

The



Ecology Consultancy



New Buckenham Neighbourhood Plan, New Buckenham, Norfolk

Preliminary Ecological Appraisal

Report for New Buckenham Parish Council

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Contents

Summary of key issues	1
1 Introduction	3
2 Methodology	6
3 Results	11
4 Potential Issues and Recommendations	31
References	37
Appendix 1: Habitat Map	39
Appendix 2: Photographs	43
Appendix 3: Plant Species List	46
Appendix 4: Legislation and Planning Policy	49

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Summary of key issues

The Ecology Consultancy was commissioned to carry out a Preliminary Ecological Appraisal (PEA) comprising a Phase 1 habitat survey, protected species assessment and ecological evaluation of the parish of New Buckenham, and a small area of Old Buckenham, Norfolk. The purpose of the PEA is to inform the emerging Neighbourhood Plan for the village. The main findings of the PEA are as follows:

- New Buckenham parish comprises a small village surrounded by mixed farmland. The Neighbourhood Plan area includes an extension into Old Buckenham parish, which comprises a historic castle, a moat, broadleaved woodland, species-poor hedgerows and semi-improved grassland. The Neighbourhood Plan area is included in Appendix 1 of this report. This appraisal excludes New Buckenham Common.
- **Statutory and Non-Statutory Sites** - The parish lies 7.7km from the nearest Special Area of Conservation (SAC) and 11.5 km from the nearest Special Protection Area (SPA). Within the parish itself there was a single statutory designated site for nature conservation which was New Buckenham Common Site of Special Scientific Interest (SSSI), and two non-statutory County Wildlife Sites (CWS), both of which make up part of the Common. Within 2km of the parish boundary, there were also an additional four CWS. Future development will be required to implement measures to avoid impacts resulting from potential increased visitor pressure on New Buckenham Common SSSI, and Local County Wildlife Sites: Adj. New Buckenham Common and Land Adj. New Buckenham Common.
- **Habitats** - the New Buckenham parish contains habitats with suitability to support protected species, and of ecological value including hedgerows likely to be 'important' under the Hedgerow Regulations (1997). Habitats of Principal Importance (HPI) were present within the New Buckenham area itself which include broad-leaved woodland, hedgerows, and ponds. Impacts on these habitats must therefore be considered as part of any future development applications.
- **Protected Species** – Habitat for nesting birds (including Schedule 1 listed barn owl), reptiles, great crested newts, vascular plants, invertebrates, badger, water vole, otter, white-clawed crayfish, and bats are present within the parish. Future development will likely require targeted species surveys to be undertaken in accordance with current survey guidelines to establish a detailed baseline for the site(s) and should implement measures to safeguard and, where possible, enhance, the favourable conservation status of species and habitats, including measures to continue accommodating key species post-development.

- **Species of Principal Importance** – Hedgehog and common toad have been recorded frequently within the village and brown hare within the mixed farmland. In addition, there are habitats within the parish suitable for harvest mouse. Future development should implement measures to protect notable species such as these, and measures should be taken to continue accommodating these species post-development.
- **National and Local Planning Policies** – New development will be required to enhance the biodiversity value of their site in accordance with national and local planning policies in order to achieve a ‘net gain’ for biodiversity. Opportunities for ecological enhancement would need to be assessed on a site by site basis; however, generic opportunities for ecological enhancement across the parish are included within this report and production of a Green Infrastructure Strategy is recommended to help identify existing and potential habitat linkages at the landscape level with a view to further developing opportunities for ecological enhancement across the parish as and when individual development plans are brought forward.

1 Introduction

BACKGROUND TO COMMISSION

- 1.1 The Ecology Consultancy was commissioned by New Buckenham Parish Council in August 2018 to carry out a Preliminary Ecological Appraisal (PEA) survey of New Buckenham parish, which includes an extension into Old Buckenham Parish. This appraisal considers land within New Buckenham parish including an extension into Old Buckenham parish and excludes New Buckenham Common Site of Special Scientific Interest (SSSI) and County Wildlife Site (CWS) as indicated on the plan provided by the client (Appendix 1, Figure 1). New Buckenham was omitted from the survey area owing to its already well documented habitats and ecological value. It is however considered within this report in terms of potential impacts of future development on the site. The survey area is herein referred to as ‘the parish’.

SCOPE OF THE REPORT

- 1.2 The aim of this appraisal is to provide baseline ecological information about the parish. This will be used to identify potential ecological constraints and opportunities associated with any future development and/or to identify the potential need for additional survey work to further evaluate any impact that may affect the favourable conservation status of species and habitats or risk contravention of legislation or policy relating to protected species and nature conservation. Where necessary, avoidance, mitigation/compensation and enhancement measures have been recommended to ensure compliance.
- 1.3 This appraisal is based on the following information sources:
- a desk study of the parish and land within a 2km surrounding radius;
 - a review of a resident’s wildlife sightings questionnaire (Oxley 2018);
 - a Phase 1 habitat survey (JNCC, 2010) of the parish to identify and map the habitats present;
 - a protected species assessment of the parish to identify features with potential to support legally protected species; and
 - an evaluation of the parish’s importance for nature conservation.
- 1.4 This appraisal has been prepared with reference to best practice guidance published by the Chartered Institute for Ecology and Environmental Management (CIEEM, 2017)

and as detailed in British Standard 42020:2013 *Biodiversity - Code of Practice for Biodiversity and Development* (BSI, 2013).

- 1.5 The survey, assessment and report were conducted and written by Beth Holmes BSc (Hons) GradCIEEM an Ecologist with over three years' experience who is competent in carrying out Phase 1 habitat surveys and protected species assessments.
- 1.6 A habitat map of the parish produced by The Ecology Consultancy (October 2018) is provided in Appendix 1.

SITE CONTEXT AND STATUS

- 1.7 The parish of New Buckenham comprises a central village surrounded by outlying houses and mixed farmland, with a large common in the east (New Buckenham Common SSSI). The parish covers an area of approximately 1.73km² and is situated in the Breckland District of Norfolk. The parish is centred on Ordnance Survey National Grid reference TM 08827 90421.
- 1.8 Habitats in the village predominantly comprised scattered trees, ponds, hedgerows, amenity grassland, introduced shrub, hard standing, and building. The surrounding farmland comprised semi-natural broad-leaved woodland, arable, semi-improved field-margins, species-poor and species-rich hedgerows, ditches, a stream, scrub, tall ruderal vegetation, mature scattered and hedgerow trees, and grazed pasture. The Neighbourhood Plan area includes an extension into Old Buckenham parish, which comprised an historic castle, a moat, broad-leaved woodland, species-poor hedgerows with trees and good quality semi-improved grassland.
- 1.9 The wider landscape comprised mixed farmland with extensive ditch, stream, and pond networks. The river Tas is situated 2km from the east boundary of the parish.

RELEVANT LEGISLATION AND PLANNING POLICY

- 1.10 The following key pieces of nature conservation legislation are relevant to this appraisal. A more detailed description of legislation is provided in Appendix 5:
 - The Conservation of Habitats and Species Regulations 2017 (commonly referred to as the Habitats Regulations);
 - Wildlife and Countryside Act 1981 (as amended);
 - Natural Environment and Rural Communities Act 2006; and

- Wild Mammals (Protection) Act 1996.

1.11 The National Planning Policy Framework (Department of Communities and Local Government, 2018) requires local authorities to avoid and minimise impacts on biodiversity and should provide net gains in biodiversity when taking planning decisions.

1.12 Other planning policies at the local level which are of relevance to this development include the Breckland Local Plan (2015). Further information is provided in Appendix 5.

2 Methodology

DESK STUDY

2.1 The following data sources were reviewed to provide information on the location of statutory designated sites¹, non-statutory designated sites², legally protected species³, Species and Habitats of Principal Importance⁴ and other notable species⁵ and notable habitats⁶ that have been recorded within a 2km radius of the parish:

- Norfolk Biodiversity Information Service (NBIS), the local Biological Records Centre, principally for species records and information on non-statutory sites;
- New Buckenham's Resident's Wildlife Sightings Survey (Oxley 2018);
- New Buckenham's Bat survey data (Newson 2018);
- New Buckenham – The Movie (Trewin 2018);
- MAGIC (<http://www.magic.gov.uk/>) - the Government's on-line mapping service; and
- Ordnance Survey mapping and publicly available aerial photography.

HABITAT SURVEY

2.2 A habitat survey of the parish was carried out on the 25 September 2018 in warm, clear, dry conditions. It covered the entire parish, where access was available, excluding New Buckenham Common, private gardens and property, and included the castle and moat to the west of the village. Habitats were described and mapped following standard Phase 1 habitat survey methodology (JNCC, 2010). Habitats were marked on a paper base map and subsequently digitised using ESRI ArcGIS software. Habitats were also

¹ Statutory designations include Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, National Nature Reserves (NNR), Sites of Special Scientific Interest (SSSI) and Local Nature Reserves (LNR).

² Non-statutory sites are designated by local authorities (e.g. Sites of Importance for Nature Conservation or Local Wildlife Sites).

³ **Legally protected species** include those listed in Schedules 1, 5 or 8 of the Wildlife and Countryside Act 1981; Schedule 2 of the Conservation of Habitats and Species Regulations 2017; or in the Protection of Badgers Act 1992.

⁴ **Species of Principal Importance** are those defined by Section 41 of the Natural Environment and Rural Communities Act, 2006.

⁵ **Notable species** include Species of Principal Importance under the Natural Environment and Rural Communities Act 2006; Local Biodiversity Action Plan (LBAP) species; Birds of Conservation Concern (Eaton *et al.*, 2015); and/or Red Data Book/nationally notable species (JNCC, undated).

⁶ **Notable habitats** include Habitats of Principal Importance under the Natural Environment and Rural Communities Act, 2006; those included in an LBAP; Ancient Woodland Inventory sites; and Important Hedgerows as defined by the Hedgerow Regulations 1997.

assessed against descriptions of Habitat of Principal Importance as set out by the JNCC (BRIG, 2008)⁷.

- 2.3 Records for dominant and notable plants are provided, as are incidental records of birds and other fauna noted during the course of the habitat survey.
- 2.4 Common names are used where widely accepted – for amphibians, birds, fish, mammals, reptiles and vascular plants. Scientific names are provided for other groups but at first mention only if there is also an accepted common name.
- 2.5 The parish was also surveyed for the presence of invasive plant species as defined by Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). However, detailed mapping of such species is beyond the scope of this commission and the location on habitat plan are indicative only.
- 2.6 Target notes are used to provide information on specific features of ecological interest (e.g. a tree with bat roosting potential) or habitat features that were too small to be mapped.

PROTECTED AND NOTABLE SPECIES ASSESSMENT

- 2.7 The suitability of the parish for legally protected species was assessed on the basis of relevant desk study records⁸ combined with field observations from the habitat survey. The likely value of habitat for protected species occurrence was ranked on a scale from ‘negligible’ to ‘present’ as described in Table 2.1.
- 2.8 The assessment of habitat suitability for protected or notable species was based on professional judgement drawing on experience of carrying out surveys of a large number of urban and rural sites and best practice survey guidance on identifying field signs which includes that for the following species: badger (e.g. Roper, 2010); bats (Collins (ed.), 2016); hazel dormouse (English Nature, 2006); great crested newt (Langton *et al.* 2001); otter (Chanin, 2003); reptiles (Gent and Gibson, 2003); and water vole (Strachan *et al.* 2011).

⁷ Data required to confirm that certain habitats (including rivers and ponds) meet criteria for Habitats of Principal Importance is beyond that obtained during a Phase 1 habitat survey. In these cases, the potential for such habitats to meet relevant criteria is noted but further surveys to confirm this assessment may be recommended.

⁸ Primarily dependent on the age of the records, distance from the site and types of habitats at the site.

Table 2.1: Protected species assessment categories

Category	Description
Present	Presence confirmed from the current survey or by recent, confirmed records.
High	Habitat present provides all of the known key requirements for a given species/species group. Local records are provided by desk study. The parish is within or close to a national or regional stronghold for a particular species. Good quality surrounding habitat and good connectivity.
Moderate	Habitat present provides all of the known key requirements for a given species/species group. Several desk study records and/or site within national distribution and with suitable surrounding habitat. Factors limiting the likelihood of occurrence may include small habitat area, barriers to movement and disturbance.
Low	Habitat present is of relatively poor quality for a given species/species group. Few or no desk study records. However, presence cannot be discounted on the basis of national distribution, nature of surrounding habitats or habitat fragmentation.
Negligible	Habitat is either absent or of very poor quality for a particular species or species group. There were no desk study records. Surrounding habitat unlikely to support wider populations of a species/species group. The parish may also be outside or peripheral to known national range for a species.

2.9 The findings of this assessment establish the ecological baseline of the parish and give an indication of the need for protected species surveys that are required to achieve compliance with relevant legislation should development be proposed which would affect these species. Surveys are commonly required for widespread species such as bats, great crested newt, reptiles and badger; but may be necessary for other species if suitable habitat is present.

2.10 Surveys may also be recommended where a site is judged to be of low suitability for a particular species/species group. However, in some cases there may be opportunities to comply with legislation, without further survey, through precautionary measures prior to and during construction.

SITE EVALUATION

2.11 The ecological value of the parish has been evaluated broadly following guidance issued by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018) which ranks the nature conservation value of a site according to a geographic scale of reference: international, national, regional, county/metropolitan, district/borough, local/parish or of value at the site scale. In evaluating the nature conservation value of the parish, the following factors were considered: nature conservation designations,

such as New Buckenham Common SSSI and CWS; species/habitat rarity; naturalness; fragility and connectivity to other habitats;

DATA VALIDITY AND LIMITATIONS

2.12 Every effort has been made to provide a comprehensive description of the parish' however, the following limitations apply to this assessment.

- The protected species assessment provides a preliminary view of the likelihood of protected species occurring in the parish. It should not be taken as providing a full and definitive survey of any protected species group. Additional surveys may be recommended, if on the basis of the preliminary assessment or during subsequent surveys, it is considered reasonably likely that protected species may be present.
- The ecological evaluation is preliminary and may change subject to the findings of further ecological surveys (should these be required).
- Even where data for a particular species group is provided in the desk study, a lack of records for a defined geographical area does not necessarily mean that there is a lack of ecological interest, the area may simply be under-recorded.
- Where only four figure grid references are provided for protected species by third parties, the precise location of species records can be difficult to determine, and they could potentially be present anywhere within the given 1km x 1km square. Equally six figure grid references are accurate to the nearest 100m only.
- The Phase 1 habitat survey does not constitute a full botanical survey or provide accurate mapping of invasive plant species.
- Buildings and tree assessments were inspected from ground level only.
- Access limitations meant that many outlying fields were not accessed, and others were surveyed from one field edge only or from one view point. This has meant a detailed survey of mature trees, in field ponds, and other boundary features was not possible (these areas are mapped on Figure 2, Appendix 1). The Phase 1 habitat map in the Appendix 1 of this report should therefore not be taken as a complete representation of all habitat within the parish. Similarly, private gardens were not accessed during the survey and, as such, all habitat types within the village have not been mapped. A full detailed appraisal of any specific land parcels proposed for development will therefore be required at a later stage to inform the planning process.

- Owing to the time of year when this survey was carried out (September), post the main flowering season, many plant species may not be detectable and therefore the species list within this report should not be taken as a definitive list of species present within the parish.
- Owing to the particularly dry summer many of the waterbodies surveyed were dry at the time of the survey and therefore the habitats described as dry are likely to contain water during periods outside of prolonged periods of little to no rainfall.
- Ecological survey data is typically valid for two years unless otherwise specified.

2.13 Despite these limitations, it is considered that this report accurately reflects the habitats present, their biodiversity values and the potential of the parish to support protected and notable species.

3 Results

DESIGNATED SITES

Statutory designated nature conservation sites

- 3.1 The parish lies 7.7km from the Norfolk Valley Fens Special Area of Conservation (SAC) and 11.5 km from Breckland Special Protection Area (SPA). The parish contains a single statutory designated site for nature conservation, which is New Buckenham Common Site of Special Scientific Interest (SSSI). In addition, there was one County Wildlife Site (CWS) adjacent the northern boundary of New Buckenham Common SSSI and one to the south of it. There were an additional four CWSs within 2km of the parish.

Table 3.1: Statutory Designated Sites

Site Name	Distance from parish and orientation	Reason for designation
New Buckenham Common (SSSI)	Within the parish covering the majority of the north-east	<p>New Buckenham Common is a large area of unimproved grassland with a traditional management of light grazing by cattle. A variety of grassland types are present which reflect the alkalinity/acidity and drainage of the underlying soils.</p> <p>Neutral grassland covers the majority of the site with sheep's fescue <i>Festuca ovina</i> and common bent <i>Agrostis capillaris</i> the principal species on the drier soils. Associated species include cowslip <i>Primula veris</i>, meadow saxifrage <i>Saxifraga granulata</i>, bird's foot trefoil <i>Lotus corniculatus</i>, adder's tongue <i>Ophioglossum vulgatum</i> and the largest colony of green-winged orchids <i>Orchis morio</i> now remaining in Norfolk.</p> <p>Poorly drained soils, in the area of a small stream that bisects the site, are dominated by marsh foxtail <i>Alopecurus geniculatus</i> and tufted hair grass <i>Deschampsia caespitosa</i> with frequent common quaking grass <i>Briza media</i>, cuckoo flower <i>Cardamine pratensis</i>, hard rush <i>Juncus inflexus</i> and meadowsweet <i>Filipendula ulmaria</i>.</p> <p>Small areas of calcareous grassland occur on hummocks in an area of undulating ground. A number of calcicoles are present including large thyme <i>Thymus pulegioides</i>, dwarf thistle <i>Cirsium acaule</i>, hoary plantain <i>Plantago media</i> and lady's bedstraw <i>Galium verum</i>.</p> <p>Acidic grassland has developed on free-draining soils in an area of old sand pits. Sheep's fescue is dominant with frequent sheep's sorrel <i>Rumex acetosella</i>, common mouse-ear <i>Cerastium fontanum</i>, harebell <i>Campanula rotundifolia</i> and scattered bushes of gorse <i>Ulex europaeus</i>.</p> <p>A sizeable pool is present on the site and contains a number of water plants including common water crowfoot <i>Ranunculus aquatilis</i>, water starwort <i>Callitriche stagnalis</i> agg. and lesser spearwort <i>Ranunculus flammula</i>. Small seasonal ponds occur in the undulating ground. These wetland features provide additional interest to the site.</p>

Table 3.1: Statutory Designated Sites

Site Name	Distance from parish and orientation	Reason for designation
		Hawthorn scrub is locally well developed, and provides a habitat for nesting birds including whitethroat, lesser whitethroat and linnet.

Non-statutory designated nature conservation sites

3.2 The parish is subject to two non-statutory nature conservation designations: Adj. New Buckenham Common County Wildlife Site (CWS), and Land Adj. New Buckenham Common CWS. A further three CWS are present within 2km of the parish boundary (see Table 3.1 below).

Table 3.1: Non-Statutory Designated Sites

Site Name	Distance from site and orientation	Reason for designation
Adj. New Buckenham Common (CWS)	Adjacent the northern boundary of New Buckenham Common in the east of the parish	This site is an area of dense neutral scrub bounded by a road with a hedgerow. Dense hawthorn and brambles (<i>Rubus fruticosus</i> agg.) with some blackthorn (<i>Prunus spinosa</i>) dominate the site interspersed by patches of willowherb (<i>Epilobium</i> spp.) The margin adjoining the road is clear of scrub with typical hedgerow plants (based on the 1985 habitat survey (NWT).
Land adj. New Buckenham Common (CWS)	Adjacent the southern boundary of New Buckenham Common in the east of the parish	<p>The site lies immediately to the south of New Buckenham Common (SSSI) and is separated from it by the B1113 road. It comprises a large area of moderately species-rich neutral grassland. Most of the site is well-drained but some parts become seasonally flooded along the ditch lines.</p> <p>Well-drained, semi-improved neutral grassland which is heavily grazed to a short turf, with numerous tussocks and small, low mounds. Tufted hair-grass (<i>Deschampsia cespitosa</i>) and red fescue (<i>Festuca rubra</i>) are abundant, and the turf also supports common bent (<i>Agrostis capillaris</i>), meadow foxtail (<i>Alopecurus pratensis</i>) and Yorkshire-fog (<i>Holcus lanatus</i>). Bulbous buttercup (<i>Ranunculus bulbosus</i>) is frequent throughout the sward, but in general, forbs are infrequent.</p> <p>There are scattered patches of hawthorn (<i>Crataegus monogyna</i>), dog-rose (<i>Rosa canina</i> agg.) and bramble (scrub, and lines of horse-chestnut (<i>Aesculus hippocastanum</i>) have been planted along the track and the B1113 road. Several large, senescent oaks (<i>Quercus robur</i>) are present in an old, defunct hedgeline which crosses the grassland.</p> <p>Where drainage is impeded along the ditches, the grassland is marshy and is characterised by stands of hard rush (<i>Juncus inflexus</i>). Other species include common mouse-ear (<i>Cerastium fontanum</i>), lesser celandine (<i>Ranunculus ficaria</i>) and cuckoo flower (<i>Cardamine pratensis</i>). The ditches and hollows are dominated by plicate sweet-grass (<i>Glyceria</i></p>

Table 3.1: Non-Statutory Designated Sites

Site Name	Distance from site and orientation	Reason for designation
		<i>plicata</i>), with some annuals including annual meadow-grass (<i>Poa annua</i>) and common chickweed (<i>Stellaria media</i>).
Jubilee Plantation (CWS)	1km W	<p>This site is a moderately sized woodland, probably of recent origin. The canopy is a mixture of mature and over-mature trees and the ground flora is most diverse to the west. The woodland is very varied in its structure and includes areas cleared for re-planting.</p> <p>Mature and over-mature English oak form a high proportion of the canopy throughout with abundant sycamore (<i>Acer pseudoplatanus</i>). Ash (<i>Fraxinus excelsior</i>) becomes dominant in the west where the canopy is most closed whilst birch (<i>Betula pendula</i>) is common across the whole site. Fallen timber and standing deadwood has been cleared from the eastern end but remains elsewhere. The shrub layer includes frequent stools of hazel (<i>Corylus avellana</i>) and scattered bushes of hawthorn and willow (<i>Salix cinerea</i>). The eastern half of the wood is very open but includes frequent elder (<i>Sambucus nigra</i>). The ground flora is of dog's mercury (<i>Mercurialis perennis</i>) and nettle (<i>Urtica dioica</i>) on richer soils but includes ground-ivy (<i>Glechoma hederacea</i>), wood avens (<i>Geum urbanum</i>) and herb-Robert (<i>Geranium robertianum</i>). The eastern half is dominated by nettle, but open areas contain a grassland flora with species such as perforate St. John's-wort (<i>Hypericum perforatum</i>) and creeping cinquefoil (<i>Potentilla reptans</i>). Regeneration of canopy species is good, particularly of sycamore and birch.</p>
Warren & Nuttery Plantation (CWS)	1.4km W	<p>This site is a medium sized broad-leaved woodland of interest for its ground flora and for the presence of some exceptionally large tree specimens.</p> <p>The woodland has a closed high canopy of several species including English oak, beech (<i>Fagus sylvatica</i>), and lime (<i>Tilia x vulgaris</i>) but mature sycamore dominates. Within the wood there are a number of very large trees, clearly pre-dating the rest of the wood and possibly originating in parkland. These are mainly beech and oak.</p> <p>The understory has scattered bushes of elder (<i>Sambucus nigra</i>) and locally spindle (<i>Euonymus europaeus</i>) and stools of hazel. Both cherry-laurel (<i>Prunus laurocerasus</i>) and rhododendron (<i>Rhododendron ponticum</i>) have been planted in the wood and the former is often present in large blocks. Box (<i>Buxus sempervirens</i>) is also found, as are small stands of yew (<i>Taxus baccata</i>) and holly (<i>Ilex aquifolium</i>). Bramble is found occasionally but elsewhere the ground flora is dominated by dog's mercury with nettle. Extensive blocks of daffodil (<i>Narcissus</i> spp.) are common whilst carpets of bluebell (<i>Hyacinthoides non-scripta</i>) occur occasionally.</p> <p>Near the middle of the site is an area which has been underplanted with a variety of conifers, many of which are beginning to mature.</p>

Table 3.1: Non-Statutory Designated Sites

Site Name	Distance from site and orientation	Reason for designation
Low Plantation (CWS)	1.4km W	<p>This site is made up of two distinct blocks of woodland with an area of marshy grassland between. To the east of the site is a small shallow lake with wooded islands. Both areas of woodland contain large amounts of fallen deadwood and regeneration of canopy trees is quite good. The site is bounded by a stream to the north. The site has tor-grass (<i>Brachypodium pinnatum</i>) which is rare in Norfolk.</p> <p>The western block of woodland has a canopy dominated by sycamore with ash (<i>Fraxinus excelsior</i>), English oak and scattered beech (<i>Fagus sylvatica</i>), the latter occurring largely along the northern edge of the stream.</p> <p>The understorey is formed by frequent hazel although large areas are dominated by snowberry (<i>Symphoricarpos rivularis</i>) whilst cherry-laurel (<i>Prunus laurocerasus</i>) and rhododendron (<i>Rhododendron ponticum</i>) form dense patches locally. The ground flora is dominated by dog's mercury (<i>Mercurialis perennis</i>) with frequent garlic mustard (<i>Alliaria petiolata</i>), and tor-grass.</p> <p>In the eastern block where the ground is wetter alder (<i>Alnus glutinosa</i>) dominates the canopy with abundant downy birch (<i>Betula pubescens</i>), sycamore and ash. Here the understorey contains abundant hazel, much occurring as huge old coppice stools. The ground flora is similar to that found in the west.</p> <p>The grassland is quite rank and appears to be ungrazed. The sward contains tussocks of Yorkshire fog (<i>Holcus lanatus</i>), meadow foxtail (<i>Alopecurus pratensis</i>) and false oat-grass (<i>Arrhenatherum elatius</i>).</p>
Carlton Rode Fen (CWS)	2km E	<p>An area of river valley dried fen, marshy grassland, woodland and scrub adjacent to the River Tas, which crosses the site.</p> <p>The site is designated for its mosaic of semi-natural habitats comprising marshy grassland, plantation woodland, broad-leaved semi-natural woodland, Carr woodland, scrub, a series of mesotrophic ponds with a connecting dyke, and remnants species-rich basic marshy grassland</p> <p>The northwest of the site is marshy grassland dominated in places by soft-rush (<i>Juncus effuses</i>) and common reed (<i>Phragmites australis</i>) elsewhere. Tufted hair-grass (<i>Deschampsia cespitosa</i>), blunt-flowered rush (<i>Juncus subnodulosus</i>) and sedges (<i>Carex</i>) are abundant. Forbs are frequent throughout and include buttercup (<i>Ranunculus</i>), common fleabane (<i>Pulicaria dysenterica</i>), hemp-agrimony (<i>Eupatorium cannabinum</i>), and ragged-Robin (<i>Lychnis flos-cuculi</i>).</p> <p>The southwest of the site is an area of plantation (<i>Salix alba</i>) woodland. The understorey comprises hawthorn (<i>Crataegus monogyna</i>) and blackthorn (<i>Prunus spinosa</i>).</p> <p>The broad-leaved semi-natural woodland comprises oak (<i>Quercus robur</i>), ash (<i>Fraxinus excelsior</i>) and willow (<i>Salix</i>).</p> <p>The mesotrophic ponds occupy the north-eastern 'arm' of the site, with surrounding carr woodland, scrub and fragments of</p>

Table 3.1: Non-Statutory Designated Sites

Site Name	Distance from site and orientation	Reason for designation
		<p>marshy grassland adjacent to the northern boundary. A narrow dyke connecting two of the ponds supports moderately species-rich emergent and marginal vegetation which includes yellow iris, hemp-agrimony, water mint (<i>Mentha aquatica</i>), gipsywort (<i>Lycopus europaeus</i>), water-cress and mare's-tail (<i>Hippuris vulgaris</i>).</p> <p>Carr woodland supports patches of dog's mercury, with wild angelica (<i>Angelica sylvestris</i>), hedge woundwort (<i>Stachys sylvatica</i>), marsh woundwort (<i>Stachys palustris</i>), bulrush <i>Typha latifolia</i> and broad buckler-fern <i>Dryopteris dilatata</i>.</p> <p>Rank, species-rich basic marshy grassland to the north of the ponds with frequent meadowsweet, hedge woundwort, wild angelica, hogweed <i>Heracleum sphondylium</i> and hedge bindweed <i>Calystegia sepium</i> ssp. <i>sepium</i>. Tufted vetch <i>Vicia cracca</i>, agrimony <i>Agrimonia eupatoria</i>, hoary ragwort <i>Senecio erucifolius</i> and pepper-saxifrage <i>Silaum silaus</i> occur in patches of finer sward.</p>

Habitat inventories and landscape-scale conservation initiatives

Ancient woodland

- 3.3 A search of the MAGIC database revealed no ancient woodland within 2km radius of the parish.

Veteran trees

- 3.4 The data search returned records of trees with veteran tree status within the parish; one pedunculate oak located within arable farmland to the north-east of the parish, and one pedunculate oak tree within New Buckenham Common SSSI. A further 73 veteran trees are distributed throughout the landscape within a 2km radius of the parish, the closest of which (two oaks) lie 55m to the south-west of the parish boundary.

Habitats of Principal Importance (HPI)

- 3.5 A search of the MAGIC database revealed HPI within the parish itself which was broad-leaved woodland, numerous ponds, and lowland meadow (New Buckenham Common SSSI). In the wider landscape, several small parcels of broad-leaved woodland are scattered throughout the landscape within a 2km radius of the parish, of which the closest woodland block outside of the parish is 95m from the eastern boundary. In addition, numerous ponds are distributed throughout the landscape within 2km of the parish boundary.

PHASE 1 HABITAT SURVEY

Overview

- 3.6 Habitats in the village predominantly comprised scattered trees, hedgerows, ponds amenity grassland, introduced shrub, hard standing, and buildings. The remaining parish comprises mixed arable land which include small semi-natural broad-leaved woodland, arable, semi-improved grass-margins, species-poor and species-rich hedgerows, ditches, a stream, scrub, tall ruderal vegetation, mature scattered and hedgerow trees, and grazed pasture. The Neighbourhood Plan area includes an extension into Old Buckenham parish, which comprised a historic castle, a moat, broadleaved woodland, species-poor hedgerows and semi-improved grassland.
- 3.7 Phase 1 habitats types are mapped in Figure 1, Appendix 1, areas are given in Table 3.2. A description of dominant and notable species and the composition of each habitat is provided below.

Table 3.2: Phase 1 Habitat Areas

Phase 1 Habitat	Extent (m ²)	%
Arable	980030.53	52
New Buckenham Common	350891.69	19
Improved grassland	208121.98	11
Residential Area	115292.85	6
Hardstanding	83284.60	4
Semi-improved grassland	56447.87	3
Amenity grassland	29487.33	1
Woodland	25623.02	1
Waterbodies (ponds, ditches, moat, stream)	21966.05	1
Scrub	15454.64	< 1
Tall ruderal	1384.40	<1

Habitat description

Arable

- 3.8 Stubble fields and freshly tilled fields were present in the north-east and south-east of the village and comprised approximately 52% of the parish area. Bare ground was dominated by frequent dove-foot crane's-bill and occasional hedge mustard and groundsel. Fields were viewed from one edge only. The fields in the north-east were largely surrounded by tall, species rich-hedgerows with trees and ditches. The fields to the south-east were largely bound by scattered mature broad-leaved trees and ditches.

- 3.9 Arable crop was present in fields to the south-east of the village. The fields were bound by species-poor semi-improved margins and ditches. Access to these fields was not possible on the day of the survey and, as such, the species composition and boundary features were not assessed in detail.
- 3.10 Grass ley was present in a large field to the south-west of the village. Access to this field was not possible on the day of the survey, as such the species composition and boundary features were not assessed in detail.

Nature Reserves

- 3.11 New Buckenham Common SSSI and the two adjoining CWS make up 19% of the parish and, although the reserve area was not surveyed as part of this assessment, it is known to comprise largely unimproved and good quality semi-improved grassland (Natural England, 2013). The habitats present within the reserves are detailed in Tables 3.1 and 3.2 above.

Improved grassland

- 3.12 Improved grazing pasture was present to the west of the castle moat and to the south of the village comprising approximately 11% of the parish. Full access to these fields was not possible on the day of the survey and, as such, the species composition and boundary features were not assessed in detail. The sward within the cattle-grazed fields in the west of the village was long (10cm+) forming tussocks, whilst the sheep-grazed fields to the south-west of the village comprised a cropped short (<3cm) as a result of intensive grazing.
- 3.13 Improved grassland field margins were present surrounding the arable field to the south-east of the village and within the churchyard.

Residential Area

- 3.14 The village comprises around 200 buildings which, along with gardens, a village green, and playing fields represented approximately 6% of the parish area. The buildings comprise residential properties and outbuildings, commercial buildings, a church and a market cross. The buildings in the village were of varying ages and construction with a significant number (approx. 44) of listed buildings.
- 3.15 Many of the buildings and outbuildings within the village were timber-framed and brick-built with varying design and finishes including flint and rendering. Roofing materials

comprised peg tile, clay pantiles, slate tiles, corrugated tin, and thatch. The buildings also had features such as soffit boxes, fascia boards, bargeboards, stepped gables, and wooden cladding.

- 3.16 Garden habitat was not accessed during this survey; however, species-poor hedgerows, introduced planting, amenity lawn and mature broad-leaved trees are commonly distributed throughout the village.

Hard standing

- 3.17 Hard standing occupies 4% of the parish, predominantly composed of car parks and roads. Some areas of gravel are present as access trackways to some of the smaller streets and forming the car park of the playing field in the north-east of the parish.

Semi-improved grassland

- 3.18 Semi-improved grassland made up approximately 3% of the parish. Semi-improved grass field margins, approximately 2m wide, were present around the arable field edges that surround the village. The margins in the north-east were dominated by perennial ryegrass. The grassland also supported flowering herb species, with frequent ribwort plantain, cleavers, common nettle, dove's-foot crane's-bill, and groundsel, with occasional broad-leaved dock, ground ivy, scarlet pimpernel, white clover, meadow salsify, meadow buttercup, white dead nettle, greater plantain, and ragwort. The margins to the north were dominated by perennial ryegrass, with occasional flowering herbs including sun spurge, groundsel, pineapple weed, germander speedwell, shepherds' purse, field penny cress, and dove's-foot crane's bill.
- 3.19 Good quality semi-improved grassland meadow was present within the fields that surrounded the castle and moat just outside the parish's western boundary. The sward was long with Yorkshire fog, cock's-foot, common bent, perennial rye grass, a fescue sp., and crested dogs tail dominant. The grassland also supported flowering herb species, with common knapweed, narrow-leaved vetch, white clover, ribwort plantain and self-heal being frequent with occasional, greater plantain, hogweed, broad-leaved dock, creeping thistle, yarrow, groundsel and lesser burdock. The grassland was bound by species-poor hedgerows and trees.
- 3.20 A wet pasture dominated by rush and creeping thistle, was present to the south of the village. The field was not accessible at the time of the survey; however, frequent

common nettle, and broad-leaved dock were visible from the fence. The fields were bounded by hedgerows with trees.

- 3.21 A roadside verge along the northern edge of the B1113 in the south-west of the village was grass-dominant, supported by occasional goat's beard, yarrow, horse-tail, prickly sow thistle, fescue, ground ivy, creeping cinquefoil, common mallow, and toad flax.

Amenity grassland

- 3.22 Amenity grassland comprised approximately 1% of the parish. Amenity grassland was present within the village at the village green, the village hall playing field, and within the village playing field. The dominant species comprised perennial rye grass, with frequent yarrow, and occasional daisy, dove's-foot crane's-bill, dandelion, and ribwort plantain.

Broad-leaved woodland

- 3.23 Broad-leaved woodland, a Habitat of Principal Importance, made up approximately 1% of the survey area. Broad-leaved woodland exists surrounding the moat and castle, outside the parish but inside the survey area. The canopy was a mix of frequent mature ash, black poplar (TN6), sycamore, goat willow, alder, English elm, hazel, and a single walnut tree. The woodland understorey dominated by elder, hawthorn, common nettle, snowberry and bramble with occasional woodland fern. Access into the entire wood was not possible at the time of the survey due to time restrictions and the dense undergrowth.
- 3.24 A small semi-natural broad-leaved woodland parcel was present adjacent to arable fields to the north of the village. The canopy comprised pedunculate oak, ash and field maple with occasional hawthorn. The woodland was open in nature and contained little in the way of shrubs understory with grasses dominant. The woodland was surrounded by a ditch. Access into the wood was not possible at the time of the survey.
- 3.25 A small semi-natural broad-leaved woodland is present adjacent to arable fields to the south-east of the village. The canopy comprises pedunculate oak, English elm, crab-apple, sycamore, ash, holly, with an understorey of snowberry, and hawthorn. Access into the wood was not possible at the time of the survey.

Ditch

- 3.26 Ditches were present around the boundaries of the field edges that surround the village. The majority of ditches were dry (see limitations) on the day of the survey owing to the drought experienced at the beginning of the year. The ditches were dominated by tall grasses or tall ruderals including rosebay willowherb, meadow sweet, broad-leaved dock and hogweed. In the west of the village surrounding the grazing fields the ditches were damp and species present composed of reed-sweet grass and water mint.
- 3.27 The moat around the castle contained water at the time of the survey. The waterbody is heavily shaded by the surrounding broad-leaved woodland established on the steep banks of the moat (Photograph 2, Appendix 2). The water was also heavily shaded by duckweed in places.

Stream

- 3.28 A stream was present within the parish, running along the southern boundary of the village. This was dry at the time of survey (see limitations).

Pond

- 3.29 Field ponds are distributed throughout the parish. The waterbodies are situated upon sandy free draining soils and are known to frequently dry out. Many of the ponds were overgrown with willow scrub.
- 3.30 Local knowledge from the Villagers Wildlife Sightings Survey (2018) suggest that garden ponds are present within the village centre. These ponds were not accessible at the time of the survey, but they are presumed likely to comprise some lined ponds that would hold water year-round. A large pond in the south of the village was partly visible from the roadside and contained water at the time of the survey.

Scrub

- 3.31 A large area of scrub was present in the north of the parish. This area was on private land and was not accessible on the day of the survey; however, from a distance the scrub appeared to comprise hawthorn, dogwood, gorse and young willow and oak trees. The understory comprised partly of rosebay willowherb.

Species-rich hedgerow with trees

- 3.32 Species-rich hedgerow with trees was present along the southern boundary of the arable fields to the north-east of the village. The hedgerow was 10m tall in places and

comprised shrubs species dominated by hawthorn, blackthorn, with occasional dog wood, and dog rose, with sapling and mature trees. The dominant trees comprised English elm, field maple, goat willow, crack willow, and ash, with occasional crab apple.

- 3.33 Several species-rich hedgerows with trees were present running north between the arable fields to the north of the village. The hedgerows here were tall (8m) and comprised a mix of the following woody species in varying proportions including hawthorn, blackthorn, holly, hazel coppice, small-leaved lime, pedunculate oak, silver birch, field maple, dog wood, guelder rose, bird cherry, rowan, English elm, goat willow, and crab apple. Mature pedunculate oak were the dominant stands.

Species-poor hedgerow

- 3.34 Species-poor hedgerows were present along the grazed pastures boundaries with species including English elm and hawthorn dominant. Species-poor hedgerows dominated by hawthorn were present around the community centre in the north-east of the village. Species-poor hedgerows were also present around the semi-improved grassland fields surrounding the castle and moat. Hedgerows here comprised predominantly of English elm with mature ash stands.

Scattered broad-leaved trees

- 3.35 Scattered broad-leaved trees were present along the boundaries of the mixed farmland fields. The majority of trees visible were mature pedunculate oak, and ash dominant, with black poplar stands (TN6).
- 3.36 Mature broadleaved trees on the village green comprise horse chestnut and small-leaved lime. Whilst mature broad-leaved trees within the playing field comprise ginkgo, bird cherry, weeping willow, silver birch, field maple, sycamore, and horse chestnut.
- 3.37 Mature broad-leaved trees within and along the boundary of the churchyard comprised small-leaved lime, yew, silver birch and plane trees. Whilst in the cemetery to the north, the trees comprised semi-mature yew, holly, field maple, and bird cherry.
- 3.38 Veteran trees exist within the parish; one pedunculate oak located within arable farmland to the north-east of the parish and one pedunculate oak tree within New Buckenham Common. In addition, several field boundary pedunculate oak trees were noted during the parish walkover survey that exhibit early signs of veteran status such

as considerable heart-wood rot, and large (>1m) trunk diameters (Photograph 1, Appendix 2).

Tall ruderal vegetation

3.39 Tall ruderal vegetation was present along the western boundary of the playing field in the east of the village and along the west boundary of the playing field at the village hall. The species comprised yarrow, common nettle, red dead nettle, broad-leaved dock, hogweed, and spear thistle.

PROTECTED AND INVASIVE SPECIES ASSESSMENT

3.40 The potential for the parish to support protected species has been assessed using criteria provided in Table 3.3, based on the results of the desk study and observations made during the PEA survey of habitats within the parish. Other legally protected species are not referred to as it is considered that the parish does not contain habitats that would be suitable to support them. The following species/species groups are potentially present at the parish:

- bats;
- great crested newts;
- breeding birds;
- water vole;
- otter;
- reptiles; and
- badgers;
- invasive species

3.41 The table also summarises relevant legislation and policies relating to protected and invasive species. Key pieces of statute are summarised in Section 1 and set-out in greater detail in Appendix 5.

Table 3.3: Protected and Invasive Species Assessment

Habitat/ species	Status 9, 10	Likelihood of occurrence
Bats	HR WCA S5 SPI LBAP	<p>PRESENT: The data search returned a total of 82 records of bats of at least eight different species within 2km of the parish from 2010 to 2017. Species records comprise serotine, barbastelle, Daubenton’s bat, Natterer’s bat, Leisler’s bat, noctule, common pipistrelle, soprano pipistrelle, and brown long-eared bat.</p> <p>In addition, a recent (2017-2018) bat study lead by Dr Stuart Newson within the village, has shown that at least nine species of bats forage in and around the village. In addition to the bats returned by the desk study whiskered/Brandt’s bats have been recorded within the parish, north of the village. The number, distribution, and the presence of rare (barbastelle and serotine) bats within the parish indicate a healthy environment.</p> <p>A number of the mature trees within the parish were noted to contain features suitable for roosting bats such as small cavities, wood-pecker holes, ivy covering, and dead wood (Photograph 1). These include a large portion of the field boundary trees in the north of the village.</p> <p>The hedgerows, woodland and scattered trees are likely to be used by foraging and commuting bat species to a certain extent, providing connectivity between roosting and foraging habitats within and outside of the parish.</p> <p>A number of buildings within the village have potential roost features that could support roosting bats. Access features, including broken, missing and slipped roof tiles (Photograph 3, Appendix 2), lifted lead flashing, missing mortar, soffit boxes, and gaps behind fascia boards.</p> <p>Several bat droppings were found within St. Martin’s Church (TN1). The presence of bat droppings means it is highly likely that a bat roost is present within this building. An accumulation of bat droppings of a small size were found on the floor and on the walls of the chancel beneath wooden sarking (Photograph 4, Appendix 2). A light scattering of large bat droppings were found within the chancel and southern isle, on the floor and on top of the pews (Photograph 5, Appendix 2).</p> <p>Given the reasons above, bats are considered further in Section 4 of this report.</p>
Great crested newts	HR WCA S5	<p>HIGH: The desk study returned no records of a great crested newts or breeding ponds within 2km of the parish, although this does not mean that they are absent from the parish (see limitations).</p>

⁹ The following abbreviations have been used to signify the legislation regarding different species: HR = Conservation of Habitats and Species Regulations 2010 (as amended); WCA S1 = Schedule 1 of the Wildlife and Countryside Act 1981 (as amended); WCA S5 = Schedule 5 of the Wildlife and Countryside Act 1981 (as amended); WCA S9 = Schedule 9 of the Wildlife and Countryside Act 1981 (as amended); PBA = Protection of Badgers Act, 1992.

¹⁰ The following abbreviations have been used to signify the policy of conservation assessments applying to notable species: SPI = Species of Principal Importance under the NERC Act 2006; LBAP = Local Biodiversity Action Plan species; BoCC = Birds of Conservation Concern - amber list / red list (Eaton *et al.*, 2015); and/or RD/NN = red data book/nationally notable species (JNCC, undated).

Table 3.3: Protected and Invasive Species Assessment

Habitat/ species	Status 9, 10	Likelihood of occurrence
	SPI LBAP	<p>Using OS maps and aerial imagery, numerous waterbodies were identified within (approx. 21) and up to 500m of the parish boundary (approx. 56). Local knowledge (Oxley, 2018) from residents suggests that the number of ponds visible on Ordnance Survey maps of the parish is higher in reality because of the presence of garden ponds within the village. In addition, there is local knowledge (Oxley, 2018) and photographic evidence (Trewin, 2018) of great crested newts within the village.</p> <p>Suitable terrestrial habitat for great crested newts within the parish were woodland, ditches, and long semi-improved grassland, tall ruderal, and hedgerows which would provide opportunities for foraging, dispersal, refuge and hibernation.</p> <p>Suitable breeding habitat within the parish comprised ditches, numerous ponds, and the castle moat. During the site walkover survey all of the accessible waterbodies were dry. However, this season has been particularly dry and it is expected that at last some of the waterbodies in the village are wet during a regular season and some year round.</p> <p>Given the reasons above, great crested newt are considered further in Section 4 of this report.</p>
Reptiles	WCA S5 SPI LBAP	<p>PRESENT: The data search returned no records (see limitations) of reptiles within the parish itself, or within 2km of the parish boundary; however, there are many local records (Oxley, 2018) from residents of grass snakes, adders, and slow worm within the parish and within the village itself. Many records are of grass snake or slow worms associated with garden ponds and compost heaps, and records of adders within the castle walls.</p> <p>Suitable habitats for reptiles within the parish included ponds, compost heaps, tall ruderal, long semi-improved grassland, woodland, cracks in walls, and bases of hedgerows which provide opportunities for foraging, basking, refuge and hibernation opportunities for species such as grass snake, adder and slow worm.</p> <p>Habitats in the wider landscape with suitability for common reptiles, consist of grassland, scrub, wetland, ditches, streams, and woodland to the east of the parish.</p> <p>Given the reasons above, common reptiles are considered further in Section 4 of this report.</p>
Breeding birds	WCA S5 SPI LBAP BoCC	<p>PRESENT: The data search returned a total of 139 records of birds from 58 species within the parish and within 2km of the parish boundary, including Birds of Conservation Concern (BoCC) red list species shag, lapwing, woodcock, turtle dove, cuckoo, grey wagtail, whinchat, fieldfare, song thrush, spotted flycatcher, willow tit, and house sparrow.</p> <p>Residents have recorded (Oxley 2018) BoCC red listed turtle dove as a frequent visitor to the parish and this species is likely to breed within the tall hedgerows around the arable farmland. Some hedgerows around the farmland to the north of the village are optimal nesting habitat for turtle doves owing to the tall height (8-10m) and wide width (4m). Another summer resident known to be nesting in the village is swift, another species of conservation concern, currently listed as Amber. Villagers also record tawny owl and goldfinch within the gardens of the village.</p>

Table 3.3: Protected and Invasive Species Assessment

Habitat/ species	Status 9, 10	Likelihood of occurrence
		<p>House martin (TN2 & Photograph 6, Appendix 2) and house sparrow (TN3) were recorded nesting within the village during the site walkover and starlings were observed to be roosting in the church tower. In the surrounding farmland a suspected little owl nest/roost (TN4) within a cavity was observed in one of the large field boundary ash trees. Rook, jackdaw, wood pigeon, dunnock, robin, blue tit, buzzard, green woodpecker, kestrel, jay, magpie, yellow hammer, stock dove, collard dove, and black bird were also incidentally recorded within the habitats within the parish.</p> <p>The hedgerows, trees and some of the buildings within the parish provide suitable breeding habitat for garden birds including house sparrow, and song thrush. They also provide habitat for declining farmland bird species such as barn owl, turtle dove, yellowhammer as well as winter visitors such as fieldfare.</p> <p>The semi-improved grassland areas within the parish may also provide suitable foraging habitat for raptors such as kestrel and green woodpecker, both amber listed species recorded in the parish during the survey.</p> <p>The arable habitat surrounding the village is also suitable for ground-nesting species such as skylark, lapwing, and oystercatcher.</p> <p>Given the reasons above, breeding birds are considered further in Section 4 of this report.</p>
Barn Owl	WCA S1	<p>PRESENT: The data search returned 30 records of barn owl. Local knowledge (Oxley 2018) suggest that barn owls are breeding and foraging around the village.</p> <p>Agricultural buildings and trees with cavities within the parish are suitable breeding and roosting habitat for barn owl. Arable field margins, semi-improved and unimproved grassland (New Buckenham Common SSSI), and hedgerows within the parish are suitable for barn owl foraging. Local knowledge (Oxley 2018) and records returned from the biological record centre indicated that barn owl, a Schedule 1 species under the WCA, also forage within the grasslands and along the hedgerows of the parish.</p> <p>Given the reasons above, Schedule 1 barn owl are considered further in Section 4 of this report.</p>
Water vole	WCA S5 SPI LBAP	<p>MODERATE: The data search returned two records of water vole within a 2km radius of the parish from 2001. The records are associated with the village of Bunwell, located north-east of the parish but appears within the search area owing to them having been assigned a grid reference of only four figures. Therefore, the relevance of these particular records to the site is low.</p> <p>Suitable water vole habitats were present within the parish, however, and these included ditches, streams, and large ponds. During the site walkover, those habitats that could be accessed were dry (see limitations) and lacked substantial aquatic vegetation such as reed sweet grass for water vole cover and foraging. None of the ditches covered by the walkover survey had any water vole signs such as burrows, feeding remains or latrines; however, a dedicated water vole survey was not undertaken and many other areas of potentially suitable habitat were not accessible on the day of the survey due to access restrictions.</p>

Table 3.3: Protected and Invasive Species Assessment

Habitat/ species	Status 9, 10	Likelihood of occurrence
		<p>It is possible that water vole are present within the parish either within water bodies/courses not accessed or within those features that were dry at the time of the survey but that typically hold water at other times, particularly given the extent of ditch networks in the wider landscape and the records of water vole within 2km of the parish.</p> <p>Given the reasons above water voles are considered further in this report.</p>
Otter	WCA S5 SPI LBAP	<p>LOW: The data search returned no records (see limitations) of otter within a 2km radius of the parish.</p> <p>Habitats within the parish suitable for otter include, ditch, streams, and large ponds. During the site walkover many of the habitats suitable for otter were dry (see limitations) and as such sub-optimal for otter. No field signs of otter were recorded during the walkover survey; however, a dedicated otter survey was not undertaken and many of the waterways and features were not accessible on the day of the survey due to access restrictions. The parish is unlikely to sustain breeding otters given the absence of a river or other substantial water courses, or significant areas of cover associated with a river system; however, it is possible that otters will occasionally utilise the ditch networks and other aquatic features for foraging and commuting when the water table is higher, particularly given the network of ditches and other wetland features within the wider landscape.</p> <p>Habitats in the wider landscape include an extensive network of ditches and field drains, ponds and lakes. The river Tas which flows into Carlton Fen lies approximately 1.4km north-east of the parish boundary.</p> <p>Given the reasons above, otter are considered further in Section 4 of this report.</p>
White-clawed crayfish	WCA S5 SPI LBAP	<p>MODERATE: The data search returned two records for white-clawed crayfish within 2km of the parish. Both records are from the village of Old Buckenham, from within a drain network that runs into New Buckenham. The records returned have a six-figure reference number, as such their accuracy is only to the nearest 100m; however, their relevance to the parish is significant owing to the connectivity of habitats within the area. The closest record is approximately 650m west and the second record is approximately 1.4km west of the parish boundary.</p> <p>The white-clawed crayfish is typically found in watercourses of 0.75 m to 1.25 m deep, but the species may occur in very shallow streams (about 5 cm of water) and in deeper, slow-flowing rivers (2.5 m). However, populations are frequently recorded in isolated lakes and ponds nearby and these habitats may become increasingly important as alien crayfish populations continue to expand (Holdich, 2003).</p> <p>Suitable habitat within the village therefore comprise waterbodies including, ponds, the moat, streams, and ditches that retain water. During the site walkover many of the drains, ditches and ponds were dry (see limitations). Although crayfish can survive in damp conditions for up to two weeks they require water in which to commute, forage, seek refuge, breed and dig burrows below the water line (Peay, 2002).</p>

Table 3.3: Protected and Invasive Species Assessment

Habitat/ species	Status 9, 10	Likelihood of occurrence
		<p>Most of the accessible waterbodies surveyed on the day of the survey were dry and therefore currently unsuitable for crayfish. The drain which flows into New Buckenham from Old Buckenham, where crayfish were recorded in 2008, was not accessible on the day of the survey and as such it is not known whether the section of drain within New Buckenham is suitable for crayfish.</p> <p>Given the reasons above, white-clawed crayfish are considered further in Section 4 of this report.</p>
Badgers	PBA	<p>MODERATE: The data search did not return any records (see limitations) for badger within the parish, or within 2km of the parish boundary.</p> <p>Habitats within the parish suitable for badger included woodland, hedgerows, ditches, and grassland. No field signs of badger were observed within the parish during the survey; however, a dedicated badger survey was not undertaken and not all of the land was accessible on the day of the survey. Badgers may be present in the surrounding farmland and woodlands.</p> <p>Given the reasons above, badgers are considered further in Section 4 of this report.</p>
Invasive species	WCA S9	<p>LOW: The data search did not return any records (see limitations) for invasive plant species from within a 2km radius of the site.</p> <p>Habitats in the village suitable for invasive species to establish include arable field margins, ditches, streams, ponds, the moat, woodland, grassland and within residential garden habitat. No field signs of invasive species on Schedule 9 of the WCA were recorded during the walkover; however, a dedicated survey was not undertaken and not all of the parish was accessible.</p> <p>Given the reasons above, invasive species are considered further in Section 4 of this report.</p>

NATURE CONSERVATION EVALUATION

Habitats

- 3.42 The parish contains one statutory designated site for wildlife (New Buckenham Common SSSI) and two non-statutory CWS with a further three CWS within 2km of the parish boundary. These sites were not included within the walkover but should be regarded as being of national and county level importance respectively.
- 3.43 The parish also contains several HPIs, including broad-leaved woodland, ponds, and hedgerows. The scattered mature broad-leaved trees within the parish, including two registered veteran status trees are of local to district value and black poplar trees. Black poplar (TN6) was present within the woodland surrounding the moat and visible along some of the field boundaries in the west of the village. Black poplar is the most endangered native timber tree in Britain according to the Forestry Commission. The semi-improved grassland around the castle also appears to be of high quality. The majority of these habitats are considered to be of at least local and possibly district level importance, and black poplar is national importance.
- 3.44 Some of the species-rich and species-poor hedgerows are also likely to qualify as an HPI & Norfolk BAP habitat on the grounds that the hedgerows comprise either native species or are more than 20m in length with minor gaps. Some hedgerows are also likely to be 'important' under the Hedgerow Regulations (1997) owing to a variety of potential criteria including their species composition, length, age, the species they support and their association with other features. Where hedgerows are 'important' or qualify as an HPI, it is reasonable to assume that they are of at least local level importance and may assume a higher value should they be found to support important populations of protected or otherwise noteworthy species or provide a valuable function in maintaining habitat connectivity across the wider landscape.
- 3.45 The remaining habitats within the parish are more common and widespread within the wider environment and are relatively limited in extent. Individual habitats of value at the site level include arable farmland, improved grassland, residential gardens, amenity grassland, non-HPI species-poor hedgerows and tall ruderal vegetation but may assume higher value should they be found to support important populations of protected or otherwise noteworthy species. Other habitats, including the wet pasture, non-HPI water bodies, and scrub are likely to be of value at the site level but, again, may assume a higher value should they be found to support important populations of protected or otherwise noteworthy species.

- 3.46 The habitats within and surrounding the village are well connected via networks of hedgerows, ditches, grassland, unlit streets, and scattered trees and, as such, wildlife is able to move around and through the village. There various protected and otherwise noteworthy species sightings (Oxley 2018) including reptiles, amphibians, birds and common toad within the gardens within the village as well as many other species seen in the parish such as fox, frogs, newts, deer, pheasants and grey squirrel.
- 3.47 The habitats within the parish are also of value as they provide ecosystem services, such as reducing urban heat island effect, carbon sequestration, and flood elevation, as well as providing culture and wellbeing to residents.

Species

- 3.48 The parish is considered to support foraging, commuting and roosting bats, including rare (barbastelle) species, populations of common reptiles (grass snakes, slow worm and adder), breeding birds including Schedule 1 species and BoCC, and species of principal importance (hedgehogs, common toad, and brown hare).
- 3.49 The parish is also likely to provide opportunities for a diversity of invertebrates given the wide range of suitable habitats present. The data search returned 34 records of invertebrates, all of which were SPI moth species, of fifteen different species from 2012 to 2016. These were: Wainscot neb, blood-vein, dark-barred twin spot carpet, buff ermine, garden tiger, cinnabar, green-brindled crescent, sallow, bearded chestnut, brown-spot pinion, centre-barred sallow, dark brocade, feathered gothic and dot moth.
- 3.50 In addition, a recent (2017-2018) bat study lead by Dr Stuart Newson within the village, has shown that at least four species of bush cricket are present within the parish: specked bush-cricket; dark bush cricket; Rosel's bush cricket; and long winged conehead. These species are of least conservation concern according to the IUCN Red-list. The butterfly species small copper, red admiral, green veined white and comma were incidentally recorded during the parish walkover survey and damsel flies were also observed from a distance foraging over the common.
- 3.51 It is considered possible the parish could support invasive species on Schedule 9 of the WCA, badger, otter, water vole, crayfish, and harvest mouse because suitable habitats were present. No evidence of these species was noted during the walkover; however targeted surveys have not been undertaken.

3.52 During the walkover, snowberry (TN5) was noted within the isolated woodland in the southeast of the site, and within the woodland surrounding the castle moat. Not all of the parish was accessible during the survey, and therefore it is possible that other invasive species are present. Snowberry is not listed on Schedule 9 of the WCA, however it is listed on the Non-Native Species Secretariat (NNSS) as a non-native steadily invasive species found in woods, hedges, scrub, waste ground and railway embankments. Its vigorous suckering habit causes it to spread from its original planting; it then produces dense thickets which outcompete other less vigorous native plants.

3.53 The habitats on site were suitable for a range of protected and noteworthy species, including SPI and Norfolk BAP species, as reported in the desk study or regarded as present or potentially present on the basis of the walkover. These are as follows:

- bats species;
- invertebrates;
- common reptiles;
- breeding birds including species of conservation concern¹¹ such as turtle dove, song thrush, house martin, house sparrow, swift, yellow hammer and many other widespread but declining species of birds;
- otter;
- water vole;
- crayfish;
- badger;
- harvest mouse;
- brown hare;
- common toad; and
- hedgehog.

3.54 Further survey would be required to assess the conservation status of these species but, if present, are likely to be of at least site-local level importance, and may assume a higher value should significant numbers, species or assemblages of species be found.

¹¹ Birds of Conservation Concern - amber list / red list (Eaton *et al.*, 2015);

4 Potential Issues and Recommendations

- 4.1 This section summarises the key findings of the survey and highlights potential constraints to future development and any requirement for further survey or assessment to inform a more detailed baseline for the area. The assessment of potential impacts on ecological features from future development is necessarily preliminary and further detailed assessment and surveys will be required to fully assess impacts and design suitable mitigation for individual proposals as they are brought forward.
- 4.2 To guide the process and allow for a holistic approach to evaluating individual applications within the wider scheme, it is recommended that a Green Infrastructure Strategy is compiled to help identify existing and potential habitat linkages at the landscape level with a view to further developing opportunities for ecological enhancement across the parish as and when individual development plans are brought forward. A high-level Ecological Constraints and Opportunities Plan (ECOP) should form part of this strategy.
- 4.3 The following key ecological issues have been identified:
- New Buckenham Common SSSI and associated CWSs within, and in close proximity to, the parish should be considered within future development proposals with measures implemented to protect these sites, where necessary. Development proposals should consider indirect impacts upon the interest features of these sites resulting from increased visitor pressure, urban effects such as littering and wildfire, and the likely increase in domestic pets (cats and dogs);
 - Habitats of varying degrees of conservation value are present within the parish. Those of higher value (by virtue of their e.g. rarity, extent, fragility or composition) include those that qualify as HPs such as broad-leaved woodland, hedgerows and ponds, as well as the areas of good quality semi-improved grassland, mature scattered broadleaved trees including rare species (Black poplar) and veteran specimens, and wet pasture. Future development should implement measures to protect and retain these features wherever possible and seek compensation for any loss;
 - These and other habitats of lower value are likely to provide important functions in terms of habitat connectivity and may support protected and otherwise noteworthy species. Their importance should be fully assessed as part of any individual development proposal and within the wider context as part of a Green Infrastructure

Strategy to inform potential constraints and opportunities for development in a holistic way.

- Hedgerows, tall ruderal, semi-improved grassland, gardens, waterbodies, woodland, and scattered trees within the parish are likely to be of value to bats and other species; – future development should implement measures to protect key green corridors, to include measures to avoid impacts from artificial lighting on these habitats where appropriate. Measures to continue accommodating species within new developments should also be considered;
- Habitat suitable for roosting bats is present in the form of trees, buildings and other structures. Future development that requires tree felling or extensive surgery or building renovation or demolition is likely to require a Preliminary Roost Assessment of those structures or trees affected.
- Habitat for great crested newt is present. Future development containing suitable waterbodies within or within 250-500m of their site will be required to carry out presence/absence surveys in order to assess the impact on great crested newts.
- Habitat suitable for widespread reptiles is present. Future development should outline measures to be undertaken to avoid killing or injuring reptiles and may require presence/ likely absence and population size class surveys, in addition to, measures to continue accommodating these species within new developments;
- Habitat suitable for breeding birds is present (trees, buildings, hedgerows, gardens, arable, and tall ruderal vegetation). Depending on the nature of the development proposal, dedicated breeding bird surveys may be required and measures to avoid killing or injuring birds or damaging/destroying their nests should be detailed alongside measures to continue accommodating these species within any new development;
- Habitat suitable for badger, is present (hedgerows, ditches, field margins, tall ruderal, arable, woodland, gardens and grassland). Future development should establish the presence/likely absence of badger within and around the boundaries of their site and, if required (presence confirmed or suspected), implement measures to avoid impacting this species or contravening the legislation. Consideration should also be given to how to continue accommodating this species within the development and the potential for increases in mortality due to road traffic;
- Habitat with suitability for otter (hedgerows, woodland, wet pasture, ditches, the moat, and stream), water vole (ditches, the moat and streams), and crayfish (pond, ditch, stream and moat) is present; future development should seek to establish the

presence/likely absence of these species within their sites and, where required, (presence confirmed or suspected) implement measures to protect and enhance these species populations during and post-development;

- Habitat with suitability for invertebrates is present (hedgerows, ponds, streams, the moat, ditches, field margins, tall ruderal, arable, woodland, and grassland). – Future development should consider measures to protect habitats with suitability for invertebrates, targeted surveys for habitats with high suitability for invertebrates, and measures to continue accommodating these species within the development;
- Habitat suitable for SPIs such as hedgehog, harvest mouse, common toad, and brown hare is present within the parish. Hedgehog, common toad, and brown hare are known to breed in the parish (Oxley 2018). Future development should consider how these species populations can be protected and enhanced during and post-development;
- Not all areas of the parish could be accessed and therefore development should consider the potential presence of invasive non-native species on a site by site basis, undertaking a targeted survey if necessary. At least one non-native invasive species (snowberry) was found to be present within the parish and, although not listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended), it is recommended that any development site with snowberry present should consider removing it as good practice.

FURTHER SURVEY REQUIREMENTS

- 4.4 Additional survey work carried out within the village would be beneficial to inform the ecology section of the Neighbourhood Plan. The biological records show an absence or lack of data for some species groups such as reptiles, amphibians, plants, and invertebrates which are likely to be present within the parish to some degree.

OPPORTUNITIES FOR ECOLOGICAL ENHANCEMENT

- 4.5 Planning policy at the national and local level and strategic biodiversity partnerships encourage inclusion of ecological enhancements in development projects. Ecological enhancements can also contribute to green infrastructure and ecosystem services such as storm water attenuation and reducing the urban heat island effect.
- 4.6 Ecological enhancement opportunities can be identified by individual developments on a site by site basis following detailed survey work and assessment. Ecological enhancement opportunities can also be identified within Neighbourhood Plans and

Green Infrastructure Strategies which can be used to influence and guide ecological enhancements proposed by individual developments.

Green Infrastructure Strategy

- 4.7 The production of a Green Infrastructure Strategy (GI Strategy) is recommended to help identify existing and potential habitat linkages at the landscape level with a view to further developing opportunities for ecological enhancement across the parish as and when individual development plans are brought forward.
- 4.8 Parish Green Infrastructure Strategies are a valuable tool for planners, committees, developers and communities themselves. They can help inform important decisions and help local people identify what is important to them, and what they would like to happen in the future, for example, informing policies and objectives in the emerging New Buckenham Neighbourhood Plan.
- 4.9 A Green Infrastructure Network Map can be produced to highlight local aspirations within the Green Infrastructure Strategy such as proposed protected view-points, proposed areas for rights of way upgrades, areas where green infrastructure would be appropriate, and proposed improvement of existing features. It could also identify existing green corridors and the opportunities for linking these up through appropriate habitat management/creation to create a better network of wildlife corridors. Ecological features within the village that could benefit from management include (but are not limited to) management of willow and scrub encroachment of ponds, ditches, and streams; relaxation of management of amenity grassland areas to leave some areas of long grasses, and active management of existing woodlands for wildlife.
- 4.10 The following section outlines some generic means by which ecological enhancement can often be achieved on development sites. These are only examples and there may be other, more specific measures recommended following detailed survey of any given development site which can be incorporated into the Landscape Management Plans, or Construction Environment Management Plans etc.

Habitat creation and wildlife planting

- 4.11 A key aim of any landscape or green infrastructure strategy should be to maintain and enhance green corridors around and throughout the parish boundary to provide quality habitat and ensure wildlife has access to such habitats within the parish and the wider environment. Such measures may include new woodland and hedgerow planting,

relaxation of mowing or cutting regimes in habitats such as amenity grassland, and pond restoration and creation to provide 'stepping stones' for wildlife.

- 4.12 Wildlife planting including native species and/or species of recognised wildlife value¹² should be incorporated. The use of nectar-rich producing plants will attract a wider range of insects, which in turn is the food source food source for bats. Consideration should also be given to creation of species-rich native hedgerows linking areas of semi-natural habitat.
- 4.13 Good horticultural practice should be utilised, including the use of peat-free composts, mulches and soil conditioners, native plants with local provenance and avoidance of the use of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

Provision of bat roosting opportunities

- 4.14 Bat boxes could be installed directly onto mature trees or buildings in undisturbed locations to provide bat roosting opportunities. The boxes should be installed ideally 4m above ground level on south west and/or south east aspects. By placing boxes on different aspects (it is often beneficial to have more than one box per tree) bats can move between roost sites depending on the desired conditions (e.g. boxes on south facing aspects will be warmer than those on north facing sides). Boxes should not be placed in areas which are very exposed, in frost pockets, or where there is a chance of disturbance. The access points and approach to the boxes should be clutter-free (it may be necessary to maintain vegetation to ensure this remains long-term) and should not be directly illuminated by artificial lighting. Potentially suitable models include the Schwegler 2F bat box or 1FF bat box.

Provision of bird breeding opportunities

- 4.15 Bird boxes could be installed directly onto trees or buildings or built into the fabric of new buildings. Bird boxes of a mix of sizes and styles to encourage a wide range of species, should be erected so that they are sheltered from the wind, rain and strong sunlight. Boxes chosen should also target species of conservation concern known to

¹² For example The Royal Horticultural Society (RHS) Perfect for Pollinators Scheme <https://www.rhs.org.uk/science/conservation-biodiversity/wildlife/encourage-wildlife-to-your-garden/plants-for-pollinators> and the joint RHS/Wildlife Trust's Gardening With Wildlife In Mind Database <http://www.joyofplants.com/wildlife/home.php>

nest within the parish such as house martin (nest cups), house sparrow (terrace boxes) and barn owl (two boxes close together is optimal for breeding barn owl).

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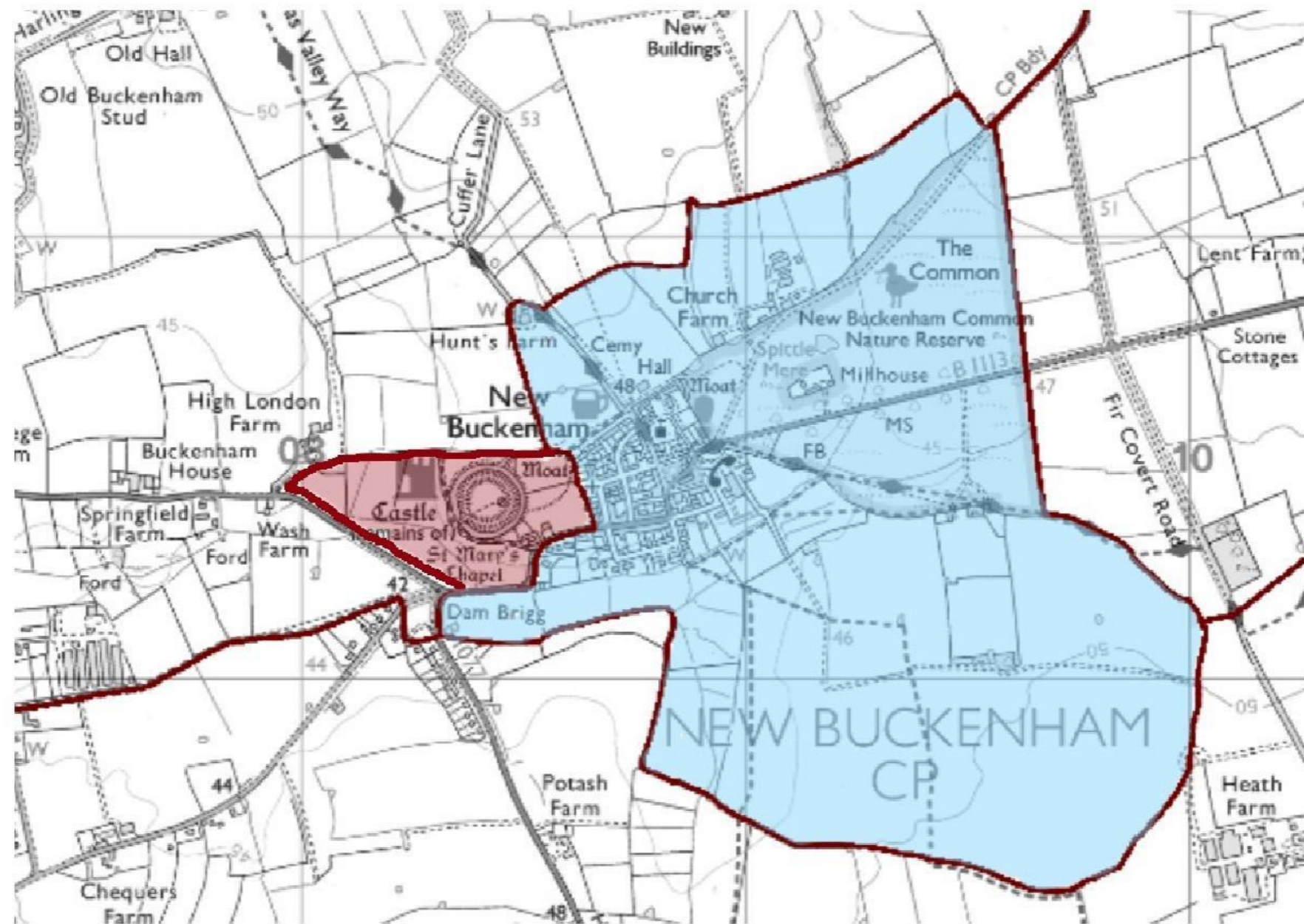
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Appendix 1: Habitat Map

Figure 1: New Buckenham Neighbourhood Plan – Proposed Boundary

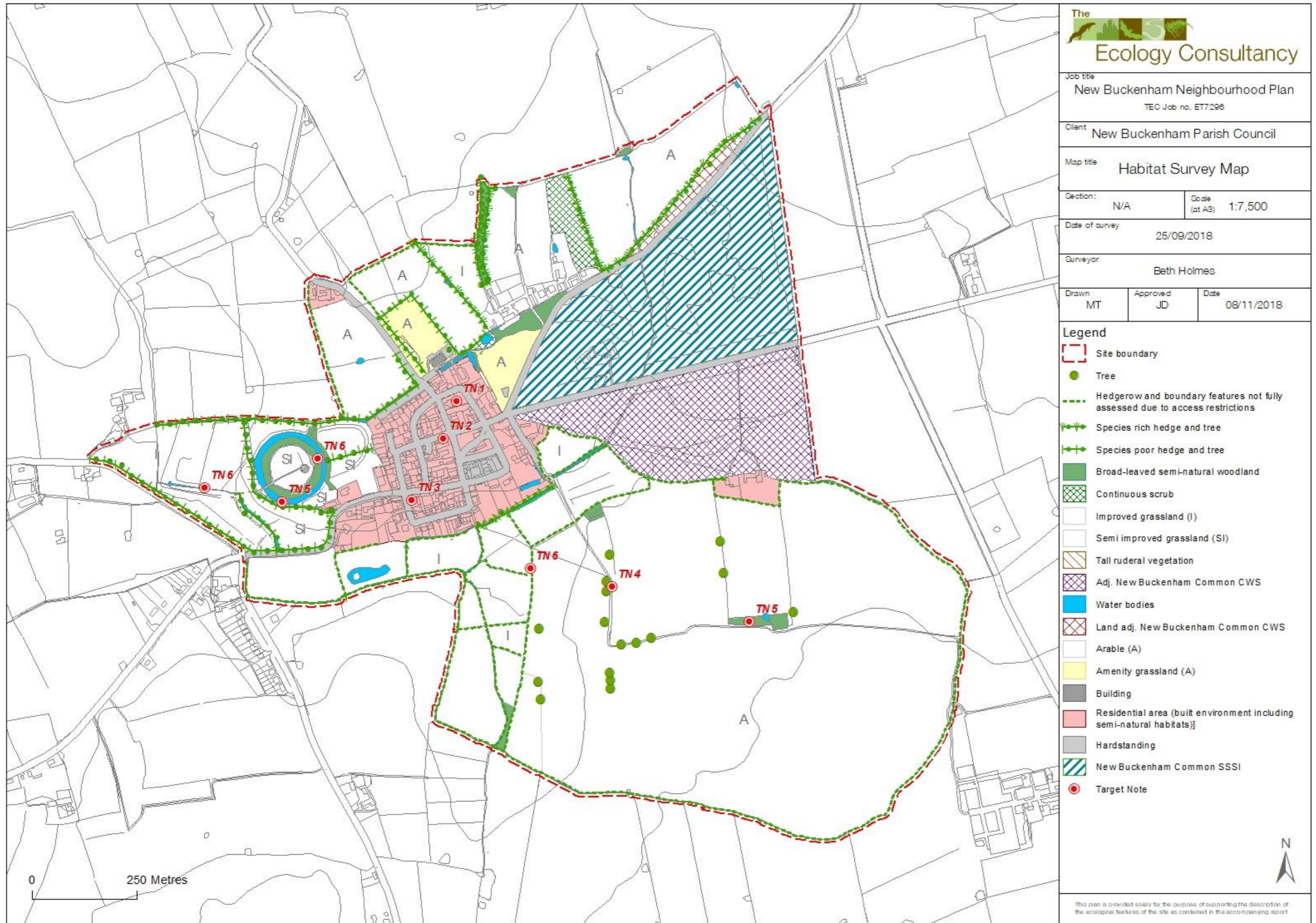
NEW BUCKENHAM NEIGHBOURHOOD PLAN - PROPOSED BOUNDARY



Blue area: New Buckenham civil parish
Pink area: Extension into Old Buckenham civil parish (within New Buckenham designated conservation area)

Proposed neighbourhood plan covers blue and pink areas

Figure 2: Habitat Survey Map



Target Notes List for new Buckenham Neighbourhood Plan, Norfolk from the Phase 1 habitat survey and protected and notable species assessment carried out on the 25 September 2018.

Target note (TN)	Description
1	Bat droppings and suspected bat roost in the chancel of St Martins Church.
2	Recently active house martin nest on a house in the centre of the village
3	House sparrows roosting/breeding beneath roof tiles of houses in the south of the village.
4	Suspected little owl roost within tree cavity with the bowl of the tree
5	Snowberry spreading amongst scrub around the moat and within woodland south of the village.
6	Black poplar trees

Appendix 2: Photographs

Photograph 1
Pedunculate oak typical of the field boundary trees, and hedgerow trees in the north and north-east of the village, multiple containing cavities.



Photograph 2
Castle Moat. View looking from east, looking north-west



Photograph 3
Building within the village showing potential bat roost features: missing roof tiles and lifted lead flashing.



Photograph 4

Accumulation of bat droppings from small bats, in Chancel of St Martin's Church. Bat droppings were also found accumulating on the floor below this feature (wooden sarking).



Photograph 5

Bat dropping, of a medium to large sized bat, found on top of pews in St. Martin's Church.



Photograph 6

House martin nest, showing signs of recent use) on a soffit box within the centre of the village.



Appendix 3: Plant Species List

Plant Species List for New Buckenham Neighbourhood Plan, Norfolk compiled from Phase 1 habitat survey carried out on the 25 September 2018.

Scientific nomenclature and common names for vascular plants follow Stace (2010). Please note that this plant species list was generated as part of a Phase 1 habitat survey, does not constitute a full botanical survey and should be read in conjunction with the associated results section of this PEA.

Abundance was estimated using the DAFOR scale as follows:

D = dominant, A = abundant, F = frequent, O = occasional, R = rare, L = locally
c=clumped, e=edge only, g=garden origin, p=planted, y = young, s=seedling or sucker,
t=tree, h=hedgerow, w=water

SCIENTIFIC NAME	COMMON NAME	ABUNDANCE	QUALIFIER
<i>Aesculus hippocastanum</i>	Horse-chestnut	O	t
<i>Acer campestre</i>	Field maple	O	t
<i>Acer pseudoplatanus</i>	Sycamore	F	t
<i>Achillea millefolium</i>	Yarrow	F	e
<i>Aesculus hippocastanum</i>	Horse chestnut	O	t
<i>Anagallis arvensis</i>	Scarlet pimpernel	O	e
<i>Arctium minus</i>	Lesser burdock	O	e
<i>Ballota nigra</i>	Black horehound	O	e
<i>Bellis perennis</i>	Daisy	F	e
<i>Betula pendula</i>	Siler birch	O	t
<i>Centaurea nigra</i>	Common knapweed	F	e
<i>Cornus sanguinea</i>	Dogwood	F	e
<i>Corylus avellana</i>	Hazel	F	h
<i>Cirsium arvense</i>	Creeping thistle	O	e
<i>Crataegus monogyna</i>	Hawthorn	O	h
<i>Dactylis glomerata</i>	Cock's-foot grass	A	e
<i>Dryopteris sp</i>	Wood-fern species	O	e
<i>Equestum sp.</i>	Horsetail species	O	e
<i>Festuca sp.</i>	Fescue species	F	e
<i>Fraxinus excelsior</i>	Ash	O	t
<i>Galium aparine</i>	Cleavers	O	e
<i>Geranium molle</i>	Dove's-foot crane's-bill	F	e
<i>Ginkgo biloba</i>	Ginkgo	R	t
<i>Glechoma hederacea</i>	Ground ivy	O	e
<i>Glyceria maxima</i>	Redd-sweet grass	R	c
<i>Hedera helix</i>	Ivy	A	h
<i>Heracleum sphondylium</i>	Hogweed	O	e
<i>Holcus lanatus</i>	Yorkshire fog	D	e
<i>Ilex aquifolium</i>	Holly	R	h
<i>Jacobaea vulgaris</i>	Ragwort	O	e
<i>Lamium album</i>	White dead-nettle	O	e
<i>Laminum purpureum</i>	Red dead-nettle	O	e
<i>Linaria vulgaris</i>	Yellow toadflax	R	e
<i>Lolium perenne</i>	Perennial ryegrass	D	e
<i>Malus sylvestris</i>	Crab apple	R	h
<i>Malva neglecta</i>	Common mallow	o	e
<i>Mentha citrata</i>	Water mint	R	c
<i>Populus nigra</i>	Black poplar	R	t
<i>Potentilla reptans</i>	Creeping cinquefoil	F	e

<i>Prunella vulgaris</i>	Selfheal	O-F	e
<i>Plantago lanceolata</i>	Ribwort plantain	O	e
<i>Plantago major</i>	Greater plantain	O	e
<i>Platanus x hispanica</i>	Plane tree	O	t
<i>Prunus padus</i>	Bird cherry	O	t
<i>Prunus spinosa</i>	Blackthorn	F	h
<i>Quercus robur</i>	Pedunculated Oak	O	h
<i>Ranunculus acris</i>	Meadow buttercup	O	e
<i>Rumex obtusifolius</i>	Broad-leaved dock	O	e
<i>Rosa canina</i>	Dog-rose	O	h
<i>Sambucus nigra</i>	Elder	R	h
<i>Salix babylonica</i>	Weeping willow	O	t
<i>Salix caprea</i>	Goat willow	O	t
<i>Salix fragilis</i>	Crack willow	O	t
<i>Senecio vulgaris</i>	Groundsel	O	e
<i>Sorbus subg. Sorbus</i>	Rowan	O	h
<i>Symphoricarpos albus</i>	Snowberry	O	p
<i>Taraxacum officinale</i>	Common dandelion	R	e
<i>Thlaspi arvense</i>	Field penny cress	F	e
<i>Tragopogon pratensis</i>	Meadow salsify	O	e
<i>Taxus baccata</i>	Yew	O	t
<i>Trifolium repense</i>	White clover	O	e
<i>Tilia cordata</i>	Small leaved lime	F	t
<i>Ulmus minor 'Atinia'</i>	English elm	F	h
<i>Urtica dioica</i>	Common nettle	F	e
<i>Veronica chamaedrys</i>	Germander speedwell	O	e
<i>Viburnum opulus</i>	Guelder rose	R	h
<i>Vicia sativa ssp. nigra</i>	Narrow-leaved vetch	F	e

Appendix 4: Legislation and Planning Policy

Important notice: This section contains details of legislation and planning policy applicable in Britain only (i.e. not including the Isle of Man, Northern Ireland, the Republic of Ireland or the Channel Islands) and is provided for general guidance only. While every effort has been made to ensure accuracy, this section should not be relied upon as a definitive statement of the law.

A NATIONAL LEGISLATION AFFORDED TO SPECIES

The objective of the EC Habitats Directive¹³ is to conserve the various species of plant and animal which are considered rare across Europe. The Directive is transposed into UK law by The Conservation of Habitats and Species Regulations 2017 and The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended).

The Wildlife and Countryside Act 1981 (as amended) is a key piece of national legislation which implements the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and implements the species protection obligations of Council Directive 2009/147/EC (formerly 79/409/EEC) on the Conservation of Wild Birds (EC Birds Directive) in Great Britain.

Since the passing of the Wildlife & Countryside Act 1981, various amendments have been made, details of which can be found on www.opsi.gov.uk. Key amendments have been made through the Countryside and Rights of Way (CRoW) Act (2000).

Other legislative Acts affording protection to wildlife and their habitats include:

- Deer Act 1991;
- Countryside and Rights of Way (CRoW) Act 2000;
- Natural Environment & Rural Communities (NERC) Act 2006;
- Protection of Badgers Act 1992;
- Wild Mammals (Protection) Act 1996.

Species and species groups that are protected or otherwise regulated under the aforementioned domestic and European legislation, and that are most likely to be affected by development activities, include herpetofauna (amphibians and reptiles), badger, bats, birds,

¹³ Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora

dormouse, invasive plant species, otter, plants, red squirrel, water vole and white clawed crayfish.

Explanatory notes relating to species protected under The Conservation of Habitats and Species Regulations 2017 (which includes smooth snake, sand lizard, great crested newt and natterjack toad), all bat species, otter, dormouse and some plant species) are given below. **These should be read in conjunction with the relevant species sections that follow.**

- In the Directive, the term ‘deliberate’ is interpreted as being somewhat wider than intentional and may be thought of as including an element of recklessness.
- The Conservation of Habitats and Species Regulations 2017 does not define the act of ‘migration’ and therefore, as a precaution, it is recommended that short distance movement of animals for e.g. foraging, breeding or dispersal purposes are also considered.
- In order to obtain a European Protected Species Mitigation (EPSM) licence, the application must demonstrate that it meets all of the following three ‘tests’: i) the action(s) are necessary for the purpose of preserving public health or safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequence of primary importance for the environment; ii) that there is no satisfactory alternative and iii) that the action authorised will not be detrimental to the maintenance of the species concerned at a favourable conservation status in their natural range.

Badger

Badgers receive legal protection under the Protection of Badgers Act 1992 which consolidates the previous Badger Acts of 1973 and 1991. The Act makes it an offence to:

- Wilfully kill, injure, take, or, in England and Wales only, attempt to kill, injure or take a badger;
- Cruelly ill-treat a badger, including use of tongs and digging;
- Intentionally or recklessly damage, destroy or obstruct access to a badger sett or any part thereof;
- Intentionally or recklessly disturb a badger when it is occupying a badger sett; or,
- Intentionally or recklessly cause a dog to enter a badger sett.

Under Section 10(2) and (3) of the Act, Natural England, under powers conferred by the Secretary of State, has authority to issue licences for the following purposes:

To interfere with badger setts for the following purposes:

- Preventing serious damage to land, crops, poultry or any other form of property (e.g. house, garden, road etc.);
- Any agricultural or forestry operation;
- Any operation to maintain or improve any existing watercourse or drainage works, or to construct new works required for the drainage of land, including works of defence against sea or tidal water;
- Preventing the spread of disease.
- To kill or take badgers for the following purposes:
 - Preventing the spread of disease;

Bats

All species of bat are fully protected under The Conservation of Habitats and Species Regulations 2017 through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of Schedule 2 species (e.g. all bats)
- Deliberate disturbance of bat species as:
 - a) to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young;
 - (ii) to hibernate or migrate³
 - b) to affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

Bats are also currently protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

How is the legislation pertaining to bats liable to affect development works?

The appropriate licence issued by the relevant countryside agency (e.g. Natural England) will be required for works liable to affect a bat roost or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Though there is no case law to date, the legislation may also be interpreted such that, in certain circumstances, important foraging areas and/or commuting routes can be regarded as being afforded de facto protection, for example, where it can be proven that the continued usage of such areas is crucial to maintaining the integrity and long-term viability of a bat roost¹⁴.

Birds

All wild birds, their nests and eggs are protected under Sections 1-8 of the Wildlife and Countryside Act 1981 (as amended). Among other things, this makes it an offence to:

- Intentionally kill, injure or take any wild bird;
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- Intentionally take or destroy an egg of any wild bird;
- Sell, offer or expose for sale, have in his possession or transport for the purpose of sale any wild bird (dead or alive) or bird egg or part thereof.

Certain species of bird, for example the barn owl, black redstart, hobby, bittern and kingfisher receive additional special protection under Schedule 1 of the Act and Annex 1 of the European Community Directive on the Conservation of Wild Birds (2009/147/EC). This affords them protection against:

- Intentional or reckless disturbance while it is building a nest or is in, on or near a nest containing eggs or young;
- Intentional or reckless disturbance of dependent young of such a bird.

How is the legislation pertaining to birds liable to affect development works?

¹⁴ Garland & Markham (2008) Is important bat foraging and commuting habitat legally protected? Mammal News, No. 150. The Mammal Society, Southampton.

To avoid contravention of the Wildlife and Countryside Act 1981 (as amended), works should be planned to avoid the possibility of killing or injuring any wild bird, or damaging or destroying their nests. The most effective way to reduce the likelihood of nest destruction in particular is to undertake work outside the main bird breeding season which typically runs from March to August¹⁵. Where this is not feasible, it will be necessary to have any areas of suitable habitat thoroughly checked for nests prior to vegetation clearance.

Those species of bird listed on Schedule 1 are additionally protected against disturbance during the breeding season. Thus, it will be necessary to ensure that no potentially disturbing works are undertaken in the vicinity of the nest. The most effective way to avoid disturbance is to postpone works until the young have fledged. If this is not feasible, it may be possible to maintain an appropriate buffer zone or standoff around the nest.

Herpetofauna (Amphibians and Reptiles)

The sand lizard *Lacerta agilis*, smooth snake *Coronella austriaca*, natterjack toad *Epidalea calamita* and great crested newt *Triturus cristatus* receive full protection under The Conservation of Habitats and Species Regulations 2017 through their inclusion on Schedule 2. The pool frog *Pelophylax lessonae* is also afforded full protection under the same legislation. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of species listed on Schedule 2
- Deliberate disturbance of any Schedule 2 species as:
 - a) to impair their ability:
 - (i) to survive, breed, or reproduce, or to rear or nurture young;
 - (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate
 - b) to affect significantly the local distribution or abundance of the species
- Deliberate taking or destroying of the eggs of a Schedule 2 species
- Damage or destruction of a breeding site or resting place
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof.

¹⁵ It should be noted that this is the main breeding period. Breeding activity may occur outwith this period (depending on the particular species and geographical location of the site) and thus due care and attention should be given when undertaking potentially disturbing works at any time of year.

With the exception of the pool frog, these species are also currently listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)
- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

Other native species of herpetofauna are protected solely under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). Species such as the adder *Vipera berus*, grass snake *Natrix natrix*, common lizard *Zootoca vivipara* and slow-worm *Anguis fragilis* are listed in respect to Section 9(1) & (5). For these species, it is prohibited to:

- Intentionally (or recklessly in Scotland) kill or injure these species
- Sell, offer or expose for sale, possess or transport for purpose of sale these species, or any part thereof.

Common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Lissotriton vulgaris* and palmate newt *L. helveticus* are listed in respect to Section 9(5) only which affords them protection against sale, offering or exposing for sale, possession or transport for the purpose of sale.

How is the legislation pertaining to herpetofauna liable to affect development works?

The appropriate licence issued by the relevant countryside agency (e.g. Natural England) will be required for works liable to affect the breeding sites or resting places of those amphibian and reptile species protected under The Conservation Habitats and Species Regulations 2017. A licence will also be required for operations liable to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, rear young and hibernate). The licences are to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Although not licensable, appropriate mitigation measures may also be required to prevent the intentional killing or injury of adder, grass snake, common lizard and slow worm, thus avoiding contravention of the Wildlife and Countryside Act 1981 (as amended).

Invasive Plant Species

Certain species of plant, including Japanese knotweed *Fallopia japonica*, giant hogweed *Heracleum mantegazzianum* and Himalayan balsam *Impatiens glandulifera* are listed on Part II of Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) in respect to Section 14(2). Such species are generally non-natives whose establishment or spread in the wild may be detrimental to native wildlife. Inclusion on Part II of Schedule 9 therefore makes it an offence to plant or otherwise cause these species to grow in the wild.

How is the legislation pertaining to invasive plants liable to affect development works?

Although it is not an offence to have these plants on your land per se, it is an offence to cause these species to grow in the wild. Therefore, if they are present on site and development activities (for example movement of spoil, disposal of cut waste or vehicular movements) have the potential to cause the further spread of these species to new areas, it will be necessary to ensure appropriate measures are in place to prevent this happening prior to the commencement of works.

Otter

Otters are fully protected under The Conservation of Habitats and Species Regulations 2010 (as amended) through their inclusion on Schedule 2. Regulation 41 prohibits:

- Deliberate killing, injuring or capturing of otters;
- Deliberate disturbance of any Schedule 2 species (e.g. otter) as:
 - a) to impair their ability:
 - (i) to survive, breed or reproduce, or to rear or nurture young;
 - (ii) to hibernate or migrate
 - b) to affect significantly the local distribution or abundance of the species
- Damage or destruction of a breeding site or resting place; and
- Keeping, transporting, selling, exchanging or offering for sale whether live or dead or of any part thereof. Intentionally kill, injure or take an otter.

Otters are also currently protected under the Wildlife and Countryside Act 1981 (as amended) through their inclusion on Schedule 5. Under this Act, they are additionally protected from:

- Intentional or reckless disturbance (at any level)

- Intentional or reckless obstruction of access to any place of shelter or protection
- Selling, offering or exposing for sale, possession or transporting for purpose of sale.

How is the legislation pertaining to otter liable to affect development works?

A European Protected Species Mitigation (EPSM) Licence issued by the relevant countryside agency (e.g. Natural England) will be required for any works liable to affect otter breeding or resting places (often referred to as holts, couches or dens) or for operations likely to result in a level of disturbance which might impair their ability to undertake those activities mentioned above (e.g. survive, breed, and rear young). The licence is to allow derogation from the relevant legislation but also to enable appropriate mitigation measures to be put in place and their efficacy to be monitored.

Water vole

The water vole is fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:

- Intentionally kill, injure or take (capture) a water vole;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection;
- Intentionally or recklessly disturb a water vole while it is occupying a structure or place used for shelter or protection; and
- Sell, offer or expose for sale, or have in his possession or transport for the purpose of sale, any live or dead water vole or part thereof.

How is the legislation pertaining to water voles liable to affect development works?

Wherever development works are liable to affect habitats known to support water vole, the relevant countryside agency must be consulted. It must be shown, that means by which the proposal can be re-designed, to avoid contravening the legislation have been fully explored e.g. the use of alternative sites, appropriate timing of works to avoid times of the year in which water voles are most vulnerable, and measures to ensure minimal habitat loss. Conservation licences for the capture and translocation of water voles may be issued by the relevant countryside agency (e.g. Natural England) for the purpose of development activities if it can be shown that the activity has been properly planned and executed and thereby contributes

to the conservation of the population. The licence will then only be granted to a suitably experienced person if it can be shown that adequate surveys have been undertaken to inform appropriate mitigation measures. Identification and preparation of a suitable receptor site will be necessary prior to the commencement of works.

White-clawed crayfish

White-clawed crayfish receive the above protection under the Wildlife and Countryside Act 1981. The legislation covers all life stages, i.e. eggs, larvae, juveniles and adults.

White-clawed crayfish that have been captured are protected by UK animal welfare legislation, which prohibits cruelty and abandonment (Protection of Animals Act 1911, Abandonment of Animals Act 1960).

Controlled waters (rivers, streams, canals, groundwaters, coastal and territorial waters) are protected against pollution under the Water Resources Act 1991. Under this Act and the Land Drainage Act 1991, any works within 8m of a main river bank or flood-bank, works that affect the flow in any watercourses, require formal consent from the Environment Agency.

How is the legislation pertaining to water voles liable to affect development works?

If presence is established, consultation with the local Environment Agency office will be required for works, not only including construction and excavation, but also other activities that may affect the floodplain, such as planting new woodland.

Action involving the “taking” of white-clawed crayfish (essentially, anything involving catching or handling of crayfish) will require a licence from the Environment Agency. This includes:

- surveys;
- rescuing of individual crayfish prior to works, and
- transfer of white-clawed crayfish from one site to another.

Wild Mammals (Protection) Act 1996

All wild mammals are protected against intentional acts of cruelty under the above legislation. This makes it an offence to:

- Mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

To avoid possible contravention, due care and attention should be taken when carrying out works (for example operations near burrows or nests) with the potential to affect any wild mammal in this way, regardless of whether they are legally protected through other conservation legislation or not.

B NATIONAL AND EUROPEAN LEGISLATION AFFORDED TO HABITATS

Statutory Designations: National

Nationally important areas of special scientific interest, by reason of their flora, fauna, or geological or physiographical features, are notified by the countryside agencies as statutory **Sites of Special Scientific Interest** (SSSIs) under the National Sites and Access to the Countryside Act 1949 and latterly the Wildlife & Countryside Act 1981 (as amended). As well as underpinning other national designations (such as **National Nature Reserves** which are declared by the countryside agencies under the same legislation), the system also provides statutory protection for terrestrial and coastal sites which are important within a European context (Natura 2000 network) and globally (such as Wetlands of International Importance). See subsequent sections for details of these designations. Improved provisions for the protection and management of SSSIs have been introduced by the Countryside and Rights of Way Act 2000 (in England and Wales).

The Wildlife & Countryside Act 1981 (as amended) also provides for the making of **Limestone Pavement Orders**, which prohibit the disturbance and removal of limestone from such designated areas, and the designation of **Marine Nature Reserves**, for which byelaws must be made to protect them.

Statutory Designations: International

Special Protection Areas (SPAs), together with **Special Areas of Conservation** (SACs) form the **Natura 2000** network. The Government is obliged to identify and classify SPAs under the EC Birds Directive (Council Directive 2009/147/EC (formerly 79/409/EEC)) on the Conservation of Wild Birds). SPAs are areas of the most important habitat for rare (listed on Annex I of the Directive) and migratory birds within the European Union. Protection afforded SPAs in terrestrial areas and territorial marine waters out to 12 nautical miles (nm) is given by The Conservation of Habitats & Species Regulations 2017. The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended) provide a mechanism for the designation and protection of SPAs in UK offshore waters (from 12-200 nm).

The Government is obliged to identify and designate SACs under the EC Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora). These are areas which have been identified as best representing the range and variety of habitats and (non-bird) species listed on Annexes I and II to the Directive within the European Union. SACs in terrestrial areas and territorial marine waters out to 12 nm are protected under The Conservation of Habitats & Species Regulations 2017. The Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 (as amended) provide a mechanism for the designation and protection of SACs in UK offshore waters (from 12-200 nm).

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention covers all aspects of wetland conservation and wise use, in particular recognizing wetlands as ecosystems that are globally important for biodiversity conservation. Wetlands can include areas of marsh, fen, peatland or water and may be natural or artificial, permanent or temporary. Wetlands may also incorporate riparian and coastal zones adjacent to the wetlands. Ramsar sites are underpinned through prior notification as Sites of Special Scientific Interest (SSSIs) and as such receive statutory protection under the Wildlife & Countryside Act 1981 (as amended) with further protection provided by the Countryside and Rights of Way (CROW) Act 2000. Policy statements have been issued by the Government in England and Wales highlighting the special status of Ramsar sites. This effectively extends the level of protection to that afforded to sites which have been designated under the EC Birds and Habitats Directives as part of the Natura 2000 network (e.g. SACs & SPAs).

Statutory Designations: Local

Under the National Sites and Access to the Countryside Act 1949 **Local Nature Reserves** (LNRs) may be declared by local authorities after consultation with the relevant countryside agency. LNRs are declared for sites holding special wildlife or geological interest at a local level and are managed for nature conservation and provide opportunities for research and education and enjoyment of nature.

Non-Statutory Designations

Areas considered to be of local conservation interest may be designated by local authorities as a **Wildlife Site**, under a variety of names such as **County Wildlife Sites** (CWS), **Listed Wildlife Sites** (LWS), **Local Nature Conservation Sites** (LNCS), **Sites of Biological Importance** (SBIs),

Sites of Importance for Nature Conservation (SINCs), or **Sites of Nature Conservation Importance (SNCIs)**. The criteria for designation may vary between counties.

Together with the statutory designations, these are defined in local and structure plans under the Town and Country Planning system and are a material consideration when planning applications are being determined. The level of protection afforded to these sites through local planning policies and development frameworks may vary between counties.

Regionally Important Geological and Geomorphological Sites (RIGS) are the most important places for geology and geomorphology outside land holding statutory designations such as SSSIs. Locally-developed criteria are used to select these sites, according to their value for education, scientific study, historical significance or aesthetic qualities. As with local Wildlife Sites, RIGS are a material consideration when planning applications are being determined.

C NATIONAL PLANNING POLICY

The National Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF) replaced Planning Policy Statement (PPS9) in April 2012 as the key national planning policy concerning nature conservation and was recently revised in 2018. The NPPF emphasises the need for suitable development. The Framework specifies the need for protection of designated sites and priority habitats and priority species. An emphasis is also made for the need for ecological networks via preservation, restoration and re-creation. The protection and recovery of priority species – that is those listed as UK Biodiversity Action Plan priority species – is also listed as a requirement of planning policy. In determining a planning application, planning authorities should aim to conserve and enhance biodiversity by ensuring that: designated sites are protected from adverse harm; there is appropriate mitigation or compensation where significant harm cannot be avoided; opportunities to incorporate biodiversity in and around developments are encouraged; planning permission is refused for development resulting in the loss or deterioration of irreplaceable habitats including aged or veteran trees and also ancient woodland.

The Natural Environment and Rural Communities Act 2006 and The Biodiversity Duty

The Natural Environment and Rural Communities (NERC) Act came into force on 1st October 2006. Section 40 of the Act requires all public bodies to have regard to biodiversity conservation when carrying out their functions. This is commonly referred to as the 'biodiversity duty'.

Section 41 of the Act (Section 42 in Wales) requires the Secretary of State to publish a list of habitats and species which are of ‘principal importance for the conservation of biodiversity.’ They are referred to in this report as Species of Principal Importance and Habitats of Principal Importance. This list is intended to assist decision makers such as public bodies in implementing their duty under Section 40 of the Act. Under the Act these habitats and species are regarded as a material consideration in determining planning applications. A developer must show that their protection has been adequately addressed within a development proposal.

D LOCAL PLANNING POLICY

The Breckland Local Plan (2015) deals with matters of strategic importance for Breckland. Key chapters include Chapter 7 – Environment, the main strategic objective being " *protecting and enhancing the natural and built environment of the District.*"

ENV 01 Green Infrastructure

The network of Green Infrastructure in the District should be safeguarded, retained and enhanced. Any new development should recognise the intrinsic value of the green infrastructure network and ensure that the functionality of the network is not undermined as a result of development. Through the promotion of positive action, and the development management process, the enhancement of the green infrastructure network in the District will be sought. There is an expectation that new development proposals will incorporate green infrastructure and where possible enhance existing connectivity. Through its layout and design, new development should respond to the location of existing green infrastructure and should support appropriate uses and functions. Where it is considered that the development will have a detrimental effect on the quantity or function of existing green infrastructure then the development will not be permitted unless replacement provision is made that is of equal or greater value than that which will be lost through development. Development that fails to exploit opportunities to incorporate green infrastructure will not be considered appropriate.

ENV 02 Sites of European, National & Local Nature Conservation Importance

The highest level of protection will be given to European Sites, with new development only permitted where:

- a. There will be no adverse effect on the integrity of any European site, or

b. If adverse effects are identified, it can be demonstrated that the proposed mitigation measures show that there will be no adverse effect on the integrity of any European site; or

c. If it cannot be ascertained that no adverse effect on integrity will result, the proposed development will only be able to proceed where there is no alternative solution and there are imperative reasons of overriding public interest. Policy ENV03 outlines specific requirements with regard to The Brecks SPA. Development likely to have an adverse effect (either directly or indirectly) on a site of national, regional or local biodiversity, or geological interest, as identified on the Policies Map, will not be permitted unless:

(a) It can be clearly demonstrated that there are reasons for the proposal that outweigh the need to safeguard the special ecological / geological interest of the site, or

(b) It has been demonstrated, where development would result in significant harm, that it cannot be reasonably located on an alternative site that would result in less or no harm, or

(c) Harm can be prevented, adequately mitigated or compensated for.

Where the Council considers that a designated site, protected species or any species or habitat of principal importance for conservation may be affected by a development proposal, a suitable environmental assessment will be required to be submitted with the planning application, for applications concerning European sites this will be a Habitats Regulation Assessment. Where development is permitted, the authority will consider the need for conditions or planning obligations to ensure the protection and enhancement of the site's nature conservation and / or geological interest.

ENV 03 The Brecks Protected Habitats & Species

The Council requires that an Appropriate Assessment is undertaken on all proposals for development that are likely to have a significant effect on the Breckland Special Protection Area (SPA). Development will only be permitted where it will not adversely affect the integrity of the SPA.

A conclusion of no likely significant effect can be met where:

a). The proposed building is located further than 1500m away from the SPA boundary or identified areas that have a functional link, a proposed building is within 1500m of the SPA

boundary but more than 1500m away from potential stone curlew nesting sites inside the SPA (these are those parts of the SPA that are also designated as Breckland Farmland SSSI);

b). The proposed new building would be completely masked from the SPA by existing built development and / or other suitable screening landscape features;

c). A proposed re-development of an existing building that would not alter its footprint; New agricultural buildings of less than 120m²;

d). Extensions to existing agricultural buildings of less than 120m² or 100% of the original, whichever is less.

A 1,500m buffer zone from the edge of those parts of the SPA that support, or are capable of supporting, Stone Curlews is currently defined on the policies map Within this constraint zone:

(a) Permission may be granted for re-use of existing buildings and for development which will be completely masked from the SPA by existing built development and / or other suitable screening landscape features.

(b) Permission may be granted for agricultural buildings where:

- there is a demonstrable need for the facility (necessary to manage the agricultural land/maintain the economic viability of an agricultural enterprise);
- justification is provided as to why it cannot be located elsewhere (outside the buffer zone);
- and justification that the selected location is the least detrimental.

Applicants must provide evidence to show how their proposal meets the criteria listed in Natural England's "Agricultural Buildings and the Breckland SPA Stone Curlew constraint zone" advice note, or successor document. Beyond the SPA boundary, on other land suitable for Stone Curlews or where they are present, an additional 1,500m development restriction buffer will also operate as is shown on the Policies Map. Within these areas the same approach will apply. The Council will consider the need for an appropriate assessment to determine the implications of development on other interest features of the SPA (i.e. Nightjar and Woodlark) on a case by case basis.

F REGIONAL AND LOCAL BAPS

Many local authorities in the UK have also produced a local Biodiversity Action Plan (LBAP) at the County or District level. The Norfolk Biodiversity Action Plan is based on the UK list of Species and Habitats of Principal Importance.



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