Preliminary Ecological Appraisal

of

The Former Piggery Site,
Hill House Lane, Needham Market



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The findings detailed in this report are based on evidence from thorough survey, where every effort has been taken to provide an accurate assessment of the site at the time of the survey. No liability can be assumed for omissions or changes after the survey has taken place. This report can be relied upon for twelve months from the date of issue, after this date an updated site visit should be undertaken to assess any material changes to the site.

This report was instructed by the Last & Tricker Partnership on behalf of their client, and following the brief agreed. Aspen Ecology has made every effort to meet the client's brief.

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1 Executive Summary

Aspen Ecology was instructed by the Last &Tricker Partnership on behalf of their client to carry out a Preliminary Ecological Appraisal (PEA) of the site: Land off Hill House Lane, Needham Market, hereafter referred to as 'the Site'. The central grid reference for the Site is TM 0811 5558. The site survey was undertaken on the 2nd February 2021.

The Site comprises a semi-improved grassland field surrounding a former Piggery building. Hedgerows and ditches are present at the boundaries.

Four statutory sites are located within 2km and there are no European Sites within impact distance (13km). Fifteen County Wildlife Sites are present within 2km, however no significant impacts are predicted.

The development proposals comprise the demolition of the existing buildings within the site and erection of four residential dwellings, hedgerows will be retained/re-planted at the site boundaries where possible.

The site provides potential habitat for reptiles and amphibians during their terrestrial phase. Further surveys should be undertaken to assess the presence or likely absence of reptiles at the site and great crested newts in ponds within 250m.

Precautionary clearance methods are included in this report to minimise the risk of causing harm to any wildlife that may be present. Enhancement suggestions are also provided, that if included may improve the site for wildlife post development.

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2 Introduction

2.1 Background

Aspen Ecology was commissioned by the Last & Tricker Partnership on behalf of their client to undertake a Preliminary Ecological Appraisal of Land at the Former Piggery Site, Hill House Lane, Needham Market, Suffolk. The National Grid co-ordinates for the centre of the site are TM 0811 5558.

The assessment was required to inform a planning application to construct four new residential dwellings at the site. This report presents the findings of the Preliminary Ecological Appraisal carried out by Aspen Ecology in February 2021.

2.2 Aims and Scope of Report

This report is a Preliminary Ecological Appraisal. According to CIEEM guidelines¹, a Preliminary Ecological Appraisal "can be used as a scoping report (for non-Environmental Impact Assessment (EIA) projects), but should not be submitted as part of a planning application unless it can be determined that the project would have no significant ecological effects, no mitigation is required and no further surveys are necessary."

This report is based on an extended Phase 1 habitat survey and desktop study aimed at assessing the suitability of the site to support protected species and notable habitats. This information allows an initial assessment of the biodiversity value of the site to be made, potential constraints to the proposed development to be identified and mitigation, compensation and enhancement measures to be developed.

The report assesses the compliance of the scheme with relevant local and national planning policy and addresses any potential impacts on legally protected species and habitats. Where potential for notable or protected species is identified, further surveys may be required to determine presence or likely absence and assess the conservation status of populations or assemblages present. The results of such work are required to fully assess the potential ecological impacts of the scheme.

2.3 Site Description

The site is located to north west of Hill House Lane on the north western edge of Needham Market. The site comprises an area of semi-improved grassland surrounding a barn, bounded by residential properties to the north east, south west and east with arable farm land to the north and west.

¹ CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester

The local area is dominated by residential properties of Needham Market to the south east, arable farmland dominates the wider area with numerous blocks of woodland and the River Gipping approximately 600m north east.

2.4 Planning Policy and Legislation

For the purposes of this report, protected species are taken to be those which are protected under UK legislation (The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019², Wildlife and Countryside Act 1981³; Protection of Badgers Act 1992⁴).

Protected species, and Species of Principle Importance for conservation of biodiversity in England (SPIE species – formally Biodiversity Action Plan species), are a material consideration for individual planning consents under the National Planning Policy Framework⁵ (NPPF), which places responsibility on LPAs to aim to conserve and enhance biodiversity in and around developments, promote the enhancement of natural and local environments through planning, and achieve net gains for biodiversity.

2.4.1 Planning Policy

2.4.1.1 National Policy

The National Planning Policy Framework (NPPF) sets out the government's requirements for the planning system in England. A number of sections of the NPPF are relevant when taking into account development proposals and the environment. As set out within Paragraph 14 of the NPPF "At heart of the National Planning Policy Framework is a presumption in favour of sustainable development, which should be seen as a golden thread running through both planmaking and decision-taking". However, Paragraph 119 goes on to state that "The presumption in favour of sustainable development does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined".

The general impetus of the NPPF in relation to ecology and biodiversity is for development proposals to not only minimise the impacts on biodiversity but also to provide enhancement. Paragraph 109 states that the planning system should contribute to and enhance the natural environment by "...minimising impacts on biodiversity and providing net gains in biodiversity where possible..."

Paragraph 118 states that "when determining planning applications, local planning authorities should aim to conserve and enhance biodiversity". A number of principles are set out in Paragraph 118 including the principle that where harm cannot be adequately avoided then it should be mitigated for, or as a last resort, compensated for. Where impacts occur on nationally designated sites, the benefits must clearly outweigh any adverse impact and

² HMSO (2019) The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations. HMSO, London.

³ HMSO (1981) Wildlife and Countryside Act (as amended). HMSO, London.

⁴ HMSO (1992) Protection of Badgers Act, HMSO London.

⁵ National Planning Policy Framework (2012)

incorporating biodiversity in and around developments should be encouraged. Protection of irreplaceable habitats, such as ancient woodlands and those sites proposed as SPAs, SACs and Ramsar sites or acting as compensation for SPAs, SACs and Ramsar sites, should receive the same protection as European sites.

In addition to the NPPF, Circular 06/05 provides guidance on the application of the law relating to planning and nature conservation as it applies in England. Paragraph 98 states "the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat". Whilst paragraph 99 states "it is essential that the presence or otherwise of a protected species, and the extent that they may be affected by the proposed development, is established before planning permission is granted".

2.4.1.2 Local Policy

The site is covered by Mid Suffolk District Council who are in the process of preparing a New Joint Local Plan Document with Babergh District Council. The New Local Plan will include all major planning policy for the District in a single document and will need to meet the requirements of the National Planning Policy Framework (NPPF). Once complete it will replace both the Core Strategy (2008) and the Local Plan Alteration No.2 (1998). A new Local Development Scheme (LDS) which sets out the revised timetable for the production of the Joint Local Plan was approved by Babergh District Council on 21st July 2020 and Mid Suffolk District Council on 23rd July 2020.

Mid Suffolk's Core Strategy was adopted in September 2008. As the key Development Plan Document it sets out the vision, objectives, spatial strategy and core policies that will guide development across the district until 2025, and beyond. A Core Strategy Focussed Review was undertaken and adopted by the Council on 20th December 2012.

Current adopted Local planning policy within Mid Suffolk is provided by the Core Strategy 2008. A single overarching policy within the Core Strategy makes specific reference to ecology and biodiversity:

Policy CS5: Mid Suffolk's Environment

All development will maintain and enhance the environment, including the historic environment, and retain the local distinctiveness of the area.

To protect, manage and enhance Mid Suffolk's biodiversity and geodiversity based on a network of:

- Designated Sites (international, national, regional and local)
- Biodiversity Action Plan Species and Habitats, geodiversity interests within the wider environment
- Wildlife Corridors and Ecological Networks

and where appropriate increase opportunities for access and appreciation of biodiversity and geodiversity conservation for all sections of the community.

Emphasis will be given to the creation new habitats particularly along the Gipping, Upper Waveney and Deben river valley's in connection with flood management schemes and to contribute towards green tourism opportunities.

3 Methodology

3.1 Site Survey

The site survey was undertaken by Mary Power BSc (Hons) MSc MCIEEM, a full member of the Chartered Institute of Ecology & Environmental Management, subject to the CIEEM Professional Code of Conduct and licensed by Natural England to survey for great crested newts (WML-CL08; Level 1) and bats (WML-CL18; Level 2).

During the survey on 2nd February 2021 the temperature was 7°C; the wind was Beaufort scale 1-2, 100% cloud cover and good visibility.

The survey was undertaken in accordance with Guidelines for Preliminary Ecology Appraisal⁶ and the broad methodology and principles of the Joint Nature Conservation Committee (JNCC) Phase 1 Habitat Survey⁷, which included mapping habitat types and identifying plant species observed on the site, including Wildlife and Countryside Act Schedule 9 invasive plant species.

The Phase 1 Habitat Map in Appendix B shows main habitat types, and features of interest identified as target notes.

The potential for presence of protected, Species of Principal Importance in England (SPIE) and rare species was assessed as follows:

Amphibians - Accessible ponds within 250m of the site were addressed for potential to support breeding amphibians where accessible. Habitat on the site, was surveyed for potential to support amphibians during their terrestrial or aquatic phase. 250m is a standardised search radius to assist in the assessment of the potential of a low impact site and its surrounding habitat to support great crested newt, based on current Natural England guidance⁸.

Bats – Habitat within, and adjacent to, the site boundary was assessed for potential to support roosting, foraging and commuting bats, aided by aerial photographs of the surrounding landscape. The survey conformed to current Bat Conservation Trust guidelines⁹.

⁶ CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester

⁷ JNCC (2010) Handbook for Phase 1 habitat survey: a technique for environmental audit (revised reprint) JNCC: Peterborough.

⁸ English Nature (2001) Great Crested Newt Mitigation Guidelines. Peterborough

⁹ Collins, J. (Ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (Third Edition). The Bat Conservation Trust, London.

Dormice – the site was assessed for potential to support dormice: Wooded/scrub areas or hedges with good under-storey/shrub layer and a diversity of foraging opportunities covering the active dormouse season.

Reptiles – Habitats were assessed for potential to support foraging or breeding reptiles and hibernation or refuge opportunities¹⁰¹¹.

Invertebrates - The site was surveyed for high quality aquatic, deadwood or other habitats which could be used by significant assemblages of invertebrates, or by invertebrates identified in the data search. During the Phase 1 survey there was no attempt made to identify species present and where a site supports features that may be of importance to invertebrates then further Phase 2 surveys may be required to assess the importance of the site.

Flora and habitats - A walkover survey identified broad vegetation types, which were then classified against Phase 1 habitat types, where appropriate. Any invasive species¹² encountered as an incidental result of the survey are noted.

Water voles and otters – Water bodies within impact distance of the site were assessed for potential to support water voles and otters.

Badgers - A visual assessment for setts, hair, latrines, prints, foraging disturbance or other signs of badgers was undertaken within, and directly adjacent to, the site boundary.

Birds - The assessment of breeding birds and wintering birds on the site was based on the suitability of habitat present, evidence of nesting such as old or currently active nests and the presence of bird species that may potentially nest within the available habitat.

Adjacent habitat - Aerial photographs, available maps and survey of the area outside the site boundary (where access was available) was used to identify any habitat in the wider landscape which could be impacted by proposed works.

3.2 Desk Study and Biodiversity Information Consultation

A 2km radius search for statutory designated sites was conducted using "MAGIC", the Multi-Agency Geographic Information system for the Countryside¹³. The search radius was extended to 13km for sites previously designated under European Legislation: Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Ramsar sites, where the potential risk of impact to the qualifying features (species or habitats) of these sites may extend over a wider area.

Suffolk Biodiversity Information Service (SBIS) was consulted for records of protected and locally rare species within a 2km radius of the site (data provided on 3rd February 2021). The site is covered by the Local BAP for Suffolk.

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¹⁰ Froglife (1999) Reptile Survey. An Introduction to Planning, Conducting and Interpreting Surveys for Snake and Lizard Conservation.

¹¹ Gent, A.H. and Gibson, S.D., eds. (1998) Herpetofauna Workers' Manual. Peterborough, Joint Nature Conservation Committee.

¹² Plant species included on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

¹³ http://defra.magic.gov.uk

4 Results and Discussion

4.1 Desk Study

MAGIC¹⁴, was accessed (4th February 2021), to identify the presence of statutory designated sites and habitats.

The site lies within an Impact Risk Zone (IRZ), requiring assessment of planning applications for likely impacts on SSSIs. Consultation with Natural England is required for: *Pipelines, pylons and overhead cables. Any transport proposal including road, rail and by water or aviation proposals; Planning applications for quarries or Oil & gas exploration/extraction; Any industrial/agricultural development that could cause air pollution; General combustion processes >20MW energy input; Landfill; Any composting proposal with more than 75000 tonnes maximum annual operational throughput; Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.*

As the application is for the construction of new dwellings consultation is not required.

Four statutory designated sites are present within 2km (detailed in Table 4.1), and no European sites (SPA, SAC or Ramsar) are present within 13km of the site. Fifteen non-statutory County Wildlife Sites is located within 2km of the site (detailed in Table 4.2).

Two sites with granted European Protected Species Licences were recorded on MAGIC within 5km of the site boundary (detailed in Table 4.3).

Table 4.1: Statutory Designated sites within 2km.

Site Name	Designation	Approx. distance from Site	Description
Fen Alder Carr	LNR	1.2km NE	This small LNR consists of a mosaic of habitat ranging from open water and tall fen vegetation to dense alder carr woodland. The alder plantation contains many mature, multi-stemmed trees. Bird life is abundant in this area of woodland since alder seed provides a valuable food source for siskin, redpoll and chaffinch. The most vociferous birds using the alder carr are rooks, occupying a large rookery high up in the tree canopy.
Needham Lakes	LNR	1.1km SE	Restored sand and gravel workings, Needham Lake is a mosaic of aquatic, marsh and scrub vegetation, which supports a wide range of plants and animals. Trees and shrubs in particular provide good cover for birds and small mammals.
Creeting St Mary Pits	SSSI	1.4km SE	This complex of old quarry sections allows a very important part of the Lower Pleistocene stratigraphy of Suffolk to be demonstrated. The site is of great importance as the type-site of the recently defined Creeting Sands, thought to be shallow marine/intertidal sediments laid down during an early Pleistocene interglacial.
Barking Woods	SSSI	1.6km S	The Barking Woods are an inter-related group of ancient woodlands, whose history has been well

¹⁴ http://defra.magic.gov.uk

medie large structu	mented since 1251. The major eval earthbanks still remain and ar pollards of oak and ash. Th ture is predominantly coppice-wit posed of a variety of different stand	marked by woodland -standards,
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Table 4.2: Non-Statutory Designated sites within 2km.

Site Name	Designation	Approx. distance from Site	Description
Keyfield Groves	cws	1.3km NW	This small woodland is divided into two sections by a wide, shrubby track, known as the Badley Walk. The northern woodland is composed of hazel and hornbeam coppice. Midland hawthorn, a species strongly associated with medieval woodlands, and elder are abundant in the understorey. The southern woodland consists of field maple, elder, rose, elm and hazel. The impenetrable shrub layer provides valuable habitat for breeding birds. A significant feature of Keyfield Groves is the abundance of dead and dying wood. This provides a source of food for invertebrates, fungi and birds.
Little Newton Wood	cws	970m SW	Little Newton Wood, together with Great Newton Wood situated close by, are important both as refuges for wildlife and as features in an intensively-farmed landscape. The entire wood is enclosed by a barbed-wire fence and a dense hedge consisting of hawthorn, dogwood and blackthorn. The tree canopy is dominated by oak and ash with small amounts of hornbeam. Beneath the tree layers, hazel coppice and elder form a dense understorey in places. The woodland floor is carpeted with dog's mercury, bluebell and wood anemone, the latter species being strongly associated with ancient woodland.
Great Newton Wood	cws	1.2km SW	The dominant species in the dense tree canopy are ash with some oak with smaller amounts of field maple coppice and hornbeam. Hazel coppice and occasional elder forms the shrub layer. The ground flora, although dominated by dog's mercury also contains patches of bluebell and primrose and a number of uncommon ancient woodland indicator species for example wood spurge and wood anemone.
Chalkheith Road Meadow	cws	1.7km SE	A large proportion of the meadow was brought into cultivation five to ten years ago but has lain fallow since. During the summer of 1993, a large proportion of the meadow was recultivated with the exception of a small area in the southern part of the site. This was planted with Norway spruce some years ago and the trees are now ten to fifteen feet in height
Lion Inn Meadow & Chalk pit	cws	1.6km SE	This site is adjacent to the Lion Inn, Needham Market and comprises a mosaic of herb-rich chalky dry grassland (a Priority habitat) and part of a disused chalk pit to the south. The site is bordered to the west by an ancient green lane containing ancient hedgerows which may be of medieval origin.
Roadside Nature Reserve 200	cws	1km NW	Chalk Flora. This is also a Roadside Nature Reserve.

River Gipping (Sections)	cws	590m NE	Many stretches of the River Gipping as it flows between Stowmarket and Ipswich are of considerable conservation value. Some sections support a diverse emergent fringe consisting of reed, pond sedge and bur-reed. This provides suitable habitat for breeding water birds, for example moorhen and coot. Channel vegetation is dominated by yellow water-lily but also contains some uncommon plants, for example arrowhead and
Fen Alder Carr	CWS (Also LNR)	1.2km NE	spiked water-milfoil. It consists of a mosaic of habitat ranging from open water and tall fen vegetation to dense alder carr. The pond which was dug in 1980 is now colonised by a range of aquatic and emergent species including sedges, rushes and the scarce water violet. In addition it provides a valuable habitat for breeding amphibians. Closeby, the alder plantation contains many mature, multi-stemmed trees. Bird life is abundant in this area of woodland since alder seed provides a valuable food source for siskin, redpoll and chaffinch
Creeting St Mary Meadows	CWS	1.5km NE	It consist of three, low-lying wet meadows enclosed by hedges which border a tributary of the River Gipping. Despite a number of years of neglect, the meadows still support a species-rich plant community characteristic of wet, unimproved pastures. Southern marsh-orchids are abundant (over nine hundred spikes were noted in 1993), together with other uncommon wetland species for example marsh valerian, meadow saxifrage and fen bedstraw. In addition, a population of wood club-rush was recorded growing in the northernmost meadow.
Creeting St Mary Churchyard	CWS	1.6km NE	Creeting St Mary Churchyard is of high wildlife value as it supports an unimproved, herb-rich, dry grassland flora characteristic of the sands and gravels of this part of Suffolk. The soils are very drought prone and this is reflected in the flora.
Roadside Nature Reserve 217	cws	1.1km NE	Chalk Flora. This site is also a Roadside Nature Reserve.
Roadside Nature Reserve 157	cws	1.4km SE	Chalk flora. This site is also a Roadside Nature Reserve.
Flordon Road Grassland	cws	1.2km SE	This site provides a matrix of grassland, scrub and woodland between the corridor of the River Gipping, Needham Lakes and Creeting St Mary Pits. There is a rich flora with chalk grassland species like Bee and Pyramidal orchids in the mown areas and Carline Thistle, Centaury, Ploughman's Spikenard and Wild Liquorice in the taller grassland. Areas of scrub around the sewage works and the diverse woodland provide a rich habitat for birds as well as reptiles and amphibians.
Roadside Nature Reserve 145	cws	1.9km SE	Wild Liquorice. This site is also a Roadside Nature Reserve.
Alderson Lake	cws	1.8km SE	Unlike many gravel pits, Alderson Lake has shallow marginal areas which support a diverse emergent and aquatic flora. Reedmace, purple loosestrife and water figwort are amongst many tall waterside plants which are found here. In addition, white water-lily, an indicator plant of unpolluted water grows well in the lake.

Table 4.3: Granted Natural England European Protected Species Mitigation Licenses within 5km

Licence number	Species	Approx. distance from Site	Details
EPSM2009-611	Great crested newt	4.8km SE	Destruction of a resting place.
2016-25709-EPS-MIT	Common & Soprano pipistrelle	2km SE	Destruction of a resting place.

4.2 Biodiversity Information Consultation

A full list of SPIE (formally UK BAP) & protected mammals, amphibians, reptiles, invertebrates and plants is shown below in Table 4.4. A reduced list of UK BAP and protected birds is shown; these have been selected based on their likelihood of being recorded at the site, given the habitat types present. Two-hundred and forty-nine records of hedgehog were provided, therefore the most recent records (2016-2020) have been used for the assessment.

Table 4.4: Protected, SPIE and locally scare species records (SBIS, 2nd February 2021).

Species	Protection	Records: Date and distance to the site
	Bats	s
Noctule Nyctalus noctula	CHS(EU Exit)R 2019; WCA; SBAP	Single record (2016) 1.8km SE.
Brown long-eared bat Plecotus auratus	CHS(EU Exit)R 2019; WCA; SBAP	Single record (2016) 1.8km SE.
Soprano pipistrelle Pipistrellus pygmaeus	CHS(EU Exit)R 2019; WCA; SBAP	Two records (2012-2016). Closest record 1.2km NE.
Common pipistrelle Pipistrellus pipistrellus	CHS(EU Exit)R 2019 & WCA	Six records (2008-2017). Closest record 230m SE.
	Other Ma	mmals
Hedgehog Erinaceous europaeus	SPIE; SBAP	Sixty-seven records (2016-2020). Closest record within adjacent garden to the SW
Otter Lutra lutra	CHS(EU Exit)R 2019; WCA; SBAP	Nineteen records (2000-2009). Closest record 230m N from a tributary of the River Gipping.
Badger Meles meles	Protection of Badgers Act	Twelve records (2004-2020). Closest record 350m E.
Water vole Arvicola amphibius	WCA; SBAP	Fourteen records (2004-2015). Closest record 230m N from a tributary of the River Gipping.
Harvest mouse Micromys minutus	SPIE; SBAP	Single record (2014) 1km E.
Hazel dormouse Muscardinus avellanarius	CHS(EU Exit)R 2019; WCA; SBAP	Two records (2005) 1.8km SE.

Protection	Records: Date and distance to the site
SPIE; SBAP	Six records (2001-2016). Closest record 1.3km S.
Amphil	bians
CHS(EU Exit)R 2017; WCA; SPIE; SBAP	Eight records (2014-2020). Closest record 310m NW
SPIE & SBAP	Two records (2005-2017). Closest record 320m NE.
Repti	iles
WCA; SPIE; SBAP	Three records (2009-2019). Closest record 260m W.
WCA; SPIE; SBAP	Six records (2011-2020). Closest record 260m W.
WCA; SPIE; SBAP	Five records (2009-2020). Closest record 230m N.
	SPIE; SBAP CHS(EU Exit)R 2017; WCA; SPIE; SBAP SPIE & SBAP Rept WCA; SPIE; SBAP WCA; SPIE; SBAP

A large number of birds were identified in the desk study, many of which would not use habitats at the site. The following SPIE/SBAP species have been recorded within 2km, and could use habitats within the site for nesting or foraging:

SPIE/BAP and Red-listed Birds of Conservation Concern (BoCC): Grey partridge, Yellowhammer, house sparrow, tree sparrow, lesser redpoll, linnet, turtle dove, marsh tit, starling, spotted flycatcher, song thrush.

SPIE/BAP and Amber-listed Birds of Conservation Concern (BoCC): Reed bunting, bullfinch, dunnock.

WCA Schedule 1 birds: Brambling, fieldfare, redwing, barn owl, firecrest.

Protected and SPIE plants

The following plants listed as Vulnerable or Endangered on the IUCN Red List for England/GB were recorded within 2km of the site.

Shepherds needle Scandix pecten-veneris, corn marigold Glebionis segetum, chicory Cichorium intybus, cornflower Centaurea cyanus (also SPIE), dwarf spurge Euphorbia exigua, small-flowered catch-fly Silene gallica, corn spurrey Spergula arvensis, yellow vetchling Lathyrus aphaca, bladder-sedge Carex vesicaria And the WCA Schedule 8 species bluebell Hyacinthoides non-scripta

Protected and SPIE invertebrates		
Invertebrates	SPIE	Small heath, white admiral and wall butterflies Twenty moths. Roman snail (WCA) Stag beetle

SBAP = Suffolk Biodiversity Action Plan; SPIE = Species of Principal Importance in England; CHS(EU Exit)R = Conservation of Habitats and Species (Amendment) (EU Exit) Regulations; WCA = Wildlife and Countryside Act.

4.3 Potential for Protected Species and Habitats

The site was assessed to identify whether the proposals could potentially impact on protected or locally rare species or habitats, either during the construction, or operational phase.

4.3.1 Habitats and Flora

The survey was undertaken in February, which is outside the optimum botanical survey season and although broad species assemblages and habitat types could be readily identified, early flowering species would not be identifiable. No rare or priority plant species were recorded during the survey.

The site comprised an area of semi-improved grassland surrounding a barn/former piggery. Hedgerows were present at the site boundaries and a pond was present in an adjacent garden to the south west.

4.3.1.1 Semi-improved grassland

Grassland at the site had a sward height of approximately 15cm and was generally unmanaged within the northern section (surrounding the building), however evidence of cutting was apparent within the southern section. Species were dominated by grasses including Yorkshire fog *Holcus lanatus*, cocks foot *Dactylis glomerata*, red fescue *Festuca rubra* and false oat-grass *Arrhenatherum elatius*. Forbs included red dead nettle *Lamium purpureum*, cow parsley *Anthriscus sylvestris*, chickweed *Stellaria media*, nettle *Urtica dioica* and red clover *Trifolium pratense*. Ruderal species were more abundant within the southern part of the site with additional species including prickly ox-tongue *Picris echioides* and ragwort *Senecio jacobaea*.

4.3.1.2 Hedgerows

Hedgerows are present along the eastern, western and southern boundaries of the site. Eastern and southern hedgerows were boundaries of the adjacent residential curtilages and generally single/low species diversity. The western hedgerow was an immature hawthorn *Crataegus monogyna* hedge planted approximately 5m from the edge of the adjacent arable field. Hedgerows within and at the boundaries of the site are unlikely to be classified as 'Important' under the Hedgerow Regulations (1997) due to the lack of species diversity and location. However they could be classified as Hedgerow Priority Habitat under BAP criteria:

A hedgerow is defined as any boundary line of trees or shrubs over 20m long and less than 5m wide, and where any gaps between the trees or shrub species are less that 20m wide¹⁵.

Hedges form ecologically important linear features, linking habitats in the wider landscape. It is recommended that hedgerows at the boundaries are retained where possible, additional planting of native and wildlife attracting species will strengthen these features as commuting/dispersal corridors.

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¹⁵ Bickmore, C. J. (2002) Hedgerow survey handbook: a standard procedure for local surveys in the UK. London: DEFRA.

4.3.1.3 Trees

Semi-mature trees were present along the north eastern boundary forming the end of a hedgerow along the line of a ditch. Species included ash *Fraxinus excelsior* and sycamore *Acer pseudoplatanus*.

4.3.1.4 Invasive Flora and WCA Schedule 9 Species

No invasive species or species listed on Schedule 9 of the Wildlife and Countryside Act (1981 as amended) were recorded at the site.

4.3.2 Bats

All UK species of bats are protected under the Wildlife and Countryside Act 1981 and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Common and soprano pipistrelle, noctule and brown long-eared bats have been recorded in the local area.

4.3.2.1 Roosting Bats - buildings

The former piggery building (B1) was a single storey, open-fronted building of concrete block and timber construction with a pitched corrugated asbestos type roof with roof lights. The building was currently used for storage and was enclosed in hoarding. A two-storey concrete block extension was present to the north west elevation, the roof had collapsed on this section. Conditions were very light internally due to the open-fronted nature and presence of roof lights. There was no internal lining and the roof was supported on modern timbers. The two southern bays had timber doors fitted which created an enclosed void, however given the lack of roosting opportunities within the rest of the building it is considered unlikely that these bays provide any suitable roosting opportunities. Overall the building was of negligible bat roost potential.

No signs indicating the presence of bats were recorded (although close inspection of the internal structure was not possible) and given the low suitability of the existing buildings, it is considered that there is a negligible risk that roosting bats would be present. No further surveys are considered necessary.

4.3.2.2 Roosting Bats - trees

Trees within the site were assessed from the ground to assess their suitability for roosting bats. Trees along the north eastern boundary were not suitable for roosting bats due to a lack of any suitable features. Other trees within the site were immature/semi-mature and did not contain any features suitable for roosting bats.

4.3.2.3 Foraging and Commuting Bats

The site generally provides moderate quality foraging habitat for bats with areas of grassland and hedgerows providing a potential foraging/commuting resource. However, given the location of the site, surrounded by predominantly arable farmland, and the small size of the site it is considered unlikely that a significant population of bats use the habitats within the stie.

Boundary hedgerows will be retained/re-planted therefore commuting routes will be maintained post-development, new garden habitats will likely provide habitat for bats post-

development. Precautionary lighting recommendations are provided to minimise the risk of causing disturbance to any bats that may use the site post-development (see Section 5.2.for more detail).

4.3.3 Reptiles

All UK reptile species are protected under the Wildlife and Countryside Act 1981, with two species afforded higher levels of protection under the European Habitat Regulations. Common lizards, slow worms and grass snakes have all been recorded locally with the former two recorded at the edge of the adjacent arable field to the south west.

The site generally provides good quality habitat for reptiles, with areas of grassland providing foraging and basking opportunities. Boundary hedgerows, ditches and brash/debris piles (TN7) provide potential shelter and hibernation opportunities.

Due to the presence of suitable habitat within the site that will be lost to facilitate the development, it is recommended that further surveys are undertaken to assess the present or likely absence of reptiles at the site.

4.3.4 Amphibians

There are no waterbodies within the site, however two ponds are present within 250m; a pond within the adjacent garden approximately 10m to the south west, and a pond approximately 160m to the north west connected to the site by a hedgerow. The ponds within the surrounding area will not be impacted directly by the proposals, however habitat within the site is suitable for amphibians during their terrestrial phase and therefore there is a high risk that the proposed development will damage and/or destroy resting places used by amphibians such as toads and great crested newts.

Further surveys are recommended to assess the presence of likely absence of great crested newts in ponds within 250m to assess the need for a mitigation licence. If great crested newts are present within the ponds, a mitigation licence will be necessary to allow the proposed works, there are two licence pathways available for great crested newts: A European Protected Species Mitigation licence (EPSM) or a District Level Licence (DLL).

4.3.5 Birds

4.3.5.1 BAP/SPIE/Red-list Birds

A number of local BAP, national SPIE, and Schedule 1 bird records were provided by SBIS from the local area. The site could support foraging and nesting Species of Principle Importance (SPIE), such as turtle dove, house sparrow, linnet and song thrush. Schedule 1 birds such as fieldfare and redwing could also forage at the site.

4.3.5.2 Nesting Birds

All nesting birds and their eggs are protected under the Wildlife & Countryside Act 1981. A number of SPIE bird species could potentially use trees and hedgerows at the site for nesting and species such as swallow could use the build nest within the building. The ivy covering the walls and roof of the building could also provide potential nesting habitat.

Similar habitat is present in the surrounding landscape associated with residential gardens and farmland hedgerows. Building demolition and any works required to trees or hedgerows should be undertaken outside of the bird nesting season (March-August), if this is not possible a nesting bird survey should be undertaken prior to the demolition/works.

4.3.6 Other Mammals

4.3.6.1 Badger

Badgers and active setts are protected under the Protection of Badgers Act 1992.

No signs indicating the presence of badgers were recorded within the site, given the small size of the site lack of signs it is unlikely that badgers would be present or impacted by the proposals. No further surveys are considered necessary; however, precautions are detailed to protect nocturnal animals, including badgers, during the initial demolition/construction phase.

4.3.6.2 Hedgehogs

Hedgehogs have been recorded locally, with a record from the adjacent garden to the south west; individuals could use habitats at the site for foraging and shelter.

The proposals involve the loss of areas of suitable grassland and debris/brash piles to facilitate the development, however hedgehogs readily use garden habitats, therefore with careful design of the site hedgehogs will still have access to suitable foraging habitat. The creation of habitat piles at the boundaries and encouraging new residents to compost garden waste will provide potential shelter habitat.

Precautionary methods (Section 5), should be followed during the construction phase to minimise the risk of causing harm to this (and other nocturnal) species, and hedgehog links should be created in any solid garden boundaries to facilitate hedgehog movement through the site post development.

4.3.6.3 Hares

Brown hares (SBAP and SPIE species) generally use arable land and long grassland, although they are likely to be present in the surrounding arable land they are unlikely to use habitats within the site.

It is not considered that the development will cause habitat fragmentation or any obstruction to hare movement, due to its location in relation to habitat suitable for hares. No further survey or precaution is necessary.

4.3.6.4 Dormice

Records of dormice in the local area are from 1.8km south west and are separated from the site by the main town of Needham Market. Habitats within the site were not suitable to support dormice, lacking in suitable structure and diversity of forage species.

The site is not connected to any other suitable habitat in the local area, therefore no further surveys or precautions are considered necessary.

4.3.6.5 Otter/Water Vole

The site does not contain any suitable habitat for otter or water vole although a ditch was

present along the north eastern boundary, it was covered in dense scrub and was likely only holding water due to recent heavy rainfall. A tributary to the River Gipping is present approximately 200m north of the site, but is not linked to the boundary ditch.

It is unlikely that otter and water vole will be impacted by the proposals, no further survey necessary.

4.3.7 Invertebrates

Habitats at the site are likely to be used by a range of common invertebrates; however, due to the size and location of the site it is considered unlikely that a significant assemblage of invertebrates is present, no further surveys are considered necessary.

4.3.8 Impact on County Wildlife Sites & European Protected Sites

The proposed development will not directly impact on any county wildlife sites due to the distance between the site and the wildlife sites in the local area. There are no European sites within impact distance of the proposed development.

4.4 Limitations and Assumptions

The baseline conditions reported and assessed in this document represent those identified during a single site survey, on the 2nd February 2021. A reasonable assessment of habitats can be made during a single survey; however, seasonal variations cannot be observed. The survey provides an overview of the likelihood of protected species occurring on the site: Where no evidence is found, this does not mean that species are not present, or using the site. Further surveys are only recommended if there is a significant likelihood that protected species may be present and impacted by the proposed development, based on the suitability of the habitat and any direct evidence.

All areas of the site were accessible on the day of the survey, however hoardings surrounding the building restricted internal access. The internal structure of the majority of the building could be readily viewed from outside the hoarding, however the southern two bays had doors and no internal access was available. The report assumes that the internal structure of these bays is similar to the rest of the building. All constraints and limitations have been taken into account within conclusions and recommendations.

The desk study used records and historical data provided by SBIS, which depend on the availability of recorders and survey effort in the area, and do not list all species likely to be present. Data supplement the site visit, but absence of records does not confirm absence of species.

5 Recommendations

5.1 Further Survey/ Mitigation

5.1.1 Reptiles

Further surveys are recommended to assess the presence or likely absence of reptiles at the site. Seven survey visits to pre-laid refuges should be undertaken during the reptile active season (April to September) under suitable weather conditions, avoiding the hotter months of July and August where possible.

If only a low population of reptiles is recorded at the site, mitigation is likely to include precautionary clearance under ecological supervision at an appropriate time of year (April – Sept) and the erection of an exclusion fence along the north eastern and north western boundaries to prevent re-colonisation of reptiles during the construction period.

5.1.2 Great crested newts

Further surveys are recommended to assess the presence or likely absence of great crested newts in ponds within 250m of the site boundary. Environmental DNA surveys can be undertaken between mid-April and the end of June and require a single visit to take a water sample from ponds which is sent for laboratory analysis. If great crested newts are present within any of the ponds a Natural England mitigation licence will be necessary to allow the proposed development to proceed. Further surveys may be necessary to inform the licence application depending on the licence route chosen.

5.2 Precautionary Methods

5.2.1 Nesting birds

Demolition of the building and any tree/hedgerow works should be undertaken outside the nesting bird season. If this is not feasible, a precautionary survey of the site prior to start of works, should be carried out, to check for active bird nests, and avoid infringing legislation which protects all nesting birds (WCA 1981). If an active nest is recorded, vegetation clearance in that part of the site (including a buffer zone, as indicated by the ecologist), will be postponed until all young birds have fledged and left the area and the nest is no longer in use.

5.2.2 Nocturnal Animals

Any deep holes or foundations left uncovered overnight should have an escape ramp (secured scaffold board), to enable any nocturnal animals that become trapped to escape.

5.2.3 Sensitive Lighting

To minimise risk of disturbance to potential foraging and commuting bats using the boundary vegetation and trees within the site (both during and post development), external lighting should be minimised as follows:

- Any task lighting (during construction) should not be directed at the boundary vegetation or trees.
- Any necessary security lighting should be set on short timers and be sensitive to large moving objects only.

- Lighting should be low-level, bollard-type, or directed downward and shielded to minimise light spillage.
- Hoods, cowls or directional lighting should be used to avoid light directed at the sky or towards the boundary shrubs or mature trees.
- Lighting times should be limited, to provide dark periods.
- If the new access or parking areas will be lit, low-level, bollard-style lighting should be considered.
- Low pressure sodium security lights with glass glazing are recommended, as these
 produce the least amount of UV light. Avoid white and blue wavelengths of the light
 spectrum. The brightness of the lamps should be kept as low as feasibly possible
 for security and safety only¹⁶¹⁷.

5.3 Enhancement Recommendations

These additional recommendations are not legal requirements but would enhance the value of the site for wildlife, as encouraged through the NPPF, and to help achieve Suffolk BAP targets.

5.3.1 Wildlife Attracting Planting

Additional tree and hedge/shrub-planting at the site boundaries would strengthen these boundaries increasing foraging opportunities for birds and invertebrates.

The following native fruit and berry bearing species could be used: hazel *Corylus avellana*, crab apple *Malus sylvestris*, dog rose *Rosa canina*, guelder rose *Viburnum opulus*, blackthorn *Prunus spinosa*, hawthorn *Crataegus monogyna* and spindle *Euonymus europaeus*.

5.3.2 Bird Boxes

Bird boxes could be installed on suitable retained trees or on the new buildings. These should be installed at least 3m above the ground and should avoid direct sunlight (not directly southfacing), prevailing wind and be out of reach of cats and other predators:

- Smaller, open-fronted box, made to BTO dimensions (for spotted flycatcher and song thrush – Suffolk BAP species).
- Nest boxes with 32mm holes for house sparrow (SPIE species) could be added to the
 outbuildings. These should be located close together for this colonial nesting species,
 in a sheltered, minimally disturbed area (on the western aspect).

5.3.3 Bat Boxes

Bat boxes could be installed on new buildings. Woodcrete boxes such as the Vivara pro Beaumaris box or the Vivara Pro Build-in WoodStone box are suitable for crevice roosting species and would be suitable for installing on/in new buildings at the site. Bat boxes should

¹⁶ BCT (2014) Artificial lighting and wildlife: Interim Guidance: Recommendations to help minimise the impact artificial lighting.

¹⁷ Institution of Lighting Professionals (2011) Guidance Notes for the Reduction of Obtrusive Light GN01:2011.

ideally be erected at least 3m above the ground in a southerly direction (south-east to south-west).

5.3.4 Hibernacula

The provision of a habitat piles along the boundary of the site (particularly north east or south west) would provide shelter for reptiles and amphibians and hibernacula would provide overwintering habitat.

Hibernacula can be created by digging a depression (2m x 1m to a depth of 0.5m) and filling with inert rubble and hard wood logs and building up to 0.5m above ground. The mound should be turfed/ covered with seeded soil, with one side open to allow reptiles/amphibians access to gaps created within.

5.3.5 Hedgehog gaps

If close-board fencing (or other solid boundary fence/wall) is installed around new garden boundaries, gaps should be created at the base of the fence to allow hedgehogs, that have been recorded locally, to move through the site. Holes 13x 13cm at the base of the fence will allow hedgehogs to move unimpeded through the site post development.

6 Conclusion

The site is of moderate ecological value, trees and buildings at the site are of negligible suitability for roosing bats, however habitats at the site are suitable for reptiles and amphibians during their terrestrial phase. Further surveys are recommended to assess the presence or likely absence of reptiles within the site and great crested newts in ponds within 250m. Hedgerows and trees at the site could be used by foraging birds, bats and invertebrates, however by following the precautionary methods outlined in this report, and any further recommendations suggested following additional surveys, it is considered unlikely that any protected or rare wildlife would be significantly impacted by the proposals. The site could be enhanced for local wildlife through inclusion of some or all of the enhancement suggestions.

7 Appendix A - Legislation

7.1 Habitat Regulations

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 transpose EU Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive) and the Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive) into domestic law, making it an offence to deliberately capture, kill or disturb wild animals listed under Schedule 2 of the Regulations. It is also an offence to damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time).

7.2 Wildlife & Countryside Act

The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act (CRoW) 2000 and the Natural Environment and Rural Communities Act (NERC) 2006, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive), making it an offence to:

- Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting;
- Intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act; intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act; intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection;
- Pick or uproot any wild plant listed under Schedule 8 of the Act.

Sites of Special Scientific Interest (SSSI) are designated under this Act.

Special Protection Areas (SPA) are strictly protected sites, designated under the Birds Directive, for rare and vulnerable birds and for regularly occurring migratory species.

7.3 Natural Environment & Rural Communities Act

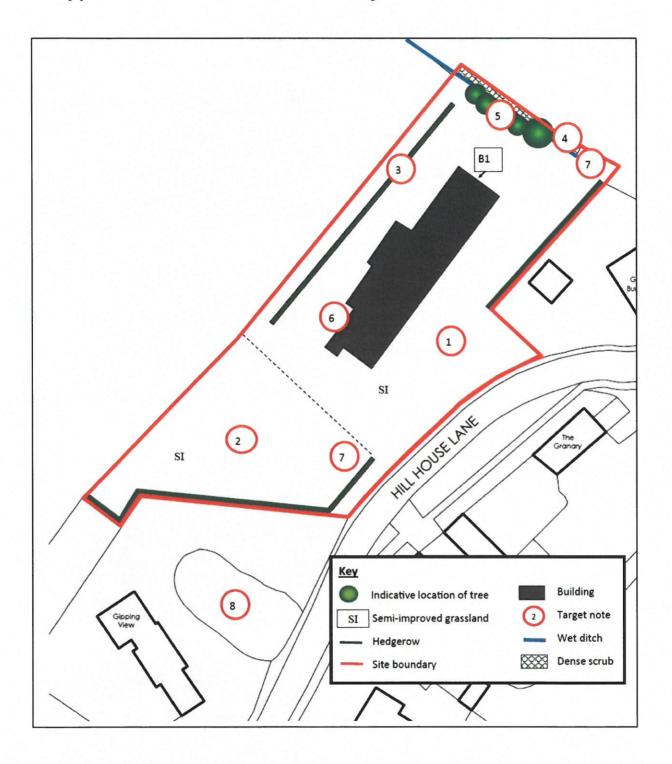
The NERC 2006 places a duty on authorities to have due regard for biodiversity and nature conservation during the course of their operations.

7.4 Biodiversity Action Plans

The UK Biodiversity Action Plan (UKBAP) was organised to fulfil the Rio Convention on Biological Diversity in 1992, to which the UK is a signatory.

There is no longer a UK Biodiversity Action Plan; this has been replaced by the UK Post-2010 Biodiversity Framework (2012). The England Biodiversity Strategy has been replaced by Biodiversity 2020: A strategy for England's wildlife and ecosystem services (2011). As a result, the BAP process has been devolved to local level with each county deciding its own way forward.

8 Appendix B - Phase 1 Habitat Survey Plan



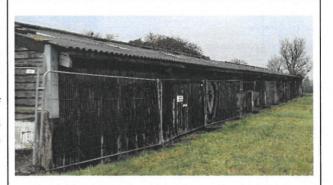
Target Notes

Target note	Habitat Description	Photo
1	Minimally/ un- managed semi-improved grassland. Species dominated by grasses including Yorkshire fog, cocks foot and red fescue. Occasional forbs included cow parsley and red dead-nettle.	
2	Sei-improved grassland that has been historically mown. Ruderal species were more prevalent here with species including bristly ox-tongue and ragwort abundant in the sward.	
3	Immature hawthorn hedgerow.	
4	Wet ditch along the north eastern boundary. Banks dominated by dense bramble scrub.	

5	Semi-mature ash and sycamore trees along the bank of the ditch on the north eastern boundary.	
6	Debris and rubble piles along the south western elevation of the building providing potential shelter and hibernation opportunities for reptiles and amphibians.	
7	Wood piles providing potential refuge habitat for reptiles and amphibians.	
8	Pond within the garden of adjacent property Gipping View, providing potential breeding habitat for amphibians including great crested newts.	

B1

Concrete block and timber building used for storage. Open cart lodge style to the north, with timber doors and corrugated asbestos type walls to the south. Pitched corrugated asbestos type roof with roof lights. Two storey concrete block extension to the north east, roof of this section has collapsed.



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