalis. In 2012, the strip of linear woodland to the south of Wherstead Wood was included within the CWS boundary following the discovery of a hazel dormouse population. This woodland is characterised by oak, hazel, bramble and honeysuckle and provides a valuable ecological corridor linking Wherstead with the parishes of Bentley and Tattingstone.

Wherstead Heath – Babergh 132: TM 138394

3.2 ha: Habitat mosaic

This small CWS is situated south of Wherstead Wood. It comprises three main plant communities. The central and eastern part of the site includes acid grassland including scarce lichen heath. In the north-western corner is an area colonised by oak and birch woodland, with an understorey of bracken and birch. In the south, birch, bramble, gorse and elder scrub forms valuable habitat for nesting birds.



Wherstead Heath CWS acid grassland and lichen heath

Hill Covert – Babergh 184: TM 146 404

10.95 ha: Ancient Woodland

Hill Covert lies along the eastern slopes of a valley and contains several different woodland stands including wet woodland in the valley bottom and drier mixed deciduous woodland further up the valley sides, both of which are Priority habitats. The wet woodland comprises mainly alder, while the drier areas are largely dominated by oak, with a good diversity of native species including hornbeam, wild cherry, elm, hazel, hawthorn and holly. The central, southern and eastern parts of the site are likely to be planted more recently, but sufficiently long ago that they have developed into mature woodland that provides connectivity between the other areas. The ground flora is diverse on the slopes leading down to the stream including a number of ancient woodland indicator species such as moschatel, bluebell, ramsons, enchanter's nightshade, opposite-leaved golden

saxifrage, yellow pimpernel, dog's mercury and wood speedwell. The varied structure and valuable features such as dead wood, mature trees and dense scrub provide habitat opportunities for a range of wildlife including invertebrates, mammals and birds. The woodland is known to support a population of hazel dormouse, a Priority species for which records in Suffolk are restricted to the south of the county.

Bourne Bridge Grassland – Babergh 136: TM 165 414

2.29 ha: Habitat mosaic

Bourne Bridge grassland consists of a triangular area of grassland between Bourne Park and the Belstead Brook. The citation indicates it is 'regularly flooded by high tides and the brackish conditions have enabled a range of uncommon plants to develop including saltmarsh plants, dittander and the uncommon corky-fruited water dropwort', but this was not confirmed due to lack of access. The grassland is surrounded by scrub which provides good habitat for a range of resident and migratory birds.



Bourne Bridge Grassland CWS in the distance

5.3 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 [14] 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 Wherstead. 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.

5.4 Suffolk Priority Habitats in Wherstead

Of the 24 Suffolk Priority habitats nine are known to be present in Wherstead parish:

- Lowland Mixed deciduous woodland
- Wet woodland
- Wood pasture and parkland
- Hedgerows
- Ponds
- Lowland Dry Acid grassland
- Coastal and Floodplain Grazing Marsh
- Coastal saltmarsh
- Mudflats

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 Wherstead 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 Wherstead

5.4.1 Lowland Mixed deciduous Woodland

5.4.1.1 General description of this 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.

5.4.1.2 Lowland Mixed Deciduous Woodland Priority Habitat in Wherstead

Ancient woodland is a significant feature of this Parish. The woodlands are scattered across the parish and include: Holbrook Park, Cutlers Wood, Spinney/Wherstead Wood with southern linear woodland, Hill Covert, Chapman's Grove and Sandpit covert. Parts of the woodland bordering Belstead village, Broomhaughton Covert, Icehouse Covert, Home Covert and Camp Yard wood may also be ancient and are all identified as Priority habitat on Magic.

Holbrook Park and Cutlers Wood are SSSIs which are described in more detail in section 5.1.2.2 above. Spinney/Wherstead Wood and Hill Covert are designated as CWS and are described in more detail in section 5.2.2 above. In addition, there are several small blocks of woodland of more recent origin.



Chapman's Grove ancient woodland

5.4.1.3 Activities and developments most likely to affect Lowland Mixed Deciduous Woodland Priority Habitat in Wherstead

- Further fragmentation of and within the existing woodland area;
- Intensification of management between woodland fragments reduces the ecological value; of edge habitats and the connectivity between woodland blocks in the landscape;
- Increasing recreational pressure within woodlands next to the urban fringe.

5.4.2 Wet woodland

5.4.2.1 General description of this Priority Habitat as described 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 where wet woodlands are linked to the river and stream network and also various bat species, birds such as marsh tit and various scarce species of beetles and weevils.

5.4.2.2 Wet woodland Priority habitat in Wherstead

There are four areas where wet woodland occurs in Wherstead.

- Within the Stalls Valley and Freston Brook (part SSSI);
- Part of Hill Covert CWS;
- Part of the woodland bordering Belstead in the north-west;
- The strip of woodland bordering Tattingstone along the southern boundary.

These areas are all associated with small streams and are dominated by alder with a ground flora typical of wet woodland including alternate and opposite leaved golden saxifrage.

5.4.2.3 Activities and developments most likely to affect the Wet Woodland Priority Habitat in Wherstead

- Further fragmentation of and within the existing woodland area;
- Intensification of management between woodland fragments reduces the ecological value of edge habitats and the connectivity between woodland blocks in the landscape.
- Activities which lead to a change in hydrology resulting in drying of the habitat.

The wet woodland within designated sites is unlikely to be affected by human activities as it is located within a SSSI.



Wet woodland dominated by alder in woodland bordering Belstead parish

5.4.3 Wood pasture and Parkland Priority Habitat

5.4.3.1 General description of this Priority Habitat as described 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.

5.4.3.2 Wood pasture and Parkland Priority Habitat in Wherstead

There are several small patches of wood pasture and parkland Priority habitat in Wherstead as identified on Magic, although these have been identified through desktop exercises and have not been ground truthed. The sites are as follows: The eastern end of Stalls Valley, the linear woodland south of Wherstead Wood, land south of Bluegate Farm, land associated with Wherstead Park, the western end of Icehouse Covert and the eastern end of Sandpit Covert.



Wood pasture and Parkland Priority Habitat adjacent to Wherstead Park

5.4.3.3 Activities and developments most likely to affect Wood Pasture and Parkland Priority Habitat in Wherstead

- 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;
- Cessation of grazing by cattle or sheep leading to changes to grassland habitat.
- Unsympathetic tree surgery including removal of fallen deadwood or standing deadwood (unless essential for safety reasons);
- Future development resulting in additional public access and potential for tree removal for safety reasons.

5.4.4 Hedgerows

5.4.4.1 General description of this 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.

5.4.4.2 Hedgerow Priority Habitat in Wherstead

The main concentration of hedgerows is in the western half of the parish, associated with the Ancient Estate Farmland landscape which occupies the majority of the parish.

During the walkover surveys, it was noted that the hedgerows within this landscape type are typically heavily managed but are moderately species-rich. Recorded species include hawthorn, blackthorn, dog rose, field maple, hazel, elm, holly with English oak and ash as standard trees.

Hedgerows are important for a number of bird Priority Species several species have been recorded in the parish that are typical of this habitat: yellowhammer, linnet, reed bunting and bullfinch.

Wherstead was one of the many parishes covered by the Suffolk Hedgerow Survey, 1998-2012. The 2012 report on this project [15] shows that, although access was not granted to some landholdings, out of the 103 hedges surveyed for woody species:

29 contained 4 species or fewer

33 contained 5, 6 or 7 species

41 contained 8 species or more

Therefore at least 72% 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 in the early stages of the Suffolk Hedgerow Survey (2004) 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.



Hedgerow in the west of the parish

5.4.4.3 Activities and developments most likely to affect Hedgerow Priority Habitat in Wherstead

- 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;
- Fertilizer and other agro-chemical drift may degrade plant and invertebrate populations, especially where a crop extends to the hedge base;

5.4.5 Ponds

5.4.5.1 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

5.4.5.2 Ponds Priority Habitat in Wherstead

Information provided by Suffolk Biodiversity Information Service and from aerial photographs indicate that there are approximately 19 ponds broadly spread through the parish, although with a higher density in the eastern half of the parish. This may be an underestimate as this does not include all ponds within individual gardens. This represents a density of approximately 2 ponds per square km (1.9 ponds/km²) indicating that Wherstead contains a lower pond density than the rest of Babergh District (4.5 ponds/km²) and also lower than the pond density of the entire Suffolk County average of 5.9 ponds/km² [16].

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 near Thorington Hall

5.4.5.3 Activities and developments that could affect the Ponds Priority Habitat in Wherstead

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.

5.4.6 Lowland Dry Acid Grassland

5.4.6.1 General description of this Priority Habitat in the context of Suffolk

Acid grassland occurs on nutrient-poor, freely-draining soils with a pH ranging from 4.0-5.5. It is found mainly in the Sandlings and Breckland areas of Suffolk, but also in other areas where sand is dominant in the geology and soils. In Suffolk, many grasslands of this type are more strongly influenced by the free-draining nature of the soils than the pH, so that they are effectively 'parched grasslands'.

This grassland is characterised by a species-poor plant community, dominated by sheep's fescue, sheep's sorrel and common bent-grass. Other species often present in the sward include sand sedge, wavy hair-grass, tormentil and heath bedstraw. The summer-parched soils in Suffolk often support stands of acid grassland rich in both mosses and lichens. In addition, acid grassland in Suffolk is noted for a number of rare and nationally scarce spring annual plants. These include clustered clover, suffocated clover and mossy stonecrop.

Many of the invertebrates occurring in acid grassland are species that do not occur elsewhere. Ground-dwelling and burrowing invertebrates particularly favour the open acid grassland swards that typically contain bare sandy areas.

The loss of unimproved acid grassland mirrors the loss of other unimproved grassland types in Suffolk. Agricultural intensification, particularly the use of agrochemicals and irrigation has resulted in substantial loss of acid grassland in the county. Further losses can be attributed to an increase in urban development particularly around Ipswich. Recent assessments of the county's resource of this habitat are 820 hectares (2.7% of the national resource).

5.4.6.2 Lowland Dry Acid Grassland Priority Habitat in Wherstead

Wherstead Heath CWS and adjacent land supports a mosaic of habitats including acid grassland and lichen heath (see 5.2.2). There are also additional, large areas of acid grassland on the sloping ground to the east and west of the CWS.

An area of acid grassland is present on the western boundary of the parish near Belstead. This undulating area is rabbit grazed with patches of bare ground providing additional habitat for ground nesting invertebrates. On the highest ground lichen heath is present – a very scarce habitat in Suffolk.



Lowland Dry Acid grassland in north-west near parish boundary with Belstead

5.4.6.3 Activities and developments that could affect the Lowland Dry Acid Grassland Priority Habitat in Wherstead

As this habitat is generally found in small patches it is extremely vulnerable to piecemeal loss.

Examples of how such changes may occur include:

- Agricultural improvements through ploughing and reseeded, liming, irrigation, fertiliser and herbicide application and change of use to horse paddocks;
- Development for housing, recreational or infrastructure projects;
- Afforestation or smaller scale woodland plantation;
- Reduction in the rabbit population leading to an encroachment of open acid grassland heath by self-sown scrub, trees and bracken.

5.4.7 Coastal and Floodplain Grazing Marsh

5.4.7.1 General description of this Priority Habitat in the context of Suffolk

Grazing marsh is defined as periodically inundated pasture, or meadow, with ditches which maintain the water levels, containing standing, brackish or fresh water. The ditches are especially rich in plants and invertebrates. Almost all areas are grazed and some are cut for hay or silage. Sites may contain seasonal water-filled hollows and permanent ponds with emergent swamp communities, but not extensive areas of tall fen species like reeds; although they may abut with fen or reed swamp communities.

Grazing marshes are particularly important for the numbers of breeding waders they support and are also very important for overwintering wildfowl.

5.4.7.2 Coastal and Floodplain Grazing Marsh Priority Habitats in Wherstead

The small area on the north-eastern edge of the parish known as 'Bourne Bridge Grassland CWS' (see 5.2.2) is shown on the 'Magic' website as being Coastal and Floodplain grazing marsh.

5.4.7.3 Activities and developments that could affect the Coastal and Floodplain Grazing Marsh Priority Habitats in Wherstead

- Changes in groundwater regime resulting in drying out of the soils
- The location of this habitat borders the Ipswich fringe where there is high development pressure. However, the low-lying nature of this site means it is unlikely to be suitable for development.

5.4.8 Coastal Saltmarsh

5.4.8.1 General description of this Priority Habitat in the context of Suffolk

Coastal saltmarshes comprise the upper, vegetated portions of intertidal mudflats and are dependent on their presence. They tend to be restricted to relatively sheltered areas such as estuaries, saline lagoons and behind barrier islands.

Vegetation is comprised of salt tolerant species adapted to regular immersion by the tides, with clear zonation depending on tolerance level, tending to show more diversity in the mid-upper marsh. Glassworts and grasses dominate.

They are particularly important for wading birds and wildfowl offering refuge, feeding and breeding sites, and can also be important for fish and invertebrates.

5.4.8.2 Coastal Saltmarsh Priority Habitats in Wherstead

Saltmarsh occurs in a narrow band along the strand bordering the southern bank of the Orwell Estuary SSSI (also part of the Stour and Orwell Estuary SPA and Ramsar site). This is a very important habitat for invertebrates and also as high tide roosting areas for estuary birds.

5.4.8.3 Activities and developments that could affect the Coastal Saltmarsh Priority Habitats in Wherstead

- Erosion and coastal squeeze are most pronounced in south-east England. Rising sea levels and storm surges as a result of climate change can result in coastal squeeze and changes in sediment structure;
- Spread of cord grass hybrids (native/non-native mix);
- Other human influences including recreational pressure.

5.4.9 Mudflats

5.4.9.1 General description of this Priority Habitat in the context of Suffolk

Mudflats are sedimentary intertidal habitat created by deposition in low energy coastal environments, particularly estuaries and other sheltered areas. They are interlinked to saltmarshes, lying between them and subtidal channels.

Mudflats are important in their role of dissipating wave energy, reducing impacts upon saltmarshes, coastal defences and low-lying land. They also play a role chemically by sequestering contaminants.

They are usually devoid of vegetation, but despite low diversity, they have a high biological productivity and abundance of organisms such as worms and benthic microalgae. Mudflats support

large numbers of predatory birds and fish, providing feeding and resting areas for internationally important populations of migrant and wintering wildfowl.

5.4.9.2 Mudflats Priority Habitats in Wherstead

These are associated with the intertidal areas of the Orwell Estuary SSSI (also part of the Stour and Orwell Estuary SPA and Ramsar site) and represent important feeding grounds for birds.

5.4.9.3 Activities and developments that could affect the Mudflats Priority Habitats in Wherstead

- Any future barrage schemes such as water storage, amenity, tidal power and flood defence pose a threat to the integrity and ecological value of mudflats in estuaries;
- Diffuse and point source discharges from agriculture, industry and urban areas creating abiotic areas or algal mats which could impact invertebrate communities
- Fishing or bait digging;
- Human disturbance on bird populations;
- Introduction of new or non-native species;
- Higher sea level and increased storm frequency may affect the sedimentation patterns of mudflats and estuaries.

5.5 Other habitats of note in Wherstead

The churchyard of St Mary's, Wherstead, represents unimproved neutral grassland with abundant pignut, common knapweed, lady's bedstraw, sweet vernal grass, meadow foxtail and field woodrush, along with ox-eye daisy, mouse-ear hawkweed and meadow vetchling to name but a few species. Although it doesn't strictly meet the criteria for Lowland Hay Meadow Priority Habitat it is of notable biodiversity value. It appears to be being regularly mown and a slight relaxation of this mowing regime in the spring such as a 'no mow May' would be beneficial to allow flowering of many of these species. Removal of cuttings is key to retaining this species-rich sward.

There are a number of veteran trees in the parish, associated with the hedgerow network or as stand-alone trees. These provide valuable habitat for a range of species including birds, bats and invertebrates.

There are a number of patches of scrub within the parish, many associated with the edges of the woodlands and linear woodland corridors. Scrub is a much-undervalued habitat and is particularly important for nesting bird species including 'Red Listed' Birds of Conservation Concern migratory species such as nightingale and turtle dove which have been recorded in the parish. In 2020, there were 21 singing nightingales recorded in the parish which is an exceptional number. Similar numbers have been recorded in 2021 (David Walsh *Pers. Comm.*).

A small orchard is present at Thorington Hall which has been planted with a variety of traditional varieties.

5.6 Suffolk Priority Species in Wherstead

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, brown long eared, barbastelle, noctule, Leisler's and serotine. Hazel dormice have been recorded within the woodland and hedgerow network. There are a number of hedgehog records and also brown hare records for the arable farmland. Common seal and common porpoise have been recorded from the River Orwell. Additionally, water shrew has been recorded within the parish. N.B. Badger is also recorded and whilst is not a Priority species, it is protected under its own specific legislation.

Birds: A good number of Red List and Amber List Birds of Conservation Concern (BoCC) have been recorded, most of which are also Priority Species. Some will breed in the parish, others arrive as winter visitors or are recorded on passage.

Key species likely to be associated with woodland, hedgerows, scrub and farmland include skylark, yellowhammer, linnet, grey partridge, cuckoo, reed bunting, corn bunting and bullfinch. There are also records of the exceeding rare turtle dove. The species also associated with settlements include starling, song thrush, house sparrow and dunnock. Spotted flycatcher has also been recorded.

Key species associated with the River Orwell include dark-bellied brent goose, white fronted goose, curlew, lapwing, black-tailed godwit, scaup, common scoter and herring gull.

Swift and barn owl are also recorded and are Suffolk Priority Species. Swift is classed as Endangered as a GB breeding bird according to International Union for Conservation of Nature (IUCN) criteria. Barn owl is listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).

Invertebrates: There are numerous records of stag beetle within the parish as well as one priority butterfly species, white admiral. There are also several Priority moth species recorded (mainly research-only) including cinnabar, grey dagger, oak hook-tip, small phoenix, green brindled crescent, dot moth and white-line dart.

Reptiles and amphibians: There are several records of common toad within the parish. There are a number of records of reptiles, common lizard, slow worm, grass snake and adder have all been recorded.

In addition, nine Suffolk rare plant species have been recorded including two priority species: black poplar and small flowered catchfly are also priority species. In addition, common cudweed, goldenrod, dittander, hounds tongue, wood sorrel, loose silky bent and annual beard grass have been recorded in the parish.

For completeness it is also noted that there are records of plants listed as invasive on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) including Japanese Rose.

5.7 Built Environment and Associated Habitats

5.7.1 General description of this habitat in the context of Suffolk

This habitat refers broadly to the wide range of structures, materials and microhabitats found in the built environment, including (though not exclusively) farm buildings, houses, gardens, allotments and also land which may have a previous history of development but is now currently unused. Notably, certain previously developed 'brownfield' sites over 0.25 hectares with specialist

vegetation communities can meet the criteria of the Priority Habitat 'Open Mosaic Habitats on Previously Developed Land'.

Land associated with 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 such 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 Wherstead

The main settlement in Wherstead is located in the north-eastern corner of the parish around Bourne Hill and along The Strand. A second area is located around Wherstead Park, south of the A14, which is a mixture of residential and employment.

Also of note is the area known as 'Stevin's Site' which lies north of the A14 and west of the Strand. This area was the former site compound used for storage by the Stevin Construction company during the construction of the Orwell Bridge which commenced in 1979. The site includes a mosaic of hard standing and buildings interspersed by grassland with extensive banks of scrub.

5.7.3 Activities and developments that could affect this habitat in Wherstead

Brownfield sites can have a high wildlife value as they may contain a habitat mosaic with specialist plant communities, scarce invertebrates or significant numbers of a particular species. Proposals for development of such sites will likely require:

- detailed surveys which must be undertaken prior to vegetation removal or excavation;
- an Ecological Impact Assessment (EclA) to evaluate likely impacts and provide avoidance, mitigation and compensatory measures, as required;
- Enhancement measures to deliver Biodiversity Net Gain.

In terms of wildlife associated with houses and gardens, 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.
- Relaxing mowing of some grassland areas (manage on rotation)

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 Wherstead

The River Orwell and its tributaries including Freston Brook and Belstead Brook and other smaller streams represent a key part of the ecological network. As well as the habitat directly associated with the watercourses, there are other significant blocks of other habitat bordering the streams including wet woodland grading into drier woodland such as in Cutlers Wood and the Stalls Valley. The un-named stream along the southern boundary of the parish is also associated with wet woodland grading into dryer oak woodland and scrub with acid grassland beyond. This connects to a wide north-south linear broadleaf woodland which links to Wherstead/Spinney Woods. Links northward to The Grove on the Belstead/Wherstead parish boundary and also to Hill Farm Covert are less well defined but do exist via hedgerows.

It is notable that this network extends beyond the parish into the neighbouring parishes of Tattlingstone, Bentley, Belstead and Freston.

In addition, the railway provides a well-wooded corridor through the western part of the parish and also forms much of the north-western parish boundary. The wide grassy and wooded banks of the A14 also provide east to west connectivity, but the road itself represents a significant barrier to north-south movement of many species.

Natural England have identified a number of network enhancement and expansion zones based on the presence of Priority habitats where habitat enhancement and Improving ecological corridors is particularly recommended and these are shown on the MAGIC website <https://magic.defra.gov.uk/MagicMap.aspx> Much of the parish falls within Zone 2, which represents land immediately adjoining existing habitat patches that are small where habitat creation is likely to be useful.

A small section along the River Orwell is identified as Zone 1, representing land connecting existing patches of primary and associated habitats which is likely to be suitable for creation of primary habitat.

Figure 4 provides a spatial view of the above-named sites and broadly identifies where there are existing wildlife corridors within the landscape which contribute to the ecological network. The more defined corridors shown as thicker arrows, such as for broad belts of woodland connecting to other similar habitats, with thinner arrows used for a well-defined hedgerow network. The absence of an arrow on the map should not be taken as absence of connectivity as parts of the parish have not been fully assessed.

These ecological linkages should be safeguarded and also strengthened whenever such opportunities arise. Improving habitat connectivity between existing designated sites is also important. Additional habitat creation in the wider landscape such as new hedgerows will also 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

Wherstead contains a small part of the statutory designated site of Stour and Orwell Estuary SPA and Ramsar site, Orwell Estuary SSSI and Freston and Cutlers Woods with Holbrook Park SSSI, as well as four County Wildlife Sites. In addition to the above, nine Priority habitats have been identified within the parish. Other habitats of interest such as St Mary's churchyard have also been identified. The high numbers of singing nightingale is a reflection of the quality of scrub habitat in the Parish.

These habitats support a range of species including 58 protected and/or Priority species (5 amphibians, 28 birds, 14 mammals, 9 invertebrates and 2 plants, however this is likely to represent under-recording of the true total.

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 networks.

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Appendix: Figures 1-4 on Pages 41-44

Figure 1: Wherstead Parish and associated Suffolk Coast and Heaths AONB boundary (purple)

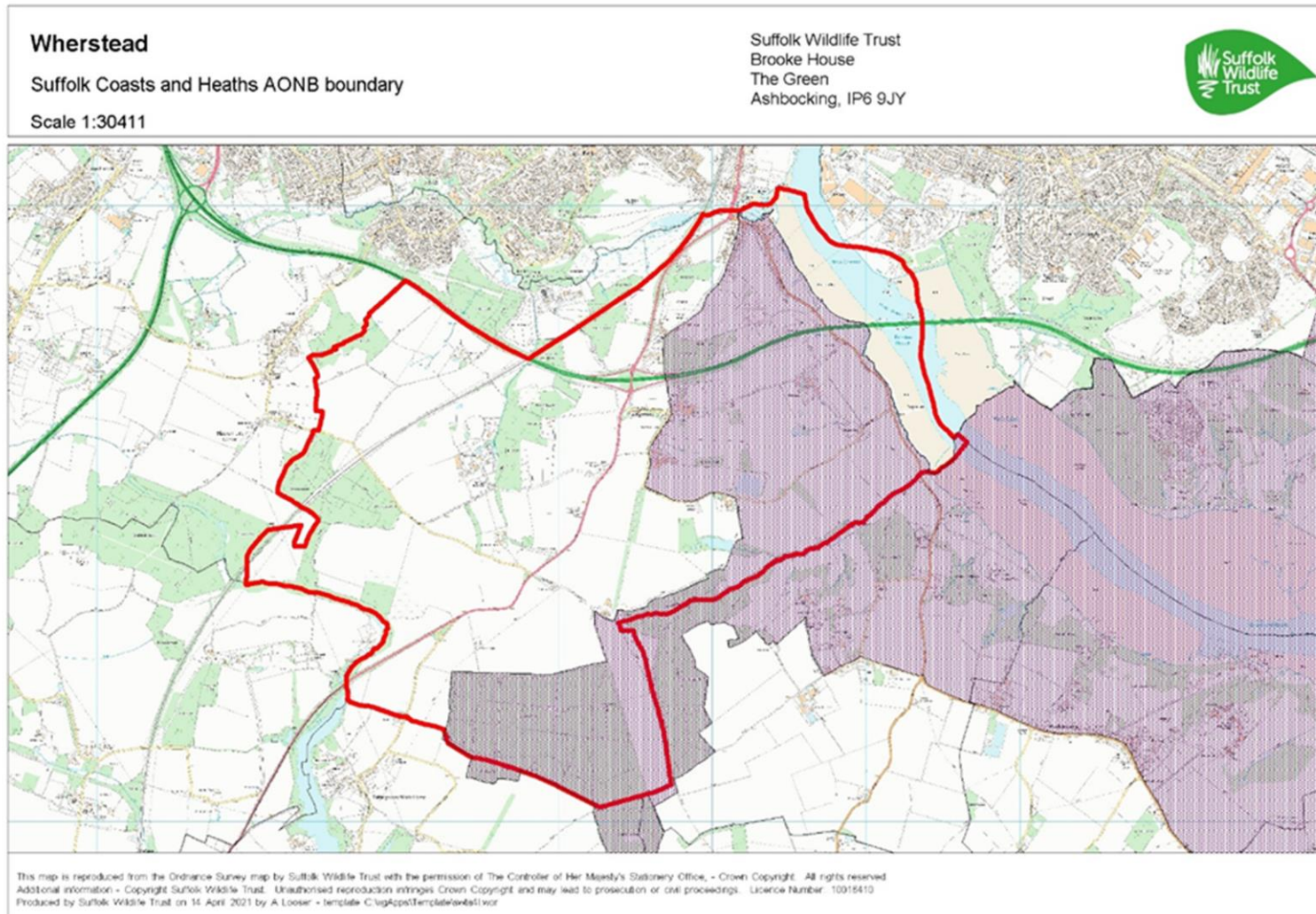


Figure 2: Suffolk Landscape Character Types ascribed to Wherstead (Source: Suffolk County Council)

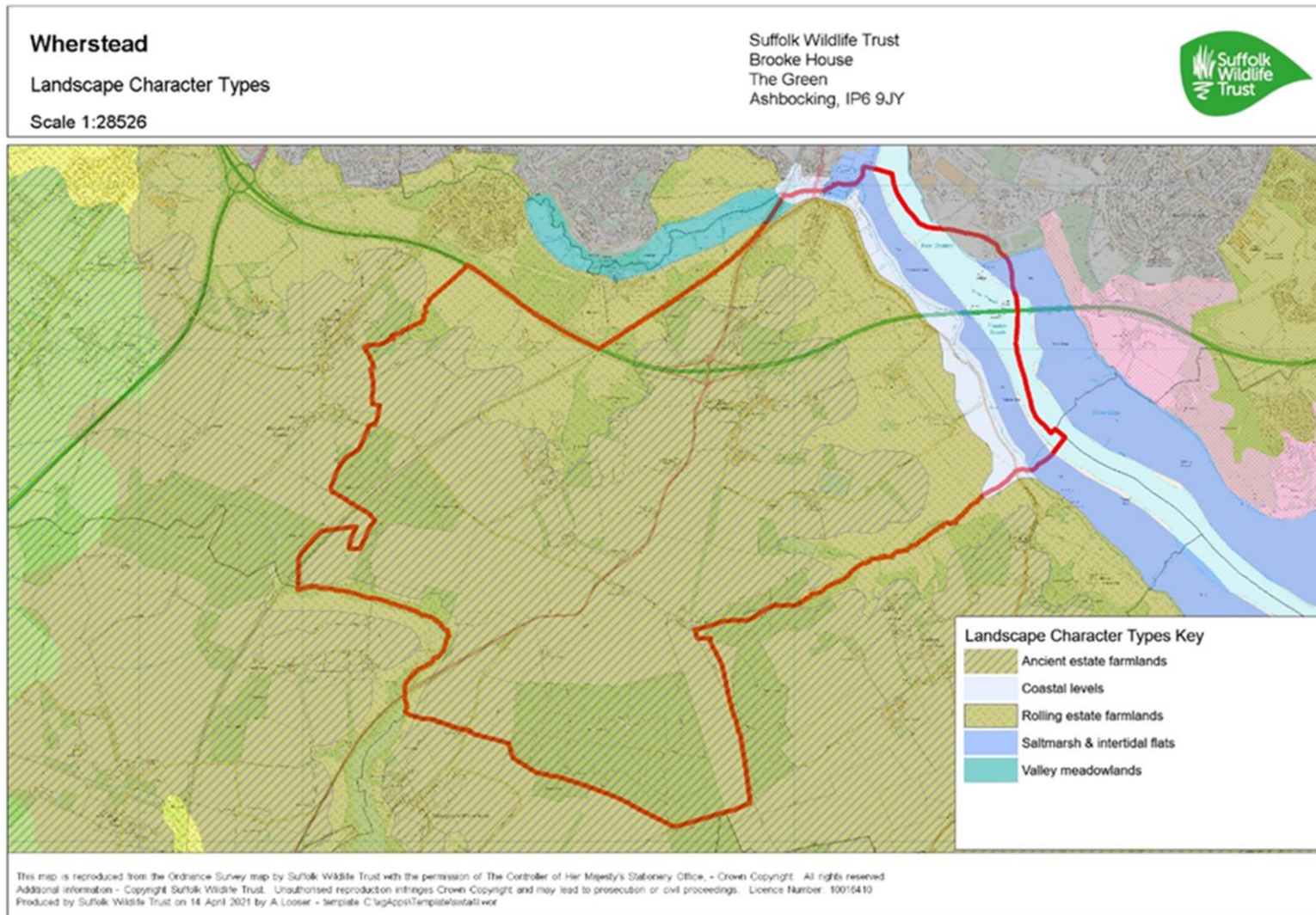


Figure 3: Location of designated sites for biodiversity

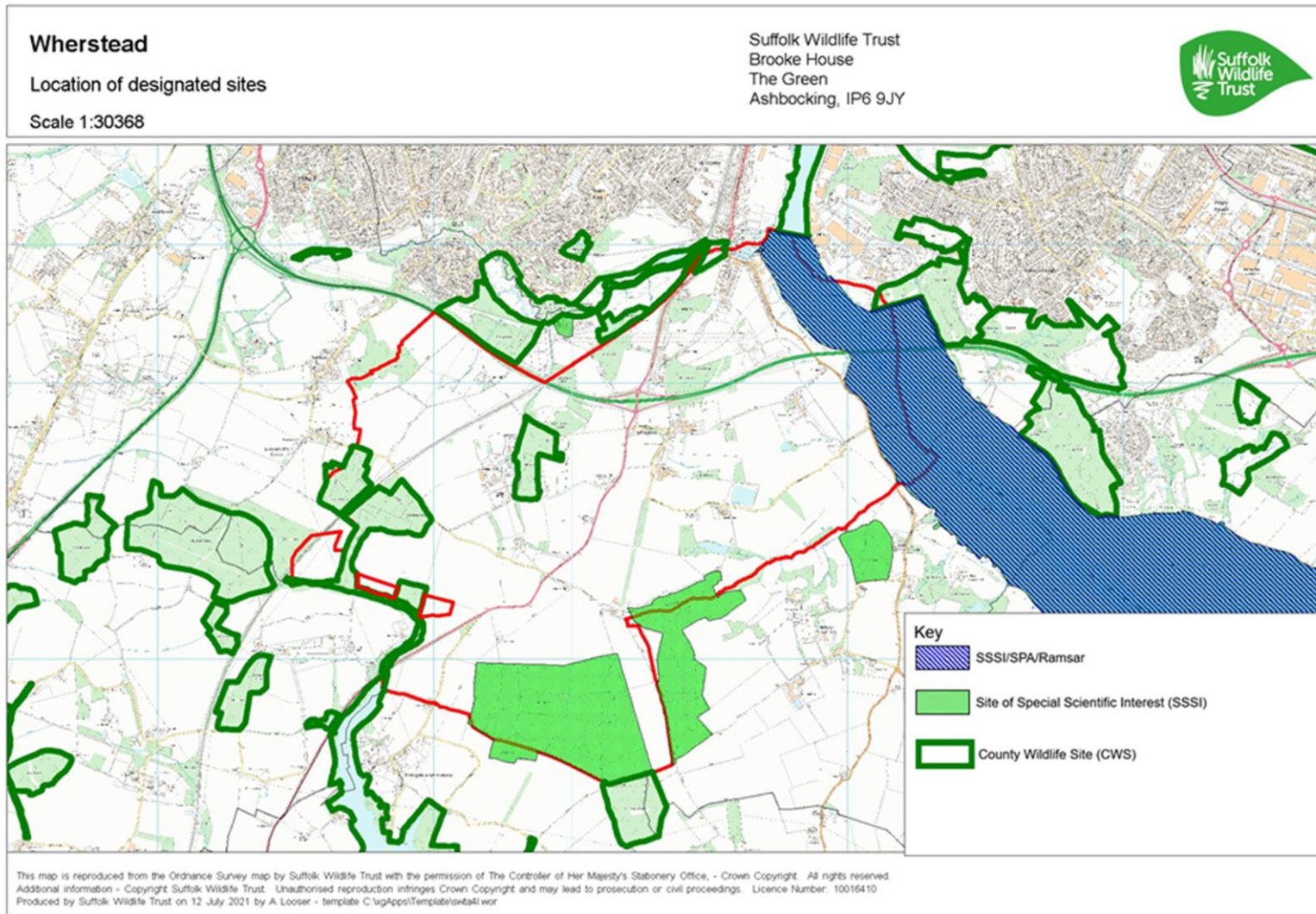
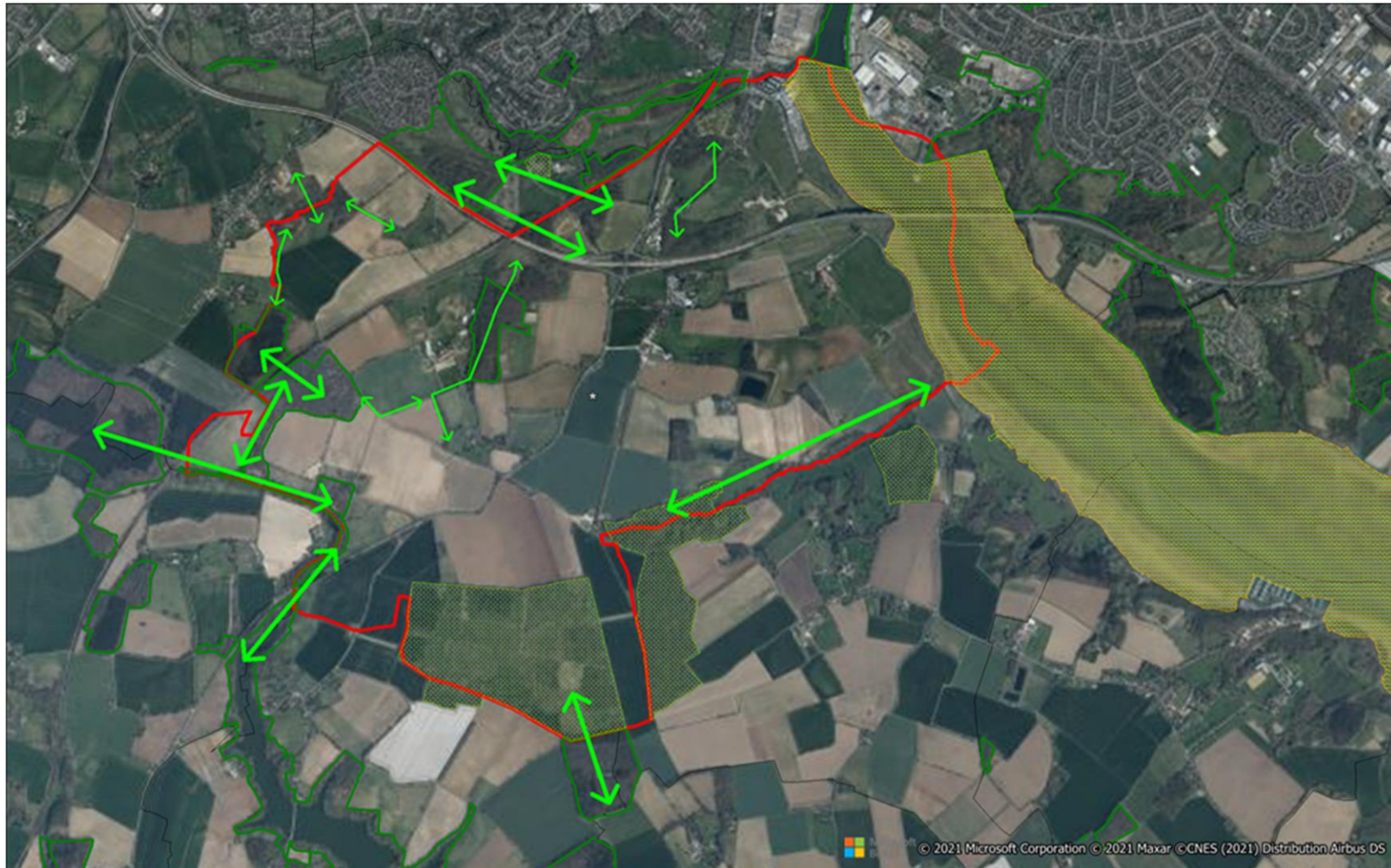


Figure 4: Broad ecological networks between habitat blocks: more defined corridors shown as thicker arrows



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