Report

Ecological Impact Assessment

Detailed Application (Eastern Site)

Lanwades Woodland Park

Sweco UK Limited
North Kiln, Felaw Maltings
46 Felaw Street
Ipswich, IP2 8PN
+44 1473 231 100

08 May 2025
Project Reference: 65210959
Document Reference: 65210959-SWE-XX-XX-T-J-0008
Revision: C03
Prepared For: Lochailort Investments Ltd

Status/Revisions

Rev.	Date	Reason for issue	Prepared	Reviewed	Approved
C01	04.04.25	Draft	CH & CF	JS	RWS
C02	09.04.25	Minor amends	CF	JS	JS
C03	08.05.25	Update bird and bat results	CF	JS	JS

This report and its findings should be considered in relation to the terms and conditions proposed and scope of works agreed between Sweco and the client.

Interpretations and recommendations contained in the report represent our professional opinions, which were arrived at in accordance with currently accepted industry practices at the time of reporting and based on current legislation in force at that time.

This report is prepared and written in the context of the proposals stated in the introduction to this report and should not be used in a differing context. Furthermore, alterations to the initial proposals or changes in conditions on site over time may necessitate an alteration to the report in whole or in part after its submission. Therefore, in the event of any change in proposals or lapse of one year or more from the date of the report, the content of the report should not be relied upon unless referred to Sweco for validation and, if necessary, re-appraisal.

Scientific survey data will be shared with local biological records centre in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) professional code of conduct.

This report was prepared only for our client and is not intended to be relied on by any other party. Third parties should not rely on the facts, matters or opinions set out in this report without the express written permission of Sweco.

Please note that Sweco does not purport to provide specialist legal advice.

Unless stated specifically, drawings and plans are indicative only. As such, the position of features marked on the plans or drawings should not be taken as 100% accurate.

Ecology reports are considered valid for 12 to 36 months after the survey date(s) depending on survey type and findings. Should the development not commence within the validity period, the survey(s) should be repeated, and the report updated.

SWECO

Table of Contents

Table of figures

Appendices

1 Non-technical Summary

This Ecological Impact Assessment report has been prepared by Sweco for Lochailort Investments Ltd and relates to the redevelopment of the former Animal Health Trust Research Centre, Kentford, CB8 7UA, for which detailed planning permission will be sought.

The purpose of this report is to establish baseline ecological conditions at the Project Site, detail mitigation measures to be put in place to minimise effects on important ecological features, identify residual effects and their significance including cumulative effects and detail enhancement measures to be incorporated into the development.

An initial ecological desk study, UK habitat classification survey, associated condition assessment and protected species scoping survey was carried out in April 2024, to map the habitats present and assess their potential to support notable/protected species. The Project Site comprises modified grassland, scattered trees, lowland beech, yew and broadleaved mixed woodland, other native hedgerow, introduced scrub, hardstanding and buildings. The Project Site has the potential to support breeding birds, bats (roosting, foraging and commuting), badger, hedgehog and brown hare, and invasive species.

The following further survey work was undertaken following the initial site walkover:

- Breeding bird survey.
- Stone-curlew scoping assessment.
- Bat emergence surveys on three buildings.
- Ground level tree assessment of all trees.
- Activity surveys in the form of automated/static surveys.
- Badger walkover and monitoring survey.

There are three internationally important designated sites within the Project Site ZOI. The impacts of the Project on the internationally designated sites and their qualifying features have been assessed within a Habitat Regulations Assessment screening report. The stone-curlew scoping assessment concluded impacts on this species are not anticipated.

Additional assessments/surveys will be required and are scheduled to start April 2025 and include:

- Additional surveys on FAR, PRF-I and PRF-M trees that will be impacted by the Project (include single aerial inspection survey (or ladder-based inspection, where the PRF is low enough to enable this to be carried out safely) and emergence surveys to be conducted between May-September inclusive).
- Further automated/static surveys for the Hybrid Application site which will supplement the existing results (three visits; April-October inclusive)).
- Badger pre-commencement check.

Following completion of the additional surveys, this report will be updated for planning application and will include supplementary discussion on the ecological baseline and the effect of the Project on ecological features with appropriate mitigation.

2 Introduction

2.1 Purpose

This Ecological Impact Assessment (EcIA) has been prepared by Sweco for Lochailort Investments Ltd, and relates to the proposed redevelopment, hereafter referred to as 'the Project', of the former Animal Health Trust Research Centre, Kentford, CB8 7UA, hereafter referred to as 'the Project Site', for which detailed planning permission will be sought.

An initial ecological desk study, UK habitat classification system (UKHab) survey and protected species scoping survey was undertaken for the site on 04 and 05 April 2024 and the findings are included herein and in the report of the preliminary ecological appraisal [1]. The preliminary ecological appraisal identified notable habitats on site and habitats suitable for notable and legally protected species, and recommended further survey to establish the ecological baseline, reported herein.

The purpose of this report is to:

- Establish baseline ecological conditions at the site.
- Provide details of ecological mitigation measures incorporated through design evolution as an intrinsic part of the project design.
- Detail any ecological mitigation measures to be implemented during site clearance and construction.
- Identify any residual ecological effects after avoidance and mitigation measures have been considered.
- Identify any compensation measures required to offset residual effects.
- Provide recommendations for how mitigation and compensation may be secured and monitored.
- Set out details of ecological enhancement measures to be included within the proposed development.
- Provide sufficient information to determine whether the project accords with relevant nature conservation policies and legislation and, where appropriate, to allow conditions or obligations to be proposed by the relevant authority.
- Outline aims and objectives of agreed ecological enhancement and habitat creation to achieve biodiversity net gain as a result of the proposed development.

2.2 Project Site Description

The Application Site has been split into two separate parts, the Project Site (red line) which envelopes 16.54 ha, and the wider ownership area (blue line) which envelopes 48.55 ha, as shown in Figure 2.1 below. For the purpose of this report, only areas within the red line boundary will be considered.

The separate outline application for the wider area is addressed in the Sweco Environmental Statement (ES) Chapter – Biodiversity ref. 65210959-SWE-XX-XX-T-J-0011.

Figure 2.1. Indicative red line boundary of the Project site (Detailed Element of Hybrid Application) and blue line boundary of the Hybrid Application site.

Map data from Google 2025. Bluesky, CNES / Airbus, Getmapping plc, Infoterra ltd & Bluesky, Maxar Technologies.

The Project Site occupies an area of approximately 15.5 ha and is located around national grid reference TL 69792 66288, to the west of Kentford.

Habitats on-site include modified grassland, scattered trees, lowland beech and yew mixed woodland, broadleaved mixed and yew woodland, other native hedgerows, introduced shrub, hardstanding and buildings.

The site is surrounded by predominantly arable land with woodland strips and hedgerow boundaries, with the residential town of Kentford to the east.

2.3 Project

The Project consists of demolition of existing buildings on site, and phased redevelopment to provide residential units alongside a retail/ commercial building (Use Class E), conversion of the existing listed stable block to community/ commercial use (Use Class F2/ E), provision of open space, play space, and associated infrastructure and car parking, as shown on Woods Hardwick drawing 19400/1009-G.

The construction phase will comprise of the following:

- Clearance of grassland habitats on site.

- Demolition of existing buildings.
- Conversion of the existing listed stable block.
- Retention and protection of woodland blocks and some hedgerows.

The operational phase will comprise the following:

- Residential homes and associated car park and private gardens.
- Community hub, shops and associated infrastructure.
- Green infrastructure comprising sustainable drainage systems (SuDS), play area including Neighbourhood Equipped Area for Play (NEAP) and Multi-Use Games Area (MUGA) facilities
- Semi-natural areas comprising additional hedgerows and trees, ornamental planting, shrubs, amenity and meadow grasslands.

3 Legislation and Policy Context

3.1 Current UK Legislation

The main pieces of legislation relating to ecology within England and Wales are:

- The Conservation of Habitats and Species Regulations 2017 (as amended)
- The Wildlife and Countryside Act 1981 (as amended)
- The Protection of Badgers Act 1992
- The Natural Environment and Rural Communities (NERC) Act 2006
- The Environment Act 2021

3.2 Planning Policy

The recommendations of this report are in line with the key principles of the National Planning Policy Framework [2] and Government Circular 06/05 [3].

Local planning policies relating to ecology are invariably based on the conservation of species protected under the above legislation, including species and habitats of principal importance listed under Section 41 of the NERC Act 2006; and the protection of designated sites. All of these features are considered within the scope of this ecological impact assessment and therefore any recommendations made herein are likely to be in line with this policy.

3.2.1 Suffolk Local Biodiversity Action Plan

The Suffolk Local Biodiversity Action Plan [4], developed by the Suffolk Biodiversity Partnership, sets out eight strategic actions to guide and assess county wide policy and strategic plans, monitoring of planning applications, and share information through seminars and training sessions. Following the publication of the UK Post-2010 Biodiversity Framework (2012), the UK BAP has been replaced by priority habitats and species; a full list of priority habitats and species for Suffolk has been published for consideration for conservation and enhancement at the local level [5].

3.2.2 West Suffolk Local Plan – Draft

The Emerging West Suffolk Local Plan [6] is currently under review and is expected to supersede the current legislation once adopted.

Paragraph 4.2.35 of the West Suffolk Local Plan Submission Draft (Regulation 19) 2024 states that *"Development proposals should seek to conserve and enhance the biodiversity and geological interests of the area and in particular ensure that protected species and habitats including those of principal importance in the UK and locally (priority habitats and species) will be protected and, where possible, enhanced".*

West Suffolk Council has merged with the former Forest Heath District Council and St Edmundsbury Council (FHDC). As such the adopted Local Plan comprises:

- Forest Heath Core Strategy (2010).
- Site Allocations Local Plan (2019).
- Joint Development Management Policies (2015).

Policy CS 2 of the former FHDC Core Strategy addresses the natural environment and states that *"Areas of landscape, biodiversity and geodiversity interest and local distinctiveness within the District will be protected from harm and their restoration, enhancement and expansion will be encouraged and sought through a variety of measures".*

Policies DM10, 11, 12, 13 and 14 of the Joint Development Management Policies (2015) address the natural environment and protected species, with paragraph 4.1 stating *"Development proposals should seek to conserve or enhance the biodiversity and geological interests of the area and in particular ensure that protected species and habitats including those set out in UK and local Biodiversity Action Plans (BAPs) will be protected and, where possible, enhanced".*

4 Methods

4.1 Technical Approach

This assessment has been produced following the CIEEM guidelines for ecological impact assessment [7]. As such, the work required has been carried out in accordance with the key principles of the National Planning Policy Framework [2] and Government Circular 05/06 [3]. Common names and binomial scientific names of plant species identified are as they appear in Stace [8].

The conclusions and recommendations are in accordance with current legislation and guidance.

4.2 Personnel

This report was produced by Graduate Ecologist Charlotte Hoskyns BSc (Hons) and Senior Ecologist Claudia Ferreira BSc (Hons), reviewed by Principal Ecologist Joshua Stafford BSc (Hons) MRSB, and approved by Richard Webber-Salmon BSc (Hons) MCIEEM.

4.3 Scope of the Assessment and Zone of Influence

The Zone of Influence (ZOI) is the area over which ecological features may be subject to change as a result of the proposed development and associated activities [7]. The ZOI varies depending on the ecological feature concerned and can extend beyond the site boundary. Where possible, ZOIs will be determined using the results of professionally accredited or published scientific studies. Where such studies are not available, the ZOI will be determined using the professional judgement of a suitably experienced and qualified ecologist. This is in line with professional guidelines [7].

Given the size and location of the site the ZOI was generally taken to be the site boundary and its immediate environs only, although the following below exceptions apply:

- Statutory designated sites: the ZOI was considered as 10 km for internationally important statutory designated sites, 5 km for nationally and locally important designated sites and 2 km for ancient woodland. These distances were chosen based on best professional judgement.
- Non-statutory designated sites: Suffolk Biodiversity Information Service (SBIS) and Cambridge and Peterborough Environmental Records Centre (CPERC) 2 km ZOI was considered sufficient. This distance was chosen based on best professional judgement.
- Stone curlew (*Burhinus oedicnemus*): Royal Society for the Protection of Birds (RSPB) 2 km ZOI was considered sufficient for local stone curlew records with points taken from the far east of the site and far west of the site, given its total length is 1.2 km. This distance was chosen based on the RSPB stone curlew monitoring protocol (not publicly accessible outside of RSPB employment);
- Bats: SBIS and CPERC 2 km ZOI was considered sufficient for local bat records. This distance was chosen based on Bat Conservation Trust (BCT) guidelines [9].

- Great crested newt: a 500 m ZOI from the site boundary was considered sufficient, based on professional guidelines [10].
- Badgers: a 30 m ZOI was considered sufficient, based on Natural England guidelines [11].

4.4 Desk Study

The Multi-Agency Geographic Information for the Countryside (MAGIC) [12] online database was consulted to obtain geographic information on nationally and/or internationally important site designations, granted European protected species licenses, ancient woodland and priority habitats from within their ZOI in the local area of relevance to the site.

SBIS and CPERC were contacted for details of any non-statutory designations and records of protected/notable habitats and species within 2 km of the site boundary. Only records of protected species from within the last 10 years are considered within this report.

Online mapping tools were used to check for the presence of any waterbodies within 500 m of the site boundary to inform an assessment of habitat availability and connectivity for great crested newt.

4.5 UK Habitat Classification System Survey

A UKHab of the site was undertaken on 04 and 05 April 2024 by Sophie Barrell, Senior Ecologist, MEcol (Hons) MCIEEM FISC level 4. Weather conditions at the time of the survey ranged from overcast with intermittent rain showers to clear, sunny and breezy, with an ambient temperature of approximately 10 to 14°C.

A list of plant species was compiled in accordance with methodology required to establish UK habitat classification types [8] up to level 4. Level 5 was recorded wherever possible, with care to accurately record all habitats of priority importance (if present). Secondary codes were added to polygons where deemed appropriate, taking special care to map mandatory codes for habitat mosaic, complex and origin. Survey was undertaken at the fine scale minimum mapping unit (MMU) of 25 m2 (polygons) and 1 m width/5 m long (lines). Key ecological features below the MMU in either area or length were mapped as points.

Habitats were classified and assessed in terms of both their conservation importance and potential to support notable and/or protected species (based on habitat suitability and/or field signs). The habitat classification highlights the habitat distinctiveness and whether they reach the criteria for a priority habitat.

These habitats were also assessed using the statutory biodiversity metric condition assessments to determine whether they are in poor, moderate or good condition [13].

4.6 Species / Species Group

The following was searched for and recorded if present during the survey:

- All field signs of protected species or those of conservation interest, including burrows, droppings, footprints and hairs
- Refuges and particular habitat types to be used by certain classes of fauna

- Any mammal paths if found were noted and followed where possible
- Entry points for fauna along fence and/or hedgerow boundaries if present
- Incidental sightings of invasive species listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

4.7 Birds

4.7.1 Breeding Birds

The breeding bird survey undertaken was based upon the line transect survey methodology utilised by the British Trust for Ornithology (BTO) Breeding Bird Survey [14] and Bird Survey Guidelines produced by the Bird Survey & Assessment Steering Group as per CIEEM good practise guidelines [15] [16] [17].

The surveys were undertaken by the experienced ornithologists Sophie Barrell and Joshua Stafford. The surveys were undertaken during suitable weather conditions, summarised in Table 4.1 below.

Table 4.1. Breeding Bird Survey Conditions

Survey	Date	Time		Temperature (°C)		Wind (Beaufort Scale)		Cloud Cover (Oktas)		Precipitation (mm)	
	2024	Start	End	Start	End	Start	End	Start	End	Start	End
1	27 March	05:30	11:00	10	12	1	1	5	6	0	0
2	11 April	15:45	19:45	14	11	2	2	7	8	0	0
3	24 April	05:40	11:30	10	13	2	3	8	5	0	0
4	24 May	05:15	11:00	14	15	1	1	1	2	0	0
5	18 June	05:00	11:00	10	12	1	1	5	3	0	0
6	18 July	04:20	08:30	15	16	2	3	8	7	0	0

All field boundaries were walked slowly and birds were identified by both sight and sound, with records of their behaviour taken and recorded onto plans. Standard BTO species codes and symbols were used to record bird species [18]. Activity and direction of flight where appropriate were used as recommended for the Bird Census Techniques [19]. The breeding bird surveys followed a set transect which aimed to include all core habitat types on and adjacent to the Project Site as shown on Figure 4.1 below.

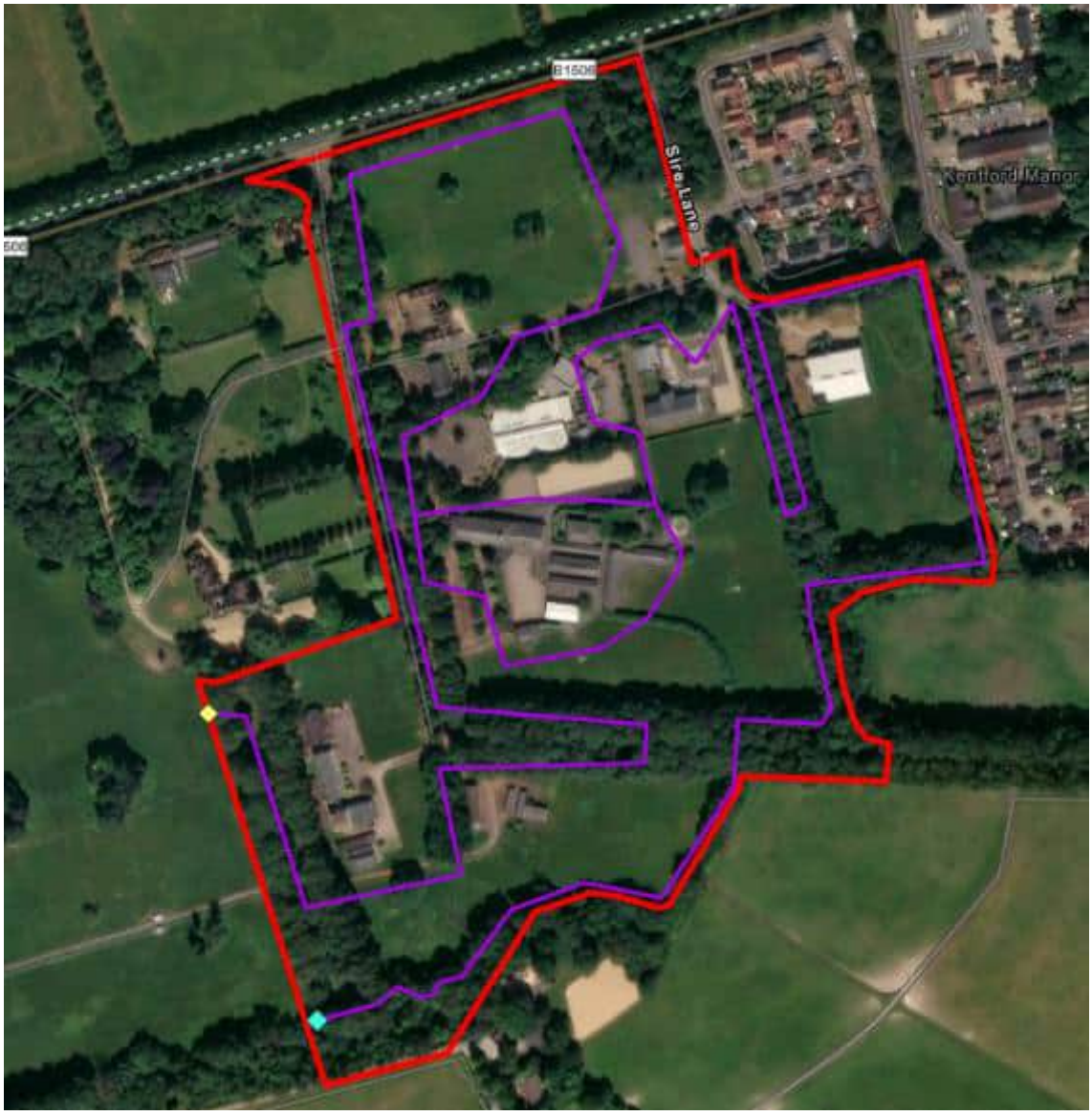


Figure 4.1. Transect route followed during the breeding bird surveys with start at the yellow dot and finish at the blue dot.

Map data from Google 2025: Bluesky, CNES / Airbus, Getmapping plc, Infoterra ltd & Bluesky, Maxar Technologies

Species and activity data were analysed spatially to compare where species were identified during more than one survey visit and therefore are likely to be holding a territory and/or actively breeding in the area. If a bird exhibited breeding activity, such as commuting with nesting material or singing for example, it was judged to be

breeding or attempting to breed on site. The survey analysis did not include mapping of territories.

Field maps and notes of bird sightings were analysed to determine the approximate locations of likely breeding sites and the numbers of birds encountered, and whether they were likely to be breeding on site, using the following criteria:

Possible:

- Species (male/female) observed within possible nesting habitat on site.
- A male singing in the breeding season but only encountered on one survey visit.

Probable:

- Same species of male singing in approximate same location on site for more than one survey visit.
- Singing male in the breeding season exhibiting territorial behaviour.
- Visiting probable nest site.
- Individuals exhibiting agitated behaviour (e.g. alarm calls).

Confirmed:

- Observed building a nest or with nesting material in beak.
- Active nest observed.
- Adults entering/leaving nest site regularly.
- Used nest or eggshells noted on site.
- Distraction display or injury feigning.
- Adult with dependant young.

Locations of sightings and analysis of activity/behaviour was used to estimate the numbers of pairs present where breeding was probable or confirmed. Incidental sightings of birds noted by ecologists during other site visits were also described.

The conservation status of species based on evidence of population declines and restriction of range on a local and international scale, as listed on the Conservation Designations for UK Taxa list published by the JNCC [20]. The Birds of Conservation Concern (BOCC) allocates species into the green, amber or red list corresponding to a low to high level of conservation concern respectively. Species accounts for priority NERC species are obtained from the JNCC [21].

The Suffolk Birds 2023 report [22] has been used to estimate county population sizes and assess the status of species of conservation concern within the county.

4.7.2 Stone-curlew

Sweco undertook an initial desk-based assessment of the Project Site and the land within 1.5 km of the surrounding area for suitability to support stone-curlew (document reference 65210959-SWE-ZZ-XX-T-J-0003-C02 – see Appendix A).

The RSPB was also contacted for records of stone curlew from within a 2 km-radius search around points at either end of the Hybrid Application site (grid reference TL 68863 65942 in the west; and TL 69982 66310 in the east).

In 2025, Graham Riley BSc ACIEEM from Wild Frontier Ecology, who has over 17 years of experience working in commercial consultancy and 14 years working for the RSPB on the Stone Curlew Recovery Project, was commissioned to undertake a field assessment of all land within 2 km of the Hybrid Application site for its ability to support stone-curlew. Full methodology with regards to the field assessment can be found within Appendix B.

4.8 Bats

4.8.1 Habitat Suitability Assessment

A bat commuting/foraging habitat suitability assessment of all habitats on site was undertaken on 04 and 05 April 2024 by Sophie Barrell.

The scoping criteria for commuting and foraging habitat suitability was taken from the best practice guidance [9], summarised in Table 4.2 below.

Table 4.2. Suitability of Commuting and Foraging Habitats for Bats

Suitability	Foraging Habitats
None	No habitat features on site likely to be used by any commuting or foraging bats at any time of year (i.e. no habitats that provide continuous lines of shade / protection for flight-lines, or generate /shelter insect populations available to foraging bats).
Negligible	No obvious habitat features on site likely to be used as flightpaths or by foraging bats; however, a small element of uncertainty remains in order to account for non-standard bat behaviour
Low	Habitat that could be used by small numbers of bats as flightpaths such as a defunct hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	Continuous habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for flightpaths such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

4.8.2 Preliminary Roost Assessment – Buildings

A Preliminary Roost Assessment (PRA) of all buildings was conducted on 04 and 05 April 2024 by Sophie Barrell, to assess their potential to support roosting bats.

Survey evidence of bats was also searched for. This includes:

- Bat droppings (if found these were collected for eDNA analysis)
- Staining around PRF entrances
- Feeding remains (such as moth wings)
- Scratch marks around PRF entrances
- Live/dead bats

The scoping criteria for roost habitat on buildings was taken directly from best practice guidance [9], and are summarised in Table 4.3. Where a feature could not be definitively assessed due to lack of internal access, a precautionary higher classification has been assumed.

Table 4.3. Suitability of Roosting Habitats for Bats – Buildings/Structures

Suitability	Roosting Habitats
None	No habitat features on site likely to be used by any roosting bats at any time of year (i.e. a complete absence of crevices/suitable shelter at all ground/underground levels).
Negligible	No obvious habitat features on site likely to be used by roosting bats; however, a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity and not a classic cool/stable hibernation site, but could be used by individual hibernating bats).
Moderate	A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status with respect to roost type only, such as maternity and hibernation – the categorisation described in this table is irrespective of species conservation status, which is established after presence is confirmed.
High	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and

Suitability	Roosting Habitats
	surrounding habitat. These structures have the potential to support high conservation status roosts, e.g. maternity or classic cool/stable hibernation site

4.8.3 Emergence Surveys – Buildings

In line with current Bat Conservation Trust (BCT) survey guidance [9] for buildings with moderate suitability for roosing bats, two dusk emergence surveys were carried out. The emergence surveys started 15 minutes prior to sunset and 1.5 hours after sunset.

Surveyors were each equipped with an Elekon Batlogger M bat detector and were strategically positioned around each building so as to maximise visual coverage. Surveyors were supported by a thermal imaging camera rig (Pulsar Helion 2 XP50 Pro Thermal Monocular) capable of filming bats flying in complete darkness, in order to monitor the buildings. A record was made of all bats emerging from the buildings, along with the time, direction of travel and suspected species. Details of general bat activity observed or heard during the survey were also noted down, to gather additional information about how bats make use of the site.

The buildings surveyed are shown on Sweco drawing 65210959-SWE-XX-XX-D-J-0002.

The survey teams comprised:

- Sophie Barrell
- Joshua Stafford
- Emma Howarth (BSc (Hons) ACIEEM)
- Emily Chubb (BSc (Hons) QCIEEM)

The surveys were undertaken during suitable weather conditions and are summarised in Table 4.4 below.

Table 4.4. Emergence Survey Conditions

Survey	Date	Time		Temperature (°C)		Wind (Beaufort Scale)		Cloud Cover (Oktas)		Precipitation (mm)	
	2024	Start	End	Start	End	Start	End	Start	End	Start	End
1	27 March	19:39	21:24	22	20	1	1	6	6	0	0
2	11 April	18:38	20:23	18	18	2	3	7	8	0	0

4.8.4 Ground Level Tree Assessment

A Ground Level Tree Assessment (GLTA) of the existing trees was conducted on 09 and 10 December 2024 by Claudia Ferreira (Level 1 Class Licence 17 reference: 2024-12308-CL17-BAT) and Eleanor Unsworth MSc, BSc (Hons).

The surveyors used binoculars and high powered torches to identify and assess any PRFs from ground level. The surveys were conducted in line with current BCT survey guidance [9].

The following data was recorded:

- The location and ID of the tree in which the PRF is located
- The location of the PRF
- The elevation and orientation of the PRF
- The internal size of the PRF (if known)
- A description of the PRF
- The BRP level assigned to the PRF

The scoping criteria for roost habitat on trees was taken directly from best practice guidance [9], and are summarised in Table 4.5**Error! Reference source not found.** below.

Table 4.5. Suitability of Roosting Habitats for Bats – Trees

Suitability	Description
None	Either no PRF in the tree or highly unlikely to be any.
FAR	Further assessment required to establish if PRFs are present in the tree.
PRF	A tree with at least one PRF present.
Where PRFs where identified on trees, these where categorised as:	
PRF-I	PRF is only suitable for individuals bats or very small numbers of bats either due to the size or lack of suitable surrounding habitats.
PRF-M	PRF is suitable for multiple bats and may therefore be used by a maternity colony.

4.8.5 Tree Scoping Exercise

As the GLTAs identified a very large number of trees within the Project site that support PRFs, including a large number of FAR trees, a scoping exercise will be undertaken to confirm the exact number of PRF-M and PRF-I trees that will be directly impacted by the Project through pruning or felling.

In the first instance, an exercise will be undertaken to determine the number of retained PRF trees for which impacts can be avoided through implementation of a bat-

sensitive lighting strategy. By designing an appropriate strategy, lighting impacts to these trees can be avoided, thereby removing the need to survey them.

All remaining trees identified as FAR, PRF-I or PRF-M will be subject to a single aerial inspection survey (or ladder-based inspection, where the PRF is low enough to enable this to be carried out safely), the aim of which will be to ensure that all trees are either correctly assigned to PRF-I or PRF-M, or removed from the scope of assessment, as this will inform the survey and mitigation approach.

Aerial (climbing) inspection surveys will be undertaken during the period May-July inclusive by a team of suitably qualified tree climbers who either hold Level 2 bat survey licences (enabling the use of endoscopes for PRF inspection), or who are acting as an Accredited Agent under a Level 2 bat licence-holder and supervised by a suitably qualified ecologist.

Any droppings found within PRFs during the aerial inspection will be collected and sent to a laboratory for DNA analysis, to identify the species present and aid in roost characterisation (see below).

Any trees found to be unsuitable to support roosting bats (i.e. features that look like PRFs from the ground but upon aerial inspection offer no roosting opportunity) will be removed from the scope.

Note that impacts to any retained trees with PRFs resulting from artificial illumination are to be avoided through implementation of a bat-sensitive lighting plan – see section 6.4.4. As such those trees have been scoped out of any further investigation.

4.8.6 Roost Characterisation of PRF-I Trees

Where clear evidence of bat roosting is identified in PRF-I trees, these trees will be subject to two further surveys (either aerial inspection, dusk emergence, or a combination of both) between May and September. As with the PRF-M trees below, the aim of these surveys will be to confirm the presence/likely absence of bat roosts and, where present, confirm the species and number of bats involved, to inform an application to Natural England for a bat mitigation licence.

Aerial inspections will follow the method described within section 194.8.5 above.

Dusk emergence surveys will start 15 minutes prior to sunset and continue until at least 1.5 hours after sunset. Surveyors will each be equipped with an Elekon Batlogger M bat detector and be strategically positioned around the tree so as to maximise visual coverage. They will be supported by a Sony Handycam AX53 Nightshot enabled infrared camera, capable of filming bats flying in complete darkness.

A record will be made of all bats emerging from any PRFs, along with the time, direction of travel and suspected species. Details of general bat activity observed or heard during the survey will also be noted down, to gather additional information about how bats make use of the site.

All recorded bat calls will be analysed using BatExplorer (Version 2.1.11.2) and all camera footage will be reviewed using appropriate software.

Any PRF-I trees where the features remain suitable for individual bats to roost, but where no evidence of bat roosting is found, will be added into the mitigation licence application to enable these trees to be felled/pruned under a precautionary method of works, to avoid any delays associated with finding bats in these trees at the time of felling/pruning.

4.8.7 Roost Characterisation of PRF-M trees

Following the scoping exercise, all PRF-M trees will be subject to two further surveys (either aerial inspection, dusk emergence, or a combination of both) between May and August to coincide with the maternity season. The aim of these surveys will be to confirm the presence/likely absence of bat roosts and, where present, confirm the species and number of bats involved, to inform an application to Natural England for a bat mitigation licence.

Aerial inspections will follow the method described at 4.8.5. above. Dusk emergence surveys will follow the method described at 4.8.6 above.

Any PRF-M trees where the features remain suitable for individual bats to roost, but where no evidence of bat roosting is found, will be added into the mitigation licence application to enable these trees to be felled/pruned under a precautionary method of works, to avoid any delays associated with finding bats in these trees at the time of felling/pruning.

4.8.8 Automated/Static Surveys

To gain an initial understanding of the local bat assemblage that makes use of the Project Site, automated/static surveys were conducted. Three Anabat Express statics were deployed to record for a minimum of five nights in suitable weather conditions, over three seasonal monitoring periods, during the active bat season (April to October). The use of three monitoring periods aligns with the recommendations of the BCT survey guidelines for low suitability habitat [9]. The detectors were programmed to record bat calls from 30 minutes before dusk to 30 minutes after dawn each night over the duration of their deployment. The locations of these are shown on Figure 4.2 below.

Figure 4.2. Location of the statics placed within the Project Site and wider area across the different survey periods.

Map data from Google 2025: Bluesky, CNES / Airbus, Getmapping plc, Infoterra ltd & Bluesky, Maxar Technologies

Bat calls recorded during the best five consecutive nights in terms of weather were analysed using BatExplorer. The weather conditions for the five nights analysed during each of the remote monitoring periods are presented in Table 4.6 below.

Table 4.6. Bat Remote Monitoring Conditions

Night (2024)	Temp (ºC) Start	Temp (ºC) End	Rain (mm) Start	Rain (mm) End	Wind (Beaufort) Start	Wind (Beaufort) End	Cloud Cover (oktas) Start	Cloud Cover (oktas) End
Spring 2024								
02 May	15	12	0	0	3	3	7	8
03 May	11	10	0.3	0	4	3	8	8
04 May	14	12	0	0	3	3	5	4
05 May	15	14	0	0	3	3	7	8
06 May	16	14	0	0	3	3	6	6
Summer 2024								
25 Aug	18	17	0	0	4	4	4	4
26 Aug	19	18	0	0	3	2	3	4
27 Aug	22	19	0	0	3	3	4	4
28 Aug	24	23	0	0	2	1	3	3
29 Aug	18	17	0	0	3	2	3	3
Autumn 2024								
23 Sep	17	17	0	0	4	4	5	5
24 Sep	15	15	0	0	3	3	4	4
25 Sep	15	14	0.3	0.3	3	3	8	8
26 Sep	14	13	0.5	0.3	3	4	8	8

Note that further automated/static surveys will be conducted from April to October 2025 as part of the Hybrid Application for the site and wider area. In line with the current BCT survey guidelines for moderate suitability habitat, nine Anabat Express statics will be deployed in different locations across the Hybrid Application site to record for a minimum of five consecutive nights per month (April to October) in appropriate (or the best available) weather conditions for bats.

4.9 Badgers

The areas of woodland habitats were searched for evidence of use of badger (*Meles meles*) by Sophie Barrell on 04 and 05 April 2024 and re-assessment by Sophie Barrell and Emily Chubb on 21 September 2024. Field signs searched include latrines, snuffle holes, guard hairs, runs, scratch posts, and sett entrances. If found, field signs were GPS tagged with photographs and notes taken. Detailed methodology and results of these surveys are reported in a separate report (document reference 65210959-SWE-XX-XX-T-J-0004).

4.10 Impact Assessment

Construction and operational impacts have been assessed separately in accordance with CIEEM guidance.

4.10.1 Important Ecological Features

The important ecological features to be considered within the impact assessment were determined following the desk study, UKHab and protected species surveys. The geographic level of importance of each of the features was assessed, as recommended within the CIEEM guidance on ecological impact assessment [7], using the criteria in Table 4.7 below.

Table 4.7. Assessment of Conservation Value of Ecological Features

Geographical Frame of Reference	Brief Description
International and European	• Habitats that meet criteria for Ramsar, SAC or SPA site. • A species present in internationally important numbers (>1% of international population). • Notable species which is part of the cited interest of an SPA or SAC and which regularly occurs in internationally or nationally important numbers.
National	• Habitats that meet criteria for SSSI or an important reserve to England. • A species present in nationally important numbers (>1% of UK population). • A species which is part of the cited interest of a SSSI and which regularly occurs in internationally or nationally important numbers. • Rare breeding species (e.g. birds with <300 UK breeding pairs).
Regional	• A local site with important regional habitats or significant populations of species of principal importance under the NERC act. • Species present in regionally important numbers (>1% of regional population).

Geographical Frame of Reference	Brief Description
	• Species listed as priority species, which are not covered above, and which regularly occur in regionally important numbers. • Sustainable populations of a species that is rare or scarce within a region. • Species on the BoCC Red List and which regularly occur in regionally important numbers.
County	• A local site with a habitat that is characteristic of the county or rare on a county scale, or with significant populations of locally important species. • Species present in county important numbers (>1% of county population). • Species listed as priority species, which are not covered above, and which regularly occurs in county important numbers • Sustainable populations of a species that is rare or scarce within a county. • A site designated for its county important assemblage of birds, reptiles, invertebrates, etc. • Species on the BoCC Red or Amber List and which regularly occur in county important numbers.
Local	• A site which has wildlife corridors likely to be essential to allow viable movement of species or improve the biodiversity of the area. • Species listed as priority species, which are not covered above, and are rare in the locality. • Species present in numbers just under county importance (<1% of county population). • Sustainable populations of a species that is rare or scarce within the locality. • A site whose designation is just under for inclusion for its county important assemblage of a particular species on site. • Other species on the BoCC Red or Amber List and which are considered to regularly occur in locally important numbers.

4.10.2 Characterisation of Effects

The following were used when categorising the ecological effects as appropriate:

- Extent.

- Positive or negative.
- Direct or indirect.
- Duration
- Timing
- Frequency
- Reversibility

4.10.3 Significance of Effects

The significance of an effect is evaluated simply as significant or not significant, where a significant effect is an effect which either supports or undermines the biodiversity conservation objectives for the important ecological features or for biodiversity in general. Effects will be considered significant at a geographic scale from local to international, in accordance with CIEEM guidelines [7].

4.10.4 Confidence of Impact

The confidence of each impact has been assessed as being either certain, probable, unlikely or extremely unlikely. These are predictions arrived at using professional judgement based on the characterisation and significance of effects after mitigation.

4.11 Limitations

The automated/static surveys were conducted over the Project Site and wider area boundary, and therefore the results provided within this report do not pertains to the Eastern site only. Additionally, only four nights were recorded in the autumn season, as appose to five. However, additional automated/static surveys will be conducted in 2025, which will allow for more robust recordings across the Project Site and wider area, as well as additional data for the autumn period.

5 Ecological Baseline

5.1 Designated Sites

All relevant desk study data relating to statutory designated sites is attached in Appendix C.

There are no designated sites found within the site boundary.

Consultation of the MAGIC online interactive mapping tool confirms the presence of six internationally important statutory designations within 10 km, six nationally important statutory designations within 5 km, and no locally important statutory designations within 2 km of the Project Site boundary.

SBIS and CPERC has confirmed the presence of five non-statutory designations, within the 2 km search radius.

Designations within the appropriate ZOI are included in Table 5.1 below.

Table 5.1. Designated Sites

Site Name	Distance and Direction from Site	Description/reason for Designation
International Designations		
Breckland SPA	2.2 km northeast	Article 4.1 qualification of breeding populations of: • A133 Stone-curlew (*Burhinus oedicnemus*) • A224 Woodlark (*Caprimulgus europaeus*) • A246 Nightjar (*Lullula arborea*)
Fenland SAC	4.6 km northeast	Qualifying features: • H6410. Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); Purple moor-grass meadows • H7210. Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*; Calcium-rich fen dominated by great fen sedge (saw sedge) • S1149 Spined loach (*Cobitis taenia*) • S1166 Great crested newt
Chippenham Fen Ramsar	4.7 km northwest	Ramsar criterion 1: • A spring-fed calcareous basin mire with a long history of management, which is partly

Site Name	Distance and Direction from Site	Description/reason for Designation
		reflected in the diversity of present-day vegetation. Ramsar criterion 2: • The invertebrate fauna is very rich, partly due to its transitional position between Fenland and Breckland. The species list is very long, including many rare and scarce invertebrates characteristic of ancient fenland sites in Britain. Ramsar criterion 3: • The site supports diverse vegetation types, rare and scarce plants. The site is the stronghold of Cambridge milk parsley (*Selinum carvifolia)*.
Breckland SAC	7.4 km northwest	Qualifying features: • 2330 Inland dunes with open *Corynephorus* and *Agrostis* grasslands • 3150 Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition* – type Vegetation • 4030 European dry heaths • 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (important orchid sites) • 91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnionincanae, Salicion albae*) - qualifying feature but not a primary reason for site selection • 1166 Great crested newt (*Triturus cristatus)* - qualifying feature but not a primary reason for site selection
Devils Dyke SAC	8.3 km southwest	Qualifying features: • H6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco - Brometalia*) (important orchid sites - lizard orchid (*Himantoglossum hircinum*). Dry

Site Name	Distance and Direction from Site	Description/reason for Designation
		grasslands and scrublands on chalk or limestone (important orchid sites).
Rex Graham Reserve SAC	8.9 km northwest	Qualifying features: • H6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco - Brometalia*) (important orchid sites - military orchid (*Orchis militaris*)). Dry grasslands and scrublands on chalk or limestone (important orchid sites).
National Designations		
Breckland Farmland SSSI	2.2 km northeast	This site is designated for a breeding stone-curlew.
Newmarket Heath SSSI	2.4 km southwest	The site is primarily comprised of lowland acid grassland, including the notified plant communities chalk grassland and neutral grassland. The grassland creates habitats for a diversity of wildlife, including species of interest such as the spotted flycatcher (*Muscicapa striata*) and an uncommon eyebright (*Euphrasia pseudokerneri*).
Red Lodge Heath SSSI	3.2 km north	This site is designated for its large invertebrate and vascular plant assemblages and is primarily comprised of lowland acid grassland. This site also supports a rare species, the five-banded weevil-wasp (*Cerceris quinquefasciata*).
Chippenham Fen and Snailwell Poor's Fen SSSI	4.6 km northwest	This site is designated for its assemblages of breeding bird invertebrates, and Cambridge milk-parsley. The site also primarily comprised of lowland fen, marsh and swamp habitat.
Snailwell Meadows SSSI	4.9 km northwest	This site is designated for the Schedule 8 of the Wildlife and Countryside Act 1981 (as amended) plant Cambridge milk-parsley and lowland valley fen habitat.
Chippenham Fen NNR	4.7 km northwest	This site is designated for its large moth assemblage, breeding bird populations, including woodcock, snipe (*Gallinago gallinago*), and nine species of warbler and Cambridge milk-parsley.

Site Name	Distance and Direction from Site	Description/reason for Designation
		The calcareous fen conditions with frequent ditches, pools and wet depressions make this site a really diverse wetland habitat.
Local Designations		
Halfmoon Plantation Pit CWS	1.7 km north	The site supports the nationally rare plant species smooth rupturewort (*Herniaria glabra*) and a variety of nationally scarce species including lesser calamint (*Clinopodium calamintha*) and little bur clover (Medicago minima). The site also has an overall invertebrate index exceeding 500.
Barberry Hedge, Moulton CWS	1.7 km southeast	The site comprises a hedgerow (Priority habitat) containing barberry (*Berberis* sp.), guelder rose (*Viburnum opulus*) and hawthorn (*Crataegus monogyna)*. The larvae of the barberry carpet moth (*Pareulype berberata*), which is nationally rare, depend on barberry as a food plant.
Moulton Churchyard, Footpath and Wood CWS	1.7 km southeast	The site includes both Moulton Churchyard and a small nearby woodland linked via a grass track. The churchyard supports areas of species-rich flora, including burnet-saxifrage (*Pimpinella saxifrage*), perforate St John's-wort (*Hypericum perforatum*) and ox-eye daisy (*Leucanthemum vulgare*). Clustered bellflower (*Campanula glomerata*), a species on Suffolk's Rare Plant Register) has also been previously recorded here. The wood itself, which is dominated by mature beech (*Fagus sylvatica*), also contains ash (*Fraxinus excelsior*), oak- (*Quercus robur*), yew (*Taxus baccata),* holly (*Ilex aquifolium*) and sycamore (*Acer pseudoplatanus*), providing habitat opportunities for a range of wildlife, particularly birds and invertebrates.
Moulton Roadside Verge CWS	1.7 km southwest	The site sits on light and chalky soils, and supports the nationally scarce lesser calamint.

Site Name	Distance and Direction from Site	Description/reason for Designation
The Limekilns and Adjacent Areas CWS	3.5 km southwest	The site supports upright brome (*Bromus erectus*) grassland and crested dog's tail (*Cynosurus cristatus*) grassland with black knapweed (*Centaurea nigra*).

International Statutory: Ramsar - wetlands of international importance, Ramsar convention. SPA - Special Protection Area, SAC - Special Areas of Conservation. **National Statutory:** SSSI - Site of Special Scientific Interest. NNR – National Nature Reserve. **Local Statutory:** LNR - Local Nature Reserve. **Non-statutory:** CWS – County Wildlife Site.

Designations that have good habitat connectivity to the site, or whose qualifying features have the potential to make use of habitats present at the site, are considered potential constraints.

5.2 Priority Habitats

The following priority habitats were identified during the desk study within ~500 m of the site:

- Coastal and Floodplain Grazing Marsh
- Lowland Calcareous Grassland
- Lowland Meadows
- Deciduous Woodland (on site)

There were no parcels of ancient woodland within 500 m of the site.

5.3 Habitats on Site

The results of the UKHab survey are presented below and on shown on Sweco drawing 65210959-SWE-XX-XX-D-J-0011.

The following habitat types are present on site:

- Modified grassland (g4)
- Modified grassland with scattered trees (g4 32)
- Other native hedgerows (h2a6)
- Built-up areas and gardens; introduced shrub (u1 847)
- Artificial unvegetated unsealed surface (u1c)
- Buildings (u1b5)
- Other developed land (u1b6)
- Broadleaved mixed and yew woodland (w1)
- Lowland beech and yew woodland (w1c)

The habitats condition assessment are included as Appendix D. Appendix E provides a list of plant species encountered for the habitats listed; as such for these plants scientific names are not provided below.

5.3.1 Modified Grassland (g4)

The majority of the grassland is well maintained and managed, with previous use as horse grazing paddocks (Photo 1 and Photo 2), with additional areas of amenity grassland associated with the built-up areas on site.

Most areas of this habitat were assessed as being in poor condition with some areas assessed as being in moderate and good condition, due to variations in species-richness, sward height, scrub encroachment, physical damage, bare ground cover, and the presence of invasive species across the site and wider survey area.

Photo 1. View of modified grassland within the horse paddocks.

Photo 2. View of modified grassland within the horse paddocks.

5.3.2 Modified Grassland with Scattered Trees (g4 32)

There are scattered trees present within the modified grassland on site (Photo 3 and Photo 4). Tree species included beech (*Fagus sylvatica*), horse-chestnut (*Aesculus hippocastanum*), silver birch (*Betula pendula*), and pine (*Pinus* sp.).

This habitat was assessed as being in moderate condition.

Photo 3. View of scattered trees within the modified grassland.

Photo 4. View of scattered trees within the modified grassland.

5.3.1 Other Native Hedgerows (h2a6)

A few small sections of native hedgerows were present on site (Photo 5 and Photo 6). The main species was beech with field maple, birch trees and young sycamore trees. As these hedgerows consisted entirely of native species, they are considered to be a priority habitat. However, they are not considered to be species rich, as they predominantly consisted of a single native species.

This habitat was assessed as being in poor condition.

Photo 5. View of hedgerow.

Photo 6. View of hedgerow.

5.3.2 Built-up Areas and Gardens; Introduced Shrub (u1 847)

There are a few small patches of non-native introduced shrub situated around buildings and hardstanding on site (Photo 7 and Photo 8).

A condition assessment is not applicable for this habitat.

Photo 7. View of introduced shrubs.

Photo 8. View of introduced shrubs.

5.3.3 Artificial Unvegetated Unsealed Surface (u1c)

Access gravel tracks comprising artificial vegetation unsealed surface are present throughout the site (Photo 9 and Photo 10).

A condition assessment is not applicable for this habitat.

Photo 9. View of artificial unvegetated unsealed surface access track.

Photo 10. View of artificial unvegetated unsealed surface parking area.

5.3.4 Buildings (u1b5)

There are 33 buildings on-site, all of which were subject to preliminary bat roost assessment. Photographs of a few of these buildings are below (Photo 11-14).

A condition assessment is not applicable for this habitat.

Photo 11. Building on site with bat high roost potential.

Photo 12. Building on site with bat high roost potential.

Photo 13. Building on site with negligible bat potential.

Photo 14. Building on site with low bat potential.

5.3.5 Other developed land (u1b6)

Hard standing, comprising roads and pavements, is present throughout the site.

A condition assessment is not applicable for this habitat.

5.3.6 Broadleaved Mixed and Yew Woodland (w1)

Small areas of broadleaved mixed and yew woodland were present on site that did not meet the criteria for lowland beech and yew woodland (Photo 15 and Photo 16).

This habitat was assessed as being in poor condition.

Photo 15. View of broadleaved mixed and yew woodland.

Photo 16. View of broadleaved mixed and yew woodland.

5.3.7 Lowland Beech and Yew Woodland (w1c)

Areas of lowland beech and yew woodland were present throughout the site comprising mainly immature and mature trees (Photo 17 and Photo 18). Veteran trees were also noted within this habitat.

This habitat was assessed as being in poor condition.

Photo 17. View of lowland beech and yew woodland.

Photo 18. View of lowland beech and yew woodland.

5.4 Species and Species Groups

5.4.1 Botany

SBIS and CPERC provided records of 21 notable plants from the 2 km data search. Non-native Spanish bluebell (*Hyacinthoides hispanica*) was recorded on site.

Habitats on site were not considered likely to support any rare or notable plant species, and therefore plants were not considered further within this report.

5.4.2 Invertebrates

There were no records of invertebrates from the CPERC 2 km data search.

SBIS provided 10 records of two notable butterfly species, small heath (*Coenonympha pamphilus*) and white-letter hairstreak (*Satyrium w-album*) within the 2 km data search.

Based on the site survey, and species recorded on site, it is considered that the habitats present on site are likely to support a common assemblage of invertebrate species only, and therefore invertebrates were not considered further within this report.

5.4.3 Reptiles

There were no records of reptiles returned in the data searches.

Due to the well managed grasslands and maintained habitats within the project site and with the surrounding roads, arable land and residential bordering the site, habitat potential for reptiles is considered negligible. As such reptiles are considered unlikely to be present on site. Therefore only precautionary measures are recommended further in this report.

5.4.4 Amphibians (including Great Crested Newt)

CPERC provided no records of amphibian species from the 2 km data search. SBIS provided one record of GCN 1.5 km south of the site.

MAGIC did not return any records of GCN Class Survey Licence Returns that confirmed the presence of GCN or records of granted GCN protected species licences within 2 km of the site.

No waterbodies are present within 500 m of the site, with the exception of the River Kennet over 400 m east of the site (east of the B1085 road). Due to the lack of habitat connectivity to the site, it is considered unlikely GCN will be present on site. In addition, the majority of the site comprises well managed modified grassland, further reducing the likelihood of supporting GCN, and whilst the woodland provides suitable habitat for GCN, with no waterbodies to facilitate breeding the site cannot support a population of GCN. Therefore, GCN are not considered further in this report.

5.4.5 Birds

CPERC and SBIS provided 40 records of 21 species from within the 2 km search area. Notable species of relevance to the site comprise corn bunting (*Emberiza calandra*), dunnock (*Prunella modularis*), golden plover (*Pluvialis apricaria*), house martin (*Delichon urbicum*), house sparrow (*Passer domesticus*), kestrel (*Falco tinnunculus*), red kite (*Milvus milvus*), rook (*Corvus frugilegus*), skylark (*Alauda arvensis*), spotted flycatcher (*Muscicapa striata*), starling (*Sturnus vulgaris*), swift (*Apus apus*), turtle dove (*Streptopelia turtur*) and yellow wagtail (*Motacilla flava*).

The scrub, hedgerows, scattered trees, and woodlands around the peripheries on site provide suitable breeding habitat for nesting birds on site.

5.4.5.1 *Breeding Bird Surveys*

A total of 30 species were recorded within the Project Site and areas immediately adjacent during the breeding bird surveys carried out in accordance with best practice guidance [17]. Only notable species have been included in Table 5.2 below, and their locations are shown on Sweco drawings 65210959-SWE-XX-XX-D-J-0005 to 0010 inclusive. The full results can be found in Appendix F.

Notable species recorded included six amber-listed BoCC, two red-listed BoCC, three NERC species, one Schedule 1 and BD Annex 1. Of these species, one was confirmed breeding, three were possibly breeding and two probable breeding within the Project Site. The remaining species were considered unlikely to be breeding on site. The highest species count was observed during visit one (March) and the lowest was during visits four (May).

Over half the birds were common species associated with the woodland blocks, as well as hedgerows on site, with 21 species classified as introduced or green listed BOCC and therefore are not considered further in this report.

There were confirmed signs of breeding from rook (*Corvus frugilegus*) species with multiple nests found within the woodlands around the site.

The majority of the birds observed in the breeding survey were birds mainly associated with the woodland, trees and hedgerows, however, some were found within the central grassland of the site. Starlings were only observed during two survey visits on site, with a large group of starlings recorded foraging within the grassland.

The remaining notable species recorded on site are considered not breeding on site and utilise the site for commuting and feeding purposes only.

Given the number of species recorded within the Project Site and the presence of limited numbers of notable species, the site is considered to be of important for breeding birds at the Local level.

Table 5.2. Breeding Bird Survey Results of Notable Species Recorded

BTO Code	Common Name	Scientific Name	National status	Visit 1 27 March 2024	Visit 2 11 April 2024	Visit 3 24 April 2024	Visit 4 24 May 2024	Visit 5 18 June 2024	Visit 6 18 July 2024	Breeding Status
D.	Dunnock	*Prunella modularis*	Amber BOCC NERC	0	1	0	0	0	0	Possible Breeding
GR	Greenfinch	*Chloris chloris*	Red BOCC	1	0	0	0	0	0	Possible Breeding
K.	Kestrel	*Falco tinnunculus*	Amber BOCC	0	0	0	0	1	0	Not Breeding
KT	Red kite	*Milvus milvus*	Sch 1 BD Annex 1	0	1	0	0	0	0	Not Breeding
RO	Rook	*Corvus frugilegus*	Amber BOCC	53	39	48	10	0	55	Confirmed Breeding
SG	Starling	*Sturnus vulgaris*	Red BOCC NERC	28	0	0	9	0	0	Not Breeding
ST	Song thrush	*Turdus philomelos*	Amber BOCC NERC	1	1	0	0	0	0	Possible Breeding
WP	Woodpigeon	*Columba palumbus*	Amber BOCC	44	7	28	38	11	13	Probable Breeding
WR	Wren	*Troglodytes troglodytes*	Amber BOCC	5	5	6	4	1	1	Probable Breeding

Sch 1 – Wildlife and Countryside Act 1981 (as amended) Schedule 1. **NERC** – Natural Environment and Rural Communities Act 2006 Section 41, species/habitats of principal importance. **BD Annex 1** – European Birds Directive, Annex 1. **BoCC Red** – Birds of Conservation Concern - Red listed. BoCC Amber – Birds of Conservation Concern - Amber listed.

5.4.5.2 Stone-curlew

No stone curlew were recorded on or in the immediate vicinity of the Hybrid Application site during the six-visit breeding bird survey undertaken by Sweco in 2024.

SBIS provided no records of stone curlew within 2 km of the Hybrid Application site boundary.

The RSPB returned two records of stone curlew from within the 2 km-radius search areas around the eastern and western ends of the Hybrid Application site. The two records date from 2015 and 2024 and both are located over 1.65 km from the Hybrid Application site boundary. The earlier record is located over 1.75 km away, north of the A14; the more recent record is located 1.65 km away, to the east of Gazley Road. Both records fall within the 1.5 km buffer of the Breckland SPA. The small number of stone curlew records held by the RSPB from within the past 10 years suggests that whilst the RSPB are monitoring the areas around the Hybrid Application site, they are not frequently used by this species.

Sweco's desk-based assessment of habitats within the Hybrid Application site and land within a 1.5 km buffer around it concluded that, whilst there was arable land and grassland present, much of this was in close proximity to built-up environments, actively used for horses, or located adjacent to suboptimal features such as woodlands, which provide overwatch for a range of avian predators. As such, both the site and the surrounding areas were considered largely unsuitable to support this species. The full report is appended to this report (see Appendix A).

The field assessment undertaken by Wild Frontier Ecology Ltd of all land within 1.5 km of the Hybrid Application site concluded that the habitats present do not offer suitable habitat for stone curlew. The full report is appended to this report (Appendix B).

The RSPB stone curlew monitoring protocol is not publicly accessible outside of RSPB employment and the Bird Monitoring Methods guidance, which outlines detailed survey techniques for specific rare species in the UK does not provide any methodology to survey for Stone curlews. As such it is not possible to compare the stone curlew methodology with the breeding bird survey methods used on site, however it is still considered likely that, were stone curlew present, they would have been detected during the six visits undertaken on site as part of the breeding bird surveys.

Given the above, impacts on stone curlew are not anticipated as a result of the Project and this species is not considered further in this report.

5.4.6 Bats

CPERC provided seven records of seven bat species from within the 2 km search area, including brown long-eared (*Plecotus auritus*), common pipistrelle (*Pipistrellus pipistrellus)*, Leisler's noctule (*Nyctalus leisleri*), noctule (*Nyctalus noctule*), serotine (*Eptesicus serotinus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and western barbastelle (*Barbastella barbastellus*).

SBIS provided 10 records of at least three species within the 2 km data search, including common pipistrelle, soprano pipistrelle and brown long-eared.

MAGIC returned three records of granted bat protected species licences, the closest being 0.85 km from, which allowed the destruction of a common pipistrelle resting place.

5.4.6.1 Habitat Suitability Assessment

The Project Site primarily consists of buildings, hardstanding and modified grassland with some hedgerows, scattered trees, and woodlands around the perimeter which provide suitable foraging and commuting habitat for bats on site, however the wider landscape is primarily comprised of arable land, with few woodland blocks in the surrounding area to connect to. Therefore, the Project Site has been classified as having low suitability habitat for foraging and commuting bats.

5.4.6.2 Preliminary Roost Assessment – Buildings

Five buildings on site supported PRFs and therefore one building has been classified as having high bat roosting potential, three buildings have been classified as moderate potential, and one building has been classified as negligible potential as shown on Table 5.3 below. The locations of these buildings are shown on drawing 65210959-SWE-XX-XX-D-J-0002.

Table 5.3. Results of Preliminary Roost Assessment

Building Ref.	External roosting evidence and/or potential roost features	Roost Suitability
B1	Brick building with a slate tile roof. Potential roost features all around the building included missing mortar gaps in the roof and brick, missing and ridge tiles.	High
B2	Brick building with slate tile roof, and roofing felt. Included pitched and flat roof sections. Potential roost features on north side of the building included mortar gaps above the garage door, gap under the fascia / soffit, and missing mortar.	Moderate
B3	Very dilapidated stone and brick building, with corrugated steel. Wooden beams present in the roof. Many potential roost features.	Moderate
B4	Dilapidated single storey, brick building, with corrugated steel roof. Many potential roost features.	Moderate
B5	Brick building with slate tiles. Open windows and holes in soffit box on north and south side of the building. During a breeding bird survey in May, it was noted that the windows into each sealed stable had been closed and therefore downgraded to Negligible.	Low and then downgraded to Negligible

5.4.6.3 *Emergence Surveys – Buildings*

The emergence survey results of the buildings B2, B3, and B4 is provided in Table 5.4 below. B1 is going to be retained and therefore emergence surveys were not conducted.

No bats were observed emerging from or re-entering the building and it is therefore considered that the building does not support a bat roost.

Table 5.4. Results of Emergence Surveys

Survey No.	Results
1	No emergences. Calls were recorded from foraging and commuting bats including noctule, serotine and common pipistrelle.
2	No emergences. Calls were recorded from foraging and commuting bats including brown long-eared, noctule, serotine and common pipistrelle.

5.4.6.4 *Ground Level Tree Assessment*

A total of 183 trees were found to support PRFs within the Project Site. Of these, 88 trees were classified as FAR, 29 as PRF-I and 66 as PRF-M. The tree locations are shown on Sweco drawing 65210959-SWE-XX-XX-D-J-0004.

5.4.6.5 *Tree Scoping Exercise*

To reduce the total number of trees requiring aerial climbing survey, the Applicant has agreed to implement a bat-sensitive lighting strategy in line with Guidance Note 08/23 produced by the BCT and the Institute of Lighting Professionals (ILP), to avoid disturbance impacts to key habitats (i.e. the woodland belts) and any PRF trees associated with those habitats.

With respect to avoiding lighting impacts to key habitat features, Guidance Note 08/23 [23] suggests that the following measures are considered:

- All luminaires should lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability
- A warm white light source (2700 Kelvin or lower) should be adopted to reduce blue light component
- Light sources should feature peak wavelengths higher than 550 nm to avoid the component of light most disturbing to bats
- Internal luminaires should be recessed (as opposed to using a pendant fitting) where installed in proximity to windows, to reduce glare and light spill
- Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges
- Column heights should be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards

- Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered
- Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt
- Where appropriate, external security lighting should be set on motion sensors and set to as short a possible a timer as the risk assessment will allow. For most general residential purposes, a 1 or 2 minute timer is likely to be appropriate
- Use of a Central Management System (CMS) with additional web-enabled devices to light on demand
- Use of motion sensors for local authority street lighting may not be feasible unless the authority has the potential for smart metering through a CMS
- The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output, increased upward light scatter from surfaces and poor facial recognition which makes them unsuitable for most sites. Therefore, they should only be considered in specific cases where the lighting professional and project manager are able to resolve these issues
- Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed. However, due to the lensing and fine cut-off control of the beam inherent in modern LED luminaires, the effect of cowls and baffles is often far less than anticipated and so should not be relied upon solely

The Applicant has committed to implementing a lighting strategy that takes account of the above recommendations to ensure that key bat habitats at the Project Site, in particular the woodland belts, do not experience lux levels above 0.2 lux on the horizontal plane and 0.4 lux on the vertical plane, where there is currently no lighting; and do not experience any increase in lighting of more than 0.2 lux on the horizontal plane and 0.4 lux on the vertical plane where there is existing lighting on site.

The bat-sensitive lighting strategy reduces the number of PRF trees within the Project Site from 183 to 102.

As stated above at 4.8.5, all remaining trees identified as FAR, PRF-I or PRF-M will be subject to a single aerial inspection survey (or ladder-based inspection, where appropriate) in 2025, the aim of which will be to ensure that all trees are either correctly assigned to PRF-I or PRF-M, or removed from the scope of assessment. Once these trees are correctly classified, any further roost characterisation surveys that are necessary to inform a mitigation licence application will be undertaken (May-September for PRF-I; May-August for PRF-M), and this report will be updated to reflect the results of those surveys and details of any mitigation measures required.

5.4.6.6 Automated/Static Surveys

The results from each remote monitoring survey period are summarised within Tables in Appendix G and shown within charts included as Figure 5.1, Figure 5.2 and Figure 5.3 below.

A total of seven bat species were recorded: common pipistrelle, soprano pipistrelle, noctule, serotine, barbastelle, Myotis species and brown long-eared bat.

During the spring monitoring period, the recordings were dominated by common pipistrelle, however a few calls from soprano pipistrelle and serotine were also recorded. During the summer monitoring period, calls of common pipistrelle, soprano pipistrelle, noctule, serotine, a *Myotis* species and brown long-eared bat were recorded. During the autumn monitoring period, fewer calls were recorded, but these includes calls of common pipistrelle, soprano pipistrelle, noctule, serotine, brown long-eared and barbastelle.

99% of the calls recorded across all monitoring periods were from common pipistrelle bats.

Soprano pipistrelles and serotine were recorded on all three survey periods. They were recorded on most nights, with a total of 80 calls, 72 of which were recorded during the second monitoring period (Summer).

Noctule bats were recorded during the summer and autumn survey periods. They were recorded on most nights, with a total of 80 calls, 72 of which were recorded during the second monitoring period (Summer).

Brown long-eared bats were also recorded during the summer and autumn survey periods. Only 11 calls were recorded, suggesting that this species is an infrequent visitor to the Project Site.

Serotine were recorded on all three automated/static survey periods, with a total of 64 calls recorded. The results suggest that serotine bats are frequent visitors to the Project Site.

Barbastelle was recorded during the summer and autumn survey periods, with a total of 8 calls recorded. This suggests that barbastelles are an infrequent visitor to the Project Site.

A *Myotis* species bat was recorded during the summer survey period, with a total of 2 calls recorded, which suggests that this species is an infrequent visitor to the Project Site.

Detailed monitoring will be undertaken in 2025 for the Hybrid Application site, with the results presented in an updated version of this report to supplement the findings.

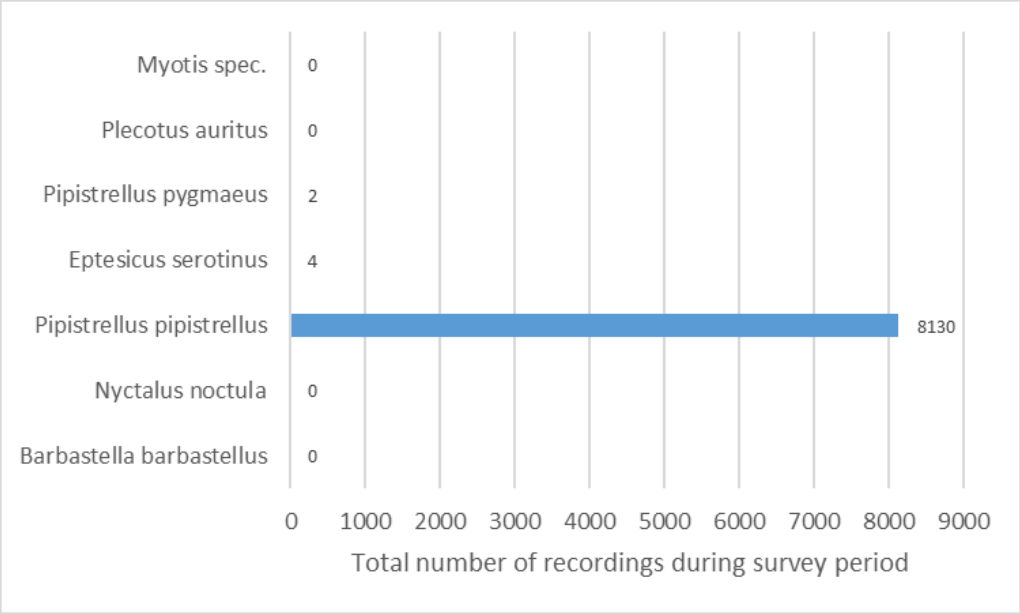


Figure 5.1. Chart showing automated/static survey results – Spring 2024.

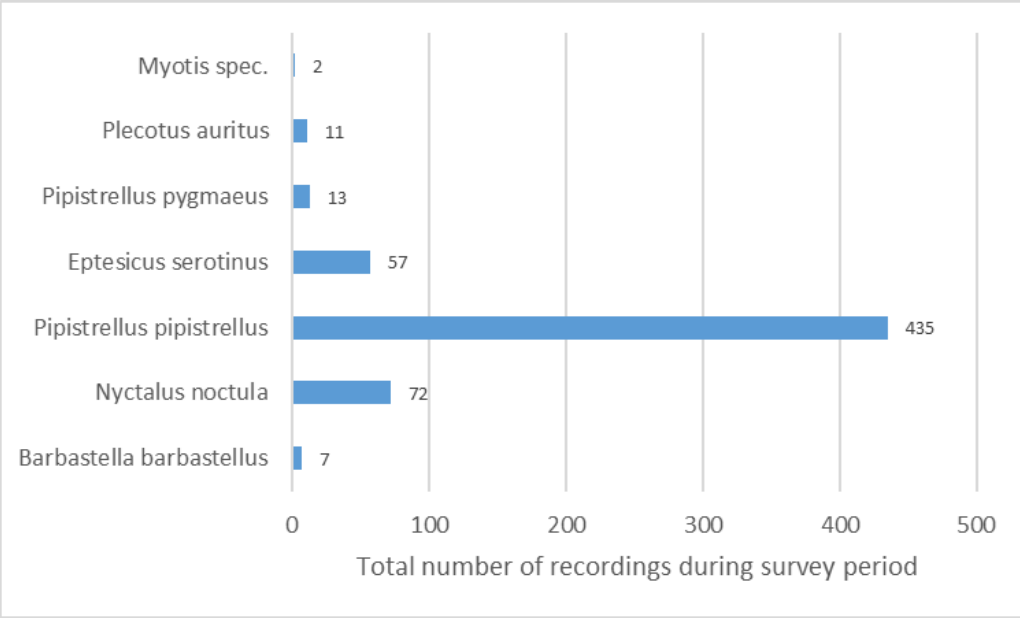


Figure 5.2. Chart showing automated/static survey results – Summer 2024.

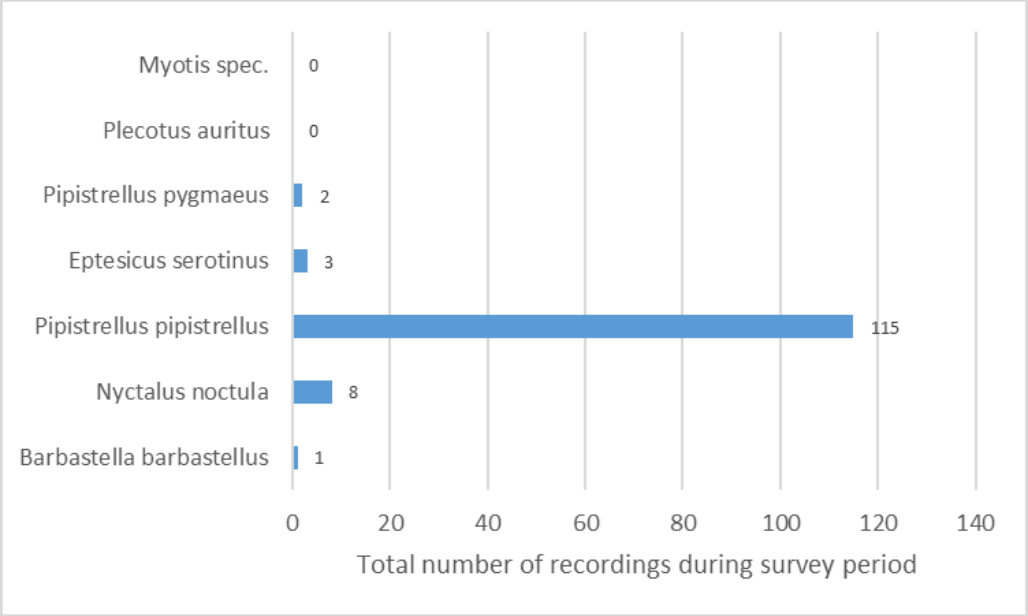


Figure 5.3. Chart showing automated/static survey results – Autumn 2024.

5.4.6.7 Night-time Bat Walkover Survey

NBW surveys will be undertaken in spring, summer and autumn 2025 for the Hybrid Application site. The findings of these surveys will be presented within an updated version of this report to supplement the findings.

5.4.7 Water vole

There were no records of water vole (*Arvicola arvensis)* returned in the data searches.

There is no suitable habitat for water voles on site as such this species is not considered further within this report.

5.4.8 Otter

VREPC provided no records of otter (*Lutra lutra*) from the 2 km data search. SBIS returned one record of otter in the 2 km data search, which was recorded on site.

However, given the distance to the nearest watercourses/the absence of watercourses in the local area, it is considered that the Project Site is unlikely to be suitable to support otter. Therefore, this species is not considered further within this report.

5.4.9 Hazel Dormouse

There were no records of hazel dormouse (*Muscardinus avellanarius*) returned in the data searches.

The hedgerows on site are primarily small and thin with very limited cover and foraging suitability for dormice, and are therefore not considered suitable to support these species. Although there is some coppiced hazel on site, there was no evidence that this management routine has been continued in recent years. The woodlands where this was evidenced lack wider landscape connectivity and is not significant enough in its own right to support a population of dormice. Therefore, this species is not considered further within this report.

5.4.10 Badger

CPERC provided no records of badger from the 2 km data search. SBIS provided two records of badger in the 2 km data search, both of which were recorded on site.

Badger presence was identified, with badger survey details reported in a separate document (document reference 65210959-SWE-XX-XX-T-J-0004) which has been redacted from upload to the public domain.

5.4.11 Hedgehog

CPERC provided no records of hedgehog (*Erinaceus europaeus*) from the 2 km data search. SBIS provided 22 records of hedgehog within the 2 km data search, six of which were recorded on site.

There is potential for the woodland, grassland and hedgerow habitat to support hedgehogs on site.

5.4.12 Brown hare

CPERC provided one record of brown hare (*Lepus europaeus*) in the 2 km data search.

SBIS provided three records of brown hare in the 2 km data search, two of which were recorded on site.

This species was recorded utilising the site during the breeding bird surveys within the central grassland areas.

5.4.13 Invasive species

CPERC provided no records of invasive non-native species (INNS) from the data search. SBIS provided no record from within the 2 km data search.

Variegated yellow archangel (*Lamiastrum galeobdolon argentatum*) was recorded towards the western boundary, as shown on Figure 5.4 below. This is listed as a Schedule 9 species under the Wildlife and Countryside Act 1981.

Figure 5.4. Location of the variegated yellow archangel within the Project Site and wider area across the different survey periods.

Map data from Google 2025: Bluesky, CNES / Airbus, Getmapping plc, Infoterra ltd & Bluesky, Maxar Technologies

6 Assessment of Effects

The evaluation in this section is based on the site surveys undertaken as described above. For purposed of the assessment, it is assumed there has been no change in the condition of the site since the sit surveys (unless otherwise stated).

6.1 Designated Sites

Full assessment of impacts to international designated sites have been completed within an HRA assessment submitted alongside this report (document reference 65210959-SWE-XX-XX-T-J-0010-C03), therefore designated sites are not considered further in this report.

6.2 Important Ecological Features and Potential Effects

The features which are considered important in the context of the site and so will be the subject of the ecological impact assessment are listed in Table 6.1 below, along with their geological importance.

Table 6.1. Important Ecological Features and Their Geographic Importance

Important Ecological Feature	Legislation/ Policy	Geographic Importance of Ecological Feature	Potential Effects
Mature and veteran trees	NERC	Local	Loss of mature and veteran trees.
Reptiles	WCA Sch 5	Local	Loss of sub-optimal habitat. Killing/injury of reptiles.
Breeding birds	WCA BoCC Red / Amber BD Annex 1	Local	Loss of nesting habitat Damage and destruction of active nests, eggs and/or chicks during site clearance.
Roosting bats	WCA Sch 5 NERC HabRegs	Local	Loss and disturbance of roosts. Killing/injury of bats
Commuting and foraging bats	WCA Sch 5 NERC HabRegs	Local	Loss of commuting and foraging habitat.

Important Ecological Feature	Legislation/ Policy	Geographic Importance of Ecological Feature	Potential Effects
			Disturbance due to increased lighting.
Badger	PBA		Potential damage, destruction or obstruction of a sett. Potential disturbance of a badger.
Hedgehog	NERC	Not important at local level	Loss of habitat.
Brown hare	NERC	Not important at a local level	Loss of habitat.
INNS – Variegated yellow archangel	WCA Sch 9	Local	Spread of the plant during works could result in an offence and cause a negative effect on habitats on site due to the plants taking away space and nutrients from native species.

WCA - Wildlife and Countryside Act 1981 (as amended). **WCA Sch 5** - Wildlife and Countryside Act 1981 (as amended) Schedule 5 (killing, injuring and sale of animals). **WCA Sch 9** - Wildlife and Countryside Act 1981 (as amended) Schedule 9 (invasive species). **NERC** - Natural Environment and Rural Communities Act 2006 Section 41. Species/habitats of principal importance. **BD Annex 1** – European Birds Directive, Annex 1. **HabRegs** – Conservation of Habitats and Species Regulations 2017 (as amended), Annex I, Annex II, Annex IV of the Habitats Directive. **PBA** – Protection of Badgers Act (1992). **BoCC Red/Amber** – Birds of Conservation Concern – Red or Amber listed.

6.3 Avoidance

6.3.1 Mature and Veteran Trees

Most of the trees onsite are to be retained and measures should be implemented to protected and retain these trees.

In accordance with British Standard 5837 Trees in Relation to Design, Demolition and Construction [24] care should be taken to avoid impacts on any mature trees. Where the trees are not directly impacted by the works, care will need to be taken to avoid adverse impacts to the root systems of these trees during the works and to avoid damaging branches with machinery. During site clearance and construction, the trees to be retained will be protected from damage with Heras fencing erected around the root protection zone of these trees. In addition, the findings and recommendations outlined within the Hayden's Arboricultural Consultants Ltd Tree Survey and Arboricultural Impact Assessment (AIA) [25] should be adhered to during the Project works.

6.3.2 Breeding Birds

The majority of the Project area is limited to existing buildings, hardstanding and modified grassland. The large woodland blocks are being retained as part of the Project as such avoiding most of the impacts to nesting birds recorded on site.

There will be some removal of trees, scrub and hedgerows to facilitate works, clearance of this, must be undertaken outside of the nesting bird season (March to August inclusive) where possible, to avoid impacting breeding or nesting birds and their nests. If this is not feasible, further migration measures will apply as outlined within section 6.4.3 below.

6.3.3 Roosting Bats

No bats were recorded utilising the buildings and therefore these can be demolished. The results are considered valid until April 2026. If works have not commenced, the emergence surveys on buildings will have to be updated. B1 is going to be retained and therefore emergence surveys were not conducted. However, if this change and B1 will be subject to construction works and disturbance, including lighting, emergence surveys of this building will be required.

Trees with features suitable for roosting bats should be retained, and lighting on site should be implemented in such a way that the trees are not illuminated. If this is not feasible, further mitigation measures will apply as outlined in section 6.4.4 below.

6.3.4 Foraging/Commuting Bats

At least seven bat species have been recorded commuting alongside the woodlands on site. Some hedgerows and scattered trees will be removed, however these large woodland blocks are being retained. Whilst the removal of some trees and hedgerows is required, no large gaps are proposed that are likely to prevent bats from using commuting routes.

The commuting routes around the Project Site will be maintained, with no works taking place within any root protection zones of retained trees allowing a buffer around the woodland.

The bat-sensitive lighting strategy will ensure that commuting corridors are not exposed to light levels significantly beyond those already present at these habitats.

6.3.5 Badger

Badgers have been recorded on site. Details on the impacts on badger will be reported in a separate report (document reference (65210959-SWE-XX-XX-T-J-0004).

6.3.6 Hedgehog

Clearance of habitats suitable for hibernating hedgehogs such as hedgerows and scrub will be conducted outside of the winter period, where possible. If this is not possible, then further mitigations measures should be implemented as detailed within section 6.4.6 below.

6.3.7 Brown Hare

When works commence on site, best practice measures will be implemented with open pits and excavations being subject to either covering overnight, or inclusion of ramps to ensure any mammals that fall in do not become trapped.

6.4 Mitigation

6.4.1 Mature and Veteran Trees

A single veteran tree will potentially be impacted by the Project (marked as T330 within the AIA report). The tree is located at the edge of a woodland block adjacent to existing paddocks and is currently leaning towards the paddock. It comprises a large wound feature with multiple cavities from the base up the main trunk. The AIA confirms that there is structural root failure and a fungal infection present. In order to retain the tree, removal of the upper canopy is required to stabilise the tree and prevent it from falling over. This will result in the loss of some parts of the tree due to pruning; however, the tree will be retained.

An arboricultural management plan will be produced covering the maintaining and protecting the woodlands during both the construction and operational phases. This comprehensive plan will outline strategies to safeguard and enhance the retained veteran trees, ensuring they continue to thrive and provide ecological benefits.

6.4.2 Reptiles and Amphibians

The Project Site is under regular management (regular cut grassing regime) as such the grassland, hedgerows and woodland margins provide limited suitable habitat for reptiles and amphibians. The Project will result in the loss of the grassland and hedgerows habitats, and some of the works are required along the woodland margins. Although it is considered that low numbers of individual reptiles may be present on site, and therefore the Project has the very small potential to result in the killing or injury of reptiles.

To avoid killing or injury to potential reptiles, vegetation clearance should be undertaken under supervision of an experienced Ecological Clerk of Works (ECoW), adhering to a Biodiversity Method Statement (BMS). Any reptiles found should be relocated by the ECoW to an area of suitable habitat within the adjacent areas. These works must avoid the hibernation season (November to February inclusive).

6.4.3 Breeding Birds

Where clearance of vegetation cannot avoid the nesting bird season (March to August inclusive) then a pre-clearance check must be undertaken by an experienced ECoW, ecologist no more than 24 hours in advance. Where vegetation is denser (e.g. hedgerows and trees) it may be necessary for a suitably experienced ecologist to oversee staged vegetation cutting over the duration of operation. These measures should be set out in a BMS.

The Project is considered unlikely to result in any significant loss of nesting opportunities for birds identified within the Project Site, given most of the lost habitat consists of buildings, hardstanding and modified grassland. However. loss of some trees, hedgerows and woodland habitats will be required. To mitigate for this the scheme will include a mixture of nest box measures and landscaping to provide

increased foraging and nesting opportunities to offset the loss of nesting habitat. A total of 20 Schwegler 1B Hole Nest Box or similar will be sited around the retained woodland alongside 10 Schwegler 2H Open Nest Box. These will provide additional nesting capacity to the garden assemblage of species that were recorded. In addition to this, five house sparrow terraces and five starling boxes will also be erected, providing additional nesting spaces for these Red Listed BoCC and NERC S41 species.

6.4.4 Roosting Bats

A bat-sensitive lighting strategy in line with Guidance Note 08/23 produced by the BCT and the ILP, will be implemented to avoid disturbance impacts to key habitats (i.e. the woodland belts) and any PRF trees associated with those habitats. The lighting strategy will ensure that key bat habitats do not experience lux levels above 0.2 lux on the horizontal plane and 0.4 lux on the vertical plane, where there is currently no lighting; and do not experience any increase in lighting of more than 0.2 lux on the horizontal plane and 0.4 lux on the vertical plane where there is existing lighting on site.

Following completion of the 2025 tree scoping exercise (see 4.8.5 above) to confirm the total number of PRF-I and PRF-M trees to be affected by pruning or felling, all PRF-I and PRF-M trees will be subject to aerial or ladder-based inspection, as appropriate, in May-July. For PRF-I trees with bat roosting evidence (where the type of roost is not immediately obvious), and PRF-M trees, roost characterisation surveys will be undertaken to determine the species and number of bats present. This information will be used to inform a mitigation licence application to Natural England.

The landscaping will be designed to provide increased foraging opportunities, especially around the proposed basin to the north, where pollen and nectar mixes will ensure increased invertebrate numbers for bats to feed on, this should offset the minimal loss of modified grassland and hedgerow found around the existing buildings.

6.4.5 Foraging/Commuting Bats

The Project will result in the loss of modified grassland, some small areas of woodland, some limited hedgerow around the existing buildings and some scattered trees. This is likely to result in a loss of foraging habitats for bats within the Project Site. However, as part of the mitigation measures a wildlife foraging area will be created towards the north of the site, including a basin and wildflower meadow to address drainage issues. This will provide a significant improvement in foraging opportunities in comparison to the existing modified grassland meadows. In addition to this, wildflower pollen and nectar mixes will be incorporated into the wider landscaping alongside hedgerow creation and some additional woodland planting. Where dead and diseased trees require removal they will be replaced with native species, to infill and maintain the extent of both hedgerow and woodland.

If for any reason lighting is required in close proximity to retained and created habitats suitable for foraging and commuting bats, it should be installed following the ILP-BCT guidance [23], as detailed within section 5.4.6.5 above.

Monthly automated/static surveys will be conducted from April to October 2025 across the Hybrid Application site. The results of this work and details of any additional

mitigation, where applicable to the Project Site, will be provided in an updated version of this report.

6.4.6 Hedgehog

Where avoidance of winter scrub removal is not feasible (i.e. comply with avoidance measures for hedgehog) or if clearance is being undertaking during the winter period, then clearance of scrub should be undertaken under supervision of an ECoW, adhering to a BMS. If hedgehogs are encountered, these can be moved by the ECoW to an area of retain habitat.

Any trenches or excavations should be backfilled on the same day as excavated OR should be covered with ply boarding OR should have as escape ladder (e.g. sawn timber plank) fitted, to allow animals that may fall in to escape.

6.4.7 Brown Hare

Any clearance of grassland on site should be undertaken under ECoW supervision, adhering to a BMS in a way to minimise the risk to brown hare, especially between February to September.

6.4.8 Invasive species

In order to prevent the spread of the Schedule 9 variegated yellow archangel recorded within the Project Site, any plant material cleared in areas where this species is growing will be disposed of at an appropriately licensed waste facility. Recommend removal by a licenced contractor.

6.5 Assessment of Effects

Table 6.2 below includes an assessment of effects including full characterisation and the residual significance of the effect after avoidance and mitigation measures have been considered.

Ecological Feature	Potential Effects	Mitigation/Avoidance Measures	Description of Effect (including extent and duration)	Characterisation of Effect	Residual Significance of Effect
Mature Trees	Loss of mature trees.	Avoidance: Erection of protective fencing to reduce potential construction impacts.	Damage to trees and their root protection zone during construction phase.	Indirect Negative During construction Reversable	No effect after mitigation.
Veteran Trees	Loss of Veteran Tree.	Mitigation: Felling of the upper canopy of T330 will take place to prevent the tree from falling over. But ensure the tree remains in place retaining the veteran feature. An arboricultural management plan will be produced covering the maintaining and protecting the woodlands during both the construction and operational phases. This comprehensive plan will outline strategies to safeguard and enhance the retained veteran trees, ensuring they continue to thrive and provide ecological benefits.	Loss of canopy to one veteran tree during the construction phase.	Direct Irreversible Negative During construction	With mitigation unlikely to be significant at local level
Reptiles	Loss of habitats	Mitigation: Creation of wildflower areas, replating of hedgerow and scattered trees	Removal of hedgerows around the buildings, scattered trees and modified grassland could results in the loss of foraging habitat	Indirect Negative During construction Reversable	Not significant at local level
	Injuring or killing animals	Avoidance: Clearance of habitats suitable to reptiles and amphibians outside of hibernation season November to February, inclusive. Mitigation: An ECoW present for site clearance of habitat suitable for reptiles and amphibians.	Machinery tracking and vegetation clearance could cause direct injury or death to animals	Direct Irreversible Negative During construction	Not significant at local level

Breeding birds	Loss of habitat	Mitigation: Creation of suitable habitat areas for breeding birds, for example, wildflower meadow areas.	Loss of hedgerow, scattered trees and introduced shrubs which could support a common assemblage of garden species nesting	Negative Indirect During construction activities Reversible	Not significant at the local level.
	Disturbance during site clearance	Avoidance: Clearance of habitat outside nesting season or checks, prior to clearance. Mitigation: ECoW will perform a pre works check of suitable habitat.	No effect after mitigation.	N/A	No effect after mitigation.
Roosting bats	Loss of habitat	Mitigation: Perform additional checks on the tree classified as FAR.	Damage to trees with unknown roosting potential (classified as FAR). As well as potential loss of B2, a low bat roost potential building. Mitigated against by the installation of bat boxes. Short-term loss of habitat until bat boxes installed. To be updated once all required roost surveys are concluded.	Negative Indirect During construction	With mitigation unlikely to be significant at local level
Foraging and Commuting bats	Loss of habitat	Avoidance: Minimise removal of habitats suitable for foraging and commuting bats Mitigation: Replace habitats suitable for foraging and commuting bats should be replaced on a like for like basis Mitigation: A lighting strategy ensuring the schemes lighting does not impact the commuting routes and passage areas within the root protections zones.	No effect after mitigation.	Negative Indirect During construction Reversible	Not significant at local level

	Disturbance during site clearance	Avoidance: Works kept outside of a 20 m radius from B2 and clearance of habitat outside the bat activity season.	If works do not come within 20m of B2 then works are not likely to cause impacts to roosting bats. Any clearance of works outside of the bat activity season will minimise loss of foraging habitat as bats will be inside hibernating. This will be short term until	N/A	No affect if avoiding
Hedgehog	Loss of habitats	Mitigation: Creation of woodland and scrub areas	Creation of woodland and scrub areas will enhance the site for foraging hedgehog.	Negative Indirect During construction activities Reversible	Not significant at local level
	Injuring or killing animals	Mitigation: ECoW will perform a pre works check of suitable habitat for hedgehog.	Machinery tracking and vegetation clearance could cause direct injury or death to animal.	Negative Direct During construction Irreversible	Not significant at local level
Brown Hare	Loss of habitats	Mitigation: Creation of open grassland areas.	Loss of the grassland will result in a loss of hare habitat. Creation of grassland habitats and open areas will enhance the site for brown hare but are unlikely to fully compensate for full loss of grassland.	Negative Indirect During construction activities Reversible	Not significant at local level
	Injuring or killing animals	Mitigation: ECoW will perform pre works check for the arable land suitable for brown hare.	Machinery tracking and vegetation clearance could cause direct injury or death to animal.	Negative Direct During construction Irreversible	Not significant at local level
INNS – Variegated yellow archangel	Risk of spreading species	Mitigation: Monitor the stand of variegated yellow archangel. Recommend removal by a licensed contractor.	If the stand of variegated yellow archangel does not spread then there will be no impact to the site. However, if it does then this will need to be removed to prevent the risk of spreading around the Project Site.	Positive Indirect Reversable	Not significant at local level

6.6 Residual Effects

Given the mitigation and avoidance measures to be put in place (as detailed above) there will be no significant residual or cumulative effects on any ecological features, providing surveys and mitigation are implemented correctly.

Provided that the BNG calculations reported in document 65213730-SWE-XX-XX-T-J-0009 demonstrate a net gain in biodiversity and meet all trading standard requirements, it is considered that there is no residual negative loss of habitats on site and therefore no significant impacts on habitats through habitat loss.

6.7 Cumulative Effects

Planning application DC/24/1394/FUL for the installation of an automatic arm barrier with LED pole lights and concrete footing is located 150 m east of the site boundary, with the status pending decision. If this was to proceed, coupled with the proposed development, cumulative effects on bats from an increase in artificial lighting could occur. Therefore, a lighting strategy to reduce the direct lighting impacts on bats should be implemented, which has been outlined within sections 6.3.4 and 6.4.5 above.

6.8 Enhancement

A minimum biodiversity net gain of 10% will be targeted for the Project Site, this will be achieved either through on-site improvements to landscaping or via credit acquisition.

A minimum of 10 bird boxes should be installed around the peripheries of the site. These should be positioned around the perimeter of the site particular near the woodland blocks, away from the main entrance building. Starlings were recorded during the breeding bird surveys and prefer to nest on buildings, therefore at least 3 staling boxes should be positioned onto buildings. Any bird boxes installed should be of a durable Woodcrete/Woodstone material, position at least 3 m above ground level in a north to north-east facing aspect with a clear flight path into and out of the box. These together with the 40 boxes recommended as part of the breeding birds mitigation measures (detailed in section 6.4.3 above) are considered enough to both compensate and enhance the Project Site for the loss of nesting bird habitat through loss whilst new planting re-establishes, and provide an overall enhancement for nesting birds.

A minimum of 20 bat boxes should be installed within the Project Site, within the woodland blocks. Any bat boxes installed should be of durable Woodcrete/Woodstone material, positioned at least 4 m above ground, however 6 m is preferred, in a south-west facing aspect with a clear flight path into and out of the box. Additional mitigation measures will be discussed following completion of the bat surveys required.

Details of the locations of the bird and bat boxes will be covered in a Landscape Ecology and Management Plan (LEMP), as well as the installation, management and maintenance of the artificial features.

6.9 Monitoring

All artificial features should be checked by an ecologist after installation to ensure appropriate location and positioning.

7 Conclusions

A preliminary ecological appraisal and a UKHab survey of the site was undertaken in April 2024. A desk study assessment was also undertaken using records obtained from CPERC and SBIS, and MAGIC search.

The site comprises modified grassland, scattered trees, lowland beech, yew and broadleaved mixed woodland, other native hedgerow, introduced scrub, hardstanding and buildings.

There are three internationally important designated sites within the Project Site ZOI. The impacts of the Project on the internationally designated sites and their qualifying features have been assessed within an HRA.

Breeding bird surveys confirmed signs of breeding from rook species with multiple nests found within the woodlands around the site. A stone-curlew scoping assessment has been conducted and concluded impacts on this species are not anticipated.

The site was assessed as having low suitable foraging or commuting habitat for bats. Five buildings were identified with bat roosting features, which were classified as negligible, moderate and high bat roosting potential. Emergence surveys were carried out on the high and moderate buildings and no emergences were recorded.

Bat activity surveys were carried out in the form of automated/static surveys per season. High volumes of bat species were recorded, dominated by common pipistrelle, however, calls from soprano pipistrelle, noctule, serotine, Leisler, brown long-ear, myotis species, and barbastelle were also recorded. However, the low numbers of barbastelle, brown long-ear and *Myotis* species suggest that they are infrequent visitors and are unlikely to be impacted by the proposed development.

Additional surveys will be required and are scheduled to start April 2025 and include:

- Additional surveys on trees classified as FAR, PRF-I and PRF-M trees that will be impacted by the Project
- Further automated/static surveys as part of the Hybrid Application site
- Badger pre-commencement checks.

Following completion of the additional surveys, this report will be updated for planning application and will include supplementary discussion on the ecological baseline and the effect of the Project on ecological features with appropriate mitigation.

The Project's biodiversity net gain target is 10%. Full details will be presented within a separate BNG report.

8 References

[1] Sweco, “Preliminary Ecological Appraisal 65210959-SWE-ZZ-XX-T-J-0002-C02,” Sweco, 2024.

[2] Ministry of Housing, Communities and Local Government, “National Planning Policy Framework,” 2025. [Online]. Available: https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF_December_2024.pdf.

[3] ODPM, “Government Circular: Biodiversity and Geological Conservation – statutory obligations and their impact within the planning system.,” 2005. [Online]. Available: https://www.gov.uk/government/publications/biodiversity-and-geological-conservation-circular-06-2005.

[4] Suffolk Biodiversity Partnership, “Suffolk Local Biodiversity Action Plan,” May 2012. [Online]. Available: https://www.suffolkbis.org.uk/sites/default/files/PDFs/Planning_BAP_Final%2018%20May%202012.pdf. [Accessed March 2025].

[5] Suffolk Biodiversity Information Service, “Priority species and habitats,” [Online]. Available: https://www.suffolkbis.org.uk/knowledge-hub. [Accessed March 2025].

[6] West Suffolk Council, “Emerging West Suffolk Local Plan,” 2024. [Online]. Available: https://www.westsuffolk.gov.uk/planning/Planning_Policies/local_plans/ws-local-plan-review.cfm. [Accessed March 2025].

[7] CIEEM, Guidelines for ecological impact assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine, 2nd ed., Winchester: Chartered Institute of Ecology and Environmental Management, 2018.

[8] C. A. Stace, New Flora of the British Isles, 3rd ed., Cambridge: Cambridge University Press, 2010.

[9] Collins, J., Bat Surveys for Professional Ecologists: Good Practice Guidelines, 4th ed., J. Collins, Ed., London: The Bat Conservation Trust., 2023.

[10] English Nature, Great Crested Newt Mitigation Guidelines, Peterborough: English Nature, 2001.

[11] Natural England; DEFRA, “Badgers: surveys and mitigation for development projects,” 2015. [Online]. Available: https://www.gov.uk/guidance/badgers-surveys-and-mitigation-for-development-projects. [Accessed April 2024].

[12] MAGIC, “Site Check,” [Online]. Available: https://magic.defra.gov.uk/. [Accessed April 2024].

[13] Department for Environment, Food & Rural Affairs, “Statutory biodiversity metric tools and guides,” February 2024. [Online]. Available: https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides.

[14] BTO, “Breeding Bird Survey Instructions,” 2018. [Online]. Available: www.bto.org/bbs. [Accessed March 2024].

[15] Bird Survey & Assessment Steering Group, “Bird Survey Guidelines for assessing ecological impacts, v.1.1.0.,” 2023. [Online]. Available: https://birdsurveyguidelines.org. [Accessed March 2024].

[16] CIEEM, “Good Practise Guidance for Habitats and Species,” 2021. [Online]. Available: https://cieem.net/wp-content/uploads/2021/05/Good-Practice-Guide-2023-edit.pdf. [Accessed March 2024].

[17] CIEEM, “Guidelines for use by ornithologists and ecological consultants who engage in bird surveys for the purpose of assessing ecological impacts including Ecological Impact Assessments (EcIA) and Environmental Impact Assessments,” 2023. [Online]. Available: https://cieem.net/resource/bird-survey-guidelines-for-assessing-ecological-impacts/. [Accessed March 2024].

[18] BTO, “BTO Species Codes,” [Online]. Available: www.bto.org/bbs. [Accessed March 2024].

[19] C. B. N. H. D. &. M. S. Bibby, Bird Census Technique - Second Edition, Academic Press, London, England, 2000.

[20] JNCC, “Conservation Designations for UK Taxa,” 2020. [Online]. Available: https://jncc.gov.uk/our-work/conservation-designations-for-uk-taxa/. [Accessed March 2024].

[21] JNCC, “UK BAP priority bird species,” 2007. [Online]. Available: https://jncc.gov.uk/our-work/uk-bap-priority-species/. [Accessed 12 2021].

[22] Suffolk Ornithologist’s Group, Suffolk Birds 2022, Suffolk Naturalist’s Society, 2022.

[23] The Institution of Lighting Professionals (ILP) and Bat Conservation Trust (BCT), “Bats and Artificial Ligthing at Night GN08/23,” 2023.

[24] The British Standards Institution, “Trees in relation to design, demolition and construction - Recommendations,” 2012.

[25] Hayden's Arboricultural Consultants Ltd, "Arboricultural Impact Assessment: East - Animal Health Trust, Kentford, Suffolk, CB8 7UU," 2025.

Drawings

19400/1009-G: Parameter Plan – Land Use Plan

65210959-SWE-XX-XX-D-J-0002: Preliminary Roost Assessment Results – Buildings

65210959-SWE-XX-XX-D-J-0011: UK Habitat Classification System Survey

65210959-SWE-XX-XX-D-J-0005-C02: Breeding Bird Survey Results – Visit 1

65210959-SWE-XX-XX-D-J-0006-C02: Breeding Bird Survey Results – Visit 2

65210959-SWE-XX-XX-D-J-0007-C02: Breeding Bird Survey Results – Visit 3

65210959-SWE-XX-XX-D-J-0008-C02: Breeding Bird Survey Results – Visit 4

65210959-SWE-XX-XX-D-J-0009-C02: Breeding Bird Survey Results – Visit 5

65210959-SWE-XX-XX-D-J-0010-C02: Breeding Bird Survey Results – Visit 6

65210959-SWE-XX-XX-D-J-0004-C02: Ground Level Tree Assessment

NOTES

1. Contractors must check all dimensions on site. Only figured dimensions are to be worked from. Discrepancies must be reported to the Architect or Engineer before proceeding. © This drawing is copyright.
2. Reproduced from OS Sitemap ® by permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office. © Crown copyright 2008. All rights reserved. Licence number 100007126.
3. Direct scaling off the drawing is permissible for planning purposes only.

Legend:

- Red Line Application Boundary.
- Residential Development Parcels.
- Care Home Parcel.
- School Site (1FE KS1 & 2 with Reception for a total of 210 pupils).
- Listed Buildings.
- Community Hub Site.
- Community Hub Parking.
- Employment Area.
- Private Woodland Garden.
- Public Open Space.
- Existing Woodland.
- New Access.
- Existing Access.

Extent of Hybrid Application.

Extent of Detailed Extent of Hybrid Application.

B1506

Removal of road narrowing

SIRE LANE

JEDDAH WAY

WEST LODGE

EAST LODGE

GARDEN COTTAGE

COMMUNITY/ WORKSPACE HUB

PROPOSED SHOP

SIR GRAHAM KIRKHAM AVENUE

5m wide landscape buffer.

PRIMARY SCHOOL & NURSERY SITE

Indicative School Layout.

LANWADES HALL - WEDDING VENUE

Existing 2.0m high close board fence.

OUTLINE PART OF THE SITE.

FULL (DETAILED) PART OF THE SITE.

EMPLOYMENT SITE

Existing 2.0m high close board fence.

Existing c.2.4m high timber hit & miss fence.

MEMORIAL GARDEN.

SCHOOL ROAD

CARE HOME PARCEL

FULL (DETAILED) PART OF THE SITE.

OUTLINE PART OF THE SITE.

LANWADES STUD

CHIPPENHAM HILL

LOCHAILORT

0 10 20 30 50 100 150 200

SCALE 1:1250

REV	DESCRIPTION	DRN	CHD	DATE
G	Drawing updated to reflect alterations to the indicative road layout which minimises impact on existing trees.	AT	JAL	01:05:25
F	Updated to reflect new road layout.	JPG	JAL	01.04.25
E	Proposed vehicular access onto School Lane omitted.	JAL	-	26.02.25
D	Client meeting (06.02.25) comments incorporated.	JAL	-	10:02:25
C	Client comments dated 29.01.25 incorporated.	JAL	-	03:02:25
B	Client comments from meeting 27.01.25 incorporated.	JAL	-	28.01.25
A	Client comments dated 23.01.25 incorporated.	JAL	-	23:01:25

☐ PRELIMINARY ☐ INFORMATION ☐ TENDER

☐ CONSTRUCTION ☐ AS BUILT

SCALE	1:1250 @ A0	DATE	Jan. 2025
DRAWN	JAL	CHK	-
DRAWING NO.	19400/1009	REV	F

TITLE: Redevelopment of Former Animal Testing Research Facility, Kentford.

DETAILS: Parameter Plan - Land Use Plan.

Woods Hardwick

Architecture | Engineering | Planning | Surveying

BEDFORD : HEAD OFFICE
15-17 Goldington Road
Bedford MK40 3NH
T: +44 (0) 1234 268862

BIRMINGHAM
Fort Dunlop, Fort Parkway
Birmingham B24 9FE
T: +44 (0) 121 6297784

ONLINE: mail@woodshardwick.com | woodshardwick.com

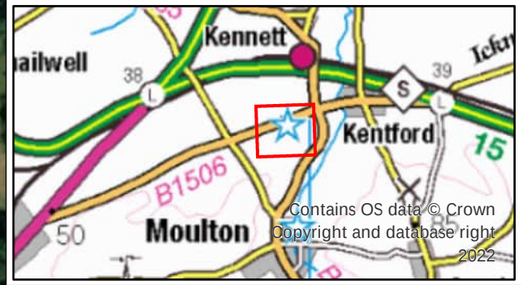
Legend

- Site boundary

Building Bat Roost Potential:

- High
- Low
- Moderate
- Negligible
- None

0 0.1 0.2 Kilometers



Rev	Date	Amendment Details	Dr'n	Chk'	App'
C01	10.09.2024	FIRST ISSUE	SB	EH	JS

Sweco UK Limited,
North Kiln, Felaw Maltings, 46 Felaw Street
Ipswich, IP2 8PN
Tel: +44 (0) 147 323 1100
www.sweco.co.uk

SWECO

Client

LOCHAILORT INVESTMENTS LTD

Project Title

LANWADES WOODLAND PARK

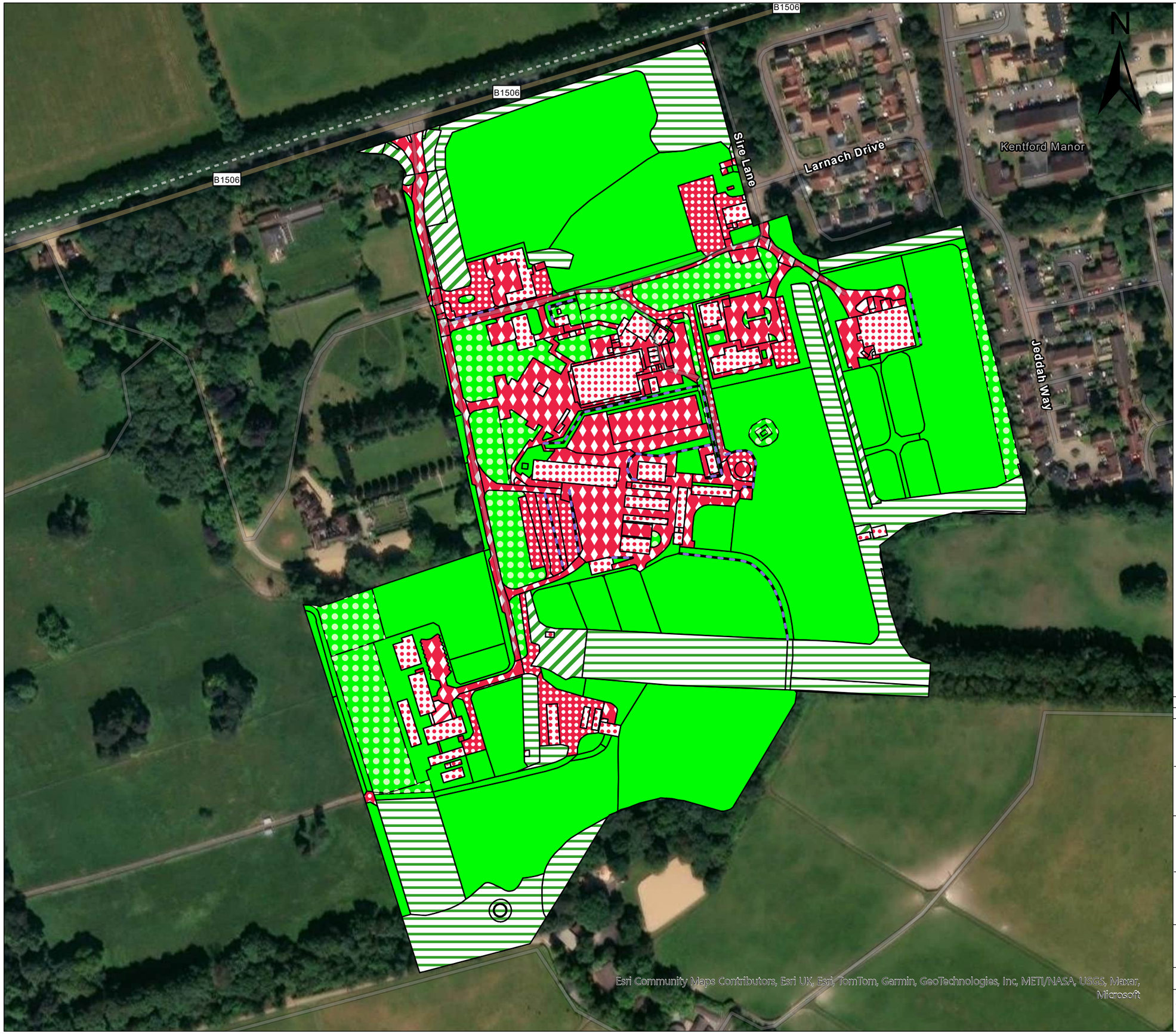
Drawing Title

PRELIMINARY ROOST ASSESSMENT - BUILDINGS

Drawing No.

65210959-SWE-XX-XX-D-J-0002

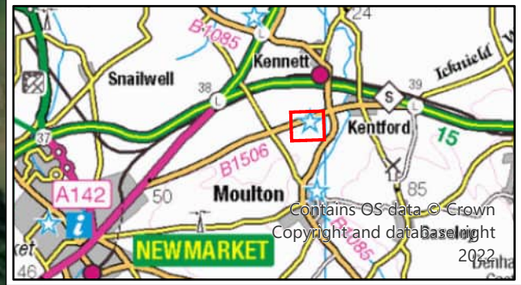
Sheet Size	Scale	Sweco Ref	Revision
A3	1:4,800	65210959	C01



Legend

- h2a6 - Other native hedgerow
- g4 - Modified grassland
- g4 32 - Modified grassland with scattered trees
- u1 847 - Introduced shrub
- u1b5 - Buildings
- u1b6 - Other developed land
- u1c - Artificial unvegetated unsealed surface
- w1 - Broadleaved, mixed and yew woodland
- w1c - Lowland beech and yew woodland

0 50 100 150 200 Meters



Rev	Date	Amendment Details	Dr'n	Chk'	App'
C01	07.05.2025	FIRST ISSUE	EH	CF	JS

Sweco UK Limited,
North Kiln, Felaw Maltings, 46 Felaw Street
Ipswich, IP2 8PN
Tel: +44 (0) 147 323 1100
www.sweco.co.uk

SWECO

Client

LOCHAILORT INVESTMENTS LTD

Project Title

LANWADES WOODLAND PARK

Drawing Title

UK HABITAT CLASSIFICATION MAP - DETAILED APPLICATION

Drawing No.

65210959-SWE-XX-XX-D-J-0011

Sheet Size	Scale	Sweco Ref	Revision
A3	1:4,000	65210959	C01

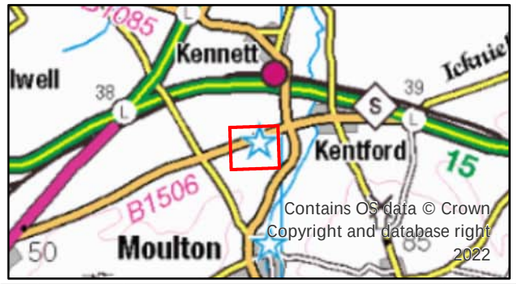
Legend

Site Boundary - Detailed Application

Breeding Bird Survey

- Sighting only
- Singing

0 30 60 120 180 240 Meters



Rev	Date	Amendment Details	Dr'n	Chk'	App'
C02	07.05.2025	SECOND ISSUE	CH	CF	JS

Sweco UK Limited,
North Kiln, Felaw Maltings, 46 Felaw Street
Ipswich, IP2 8PN
Tel: +44 (0) 147 323 1100
www.sweco.co.uk

SWECO

Client

LOCHAILORT INVESTMENTS LTD

Project Title

LANWADES WOODLAND PARK

Drawing Title

BREEDING BIRD SURVEY RESULTS - VISIT 1
DETAILED APPLICATION

Drawing No.

65210959-SWE-XX-XX-D-J-0005

Sheet Size	Scale	Sweco Ref	Revision
A3	1:4,000	65210959	C02

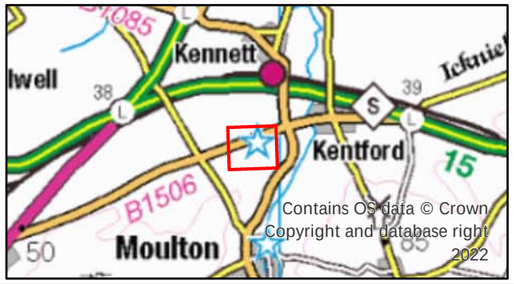
Legend

Site Boundary - Detailed Application

Breeding Bird Survey

Singing

0 30 60 120 180 240 Meters



Rev	Date	Amendment Details	Dr'n	Chk'	App'
C02	07.05.2025	SECOND ISSUE	CH	CF	JS

Sweco UK Limited,
North Kiln, Felaw Maltings, 46 Felaw Street
Ipswich, IP2 8PN
Tel: +44 (0) 147 323 1100
www.sweco.co.uk

SWECO

Client

LOCHAILORT INVESTMENTS LTD

Project Title

LANWADES WOODLAND PARK

Drawing Title

BREEDING BIRD SURVEY RESULTS - VISIT 2 DETAILED APPLICATION

Drawing No.

65210959-SWE-XX-XX-D-J-0006

Sheet Size	Scale	Sweco Ref	Revision
A3	1:4,000	65210959	C02

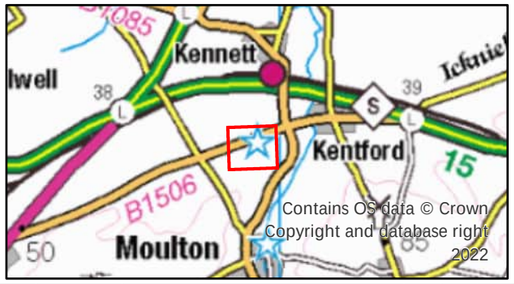
Legend

Site Boundary - Detailed Application

Breeding Bird Survey

- Sighting only
- Singing

0 30 60 120 180 240 Meters



Rev	Date	Amendment Details	Dr'n	Chk'	App'
C02	07.05.2025	SECOND ISSUE	CH	CF	JS

Sweco UK Limited,
North Kiln, Felaw Maltings, 46 Felaw Street
Ipswich, IP2 8PN
Tel: +44 (0) 147 323 1100
www.sweco.co.uk

SWECO

Client

LOCHAILORT INVESTMENTS LTD

Project Title

LANWADES WOODLAND PARK

Drawing Title

BREEDING BIRD SURVEY RESULTS - VISIT 3
DETAILED APPLICATION

Drawing No.

65210959-SWE-XX-XX-D-J-0007

Sheet Size	Scale	Sweco Ref	Revision
A3	1:4,000	65210959	C02

Legend

Site Boundary - Detailed Application

Breeding Bird Survey

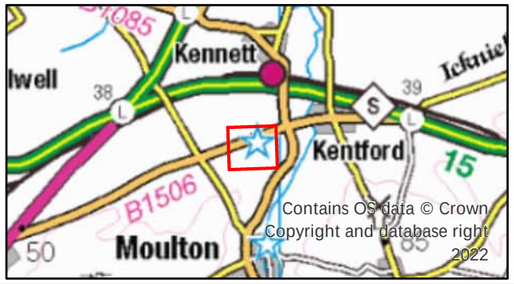
Calling

Sighting only

Singing

0 30 60 120 180 240

Meters



Rev	Date	Amendment Details	Dr'n	Chk'	App'
C02	07.05.2025	SECOND ISSUE	CH	CF	JS

Sweco UK Limited,
North Kiln, Felaw Maltings, 46 Felaw Street
Ipswich, IP2 8PN
Tel: +44 (0) 147 323 1100
www.sweco.co.uk

SWECO

Client

LOCHAILORT INVESTMENTS LTD

Project Title

LANWADES WOODLAND PARK

Drawing Title

BREEDING BIRD SURVEY RESULTS - VISIT 4
DETAILED APPLICATION

Drawing No.

65210959-SWE-XX-XX-D-J-0008

Sheet Size	Scale	Sweco Ref	Revision
A3	1:4,000	65210959	C02

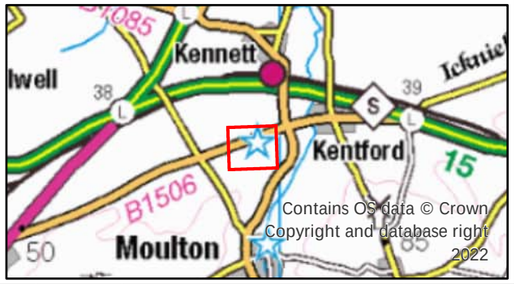
Legend

Site Boundary - Detailed Application

Breeding Bird Survey

- Sighting only
- Singing

0 30 60 120 180 240 Meters



Rev	Date	Amendment Details	Dr'n	Chk'	App'
C02	07.05.2025	SECOND ISSUE	CH	CF	JS

Sweco UK Limited,
North Kiln, Felaw Maltings, 46 Felaw Street
Ipswich, IP2 8PN
Tel: +44 (0) 147 323 1100
www.sweco.co.uk

SWECO

Client

LOCHAILORT INVESTMENTS LTD

Project Title

LANWADES WOODLAND PARK

Drawing Title

BREEDING BIRD SURVEY RESULTS - VISIT 5
DETAILED APPLICATION

Drawing No.

65210959-SWE-XX-XX-D-J-0009

Sheet Size	Scale	Sweco Ref	Revision
A3	1:4,000	65210959	C02

Legend

Site Boundary - Detailed Application

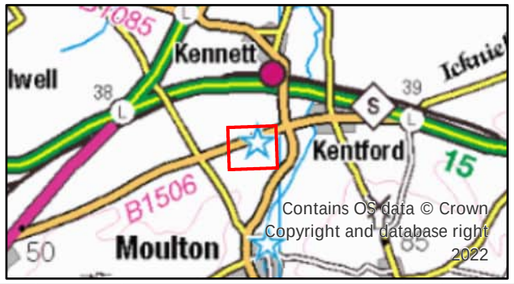
Breeding Bird Survey

Calling

Sighting only

Singing

0 30 60 120 180 240 Meters



Rev	Date	Amendment Details	Dr'n	Chk'	App'
C02	07.05.2025	SECOND ISSUE	CH	CF	JS

Sweco UK Limited,
North Kiln, Felaw Maltings, 46 Felaw Street
Ipswich, IP2 8PN
Tel: +44 (0) 147 323 1100
www.sweco.co.uk

SWECO

Client

LOCHAILORT INVESTMENTS LTD

Project Title

LANWADES WOODLAND PARK

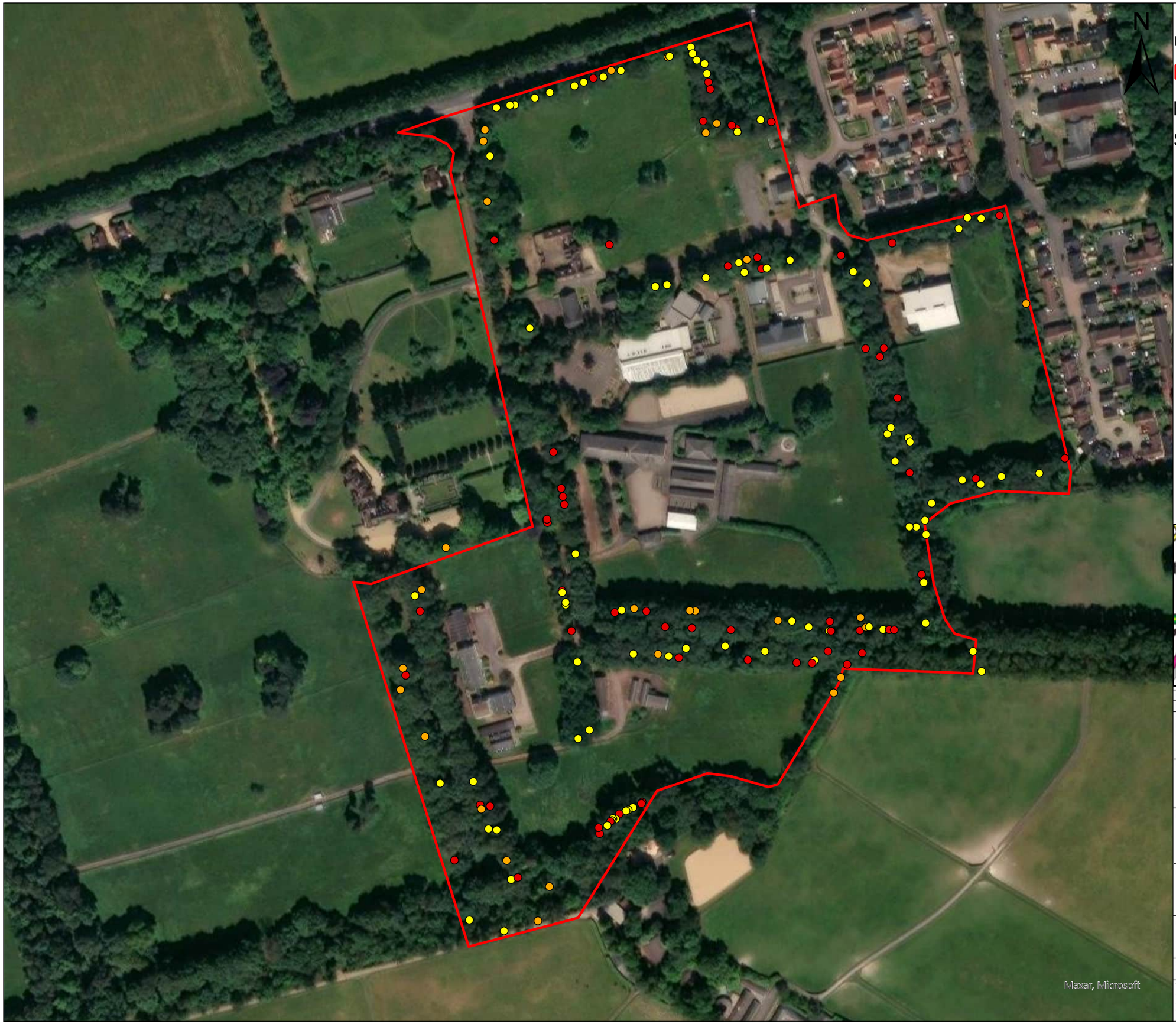
Drawing Title

BREEDING BIRD SURVEY RESULTS - VISIT 6
DETAILED APPLICATION

Drawing No.

65210959-SWE-XX-XX-D-J-0010

Sheet Size	Scale	Sweco Ref	Revision
A3	1:4,000	65210959	C02



Legend

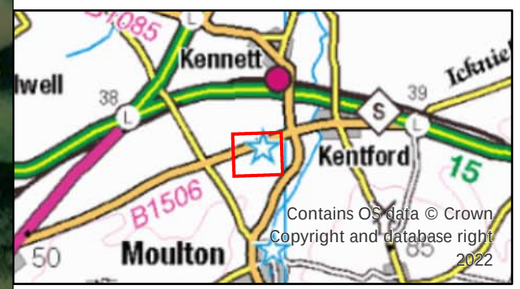
Site Boundary - Detailed Application

Bat Roost Potential

Suitability

- FAR (88)
- PRF-I (29)
- PRF-M (66)

0 50 100 200 Meters



Rev	Date	Amendment Details	Dr'n	CF	JS
C02	07.05.2025	SECOND ISSUE	CF	JS	MCB

Sweco UK Limited,
North Kiln, Felaw Maltings, 46 Felaw Street
Ipswich, IP2 8PN
Tel: +44 (0) 147 323 1100
www.sweco.co.uk

SWECO

Client

LOCHAILORT INVESTMENTS LTD

Project Title

LANWADES WOODLAND PARK

Drawing Title

GROUND LEVEL TREE ASSESSMENT DETAILED APPLICATION

Drawing No.

65210959-SWE-XX-XX-D-J-0004

Sheet Size	Scale	Sweco Ref	Revision
A3	1:4,000	65210959	C02

Appendix A – Ecology & Biodiversity Net Gain Assessment Letter

Document Reference: 65210959-SWE-ZZ-XX-T-J-0006-C02

Lochailort Kentford Ltd
Eagle House
108-110 Jermyn Street
London
SW1Y6EE

Sweco UK Limited
North Kiln, Felaw Maltings
46 Felaw Street
Ipswich, IP2 8PN
+44 1473 231 100

PRIVATE AND CONFIDENTIAL

28/11/2024
Project Name: Lanwades country park
Project Reference: 65210959
Document Reference: 65210959-SWE-ZZ-XX-T-J-0006-C02

Landwades Woodland Park – Ornithology Response Assessment

Introduction

This letter has been prepared by Sweco for Lochailort Kentford Ltd to respond to West Suffolks Council's letter dated 8 November 2024, and the 9 September 2024 responses from both the RSPB and Wildlife Trust, received on the same day, with regards to the site and stone curlew impacts .

The approach of this assessment is considered valid for all submissions on the Landwades Country Park site.

The Breckland Special Protection Area (SPA) is located 2.2km northeast of the closest part of the site, and separated from the site by the village of Kentford, the A14 road and farmland. The site falls outside the 1.5km constraint zone around the SPA and meets the criteria for “Redevelopment of existing building(s) to residential where there is no net increase in area of built development within settlement boundaries”. Natural England considered this sufficient to screen out potential impacts to the Breckland SPA under the small development tool for the permitted development scheme, and providing adequate mitigation is applied to any larger application addressing recreational pressures, would likely support the larger application. However, West Suffolk Council state that birds outside the 1.5km, buffer through precautionary principles are functionally linked to the designated site and that due to this, the development should undertake three years’ worth of surveys of all suitable habitat within 1.5km of the development itself to ensure any stone curlew are identified.

Bird Surveys

Sweco has undertaken bird surveys of the entire Animal Health Trust site. The breeding bird surveys followed a set transect route which aimed to include all core habitat types on and adjacent to site. The breeding bird survey undertaken at the site was based upon the line transect survey methodology utilised by the British Trust for Ornithology (BTO) Breeding Bird Survey (BBS)[1] and Bird Survey Guidelines produced by the Bird Survey & Assessment Steering Group[2], in line with CIEEM good practice guidelines[3].

Six separate visits were undertaken between 27 March 2024 and 18 July 2024, and were led by experienced ornithologists. The surveys were undertaken during suitable weather conditions, as summarised in Table 1 below, and consisted of five dawns and one dusk.

Table 1 : Breeding Bird Survey Conditions

Survey	Date	Time		Temperature (°C)		Wind (Beaufort Scale)		Cloud Cover (Oktas)		Precipitation (mm)	
	2024	Start	End	Start	End	Start	End	Start	End	Start	End
1	27 March	05:30	11:00	10	12	1	1	5	6	0	0
2	11 April	15:45	19:45	14	11	2	2	7	8	0	0
3	24 April	05:40	11:30	10	13	2	3	8	5	0	0
4	24 May	05:15	11:00	14	15	1	1	1	2	0	0
5	18 June	05:00	11:00	10	12	1	1	5	3	0	0
6	18 Jully	04:20	08:30	15	16	2	3	8	7	0	0

All field boundaries were walked slowly, and birds were identified by both sight and sound, with records of their behaviour taken and recorded onto plans. Standard BTO species

[1] BTO/JNCC/RSPB. (2018). Breeding Bird Survey Instructions, https://www.bto.org/sites/default/files/bbs_instructions_2018.pdf [accessed November 2024]

[2] Bird Survey & Assessment Steering Group. (2024). Bird Survey Guidelines for assessing ecological impacts, https://birdsurveyguidelines.org [accessed November 2024]

[3] CIEEM. (2021) Good Practice Guidance for Habitats and Species, May 2021, version 3

codes and symbols were used to record bird species[1]. Activity and direction of flight where appropriate were used as recommended for the Bird Census Techniques (C. Bibby, 2000).

Species and activity data were analysed spatially to compare where species were identified during more than one survey visit and therefore are likely to be holding a territory and/or actively breeding in the area. If a bird exhibited breeding activity, such as commuting with nesting material or singing for example, it was judged to be breeding or attempting to breed on site.

No stone curlew, nightjar or woodlark were recorded on site during any of the surveys. This is likely due to the habitat on site being suboptimal for all three species. Continuing management on site controls the habitats, and regular hay cuts of the meadow areas prevent succession into habitats that may better suit the assemblages. Furthermore, in relation to stone curlew, the site is enclosed and, in some areas, bisected by small blocks of mature woodland that provide easy vantage points for predators (raptors and corvids), further reducing the potential for the site to support stone curlew. The site also supports a large rookery around the main entrance road, and a large congregation of nesting crows on the north eastern woodland block, both of which further reduce the likelihood of ground nesting birds using the site, combined with the dense woodland blocks that runs across the site providing easy access for predators like foxes and badgers, both of which have been recorded on site during the site surveys.

The Wider Area

This report includes an assessment of the wider area surrounding the site, conducted alongside the bird surveys summarized above, to evaluate the impact of nearby developments and the suitability of the land for supporting stone curlew populations with relation to the proposed development.

West Suffolk Council state within their response of 9 September 2024 that "*Stone Curlew nest density has been shown to be negatively impacted by the built environment, with lower nest densities found up to 1.5km from settlements*. *The precise mechanisms for disturbance from buildings are not fully understood. For example, it is not a straightforward line-of-sight issue, as reduced nest density occurs beyond woodland that screens any visual development effects. It is likely to be a combination of the visual disturbance caused by buildings in the environment, increased recreational disturbance, noise and light pollution, and disturbance (including predation) by domestic pets.*" Consequently, West Suffolk Council state that there is a requirement to survey suitable habitats within 1.5km buffer of the development site over a three-year period, as these areas may still be viable for stone curlew.

A review of aerial mapping reveals that the site is located immediately south of the village of Kennet, west of Kentford, north of Moulton, and east of Thetford. Following the principles

outlined by the West Suffolk Council, the figure below shows a 1.5km buffer drawn around each of these built-up areas (focused on buildings – if curtilage is included, the area covered is larger), as well as a 1.5 km buffer drawn around the Lanwades site (see Figure 1). This figure clearly demonstrates that the 1.5km buffer around the Lanwades site lies *entirely* within the 1.5km buffer that already affected by existing built-up areas. Therefore, all areas within the Lanwades 1.5km buffer already experience impacts from the existing surrounding developments. As such, this buffer zone is significantly less likely to be utilized by stone curlew for nesting, for the reasons highlighted by West Suffolk Council.

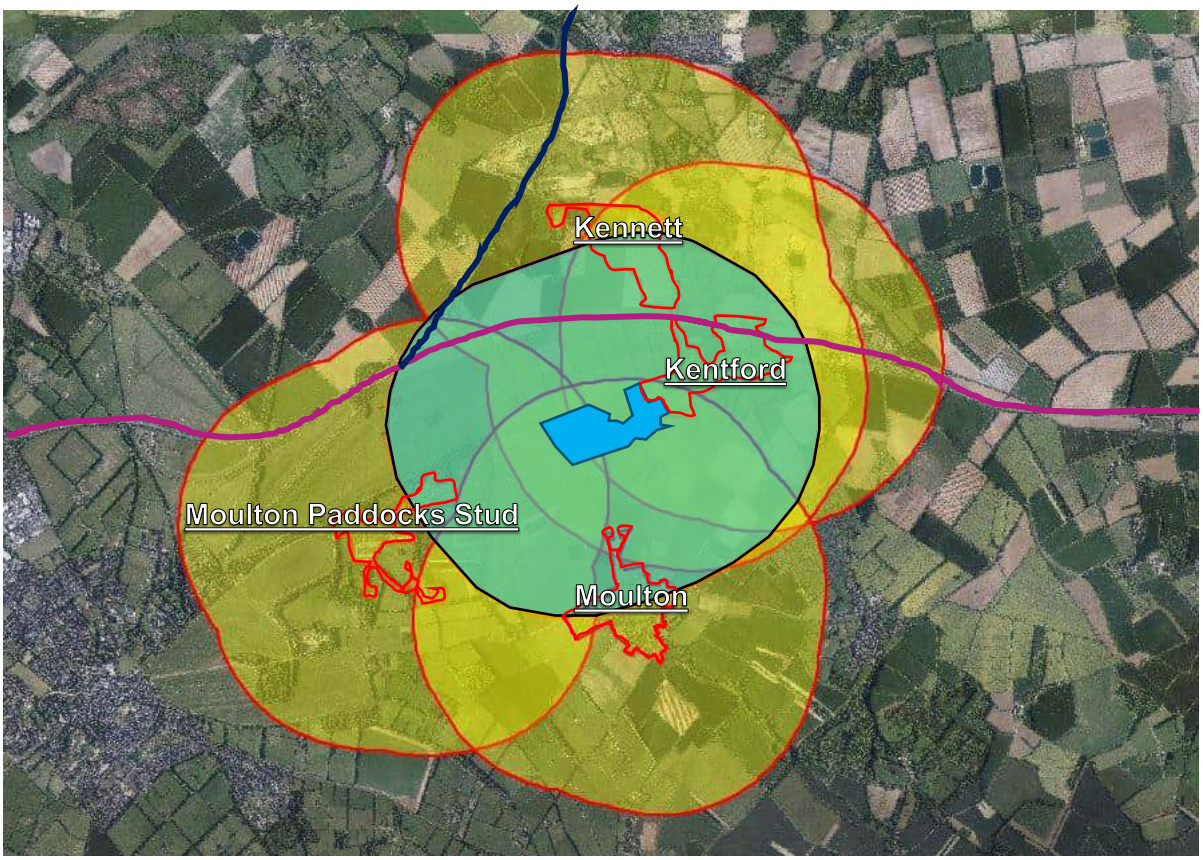


Figure 1. Figure shows a 1.5km buffer around surrounding built-up areas (red line, yellow fill), and a 1.5km buffer around the Lanwades site (black line, blue fill). The approximate boundaries of each village have been highlighted above the zones with the addition of the A14 in purple and the A11 in dark blue.

Assessment of Habitats to the North

Having already established the suboptimal nesting potential of the land to the north of the proposed scheme due to its proximity to existing built-up areas, we can now conduct a

further assessment of the habitat within 1.5km of the site to evaluate its suitability for supporting stone curlew.

Directly north of the site lies St. Simons Stud, followed by the A14, which runs parallel to the stud. The paddocks within the stud are primarily used for horse grazing or hay production. Each field margin is lined with dense, mature trees, and the paddocks are bisected by mature woodland with, in most fields, additional clusters of mature trees. Many paddocks also contain field shelters for horses, as well as barn and stable buildings located throughout the site. The main stud area features a large complex of stables, barns, and housing, with multiple concrete access tracks crossing the site. Further north lies the A14 and beyond this lies the overground railway line and Kennet stations, followed by arable wheat or cereals fields adjacent to the Banks Mills industrial estate.

Studies by Green *et al.*[4][5] found that stone curlews breed in short semi-natural dry grasslands and heaths (referred to throughout as heathland) and spring-sown arable farmland, particularly in areas with sandy soils containing stones or rubble. It was noted that these birds are most likely to breed in spring-sown arable fields if the crops grow tall and dense later in the summer and if the fields are in close proximity to short semi-natural grassland or sheep pasture, while being located more than 3km away from the nearest major road. Key characteristics of preferred nesting and foraging habitats include sparse vegetation and bare ground. The more recent study[6] using GPS trackers found that stone curlew by day are three times more likely to forage on disturbed grassland and by night are twice as likely to forage on disturbed grassland than unmodified grassland.

The grazed paddocks to the north do not meet these criteria. These paddocks are actively grazed by horses and are surrounded by woodland, with a close proximity to existing built-up environments, the overground railway and the A14 and other major roads. There are no bare ground patches within these fields and stones and rocks within the field will be actively removed as part of site management, as these pose a risk to horses. As such, the paddocks are unlikely to provide suitable nesting conditions for stone curlew. The mature woodland that borders all the field margins, and the clusters of mature trees, provide vantage points for corvids (rookery and 18 crow nests recorded in woodland on site adjacent) and raptors, as well as cover for badgers and foxes, resulting in an increased risk of predation for ground-nesting birds. Taking into account the previous points and the proximity to the A14, A11 and B1506, the habitat within St Simons Stud is considered unsuitable for nesting stone curlew. Additionally, as these fields are currently managed as grazed paddocks and

---

[4] Green RE, Tyler GA, Bowden CGR. Habitat selection, ranging behaviour and diet of the stone curlew (Burhinus oedicnemus) in southern England. Journal of Zoology. 2000;250(2):161-183. doi:10.1111/j.1469-7998.2000.tb01067.x

[5] Green, R.E. and Griffiths, G.H. (1994), Use of preferred nesting habitat by stone curlews Burhinus oedicnemus in relation to vegetation structure. Journal of Zoology, 233: 457-471. https://doi.org/10.1111/j.1469-7998.1994.tb05277.x

[6] Hawkes, R.W., Smart, J., Brown, A., Green, R.E., Jones, H. and Dolman, P.M. (2021), Effects of experimental land management on habitat use by Eurasian Stone-curlews. Anim. Conserv., 24: 743-755. https://doi.org/10.1111/acv.12678

hay-cut fields, it is unlikely that their management will change in the coming years, meaning that further years of monitoring these habitats would be unlikely to result in any significant change in their use by stone curlew.

To the north of the study area lies the only potentially suitable habitat for nesting stone curlews: an arable field located north of the A14 and the overground rail line. However, this area is considered unsuitable due to its proximity to the village of Kennett and the ongoing construction works at Kennett Garden Village, which borders this field to the northeast. The construction site has active excavators and other machinery engaged in developing residential properties that back onto these arable fields. Additionally, the A14 and the Banks Mills industrial estate are located immediately adjacent to the arable land along the south further circling the land. Although the habitat itself may possess some suitability, its closeness to these significant disturbances greatly limits its potential to support stone curlews. This is further emphasized by surveys conducted by MLM Group (now Sweco) related to the Kennett Garden Village planning application (18/00752/ESO), which found no stone curlews present during the 2016 or 2017 surveys and concluded that the cropland in this area was unsuitable for stone curlews.

Assessment of Habitats to the East

To the east of the site lies the main village of Kentford, with existing residential development starting immediately adjacent to the site and extending approximately 1.5 km east towards the A14, which curves back around, ending just outside the village. Interspersed throughout this area are grassland paddocks, which increase to the south east. Here, the paddocks are associated with Lanwades Stud, whose main site is directly south of the proposed development. These paddocks resemble those of St. Simons Stud and are bordered by large, mature woodlands, along with blocks of woodland that extend from the River Kennet. The proximity of this mature woodland around the edges of these fields provides ideal vantage points for corvids and raptors, and offers cover for badgers and foxes. Scattered housing is also present throughout this area.

At the southeastern edge of the buffer, much of the land remains dedicated to grazing, but there are arable fields used for crops that could potentially support stone curlew populations. However, these fields are located much closer to the village of Gazeley, at a minimum distance of only 500m from the nearest property, Gazeley Stud, and as such fall well within the 1.5km impact zone around Gazeley.

Considering the size and nature of Kentford and Gazeley, and the existing 1.5km impact zone around each village, the Lanwades development does not increase the area that is already subject to disturbance and thus suboptimal for nesting. Furthermore, given the existing roads and public footpaths between the two villages, as well as the predominant land use comprising horse paddocks, woodland blocks, and equine and agricultural housing, it is unlikely that stone curlew would be nesting in this area.

Assessment of Habitats to the South

Immediately south of the site lies Lanwades Stud and BSAS Telecoms, located almost directly adjacent to the site boundary. The area immediately south consists of horse paddocks and mature woodland blocks, which then lead to Trinity Hall Cottages, a local school, and the village of Moulton, which begins approximately 1 km from the site and extends for another kilometre along the B1085 that starts by the site and runs south through the village.

As previously mentioned, the proximity of the village of Moulton and the existing residential developments adjacent to the site means that the fields between the site and Moulton are already experiencing impacts from these developments. Additionally, the land in this area primarily consists of grazed paddocks, barns, and stable buildings, making it unlikely to support stone curlew populations, for the reasons outlined above.

Assessment of Habitats to the West

Finally, to the west lies Moulton Paddock Studs, a prominent facility in the area that is home to over 200 horses. This extensive property features numerous paddocks, a large stable complex, barns, housing, offices, and a stately home, along with several major gallops and rides that are regularly utilized for exercising and training horses. The site is bordered by significant mature woodlands that line nearly all roads and access tracks, as well as the paddocks and field margins, likely influenced by the construction of Fidget Hall in the early 18th century.

While the paddocks themselves offer negligible nesting suitability for stone curlew, the larger gallops may present some potential due to their expansive open areas. However, these are in regular use and the grass in these regions appears to be regularly-managed to keep it short, with livestock fencing and mow lines present on aerial imagery. Additionally, several grass and sand tracks cross the area, mimicking raceways. The proximity to Newmarket and the A14 further reduces this area's suitability.

Given the level of activity at the site and the low suitability of the habitat for supporting stone curlew, along with existing impact zones already affecting this area, it is unlikely that stone curlew would utilize this location for nesting.

Furthermore, the western boundary of the site lies approximately 3.5km from the Special Protection Area (SPA). A 1.5km impact zone would extend from 3.5km to 5km away from the SPA. A study by the Zoological Society of London[7] utilized GPS tags to monitor stone curlew movements, revealing that 90% of foraging locations occurred within 1km of nesting sites during the breeding season, although some birds did travel up to 4.1km at night to

[7] Hawkes, R.W., Smart, J., Brown, A., Green, R.E., Jones, H. and Dolman, P.M. (2021), Effects of experimental land management on habitat use by Eurasian Stone-curlews. Anim. Conserv., 24: 743-755. https://doi.org/10.1111/acv.12678

forage in high-quality sites with abundant invertebrate populations, such as pig fields, spring-sown crops, and isolated manure piles. The primary conclusion of the paper emphasizes that conservation efforts should focus on promoting improved breeding attempts through enhanced foraging opportunities created by ground disturbance within 1km of the nest. This aligns with earlier research[8] indicating that stone curlews travel about 3km from their nests to feed at night and prefer nesting sites in short semi-natural grassland or sheep-grazed pastures that are more than 3km away from major roads. Given these factors, it is unlikely that these areas would be utilized by stone curlews for nesting.

Foraging Value of Horse Paddocks

An important point that has not yet been addressed is the low level of invertebrate populations found in horse-grazed fields. Newmarket has a rich racing history and is home to many studs that produce horses competing at regional, national, and international levels. Due to the frequent movement of horses, standard medical treatments, including anthelmintics (drugs used to treat internal and external parasitic infections), must be administered regularly.

Recent studies[9] have shown that the most common anthelmintic treatments have significant negative impacts on earthworm populations, with nearly all treatments affecting soil invertebrates adversely, although some are notably more harmful than others. Tyler, *et al.*[5] found earthworms, soil-surface invertebrates and molluscs are the main prey of adult stone curlews and their chicks. As such, paddocks in general are likely to present a suboptimal foraging resource for stone curlews, before taking into account the other points raised above.

Conclusion

In conclusion this letter addresses the concerns raised by West Suffolk Council regarding the potential impacts of the proposed development on stone curlew populations in relation to the surrounding habitats. The assessments conducted by Sweco indicate that the land within the vicinity of the proposed development, including the wider area, is generally suboptimal for stone curlew nesting and foraging, due to a range of factors.

The site falls outside the Breckland SPA 1.5km constraint zone, which in Natural England's view means that development does not pose a significant threat to the SPA population, provided adequate mitigation measures are implemented.

---

[8] Tyler, Glen & Bowden, Christopher. (2000). Habitat selection, ranging behaviour and diet of the Stone Curlew (Burhinus oedicnemus) in Southern England. Journal of Zoology. 250. 161 - 183. 10.1111/j.1469-7998.2000.tb01067.x.

[9] Anne E. Goodenough, Julia C. Webb, Jonathan Yardley, Environmentally-realistic concentrations of anthelmintic drugs affect survival and motility in the cosmopolitan earthworm Lumbricus terrestris (Linnaeus, 1758), Applied Soil Ecology, Volume 137, 2019, Pages 87-95, ISSN 0929-1393, https://doi.org/10.1016/j.apsoil.2019.02.001.

Survey results from the Animal Health Trust site recorded no presence of stone curlew, nightjar, or woodlark. This has been attributed to the site's management regime and habitat conditions, which are not conducive to these species. Additionally, the presence of existing residential developments, major roads, and the suboptimal nature of the surrounding landscapes, characterized by horse paddocks and mature woodlands, further diminishes the site's potential to support this species.

The detailed evaluation of the areas to the north, east, south, and west of the site reinforces the conclusion that these regions, while they may contain limited areas of suitable habitat, are significantly impacted by nearby development, as well as disturbance resulting from the day-to-day management and use of these areas. The presence of mature woodland, groups of mature trees, active horse grazing, and proximity to built-up areas create conditions that are not suitable for nesting stone curlews.

Furthermore, the ongoing management of horse-grazed fields, coupled with the use of anthelmintic treatments that negatively affect invertebrate populations, further reduces the foraging potential of the site and its wider surroundings for stone curlew, which rely heavily on soil invertebrates as a food source.

Overall, the evidence presented indicates that the proposed development is unlikely to impact stone curlew nesting in the area due to existing conditions and disturbance that renders the area unsuitable for stone curlew nesting.

We acknowledge that the scheme will need to implement mitigation measures to address potential recreational impacts at the Breckland SPA. However, we do not consider that additional surveys or mitigation for nesting stone curlew are necessary, or appropriate, given the low likelihood that the site, or any land within 1.5km of it, supports this species.

We believe that measures to address potential recreational impacts at the SPA can be effectively managed within the ownership of the site through the creation of walkways and dog off-lead areas, to encourage local recreation. In addition, as recent studies have demonstrated the importance of ground disturbance near nesting sites, there may be an opportunity for the proposed scheme to include funding for the creation of lapwing and stone curlew habitats, either within or in closer proximity to the SPA. This approach would enhance the quality of foraging areas, and serve as both mitigation and enhancement for these birds.

Yours faithfully

Joshua Stafford BSc (Hons) MRSB
Principal Ecologist
joshua.stafford@sweco.co.uk

Appendix B – Stone Curlew Scoping Report

Report produced by Graham Riley BSc ACIEEM (Wild Frontier Ecology)

WILD FRONTIER ECOLOGY

Proposed Development at Lanwades, Kennet, near Newmarket, Suffolk

Stone Curlew Scoping Report

April 2025

Report produced by	Report submitted to
Author: Graham Riley BSc ACIEEM	SWECO UK ltd Grove House Mansion Gate Drive Leeds LS7 4DN Contact: Joshua Stafford
Quality control and senior review by: Robert Yaxley BSc (Hons) CEcol CEnv MCIEEM	
Wild Frontier Ecology Unit 2, Cold Blow Farm Great Snoring Fakenham Norfolk NR21 0HF Tel: 01328 864633 graham@wildfrontier-ecology.co.uk	

Company Registered in England and Wales No: 4942219.

VAT Reg No: 887 4692 54

Registered Office: Saxon House, Hellesdon Park Road, Drayton High Road, Norwich NR6 5DR

Director: Robert Yaxley BSc (Hons) CEcol Cenv MCIEEM

The data which we have prepared and provided are accurate and have been prepared and provided in accordance with the CIEEM's Code of Professional Conduct. We confirm that any opinions expressed are our best and professional bona fide opinions.

CIEEM REGISTERED PRACTICE 2024-2025

This report conforms to the British Standard 42020:2013 Biodiversity – Code of practice for planning and development.

Contents

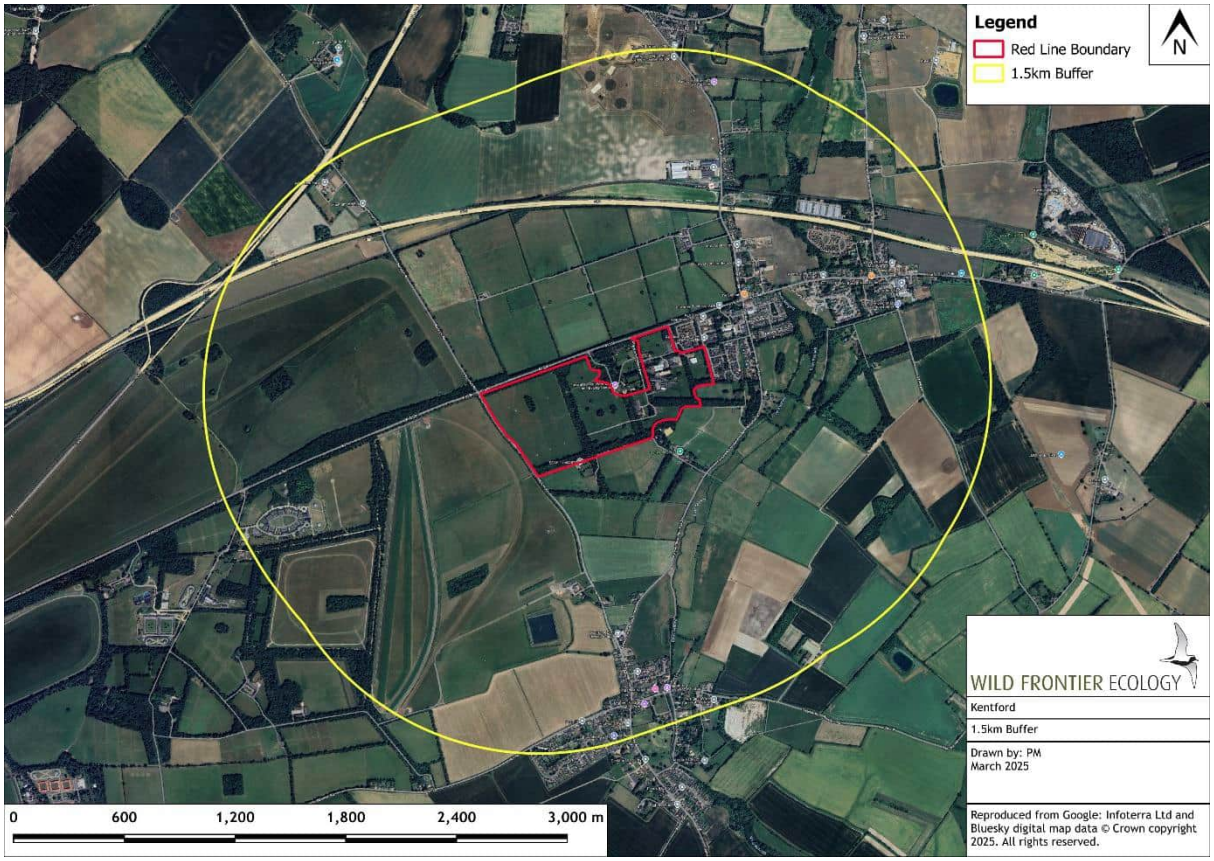
1. Background

Wild Frontier Ecology Ltd. (WFE) was commissioned by SWECO UK Ltd to undertake a stone curlew scoping exercise in relation to a proposed residential housing scheme at Lanwades, Kentford near Newmarket, Suffolk CB8 7UA.

West Suffolk Council have requested three years of stone curlew survey data for the surrounding 1.5km radius (figure 1) of the proposed development boundary as the site lies just within 1km square cells where at least part of the cell is within 1,500m of the Breckland SPA (holding stone curlews). These 1km cells have significant data gaps as they are not within the traditional stone curlew nesting areas covered by the RSPB and therefore additional data may be requested regarding development proposals.

This scoping exercise comprises a data search with the RSPB (undertaken by SWECO) and a habitat survey (within the 1.5km buffer) undertaken by WFE.

Figure 1: Proposed Development Footprint and 1.5km Buffer



2. Methods

2.1 Data Search

The RSPB was contacted by SWECO UK Ltd in February 2025 to obtain stone curlew nesting data within 1.5km of the proposed development site within the last 10 years.

2.2 Stone curlew habitat survey

The survey was undertaken by senior ecologist Graham Riley on 25th April 2025. The surveyor has extensive experience working with stone curlews having been part of the RSPB Eastern England Stone Curlew Recovery Project for 14 seasons between 1993 – 2006 and has subsequently completed many stone curlew projects while working for WFE. The survey involved appraising and mapping the habitats within the 1.5km buffer with regard to their suitability for nesting stone curlews as well as assessing the levels of human disturbance that these areas may be subjected to. Apart from within the proposal site itself this survey was undertaken from public roads.

Stone curlew habitat within eastern England comprises extensive undisturbed areas of short sward rabbit grazed grass heathland as well as large, spring sown bare fields, most notably sugar beet. Within the Breckland core area other spring sown crops such as maize, onions, linseed and carrots can also be utilised on occasion, but the preference is for bare ground which is why sugar beet is important as it is a relatively slow growing crop and retains good bare ground habitat until late spring/early summer.

3. Constraints

The survey was out of necessity undertaken from public roads due to a lack of access to the surrounding landholdings, and there were limited opportunities for pulling over on the busier routes. Also, due to the topography of the land some areas on the periphery of the buffer could not be viewed at all (unmapped areas in figure 2). Therefore, the habitat mapping is not comprehensive within the entire buffer area, but it is considered that the majority of the habitats could be viewed adequately for the purposes of the survey.

4. Results

4.1 Data Search

The RSPB returned no records of nesting stone curlew within 1.5 km of the development site and provided a confirmation letter of zero records on 22nd April 2025. The closest of two records returned from outside of the buffer comprised a nesting pair 1.65km to the west of the site from 2022.

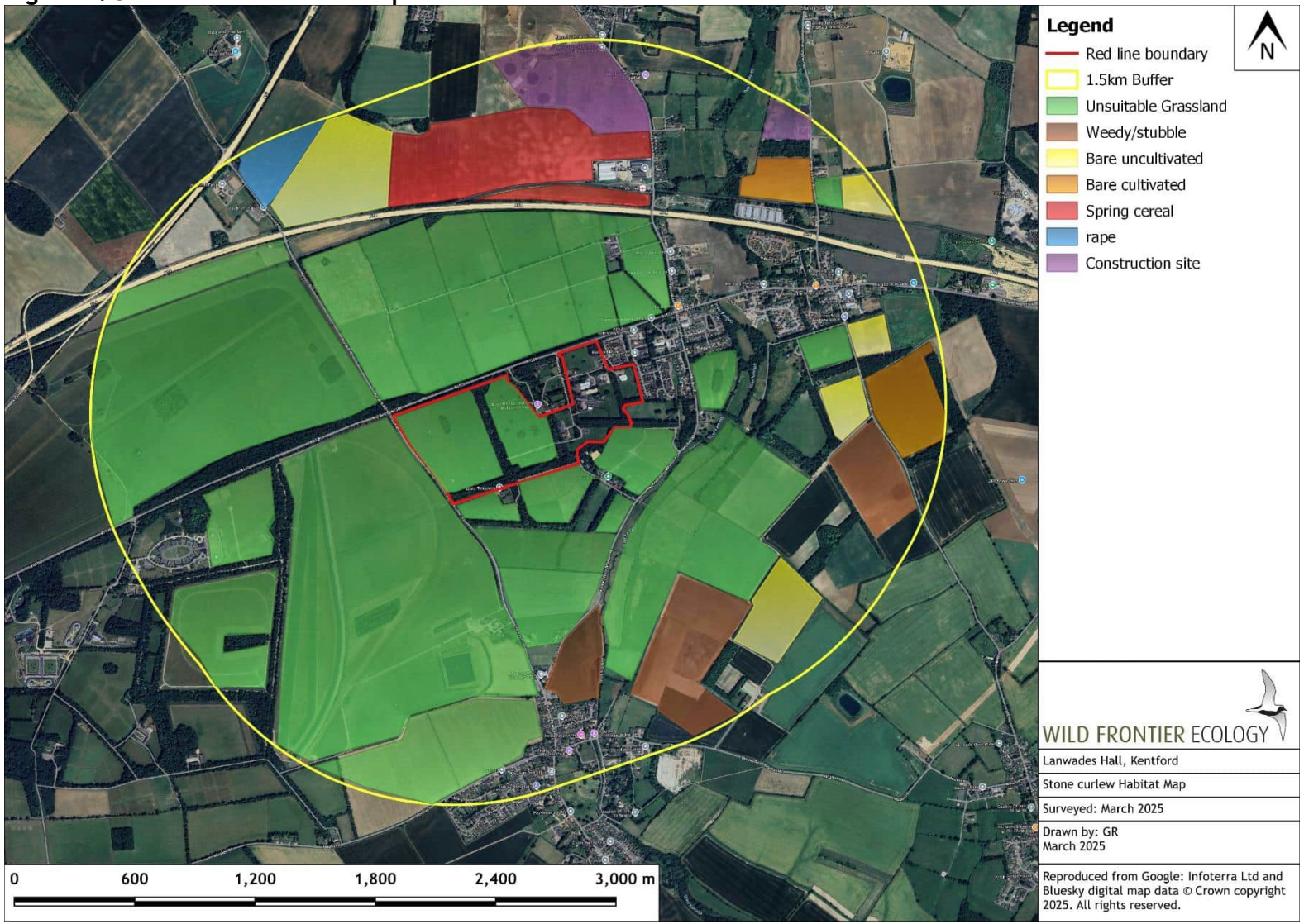
4.2 Habitat Survey

The observable habitats within the 1.5km buffer have been mapped and are presented within figure 2 below.

The vast majority of the land within the buffer was comprised of grassland paddocks and fields, predominantly used for grazing and exercising racehorses. The grass sward was variable in length and generally tussocky showing little sign of recent grazing activity.

The remainder of the land use within the buffer comprised a mixture of weedy/stubble fields, bare uncultivated and bare cultivated (bedded) fields, spring cereal, oilseed rape and active construction sites. The A14 runs east-west through the northern section of the buffer and the A11 just penetrates the buffer in the far north-western corner. The village of Moulton lies within the southernmost part of the buffer while the village of Kentford occupies a sizeable area in the central/eastern section.

Figure 2. Stone curlew habitat map



5. Discussion

There were no areas observed within the grassland paddocks/fields that contained suitable habitat for nesting stone curlews, which have a preference for very short sward, rabbit grazed heathland, ideally with bare and flinty areas. It is considered likely that these grass paddocks also experience regular disturbance which would also discourage stone curlew nesting activity due to their aversion to the presence of humans. At best, some areas could be utilised as foraging habitat, but no nesting habitat was found to be present within the areas viewable from roads.

The bare uncultivated fields were either small and isolated or adjacent to disturbance sources i.e. busy trunk roads (A14 and A11) and the two settlements. They are also likely to be cultivated in the coming days/weeks causing more disturbance and then drilled with potentially unsuitable crops. The bare cultivated fields observed were all bedded which is not the preference for nesting stone curlews, although they occasionally use bedded crops such as onions and carrots within the core area of Breckland. It is not considered likely that such suboptimal habitat would be used in an outlying area away from the major population centre. The remaining fields were drilled with unsuitable crops such as rape and spring cereals which were already at a stage where no bare ground was present. The weedy/stubbly fields are also unsuitable as they don't provide enough bare ground and unbroken site-lines that stone curlews require when incubating eggs. These fields will also likely be cultivated later in the spring. The final land use type observed comprised the active construction sites (housing) present to the north of the A14, and these are wholly unsuitable due to the extreme ongoing disturbance from vehicles/machinery and human workers etc.

The fields that were not viewable during the survey were generally on the edge of the buffer, small in size and/or close to disturbance sources such as settlements and major trunk roads. Even if they were drilled with suitable crops such as sugar beet it is considered unlikely that they would prove attractive to a prospecting pair of stone curlews outside of the traditional nesting area.

6. Conclusion

The stone curlew scoping exercise comprised a habitat survey of a 1.5km buffer around the Lanwades proposed residential development site and a data search with the RSPB.

The data search provided no nesting stone curlew records within the 1.5km buffer during the last 10 years and the habitat survey found there to be no observable suitable nesting habitat within the buffer. Therefore, it is concluded that it is extremely unlikely that stone curlews will be present as a breeding species within the near vicinity of the proposed housing development within the 2025 nesting season.

7. Appendix 1 Photos

Photo 1. Grassy paddock in the north of the 1.5km buffer

Photo 2. Grassy paddock within the proposal site

Photo 3. Grassy paddock in the west of the buffer area

Photo 4. Bare uncultivated field in the east of the buffer area

Photo 5. Rape field and bare uncultivated field in the north-west corner of the buffer area

Photo 6. Bare cultivated field (bedded) in the east of the buffer area

Photo 7. Stubble/weedy field with wide grassy margin in the south of the buffer area

Appendix C – Ecological Desk Study Data

Site Check Report Report generated on Thu May 30 2024
You selected the location: Centroid Grid Ref: TL69336610
The following features have been found in your search area:

Ramsar Sites (England) - points

Name	CHIPPENHAM FEN
Reference	UK11014
Hectares	155.87

Ramsar Sites (England)

Name	CHIPPENHAM FEN
Reference	UK11014
Hectares	155.87

Special Areas of Conservation (England) - points

Name	DEVILS DYKE
Reference	UK0030037
Hectares	8.25
Hyperlink	https://sac.jncc.gov.uk/site/UK0030037

Name	REX GRAHAM RESERVE
Reference	UK0019866
Hectares	2.76
Hyperlink	https://sac.jncc.gov.uk/site/UK0019866

Special Areas of Conservation (England)

Name	DEVILS DYKE
Reference	UK0030037
Hectares	8.25
Hyperlink	https://sac.jncc.gov.uk/site/UK0030037

Name	FENLAND
Reference	UK0014782
Hectares	619.41
Hyperlink	https://sac.jncc.gov.uk/site/UK0014782

Name	BRECKLAND
Reference	UK0019865
Hectares	7541.67
Hyperlink	https://sac.jncc.gov.uk/site/UK0019865

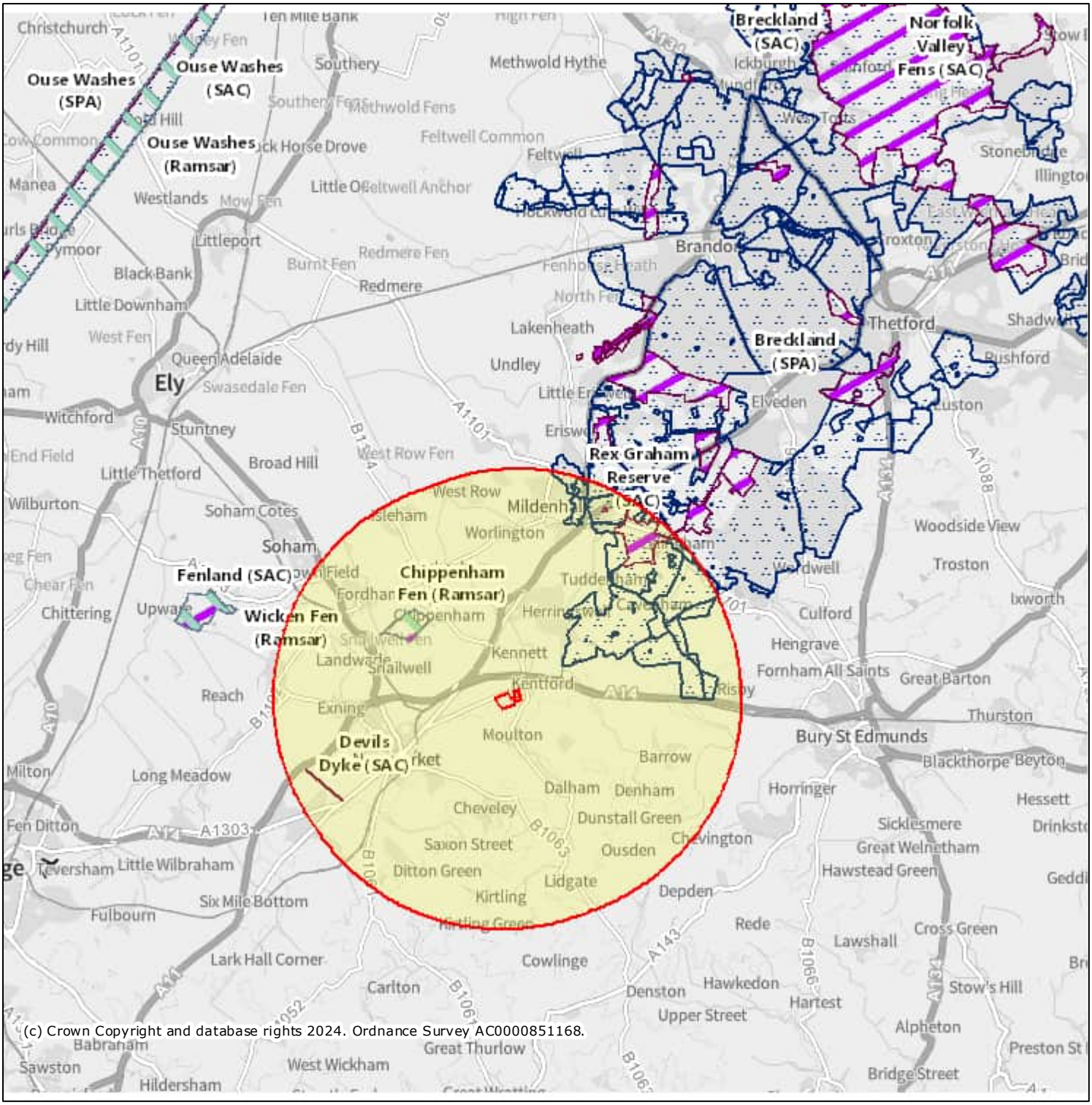
Name	REX GRAHAM RESERVE
Reference	UK0019866
Hectares	2.76
Hyperlink	https://sac.jncc.gov.uk/site/UK0019866

Special Protection Areas (England)

Name	BRECKLAND
Reference	UK9009201
Hectares	39432.56

Special Protection Areas (England) - points
No Features found

Designated Sites 10km



Legend

- Ramsar Sites (England)
- Special Areas of Conservation (England)
- Special Protection Areas (England)

0 7.5 15
km

Projection = OSGB36
xmin = 520800
ymin = 248300
xmax = 621300
ymax = 297200

Map produced by MAGIC on 30 May, 2024.

Site Check Report Report generated on Thu May 30 2024
You selected the location: Centroid Grid Ref: TL69326610
The following features have been found in your search area:

Sites of Special Scientific Interest (England)

Name	Breckland Farmland SSSI
Reference	1008291
Natural England Contact	Delivery and Projects Team, (Conservation), Natural England
Natural England Phone Number	0845 600 3078
Hectares	13393.96
Citation	2000442
Site Details Hyperlink	http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s2000442
Site Feature Condition Hyperlink	https://designatedsites.naturalengland.org.uk/SiteFeatureCondition.aspx?SiteCode=s2000442&SiteName=Breckland Farmland SSSI

Name	Newmarket Heath SSSI
Reference	1002738
Natural England Contact	Munro, (Sarah), Natural England
Natural England Phone Number	0845 600 3078
Hectares	279.3
Citation	1006650
Site Details Hyperlink	http://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1006650
Site Feature Condition Hyperlink	https://designatedsites.naturalengland.org.uk/SiteFeatureCondition.aspx?SiteCode=s1006650&SiteName=Newmarket Heath SSSI

Local Nature Reserves (England) - points
No Features found

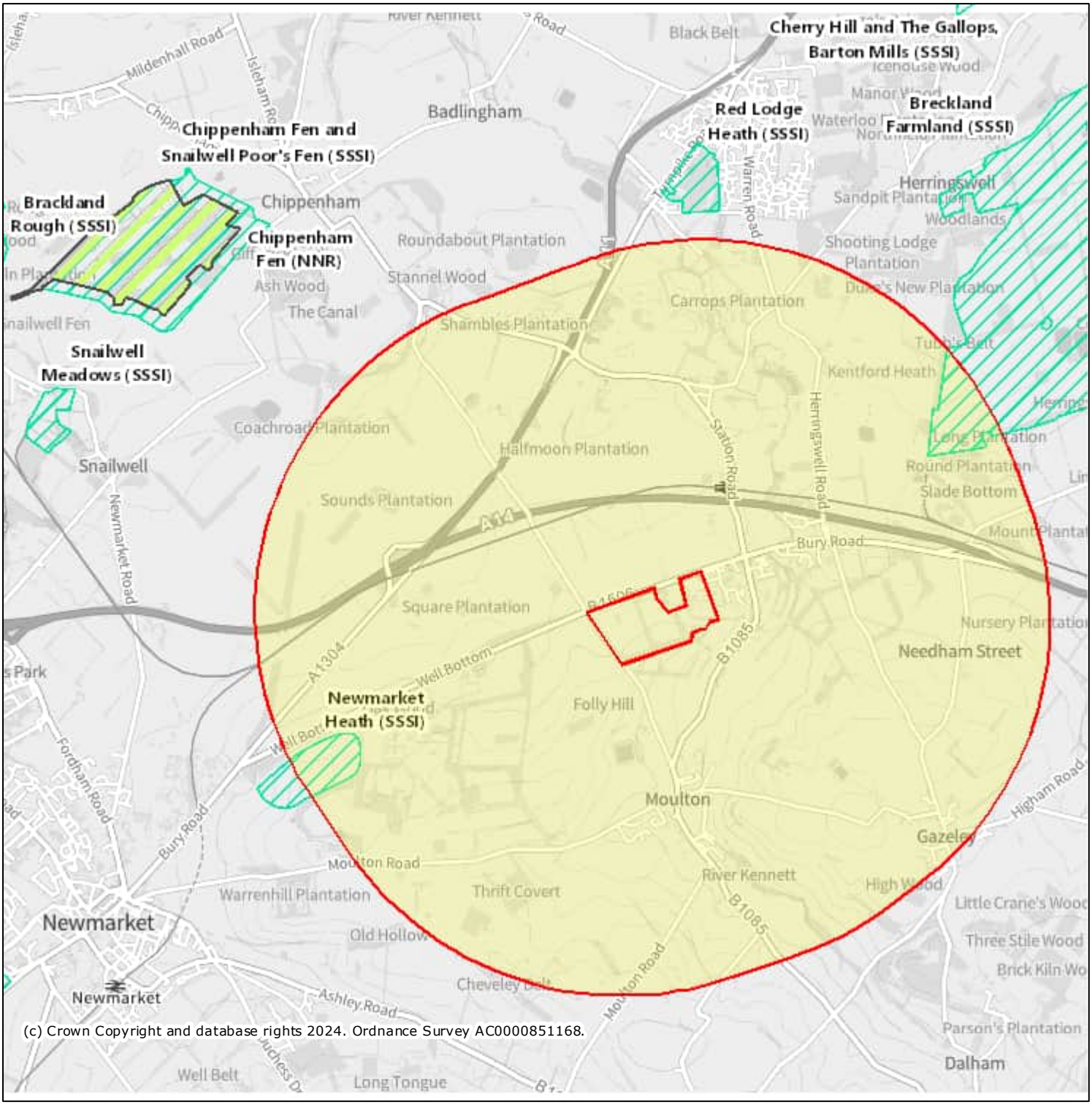
Local Nature Reserves (England)
No Features found

National Nature Reserves (England) - points
No Features found

National Nature Reserves (England)
No Features found

Sites of Special Scientific Interest (England) - points
No Features found

Designated Sites 3km



Legend

- Local Nature Reserves (England)
- National Nature Reserves (England)
- Sites of Special Scientific Interest (England)

0 1.5 3
km

Projection = OSGB36
xmin = 558300
ymin = 261800
xmax = 578400
ymax = 271600

Map produced by MAGIC on 30 May, 2024.

Site Check Report Report generated on Thu May 30 2024
You selected the location: Centroid Grid Ref: TL69326610
The following features have been found in your search area:

Granted European Protected Species Applications (England)
No Features found

Great Crested Newt Class Survey Licence Returns (England)
No Features found

Great Crested Newt Pond Surveys 2017 - 2019
No Features found

Site Check Report Report generated on Fri May 31 2024
You selected the location: Centroid Grid Ref: TL69326609
The following features have been found in your search area:

Priority Habitat Inventory - Coastal and Floodplain Grazing Marsh (England)

Main Habitats	Coastal and floodplain grazing marsh
Habitat Codes	CFPGM
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	Environment Agency Floodplains River and Tidal 2004
Area In Hectares	0.44
Publication Version	Dec_2023
Unique ID	PHID56984479_026540626

Main Habitats	Coastal and floodplain grazing marsh
Habitat Codes	CFPGM
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	Environment Agency Floodplains River and Tidal 2004
Area In Hectares	4.75
Publication Version	Dec_2023
Unique ID	PHID56988279_026532006

Priority Habitat Inventory - Lowland Calcareous Grassland (England)

Main Habitats	Lowland calcareous grassland
Habitat Codes	LCGRA
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Annex1(H6210), NVC(CG3)
Additional Habitats Present	Null
Primary Data Sources	Cambridgeshire and Peterborough Biological record centre 1998
Area In Hectares	42.92
Publication Version	Dec_2023
Unique ID	PHID56808424_026612061

Main Habitats	Lowland calcareous grassland
Habitat Codes	LCGRA
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Annex1(H6210), NVC(CG3)
Additional Habitats Present	Null
Primary Data Sources	Cambridgeshire and Peterborough Biological record centre 1998
Area In Hectares	0.09
Publication Version	Dec_2023
Unique ID	PHID56835699_026646859

Priority Habitat Inventory - Lowland Meadows (England)

Main Habitats	Lowland meadows
Habitat Codes	LMEAD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Annex1(H6210), NVC(CG3c, MG5b)
Additional Habitats Present	Null
Primary Data Sources	Bedfordshire & Cambridgeshire Area English Nature Team 1988
Area In Hectares	68.55
Publication Version	Dec_2023
Unique ID	PHID56733929_026626576

Priority Habitat Inventory - Deciduous Woodland (England)

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD

Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	2.04
Publication Version	Dec_2023
Unique ID	PHID56939296_026571018

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	8.19
Publication Version	Dec_2023
Unique ID	PHID56928129_026597492

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	0.15
Publication Version	Dec_2023
Unique ID	PHID56960226_026637300

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	0.01
Publication Version	Dec_2023
Unique ID	PHID56988583_026575899

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	0.05
Publication Version	Dec_2023
Unique ID	PHID56961171_026623701

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	0.55
Publication Version	Dec_2023
Unique ID	PHID56942614_026624310

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null

Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	1.65
Publication Version	Dec_2023
Unique ID	PHID56971344_026611364

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	0.26
Publication Version	Dec_2023
Unique ID	PHID56972584_026587280

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	0.12
Publication Version	Dec_2023
Unique ID	PHID56979707_026647603

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	0.04
Publication Version	Dec_2023
Unique ID	PHID56991066_026576069

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	0.63
Publication Version	Dec_2023
Unique ID	PHID56981143_026566761

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	0.17
Publication Version	Dec_2023
Unique ID	PHID56963544_026629191

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	1.77

Publication Version	Dec_2023
Unique ID	PHID56946177_026629428

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	0.15
Publication Version	Dec_2023
Unique ID	PHID56964551_026623169

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	0.02
Publication Version	Dec_2023
Unique ID	PHID56992206_026573961

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	0.04
Publication Version	Dec_2023
Unique ID	PHID56992241_026572894

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	1.69
Publication Version	Dec_2023
Unique ID	PHID57021598_026605033

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	0.15
Publication Version	Dec_2023
Unique ID	PHID56965460_026617258

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	0.05
Publication Version	Dec_2023
Unique ID	PHID56993487_026574773

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	0.3
Publication Version	Dec_2023
Unique ID	PHID56975831_026647146

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	0.21
Publication Version	Dec_2023
Unique ID	PHID56833153_026606325

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	0.81
Publication Version	Dec_2023
Unique ID	PHID56879703_026620374

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	0.03
Publication Version	Dec_2023
Unique ID	PHID56879874_026616642

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	0.99
Publication Version	Dec_2023
Unique ID	PHID56845225_026635963

Main Habitats	Deciduous woodland
Habitat Codes	DWOOD
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	Null
Primary Data Sources	National Forest Inventory 2020
Area In Hectares	7.58
Publication Version	Dec_2023
Unique ID	PHID56798745_026590218

Priority Habitat Inventory - No main habitat but additional habitat exists (England)

Main Habitats	No main habitat but additional habitats present

Habitat Codes	NMHAB
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	DWOOD
Primary Data Sources	Null
Area In Hectares	0.59
Publication Version	Dec_2023
Unique ID	PHID56819439_026593170

Main Habitats	No main habitat but additional habitats present
Habitat Codes	NMHAB
Habitat Feature Descriptions	Null
Habitat Feature Codes	Null
Other Habitat Classification	Null
Additional Habitats Present	DWOOD
Primary Data Sources	Null
Area In Hectares	0.35
Publication Version	Dec_2023
Unique ID	PHID56952848_026632009

Priority Habitat Inventory - Coastal Saltmarsh (England)
No Features found

Priority Habitat Inventory - Coastal Sand Dunes (England)
No Features found

Priority Habitat Inventory - Coastal Vegetated Shingle (England)
No Features found

Priority Habitat Inventory - Maritime Cliffs and Slopes (England)
No Features found

Priority Habitat Inventory - Mudflats (England)
No Features found

Priority Habitat Inventory - Saline Lagoons (England)
No Features found

Priority Habitat Inventory - Calaminarian Grassland (England)
No Features found

Priority Habitat Inventory - Good quality semi-improved grassland (Non Priority) (England)
No Features found

Priority Habitat Inventory - Lowland Dry Acid Grassland (England)
No Features found

Priority Habitat Inventory - Purple Moor Grass and Rush Pasture (England)
No Features found

Priority Habitat Inventory - Upland Calcareous Grassland (England)
No Features found

Priority Habitat Inventory - Upland Hay Meadows (England)
No Features found

Priority Habitat Inventory - Lowland Heathland (England)
No Features found

Priority Habitat Inventory - Mountain Heaths and Willow Scrub (England)
No Features found

Priority Habitat Inventory - Upland Heathland (England)
No Features found

Priority Habitat Inventory - Limestone Pavements (England)
No Features found

Priority Habitat Inventory - Blanket Bog (England)
No Features found

Priority Habitat Inventory - Lowland Fens (England)
No Features found

Priority Habitat Inventory - Lowland Raised Bog (England)
No Features found

Priority Habitat Inventory - Reedbeds (England)
No Features found

Priority Habitat Inventory - Upland Flushes, Fens and Swamps (England)
No Features found

Priority Habitat Inventory - Ponds and Lakes (England)
No Features found

Ancient Woodland (England)
No Features found

Ancient Woodland – Revised COMPLETED COUNTIES (England)
No Features found

Forestry Commission Legal Boundary (England)
No Features found

Priority Habitat Inventory - Traditional Orchards (England)
No Features found

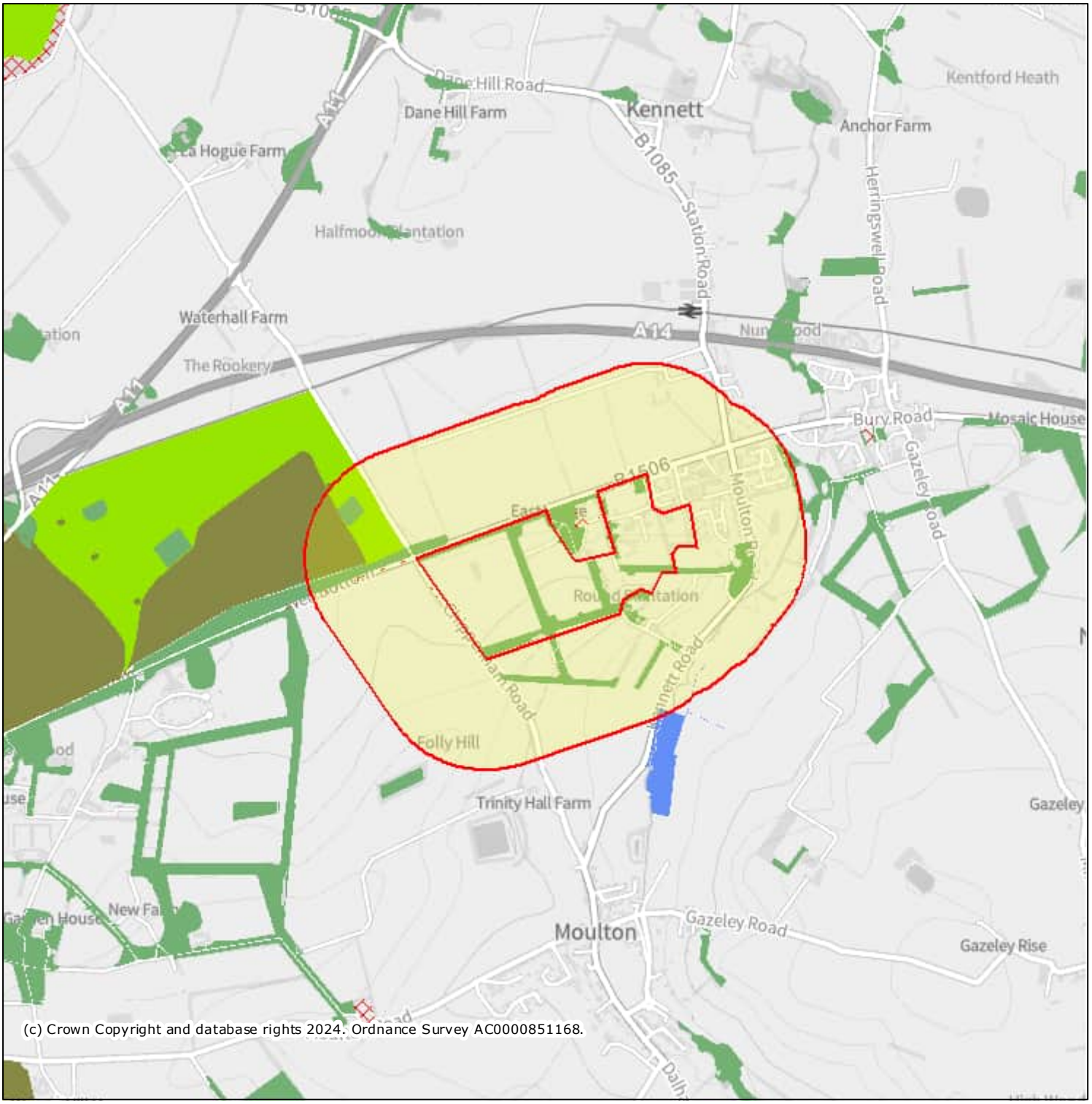
Woodpasture and Parkland BAP Priority Habitat (England)
No Features found

Open Mosaic Habitat (Draft)
No Features found

Priority Habitat Inventory - Fragmented heath (Non Priority) (England)
No Features found

Priority Habitat Inventory - Grass Moorland (Non Priority) (England)
No Features found

Priority Habitat Map 500m



Legend

- Priority Habitat Inventory - Coastal and Floodplain Grazing Marsh (England)
- Priority Habitat Inventory - Lowland Calcareous Grassland (England)
- Priority Habitat Inventory - Lowland Meadows (England)
- Priority Habitat Inventory - Deciduous Woodland (England)
- Priority Habitat Inventory - Traditional Orchards (England)
- Priority Habitat Inventory - No main habitat but additional habitat exists (England)

0 0.75 1.5
km

Projection = OSGB36
xmin = 563000
ymin = 262600
xmax = 575700
ymax = 269700

Map produced by MAGIC on 31 May, 2024.

Appendix D – Habitat Condition Assessment Sheets

Condition Sheet: GRASSLAND Habitat Type (low distinctiveness)

UK Habitat Classification (UKHab) Habitat Type

Grassland - Modified grassland

Habitat Description

Modified grassland, including amenity grassland and pasture paddocks for horse grazing

ukhab – UK Habitat Classification											
On-site or off-site, site name and location	On-site and off-site	**Survey date and Surveyor name**	04/05/24 and 05/05/24 SB								
		Survey reference (if relating to a wider survey)	N/A								
Limitations (if applicable)	N/A	**Habitat parcel reference**									
			Amenity	Modified grass, long	Amenity grass with scat trees	Amenity	Paddocks / pasture	Amenity	Amenity	Paddock / pasture		
		Grid reference									
Condition Assessment Criteria			Grass 1	Grass 2	Grass 3	Grass 4	Grass 5	Grass 6	Grass 7	Grass 8		
			Criterion passed (Yes or No)									**Notes (such as justification)**
A	There are 6-8 vascular plant species per m^2 present, including at least 2 forbs (these may include those listed in Footnote 1). **Note - this criterion is essential for achieving Moderate or Good condition.** Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m^2 (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.		Y	Y	N	Y - 6 max	N	N	Y	Y		
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.		N	Y	N	N	Y	N	N	Y		
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble *Rubus fruticosus* agg. may be present). Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.		Y	Y	Y	N	Y	Y	Y	Y		
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.		N	Y	N	Y	Y	N	Y	N		
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens)[2].		N	Y	N	Y	Y	Y	Y	Y		
F	Cover of bracken *Pteridium aquilinum* is less than 20%.		Y	Y	Y	Y	Y	Y	Y	Y		
G	There is an absence of invasive non-native plant species[3] (as listed on Schedule 9 of WCA[4]).		Y	Y	N	Y	Y	Y	Y	Y		
		Essential criterion achieved (Yes or No)	Y	Y	N	Y	N	N	Y	Y		
		Number of criteria passed	4	7	2	4	6	4	6	6		

Condition Assessment Result (out of 7 criteria)	**Condition Assessment Score**	**Score Achieved ×/✓**									
Passes 6 or 7 criteria including passing essential criterion A	Good (3)		Y					Y	Y		
Passes 4 or 5 criteria including passing essential criterion A	Moderate (2)	Y			Y						
Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A)	Poor (1)			Y		Y	Y				

Suggested enhancement interventions to improve condition score

Footnotes

Footnote 1 – Creeping thistle *Cirsium arvense* , spear thistle *Cirsium vulgare* , curled dock *Rumex crispus* , broad-leaved dock *Rumex obtusifolius* , common nettle *Urtica dioica* , creeping buttercup *Ranunculus repens* , greater plantain *Plantago major* , white clover *Trifolium repens* and cow parsley *Anthriscus sylvestris* .

Footnote 2 – For example, this could include small, scattered areas of bare ground allowing establishment of new species, or localised patches where not exceeding 10% cover.

Footnote 3 – Assess this for each distinct habitat parcel. If the distribution of invasive non-native species varies across the habitat, split into parcels accordingly, applying a buffer zone around the invasive non-native species with a size relative to its risk of spread into adjacent habitat, using professional judgement.

Footnote 4 – Wildlife and Countryside Act 1981 (as amended).

Condition Sheet: INDIVIDUAL TREES Habitat Type

Habitat Types

Individual trees – Urban trees
Individual trees – Rural trees
Complete a condition sheet for each tree or block of trees.

Please see the separate Line of trees condition sheet for a line of rural trees. You should only use the Line of trees condition assessment and record that habitat type in rural locations.

Habitat Description

Scattered trees within modified grassland

Individual trees (description applied to the urban or rural environment):
Young trees over 7.5 cm in diameter at breast height whose canopies are not touching.

Urban Perimeter / Linear Blocks and Groups (description applied to the urban environment only):
Groups or stands of trees (size requirement as defined above) within and around the perimeter of urban land. This includes those along urban streets, highways, railways and canals, and also former field boundary trees incorporated into developments. Canopies should predominantly overlap continuously. Groups of urban trees that don't match the descriptions for woodland may be assessed within this category.

On-site or off-site, site name and location	On-site and off-site	**Survey date and Surveyor name**	04/05/24 and 05/05/24 SB										
		Survey reference (if relating to a wider survey)	N/A										
Limitations (if applicable)	N/A	**Habitat parcel reference**											
		Scat trees 1	Scat trees 2	Scat trees 3									
		Grid reference											
Condition Assessment Criteria		Horse chest nut	Mix	Beech domin									
		Criterion passed (Yes or No)											**Notes (such as justification)**
A	The tree is a native species (or at least 70% within the block are native species).	N	N	Y									
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Y	Y	Y									
C	The tree is mature (or more than 50% within the block are mature)[1].	Y	N	Y									
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	N	Y	Y									
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	N	N	N									

F	More than 20% of the tree canopy area is oversailing vegetation beneath.	Y	N	N								
	Number of criteria passed		2	4								

Condition Assessment Result (out of 6 criteria)	**Condition Assessment Score**	**Score Achieved ×/✓**									
Passes 5 or 6 criteria	Good (3)										
Passes 3 or 4 criteria	Moderate (2)	Y		Y							
Passes 2 or fewer criteria	Poor (1)		Y								
Note that 'Fairly Good and Fairly Poor' condition categories are not available for this broad habitat type.											

Suggested enhancement interventions to improve condition score[2]

Condition sheet: HEDGEROW Habitat Types

Habitat Type

Native hedgerow
Native hedgerow - associated with bank or ditch
Native hedgerow with trees
Native hedgerow with trees - associated with bank or ditch
Species-rich native hedgerow
Species-rich native hedgerow - associated with bank or ditch
Species-rich native hedgerow with trees
Species-rich native hedgerow with trees - associated with bank or ditch

Habitat Description

Other native hedgerow

ukhab – UK Habitat Classification

On-site or off-site, site name and location	On-site and off-site	**Survey date and Surveyor name**	04/05/24 and 05/05/24 SB
Limitations (if applicable)	N/A	**Survey reference (if relating to a wider survey)**	N/A

Condition Assessment Details

A series of ten attributes, representing key physical characteristics are used for this assessment. Each attribute is assigned to one of five functional groups (A – E) and the condition of a hedgerow is assessed according to the number of attributes from these functional groups which pass or fail the 'favourable condition' criteria.

This assessment is based on the Hedgerow Survey Handbook[1] and Favourable Conservation Status document[2]. For further clarification please refer to the Hedgerow Survey Handbook.

Best practice would be to record the species, age, spacing and other key information about all trees present along a hedgerow within the 'Habitat Description' box, as well as other key features of the hedgerow.

Hedgerow favourable condition attributes

Attributes and functional groupings (A, B, C, D and E)		**Criteria - the minimum requirements for 'favourable condition'**	**Criteria description**	**Habitat parcel reference**										
				Grid reference										
				H1	H2	H3								
Core groups - applicable to all hedgerow types				**Criterion passed (Yes or No)**										**Notes (such as justification)**
A1.	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is >1.5 m height).	N - Almost 1.5m	N	Y								
A2.	Width	>1.5 m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees. Outgrowths (such as blackthorn *Prunus spinosa* suckers) are only included in the width estimate when they are >0.5 m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).	N	N	N								

B1.	Gap - hedge base	Gap between ground and base of canopy <0.5 m for >90% of length	This is the vertical 'gappiness' of the woody component of the hedgerow, and its distance from the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable (see page 65 of the Hedgerow Survey Handbook).	Y	Y	N									
B2.	Gap - hedge canopy continuity	Gaps make up <10% of total length; and No canopy gaps >5 m	This is the horizontal 'gappiness' of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall 'gappiness' but are not subject to the >5 m criterion (as this is the typical size of a gate).	Y	N	N									
C1.	Undisturbed ground and perennial vegetation	>1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of length: · Measured from outer edge of hedgerow; and · Is present on one side of the hedgerow (at least).	This is the level of disturbance (excluding wildlife disturbance) at the base of the hedgerow. Undisturbed ground is present for at least 90% of the hedgerow length, greater than 1 m in width and must be present along at least one side of the hedgerow. This criterion recognises the value of the hedgerow base as a boundary habitat with the capacity to support a wide range of species. Cultivation, heavily trodden footpaths, poached ground etc. can limit available habitat niches.	N	N	N									
C2.	Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	The indicator species used are nettles *Urtica* spp., cleavers *Galium aparine* and docks *Rumex* spp. Their presence, either singly or together, does not exceed the 20% cover threshold.	N	N	N									
D1.	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species (including those listed on Schedule 9 of WCA[3]) and recently introduced species.	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives. For information on archaeophytes and neophytes see the JNCC website[4], as well as the BSBI website[5] where the 'Online Atlas of the British and Irish Flora'[6] contains an up-to-date list of the status of species. For information on invasive non-native species see the GB Non-Native Secretariat website[7].	Y	Y	Y									
D2.	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activities.	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices (for example, excessive hedgerow cutting).	N	N	N									
Additional group - applicable to hedgerows with trees only															
E1.	Tree class	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient[8]), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	This criterion addresses if there are a range of age-classes or morphologies which allow for replacement of trees and provide opportunities for different species.	N - Young beech trees											

E2.	Tree health	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	This criterion identifies if the trees are subject to damage which compromises the survival and health of the individual specimens.	N												

The hedgerow condition assessment generates a weighting (score) ranging from 1 - 3, which is used within the Statutory Biodiversity Metric. The scores for each are set out in the tables below.

Condition categories for hedgerows without trees

Category	Category Requirements	Metric Score
Good	No more than 2 failures in total; **AND** No more than 1 failure in any functional group.	3
Moderate	No more than 4 failures in total; **AND** Does not fail both attributes in more than one functional group (for example, fails attributes A1, A2, B1 and C2 = Moderate condition).	2
Poor	Fails a total of more than 4 attributes; **OR** Fails both attributes in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1
	Score achieved:	Poor

Condition categories for hedgerows with trees

Category	Category Requirements	Metric score
Good	No more than 2 failures in total; **AND** No more than 1 failure in any functional group.	3
Moderate	No more than 5 failures in total; **AND** Does not fail both attributes in more than one functional group (for example, fails attributes A1, A2, B1, C2 and E1 = Moderate condition).	2
Poor	Fails a total of more than 5 attributes; **OR** Fails both attributes in more than one functional group (for example, fails attributes A1, A2, B1 and B2 = Poor condition).	1
	Score achieved:	1- Poor

Suggested enhancement interventions to improve condition score

Footnotes

Footnote 1 – DEFRA (2007) *Hedgerow Survey Handbook. A standard procedure for local surveys in the UK.* [online] Available on:
layout (hedgelink.org.uk)
Footnote 2 – STALEY, J.T. ET AL. (2020) *Definition of Favourable Conservation Status for Hedgerows.* [online] Available on:
Definition of Favourable Conservation Status for Hedgerows - RP2943 (naturalengland.org.uk)
Footnote 3 – Wildlife and Countryside Act 1981 (as amended).
Footnote 4 – CHEFFINGS, C. M. et al. (2005) *The Vascular Plant Red Data List for Great Britain.* Species Status 7: 1-116. [online] Available on:
The Vascular Plant Red Data List for Great Britain (Species Status No. 7) | JNCC Resource Hub
Footnote 5 – BOTANICAL SOCIETY OF BRITAIN AND IRELAND (BSBI). *Definitions: wild, native or alien?* [online] Available on:
Definitions: wild, native or alien? – Botanical Society of Britain & Ireland (bsbi.org)
Footnote 6 – BSBI and Biological Records Centre (BRC) (2022) *Online Atlas of the British and Irish Flora.* [online] Available on:
Acknowledgements | Online Atlas of the British and Irish Flora (brc.ac.uk)
Footnote 7 – GB NON-NATIVE SPECIES SECRETARIAT (GBNNSS) (2022) Available on:
Home » NNSS (nonnativespecies.org)
Footnote 8 – See gov.uk standing advice on ancient and veteran trees. Available from:
Keepers of time: ancient and native woodland and trees policy in England (publishing.service.gov.uk)
and
Ancient woodland, ancient trees and veteran trees: advice for making planning decisions - GOV.UK (www.gov.uk)

Condition Sheet: WOODLAND Habitat Type

UK Habitat Classification (UKHab) Habitat Types

Woodland and forest - Lowland beech and yew woodland
Woodland and forest - Lowland mixed deciduous woodland
Woodland and forest - Native pine woodlands
Woodland and forest - Other coniferous woodland
Woodland and forest - Other Scot's pine woodland
Woodland and forest - Other woodland; broadleaved
Woodland and forest - Other woodland; mixed
Woodland and forest - Upland birchwoods
Woodland and forest - Upland mixed ashwoods
Woodland and forest - Upland oakwood
Woodland and forest - Wet woodland

Habitat Description

Lowland beech and yew woodland

ukhab – UK Habitat Classification

This condition sheet is based on the England Woodland Biodiversity Group (EWBG) Woodland Condition Survey Method, available here:

Woodland Wildlife Toolkit (sylva.org.uk)

IMPORTANT: This biodiversity metric woodland condition assessment must be used to assess woodland being input into the biodiversity metric. The outputs of this condition assessment are not equivalent to, nor are they comparable with the scores from the EWBG condition assessment, because the EWBG assessment has been adapted for the biodiversity metric, including the removal of EWBG Indicator 7 (Proportion of favourable land cover around woodland) and Indicator 14 (Size of woodland), and minor changes to other indicators.

On-site or off-site, site name and location	On-site and off-site	**Survey date and Surveyor name**	04/05/24 and 05/05/24 SB	**Habitat parcel reference**											
				W1											
Limitations (if applicable)	N/A	**Survey reference (if relating to a wider survey)**	N/A	**Grid reference**											
				Beech Woodland											

Condition Assessment Criteria

	Indicator	**Good (3 points)**	**Moderate (2 points)**	**Poor (1 point)**	**Score per indicator**										**Notes (such as justification)**
A	**Age distribution of trees**	Three age-classes[1] present.	Two age-classes[1] present.	One age-class[1] present.	2										
B	**Wild, domestic and feral herbivore damage**	No significant browsing damage evident in woodland[2].	Evidence of significant browsing pressure is present in less than 40% of whole woodland[2].	Evidence of significant browsing pressure is present in 40% or more of whole woodland[2].	1										
C	**Invasive plant species**	No invasive species[3] present in woodland.	Rhododendron *Rhododendron ponticum* or cherry laurel *Prunus laurocerasus* not present, and other invasive species[3] <10% cover.	Rhododendron or cherry laurel present, or other invasive species[3] ≥10% cover.	3										
D	**Number of native tree species**	Five or more native tree or shrub species[4] found across woodland parcel.	Three to four native tree or shrub species[4] found across woodland parcel.	Two or less native tree or shrub species[4] across woodland parcel.	2										
E	**Cover of native tree and shrub species**	>80% of canopy trees and >80% of understory shrubs are native[5].	50 - 80% of canopy trees and 50 - 80% of understory shrubs are native[5].	<50% of canopy trees and <50% of understory shrubs are native[5].	3										
F	**Open space within woodland**	10 - 20% of woodland has areas of temporary open space[6]. Unless woodland is <10ha, in which case 0 - 20% temporary open space is permitted[7].	21 - 40% of woodland has areas of temporary open space[6].	<10% or >40% of woodland has areas of temporary open space[6]. But if woodland <10ha has <10% temporary open space, please see Good category[7].	3										

G	**Woodland regeneration**	All three classes present in woodland[8]; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland[8].	No classes or coppice regrowth present in woodland[8].	1										
H	**Tree health**	Tree mortality 10% or less, no pests or diseases and no crown dieback[9].	11% to 25% tree mortality and or crown dieback or low-risk pest or disease present[9].	Greater than 25% tree mortality and or any high-risk pest or disease present[9].	3										
I	**Vegetation and ground flora**	Recognisable NVC plant community[10] at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community[10] at ground layer present.	No recognisable woodland NVC plant community[10] at ground layer present.	2										
J	**Woodland vertical structure**	Three or more storeys across all survey plots, or a complex woodland[11].	Two storeys across all survey plots[11].	One or less storey across all survey plots[11].	1										
K	**Veteran trees**	Two or more veteran trees[12] per hectare.	One veteran tree[12] per hectare.	No veteran trees[12] present in woodland.	1										
L	**Amount of deadwood**	50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities[13].	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities[13].	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities[13].	2										
M	**Woodland disturbance**	No nutrient enrichment or damaged ground evident[14].	Less than 1 hectare in total of nutrient enrichment across woodland area, and or less than 20% of woodland area has damaged ground[14].	1 hectare or more of nutrient enrichment, and or 20% or more of woodland area has damaged ground[14].	1										
				Total Score (out of a possible 39)	25										

Condition Assessment Result	**Condition Assessment Score**	**Result Achieved**										
Total score >32 (33 to 39)	Good (3)											
Total score 26 to 32	Moderate (2)											
Total score <26 (13 to 25)	Poor (1)	Y										

Suggested enhancement interventions to improve condition score

Appendix E – Plant Species List

Site Name: Lanwades Woodland Park (Animal Health Trust)
Project No: 65210959
Date of Survey: 04/05/2024 to 05/05/2024

SWECO

Species of Plant		Habitats					
Common name	**Scientific name**	**Modified grassland**	**Tall ruderal**	**Scattered trees**	**Tree line**	**Woodland**	**Hedgerow**
Red dead-nettle	*Lamium purpureum*	X					
Groundsel	*Senecio vulgaris*	X					
Ribwort plantain	*Plantago lanceolata*	X					
Common ragwort	*Senecio jacobaea*	X					
Common stork's-bill	*Erodium cicutarium*	X					
Greater plantain	*Plantago major*	X					
Cock's-foot	*Dactylis glomerata*	X					
Forget-me-not sp.	*Myosotis sp.*	X					
Prickly lettuce	*Lactuca serriola*	X					
Perennial rye-grass	*Lolium perenne*	X					
Common mouse-ear	*Cerastium fontanum*	X					
Cut-leaved crane's-bill	*Geranium dissectum*	X					
Dandelion	*Taraxacum agg.*	X					
Chickweed	*Stellaria sp.*	X					
Dove's-foot crane's-bill	*Geranium molle*	X					
Meadow foxtail	*Alopecurus pratensis*	X					
Comfrey sp.	*Symphytum sp.*	X					
Common nettle	*Urtica dioica*	X	X			X	X
Bedstraw sp.	*Galium sp.*	X					
Daisy	*Bellis perennis*	X					
Field wood-rush	*Luzula campestris*	X					
Red fescue	*Festuca rubra*	X					
Ground-ivy	*Glechoma hederacea*	X					
Yarrow	*Achillea millefolium*	X					
Creeping cinquefoil	*Potentilla reptans*	X					
Common mallow	*Malva sylvestris*	X					
White dead-nettle	*Lamium album*	X	X				
Creeping bent	*Agrostis stolonifera*	X					
Germander speedwell	*Veronica chamaedrys*	X					
Timothy	*Phleum pratense*	X					
Creeping buttercup	*Ranunculus repens*	X					

Site Name: Lanwades Country Park (Animal Health Trust)
Project No: 65210959
Date of Survey: 04/05/2024 to 05/05/2024

SWECO

Species of Plant		Habitats					
Common name	**Scientific name**	**Modified grassland**	**Tall ruderal**	**Scattered trees**	**Tree line**	**Woodland**	**Hedgerow**
Broad-leaved dock	*Rumex obtusifolius*	X					
Tall fescue	*Schedonorus arundinaceus*	X					
White clover	*Trifolium repens*	X					
Creeping thistle	*Cirsium arvense*	X	X				
Cow parsley	*Anthriscus sylvestris*	X					
Tufted vetch	*Vicia cracca*	X					
Common couch	*Elytrigia repens*	X	X				
Spanish bluebell	*Hyacinthoides hispanica*	X					
Herb-robert	*Geranium robertianum*	X				X	
Cleavers	*Galium aparine*		X				
Green alkanet	*Pentaglottis sempervirens*		X				
Red dead-nettle	*Lamium purpureum*		X				
Garlic mustard	*Alliaria petiolata*					X	
Beech	*Fagus sylvatica*			X	X	X	X
Horse-chestnut	*Aesculus hippocastanum*			X		X	
Silver birch	*Betula pendula*			X			
Pine sp.	*Pinus sp.*			X		X	
Ash	*Fraxinus excelsior*					X	
Hawthorn	*Crataegus monogyna*					X	X
Holly	*Ilex aquifolium*					X	
Apple	*Malus pumila*					X	
Sycamore	*Acer pseudoplatanus*					X	
Field maple	*Acer campestre*						X
Blackthorn	*Prunus spinosa*						X
Snowberry	*Symphoricarpos albus*						X
Ivy	*Hedera helix agg.*						X
Elder	*Sambucus nigra*						X
Dog-rose	*Rosa canina*						X
English oak	*Quercus robur*						X
Leyland cypress	*X Cuprocyparis leylandii*				X		

Site Name: Lanwades Country Park (Animal Health Trust)
Project No: 65210959
Date of Survey: 04/05/2024 to 05/05/2024

Species of Plant		Habitats					
Common name	**Scientific name**	**Modified grassland**	**Tall ruderal**	**Scattered trees**	**Tree line**	**Woodland**	**Hedgerow**
Daffodil	*Narcissus pseudonarcissus subsp. pseudonarcissus*					X	
Holly	*Ilex aquifolium*					X	
Cherry sp.	*Prunus sp.*						X

Common and scientific names identified are as they appear in Stace, C. (2010) New Flora of the British Isles (3rd edition), Cambridge University Press.

Names in this list were sourced from the Wildflower Society website:
http://ww.thewildflowersociety.com/wfs_list_of_all_plants/main_menu_2010.htm

DAFOR key: D = dominant >75% cover; A = abundant 51-75% cover; F – frequent 26-50% cover;
O = occasional 11-25% cover; R = rare 1-10% cover, LF = locally frequent, X = present (no frequency recorded).

Appendix F – Breeding Bird Survey Results

Site Name: Lanwades Woodland Park - Eastern Side
Project No: 65210959
Surveyor(s): Joshua Stafford

SWECO

Common name	BTO code	Scientific name	BOCC / Sch 1 / NERC / BD Annex 1	Conservation Status within Suffolk	Visit 1	Visit 2	Visit 3	Visit 4	Visit 5	Visit 6	Breeding Status	Recorded within the Boundary
Blackbird	B.	*Turdus merula*	Green BOCC	Very common resident, winter visitor and passage migrant	7	5	3	6	1	4	Probable Breeding	Some
Blackcap	BC	*Sylvia atricapilla*	Green BOCC	Common summer visitor and passage migrant	0	0	0	1	0	0	Possible Breeding	Yes
Blue tit	BT	*Cyanistes caeruleus*	Green BOCC	Very common resident and scarce passage migrant	13	9	10	8	4	6	Confirmed Breeding	Some
Buzzard	BZ	*Buteo buteo*	Green BOCC	Common resident, winter visitor and passage migrant; increasing breeding population	1	0	1	8	0	1	Possible Breeding	Yes
Carrion crow	C.	*Corvus corone*	Green BOCC	Very common resident, winter visitor and passage migrant	17	1	5	0	10	0	Confirmed Breeding - offsite	Some
Chiffchaff	CC	*Phylloscopus collybita*	Green BOCC	Very common summer visitor and passage migrant, a few overwinter	3	1	2	0	0	1	Possible Breeding	Some
Chaffinch	CH	*Fringilla coelebs*	Green BOCC	Very common resident, winter visitor and passage migrant	0	0	5	0	0	1	Probable Breeding	Some
Dunnock	D.	*Prunella modularis*	Amber BOCC NERC	Very common resident and fairly common passage migrant	0	1	0	0	0	0	Possible Breeding	Yes
Green woodpecker	G.	*Picus viridis*	Green BOCC	Common resident	1	1	1	0	1	1	Probable Breeding	Yes
Goldcrest	GC	*Regulus regulus*	Green BOCC	Very common resident and passage migrant	3	1	1	1	1	0	Probable Breeding	Some
Greenfinch	GR	*Chloris chloris*	Red BOCC	Very common, but apparently declining, resident and passage migrant	1	0	0	0	0	0	Possible Breeding	Some
Great spotted woodpecker	GS	*Dendrocopos major*	Green BOCC	Common resident. Scarce passage migrant	1	1	1	2	0	0	Probable Breeding	Yes
Great tit	GT	*Parus major*	Green BOCC	Very common resident and scarce passage migrant	5	4	5	2	0	0	Probable Breeding	Some
Jay	J.	*Garrulus glandarius*	Green BOCC	Common resident and scarce passage migrant	6	0	0	0	0	0	Not Breeding	Yes
Jackdaw	JD	*Coloeus monedula*	Green BOCC	Very common resident, winter visitor and passage migrant	18	9	4	8	8	67	Probable Breeding	Some
Kestrel	K.	*Falco tinnunculus*	Amber BOCC	Common but declining resident. Uncommon passage migrant	0	0	0	0	1	0	Not Breeding	Yes
Red kite	KT	*Milvus milvus*	Sch 1 , BD Annex 1	Uncommon but increasing winter visitor and passage migrant. Has bred in recent years	0	1	0	0	0	0	Not Breeding	Yes
Long-tailed tit	LT	*Aegithalos caudatus*	Green BOCC	Very common resident and scarce passage migrant	2	2	1	0	0	0	Possible Breeding	Yes
Magpie	MG	*Pica pica*	Green BOCC	Very common resident	0	0	0	1	1	6	Possible Breeding	Yes
Nuthatch	NH	*Sitta europaea*	Green BOCC	Fairly common resident	1	0	0	0	0	0	Not Breeding	Yes
Pheasant	PH	*Phasianus colchicus*	Green BOCC	Very common resident; numbers augmented by releases	0	1	1	0	0	1	Possible Breeding	Yes
Pied wagtail	PW	*Motacilla alba*	Green BOCC	Common resident, passage migrant and winter and summer visitor	0	1	2	0	0	0	Possible Breeding	Yes

Robin	R.	*Erithacus rubecula*	Green BOCC	Very common resident, winter visitor and passage migrant	6	9	6	5	1	2	Confirmed Breeding	Some
Rook	RO	*Corvus frugilegus*	Amber BOCC	Very common resident, winter visitor and passage migrant	53	39	48	10	0	55	Confirmed Breeding	Yes
Starling	SG	*Sturnus vulgaris*	Red BOCC NERC	Very common but declining resident, winter visitor and passage migrant	28	0	0	9	0	0	Not Breeding	Some
Swallow	SL	*Hirundo rustica*	Green BOCC	Very common summer visitor and passage migrant	0	0	0	1	5	0	Confirmed Breeding	Yes
Song thrush	ST	*Turdus philomelos*	Amber BOCC NERC	Fairly common resident, passage migrant and winter visitor	1	1	0	0	0	0	Possible Breeding	Yes
Treecreeper	TC	*Certhia familiaris*	Green BOCC	Common resident	0	2	0	0	0	0	Not Breeding	Yes
Woodpigeon	WP	*Columba palumbus*	Amber BOCC	Very common resident, winter visitor and passage migrant	44	7	28	38	11	13	Probable Breeding	Some
Wren	WR	*Troglodytes troglodytes*	Amber BOCC	Very common resident and scarce passage migrant	5	5	6	4	1	1	Probable Breeding	Some

Common and scientific names in this list were sourced from BOU British List 9th Report (2017)

Sch 1- Wildlife and Countryside Act 1981 (as amended) Schedule 1.

NERC- Natural Environment and Rural Communities Act 2006 Section 41, species/habitats of principal importance.

BD Annex 1- European Birds Directive, Annex 1.

BoCC Red- Birds of Conservation Concern - Red listed.

BoCC Amber- Birds of Conservation Concern - Amber listed .

Appendix G – Automates/Static Survey Results

Table F.1. Remote Monitoring Survey Results

Survey Period	Bat Species	Total Call by Species	Percentage of Calls by Species (%)
Spring 2024	*Myotis* sp.	0	0
	Plecotus auratus	0	0
	Pipistrellus pygmaeus	2	0
	Eptesicus serotinus	4	0
	Pipistrellus pipistrellus	8130	99
	Nyctalus noctule	0	0
	Barbastella barbastellus	0	0
Summer 2024	*Myotis spec.*	2	0
	Plecotus auratus	11	0.02
	Pipistrellus pygmaeus	13	0.02
	Eptesicus serotinus	57	9.7
	Pipistrellus pipistrellus	435	74
	Nyctalus noctule	72	12
	Barbastella barbastellus	7	0
Autumn 2024	*Myotis spec.*	0	0
	Plecotus auratus	11	7.8
	Pipistrellus pygmaeus	2	1
	Eptesicus serotinus	3	2.1
	Pipistrellus pipistrellus	115	82
	Nyctalus noctule	8	5.7
	Barbastella barbastellus	1	0.7