

Land off Station Road, Surfleet, Lincolnshire

Preliminary Ecological Appraisal

Client: Mrs G. Needham

Report Reference: RSE_801_01-V1

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Revisions:

1. Executive Summary

RammSanderson Ecology Ltd was instructed by Mrs G Needham to carry out a Preliminary Ecological Appraisal of land off Station Road, Surfleet, near Spalding, Lincolnshire (central rid reference: TF256285) to inform a planning proposal for a residential development on the site. The survey also included a daytime bat and tree roost potential assessment. This report provides ecological information to submit with a planning application. The findings of the surveys are summarised below:

Habitats

Overall the habitats within the site were of low ecological value, largely consisting of cultivated arable fields and grassland. The belts of cypress trees on the boundaries were considered to be of value as ecological corridors. The current proposals include the retention of these features although it may be possible to seek enhancement of the site through replacement with native species rich hedgerows. The trees on site were considered to be of moderate botanical value and their retention is recommended where feasible (unless tree condition when assessed by an arboriculturalist is unsafe for retention to be permitted within the context of the proposals).

The River Glen occurs 10m from the southern boundary of the site, whilst not directly impacted by the proposals, mitigation for indirect impacts must be considered including following pollution prevention measures during construction. For information on good working practises see Environment Agency PPG5 document for guidance only.

Great Crested Newt

Suitable terrestrial habitat for the species is present on site. Additionally, eight waterbodies are located (from OS Mapping) within 500m of the boundaries, which may be suitable for the species, meaning a potentially increased likelihood of presence within the site. It is therefore recommended that these waterbodies are investigated further to assess their suitability for breeding amphibians and make recommendation if required thereafter as to whether any further presence / absence survey or mitigation will be necessary prior to determination of the application, or prior to commencement on site, depending on the findings.

Reptiles

The site contains suitable habitat for reptiles; however, the majority of the site area is unsuitable comprising arable land. The proposals for the site will retain the primary habitats of value, including the tree lines and dry ditch on site and so it is considered that the development of the site will have limited impact to reptile species should they occur locally and the site is unlikely to be core to the success of any local populations, especially in light of potential site enhancements which could bolster habitat availability for reptiles.

Therefore, no further survey for reptiles is considered necessary. However, it is recommended that a Precautionary Method of Works is provided in relation to any initial site clearance works.

Roosting Bats

Building 2 was considered to have 'moderate' potential to support roosting bats. In order to determine presence/absence of a roost it is recommended that the ivy covering it is removed as soon as possible and any suitable roosting features uncovered are inspected using an endoscope (at any time of year). Should this reveal evidence of a roost, or if the presence of a roost cannot be ruled out by these techniques, up to three further nocturnal surveys would be required to be completed between May and September to ascertain presence or absence of this protected group of species.

Foraging Bats

The sites main foraging features including the trees are to be retained by the proposals (although recommendation for replacement of native species rich hedgerows could be considered) and overall the foraging potential within the site is considered limited. Therefore no further bat activity surveys are recommended, however a lighting scheme which considers a reduced impact to nocturnal fauna should be implemented within the final proposals.

Nesting Birds

The trees, buildings and belts of cypress are suitable habitats for nesting birds, therefore any clearance or facilitative pruning should be completed outside of the bird nesting season (which is considered to be March to September inclusive). If this is not possible the site should first be checked by a suitably qualified ecologist for any in-use nests. If any in-use nests are found, these should be protected from works until chicks have fledged.

Badgers and Other Notable Fauna

No evidence of badger or other large mammals was identified within the survey however a minor residual risk remains that badger and other fauna may pass through the site during construction; therefore, good working practices are recommended.

Enhancements

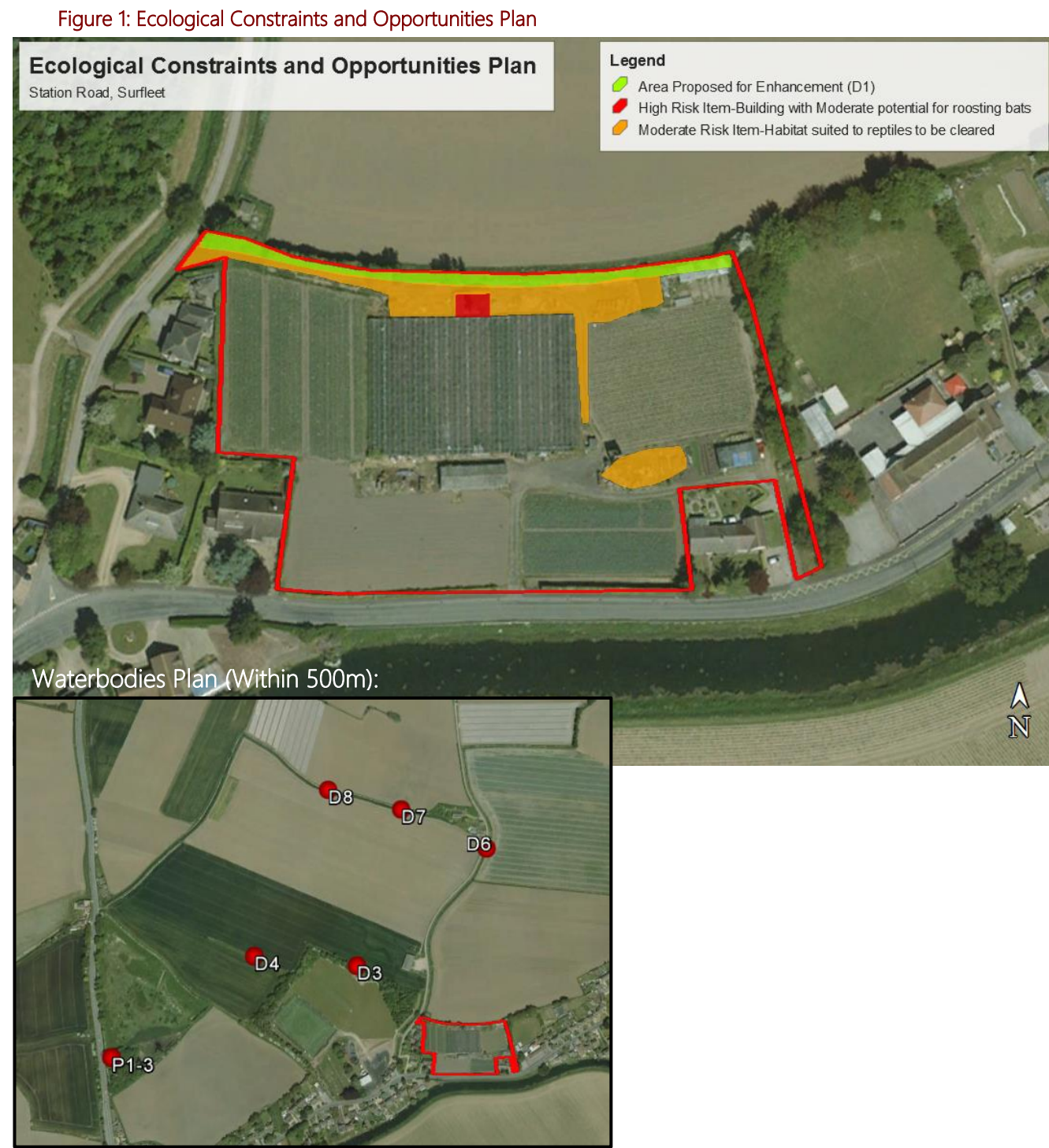
The retention of the dry ditch and hedgerows provide scope for potential widening and enhancement of the associated bankside vegetation to provide compensation for those losses of vegetation elsewhere on site for flora and fauna. This could potentially link in with the drainage strategy for the site. Consideration could be given with regard to replacement of the cypress hedgerows with native species rich hedgerows which will be more beneficial to biodiversity.

Planting of native & ornamental species with definite benefits to wildlife, including hedgerow and tree species is recommended across the site.

It is also recommended that the new buildings (where feasible) on site incorporate built in bird and bat boxes as well as including hedgehog boxes and fence openings at ground level for small mammal dispersal within the sites peripheral habitats.

Ecological Constraints and Opportunities Plan

The ecological constraints and opportunities plan overleaf summarises the areas where further surveys and precautionary approaches are recommended as well as highlighting potential enhancement and retention of ecological corridors.



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High Risk Item: Further survey requirements or effect on European Protected Species requiring either mitigation or further survey
Moderate Risk Item: Mitigation required for protected or notable species
Low risk Item: Mitigation / Works procedures adopted for potential species which may pass through site during construction phases
Enhancement Possibilities: possible enhancements suitable for this site given its context.

High Risk Item

B2 was assessed as having moderate potential to support roosting bats and it is recommended that further investigations are undertaken.

Site supports terrestrial habitat suited to GCN. Eight waterbodies identified within 500m of the site that may have suitability to GCN. As such an HSI assessment is recommended on P1-3, D3, 4 and 6-8; see Ponds Plan for locations. Where suitability to GCN is sufficient, additional presence/absence surveys may be required.

Moderate Risk Item

Reptile species may be present locally although the site is of lower value for reptiles. However a precautionary approach is recommended for any habitat clearance on site (pending results of further GCN surveys).

Low Risk

The trees, shrubs, hedgerows, and buildings are suitable for nesting birds. Any vegetation clearance and building demolition must be completed outside the nesting bird season (excluding to B3 which had potential to support other fauna including reptiles). Clearance during the period of March to September can only be undertaken following an assessment by an ecologist. Where active nests are found, works will be halted in the area until all chicks have fledged.

Pollution prevention measures to be adopted to avoid polluting the River Glen LWS 10m south of the site across the Station Road.

Enhancement Possibilities

Retain and plant native broadleaved trees/hedgerows across the site (i.e. to define new property boundaries) as well as improve existing dry ditch along the northern boundary to compensate losses of habitats with value to fauna elsewhere on site by increasing the bankside vegetation total area.

Nesting bird and hedgehog boxes could also be included on trees and new buildings.



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1 – Phase 1 habitat survey plan

2. Introduction and Background

Purpose and Scope of this Report

RammSanderson Ecology Ltd was commissioned by Mrs G Needham to assess the potential ecological impacts of a residential development of land and associated buildings off Station Road, Surfleet, near Spalding, Lincolnshire (central rid reference: TF256285). This included an ecological impact assessment of the proposals, a desk based assessment, Extended Phase 1 Habitat Survey, and a preliminary protected species assessment. Taken together, in common with the Chartered Institute of Ecology & Environmental Management's (CIEEM) 2012 publication this is termed as a Preliminary Ecological Appraisal (PEA). This assessment is considered 'preliminary' until any required protected species, habitat or invasive species surveys can be completed and the results are then updated into a final 'Ecological Appraisal', which can be used to lawfully determine a planning application in line with current planning policy¹.

The study area is defined as shown in the enclosed Site Location Plan and Phase 1 Habitat plan plus a buffer zone extended to include the Zone of Influence (see section below) of the proposals (hereafter referred to as the "Site").

This Appraisal is based on a review of the development proposals provided by the Client, desk study data (third party information) and a survey of the Site. The aims of this report are to:

- Classify the habitat types at the sites based on standard Phase 1 Habitat survey methodology;
- Evaluate any potential for protected species to be present;
- Identify any significant ecological impacts likely to result from the proposed development; and,
- Provide recommendations for any further surveys that might be required, for example to confirm presence / likely absence of protected species, which would need to be proven in order for a planning decision to be concurrent with current planning policy.

This report pertains to these results only; recommendations included within this report are the professional opinion of an experienced ecologist and therefore the view of RammSanderson Ecology Ltd.

The surveys and desk based assessments undertaken as part of this review and subsequent report including the Ecological Constraints and Opportunities Plan are prepared in accordance with the British Standard for Biodiversity Code of Practice for Planning and Development (BS42020:2013).

Zone of Influence

The term Zone of Influence is used to describe the geographic extent of potential impacts of a proposed development. The Zone is determined by the nature of the development and also in relation to individual species, depending on their habitat requirements, mobility and distances indicated in any best practice guidelines.

In relation to great crested newts (GCN) for example, the zone of influence is considered to be up to 500m from the site boundaries, as this is the distance that Natural England would require to be considered in relation to GCN licensing.

¹ Office of the Deputy Prime Minister Circular 06/05: Biodiversity and Geological Conservation - Statutory Obligations and Their Impact Within the Planning System

Site Context and Location

The site is located off Station Road, Surfleet (central rid reference: TF256285) and is currently being utilised for arable production. The site comprises small arable field compartments, agricultural buildings, a dry ditch, hedgerows and areas of bare ground as well as scattered vegetation including some trees. The site is set within a predominantly agricultural landscape with the River Glen located south of the site beyond Station Road. To the north lies arable and pastoral land dissected by ditches, hedgerows and woodland copses. East and West of the site, the predominately linear settlement of Surfleet stretches along Station Road.

The site measured approximately 1.2 hectares and is bound by a dry ditch to the north, neighbouring properties to the east/west and Station Road to the south.

Figure 2: Site Location Plan (star indicates location)



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Figure 3: Site Context Plan



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3. Legislation and Planning Policy

Articles of British legislation, policy guidance and both Local Biodiversity Action Plans (BAPs) and the NERC Act 2006 are referred to throughout this report. Their context and application is explained in the relevant sections of this report. The relevant articles of legislation are:

- The National Planning Policy Framework (2012);
- ODPM Circular 06/2005 (retained as Technical Guidance on NPPF 2012);
- Local planning policies (Lincolnshire County Council);
- The Conservation of Habitats and Species Regulations 2010 (as amended);
- The Wildlife and Countryside Act 1981 (as amended);
- EC Council Directive on the Conservation of Wild Birds 79/409/EEC;
- National Parks and Access to the Countryside Act 1949;
- The Protection of Badgers Act 1992;
- The Countryside and Rights of Way Act 2000;
- The Hedgerow Regulations 1997;
- The Natural Environment and Rural Communities (NERC) Act 2006;
- Lincolnshire Local Biodiversity Action Plan.

Bats

All species of British bats are fully protected under *The Conservation of Habitats and Species Regulations* 2010 (as amended). The Regulations prohibit:

- the deliberate killing, injuring or taking of bats;
- the deliberate disturbance of any bat species in such a way as to be significantly likely to affect:
 - their ability of to survive, hibernate, migrate, breed, or rear or nurture their young; or
 - the local distribution or abundance of that species.

- damage or destruction of a breeding site or resting place (roost);
- the possession or transport of bats or any other part of.

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

- intentional or reckless disturbance (at any level);
- obstruction of access to any place of shelter, breeding or rest;
- selling, bartering or exchange of these species, or parts of.

Under certain circumstances a licence may be granted by Natural England to permit activities that would otherwise constitute an offence. In relation to development, a scheme must have full planning permission before a licence application can be made.

Seven British bat species are listed as Species of Principal Importance (SPI) under the Natural Environment and Rural Communities (NERC) Act 2006. These are barbastelle (*Barbastellus barbastellus*), Bechstein's (*Myotis bechsteinii*), noctule (*Nyctalus noctula*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared (*Plecotus auritus*), greater horseshoe (*Rhinolophus ferrumequinum*) and lesser horseshoe (*Rhinolophus hipposideros*).

Under the National Planning Policy Framework 2012 the presence of any protected species is a material planning consideration. The Framework states that impacts arising from development proposals must be avoided where possible or adequately mitigated/compensated for and that opportunities for ecological enhancement should be sought.

4. Methodology

Impact Appraisal

The overall ecological appraisal is based on the standard best practice methodology provided by the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2012). The assessment identifies sites, habitats, species and other ecological features that are of value based on factors such as legal protection, statutory or local site designations such as Sites of Special Scientific Interest (SSSI) or Local Wildlife Sites (LWS) or inclusion on Red Data Book Lists or Biodiversity Action Plans. Ecological value is considered in the context of international, national, regional or local scale and potential constraints to development are identified on that basis, with recommendations for further more detailed surveys made as appropriate, for example to fully investigate botanical value or to confirm presence / likely absence of a protected species.

In appraising any impacts, the review considers the Client's Site proposals and any subsequent recommendations made are proportionate and appropriate to the site and have considered the Mitigation Hierarchy as identified below:

- **Avoid:** Provide advice on how the development may proceed by avoiding impacts to any species or sites by either consideration of site design or identification of an alternative option.
- **Mitigate:** Where avoidance cannot be implemented mitigation proposals are put forward to minimise impacts to species or sites as a result of the proposals. Mitigation put forward is proportionate to the site.
- **Compensate:** Where avoidance cannot be achieved any mitigation strategy will consider the requirements for site compensatory measures.
- **Enhance:** The assessment refers to planning policy guidance (e.g. NPPF) to relate the ecological value of the site and identify appropriate and proportionate ecological enhancement in line with both national and local policy.

Desk Based Assessment

Data regarding statutory and non-statutory designated sites, plus any records of protected or notable species and habitats was requested from the local ecological records centre and online resources, details of which are provided in table 1 below.

Table 1: Consulted Resources

Consultee/Resource	Data Sought	Search Radius from Boundary
Lincolnshire Environmental Records Centre	Non-Statutory Site Designations, protected/notable species records	2km
www.magic.gov.uk ²	Statutory Site Designations	5km
	NERC Act (2006) Habitats	1km

NB: The desk study data is third party controlled data, purchased for the purposes of this report only. RammSanderson Ecology Ltd cannot vouch for its accuracy and cannot be held liable for any error(s) in these data.

Phase 1 Habitat Survey

An extended Phase 1 Habitat Survey of the site was completed on the on 08/11/2016 . Habitats were described and mapped following standard Phase 1 Habitat Survey methodology (JNCC, 2010), which categorises habitat type through the identification of individual plant species.

Nomenclature follows Stace (Stace, 2010) for vascular plant species and the DAFOR scale for relative abundance was used in the field to determine dominant plants within habitats and communities (D = dominant, A = abundant, F = frequent, O = occasional and R = rare).

Hedgerow Assessment

Hedgerows on site were assessed using the Hedgerow Evaluation and Grading System (HEGS) (Clements & Tofts, 1992). This method of assessment includes noting canopy species composition, associated ground flora and climbers, structure of the hedgerow including height, width and gaps, associated features including number and species of mature trees, banks, ditches and grass verges.

Each hedgerow is given a grade using HEGS with the suffixes '+' and '-', representing the upper and lower limits of each grade respectively. These grades represent a continuum on a scale from 1+ (the highest score and denoting hedges of the greatest nature conservation priority) to 4- (representing the lowest score and hedges of the least nature conservation priority) as follows:

- Grade 1 – High to very high value
- Grade 2 – Moderately high to high value
- Grade 3 – Moderate to low value
- Grade 4 – Low value

Hedgerows graded 1 or 2 are considered to be a priority for nature conservation.

The hedgerows were also assessed against the Wildlife and Landscape criteria contained within The Hedgerow Regulations 1997 to determine whether they qualified as 'Important Hedgerows' under the Regulations. This was achieved using a methodology in accordance with both the Regulations and DEFRA guidance.

² Multi Agency Geographic Information for the Countryside Interactive GIS Map.

Protected / Notable Species Scoping Assessment

The habitats on site were assessed for their suitability for supporting any legally protected or notable species that would be affected by the proposed development. This includes invasive non-native plant species such as Japanese knotweed, Giant Hogweed and Himalayan Balsam.

Any incidental sightings of individual species or field signs such as footprints, latrines or feeding remains discovered during the survey were noted. In the case of bats, specific quantitative assessment methodologies have been adopted industry wide and details of these are provided below.

Bats

The overall value of the site and its connectivity to the wider countryside was assessed in relation to bats. The likelihood of bats roosting at the site, or moving through the site between local roost sites and foraging/mating/hibernation habitats was considered.

The buildings and trees on site were assessed then graded according to the Bat Conservation Trust's good practise guidelines: *Bat Surveys for professional ecologists* (Collins *et al.*, (3rd) 2016). The building was given a potential grading of confirmed roost, high, medium, low or negligible based on the survey guidelines, as illustrated within Table 2.

Table 2: Criteria for Bat Roost Potential Assessment of Trees & Buildings

Roost Potential	Description	Surveys Required (Buildings)	Surveys Required (Trees)
Confirmed roost	Evidence of roosting bats found during initial daytime inspection.	3 – including 1 dawn as a minimum	3 – including 1 dawn as a minimum
High *	Structures with one or more features suitable for bat roosting, with obvious suitability for larger numbers of bats.	3 – including 1 dawn as a minimum	3 – including 1 dawn as a minimum
Moderate	Structure with one or more potential roost sites that could be used due to size, shelter and protection but unlikely to support a roost of high conservation status.	2– including 1 dawn as a minimum	2– including 1 dawn as a minimum
Low	Structure with one or more potential roosting sites used by individual bats opportunistically. Insufficient space, shelter or protection to be used by large numbers of bats.	1 Survey	Precautionary Mitigation Approach, some instances may require further survey
Negligible	No or negligible features identified that are likely to be used by roosting bats	None	None

* Unless it is a confirmed roost, additional surveys are required of buildings to assess presence / likely absence of a roost. The number of surveys are indicative to give confidence in a negative result, i.e. where no bats are found, confidence in a result can be taken.

Surveyors

The survey was carried out by Joe McLaughlin BSc (Hons) Grad CIEEM and Katie Lawrence BSc (Hons). Joe holds class two licences for both bats (2016-26529-CLS-CLS) and GCN (2015-15074-CLS-CLS). Both are appropriately qualified and experienced to carry out this type of survey.

Table 3: Summary of Weather Conditions

Survey 1	
Survey type	PEA and BBA
Date completed	15.11.2016
Temperature	12°C
Wind speed (Beaufort Scale)	2
Cloud cover	30%
Precipitation	0

Limitations

Phase 1 surveys during the period of October to April are generally less efficient than during the spring or summer, and it is possible that some plant species have been missed by the field survey. However, in view of the ecological character of the habitats recorded it is considered that the survey is adequate to make a robust assessment of habitats present and the sites likely nature conservation significance.

It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment

Accurate lifespan of ecological data

The majority of ecological data remain valid for only short periods due to the inherently transient nature of the subject. The survey results contained in this report are considered accurate for approximately 2 years, notwithstanding any considerable changes to the site conditions.

5. Results

Desk Study

A total of two statutorily designated sites were recorded within the search area, the details of which are summarised in Table 4 below.

Table 4: Summary of Designated Sites

Site Name	Designation	Location	Brief Description
Surfleet Lows	SSSI ³	370m W	Lowland mire grassland and rush pasture.
Vernatts	LNR ⁴	4.4km SW	Matrix of habitats, including a wildflower meadow, reedbeds, marsh and a large pond supporting invertebrates, water voles and reed warblers.

Six non-statutorily designated sites were also identified within the search radius, details of which are provided in Table 5.

Table 5: Non-statutory Designated Sites

Site Name	Designation	Location	Brief Description
River Glen Corridor	LWS ⁵	10m S	Botanically rich 20km stretch of river, including aquatic, waterside, neutral grassland and woody species.
Surfleet Lows	LWT ⁶ /LWS	370m W	Lowland mire grassland and rush pasture.
A16 East Verge South of the River Glen	LWS	660m SE	Diverse grassland and botanically rich unmanaged ditch.
A16 Verges North of the River Glen	LWS	1.4km NE	Unmanaged neutral grassland and ditches
Blue Gowt Drain, North	LWS	1.4km E	Contains critically endangered ribbon-leaved water-plantain, occurring only naturally in 3 places in Britain. Also, contains Nuttall's waterweed.
Vernatts Drain	LWS	At nearest point 1.9km to S	Extensive drain system which is considered notable for flora and fauna.

Within 1km of the site, five NERC (2006) priority habitats were identified. These included four deciduous woodlands (closest 435m southwest of the site), two reedbeds (closest 460m), one wet woodland (500m west), one traditional orchard (540m northeast) and three coastal and floodplain grazing marshes (closest 630m southwest). Two good quality semi-improved grasslands were also identified (closest 370m west), which are classed as a non-priority habitat. Two additional areas of woodland and scrub were highlighted by the National Forest Inventory (closest located 840m northeast of the site).

Protected species records were received from Lincolnshire Environmental Records Centre. A summary of the records considered most relevant to the site and/or proposed development are provided in Table 6.

³ SSSI – Site of Specific Scientific Interest

⁴ LNR – Local Nature Reserve

⁵ LWS – Lincolnshire Local Wildlife Site

⁶ LWT – Lincolnshire Wildlife Trust Reserve

Table 6: Summary of Protected and Notable Species Records

Species	Records	Conservation Status
Amphibian		
Common Frog	2 records; Closest record 1.2km E*	WCA(5) ⁷ & NERC ⁸
Smooth Newt	1 record; 1.2km E	Partial protection WCA(5) & LBAP ⁹
Mammals		
Unidentified Bat sp.	72 records; Closest record field observation 30m SE*	EPS ¹⁰ , WCA(5) & NERC
Common Pipistrelle	5 records; Closest record 4000m SW	EPS, WCA(5) & LBAP
Daubenton's bat	5 records; Closest record 400m SW	EPS, WCA(5), NERC & LBAP
Pipistrelle Bat sp.	4 records; Closest record 500m SW*	EPS, WCA(5), NERC & LBAP
Hedgehog	6 records; Closest record 500m W*	NERC
Water Vole	14 records; Closest record 550m SW*	WCA(5), NERC & LBAP
Soprano Pipistrelle	5 records; Closest record 550m SW*	EPS, WCA(5) & LBAP
Brown Hare	5 records; Closest record 550m SE*	NERC
Brown Long-eared bat	2 records; Closest record 550m SW*	EPS, WCA(5), NERC & LBAP
Badger	Records of setts were found within the search area, however further information of their location cannot be disclosed	PBA ¹¹
Birds		
House Sparrow	19 records; Closest record 150m NE*	BoCCRed ¹² , NERC & LBAP
Starling	16 records; Closest record 150m NE*	BoCCRed, NERC & LBAP
Barn Owl	3 records; Closest within 1km of the site	BoCCAmber ¹³ , WCA1 ¹⁴ & LBAP
Greylag Goose	5 records; Closest record 510m W*	BoCCAmber
Lapwing	4 records; Closest record 510m W*	BoCCRed, NERC & LBAP
Linnet	3 records; Closest record 510m W*	BoCCRed, NERC & LBAP
Mute Swan	8 records; Closest record 510m W*	BoCCAmber
Redshank	1 record; 510m W	BoCCAmber & LBAP
Reed Bunting	2 records; Closest record 510m W*	BoCCAmber, NERC & LBAP
Skylark	3 records; Closest record 510m W*	BoCCRed, NERC & LBAP
Snipe	5 records; Closest record 510m W*	BoCCAmber & LBAP
Song Thrush	5 records; Closest record 510m W*	BoCCRed, NERC & LBAP

⁷ WCA(5) – Wildlife & Countryside Act 1981 (as amended) Section 5 protecting against trade or sale of species.

⁸ Natural Environment Rural Communities Act (2006) Species of Principal Conservation Importance; UKBAP & LBAP

⁹ LBAP – Local Biodiversity Action Plan

* Some / all species records 6-figure grid reference only available so accuracy is reduced

¹⁰ European Protected Species (EPS), protected by the Conservation of Habitats and Species Regulations 2010

¹¹ PBA – Protection of Badgers Act (1992)

¹² BoCCRed – Birds of Conservation Concern Category: Red (High Concern)

¹³ BoCCAmber – Birds of Conservation Concern Category: Amber (Moderate Concern)

¹⁴ WCA1 – Wildlife and Countryside Act 1981 (as amended) Schedule 1 protecting against birds

Species	Records	Conservation Status
Spotted Flycatcher	1 record; 510m W	BoCCRed & NERC
Swift	2 records; Closest record 510m W	BoCCAmber & LBAP
Yellow Wagtail	1 record; 510m W	BoCCRed, NERC & LBAP
Yellowhammer	3 records; Closest record 510m W	BoCCRed, NERC & LBAP
Brambling	1 record; 560m SE*	WCA1
Curlew	1 record; 560m SE*	BoCCAmber, NERC & LBAP
Fieldfare	1 record; 560m SE*	BoCCRed & WCA1
Hen Harrier	1 record; 560m SE*	BoCCRed & WCA1
Little Gull	1 record; 560m SE*	BoCCAmber & WCA1
Pink-footed Goose	1 record; 560m SE*	BoCCAmber
Redwing	4 records; Closest record 560m SE*	BoCCRed & WCA1
Corn Bunting	1 record; 810m SW*	BoCCRed, NERC & LBAP
Cuckoo	1 record; 810m SW*	BoCCRed & NERC
Grey Partridge	2 records; Closest record 810m SW*	BoCCRed, NERC & LBAP
Turtle Dove	2 records; Closest record 810m SW*	BoCCRed, NERC & LBAP
Tree Sparrow	1 record; 830m SW	BoCCRed & NERC
Kingfisher	2 records; within 1km	BoCCAmber & WCA1
Hobby	1 record; within 1km*	WCA1
Reptiles		
Grass Snake	2 records; Closest record 800m W	WCA(5) & NERC
Invertebrates		
Small Heath	4 records; Closest record 530m SW	NERC
Cinnabar	2 records; Closest record 530m SW	NERC
Wall	1 record; 810m SW*	NERC
Invasive Non-Native		
Muntjac	1 record; 500m NW	WCA(9) ¹⁵
Mink	3 records; Closest record 530m SW	WCA(9)
Grey Squirrel	3 records; Closest record 1.6km NW	WCA(9)
Montbretia	1 record; 1.3km NE	WCA(9)
Canadian Waterweed	1 record; 1.9km ENE	WCA(9)
Nuttall's Waterweed	2 records; Closest record 1.9km NE	WCA(9)

Full species records are available to view upon request.

¹⁵ WCA(9) – Wildlife & Countryside Act 1981 (as amended) Schedule 9 protecting against invasive non-native species.

Phase 1 Habitat Survey

The site comprised a range of different habitats all of which are listed below under the relevant headings. For a Phase 1 survey plan refer to Appendix 1, and for photos of habitats refer to text below.

The habitats types are detailed below, and are listed in order of the JNCC (2010) Handbook. The species list provided in this report reflect only those taxa observed during the survey.

Scattered Trees

Several semi mature/mature trees were located on site. Species comprised ash *Fraxinus excelsior*, Lombardy poplar *Populus nigra* and cypress *Cupressus sp.*

Poor Semi-improved Grassland

An area of set aside unmanaged land had developed into a poor semi-improved grassland within field margins and at the peripheries of the site. Grass species frequently encountered included false oat-grass, *Arrhenatherum elatius*, red fescue *Festuca rubra*, wall barley *Hordeum murinum*, Yorkshire fog *Holcus lanatus* and perennial rye grass *Lolium perenne*. Other species which were occasionally recorded within this habitat included groundsel *Senecio vulgaris*, common ragwort *Senecio jacobaea*, common dandelion *Taraxacum officinale*, broad-leaved dock *Rumex obtusifolius*, chickweed *Stellaria media*, and greater plantain *Plantago major*.

Tall Ruderal Vegetation

This habitat was located within the site peripheries and between heavily cultivated areas such as the arable fields/former arable fields which were now considered ephemeral/short perennial habitats. Tall ruderal species included dominant common nettle *Urtica dioica* with frequently encountered fat hen *Chenopodium album*, rosebay willowherb *Chamerion angustifolium*, cleavers *Galium aparine*, false oat-grass, red shank *Persicaria maculosa* and sun spurge *Euphorbia helioscopia* also recorded. Other occasionally recorded species included sow thistle, mares tail, white dead nettle and nearby the dry ditch common reed. Within areas of tall ruderal vegetation on site climbing species noted included common hop *Humulus lupulus* and ivy *Hedera helix*.

Figure 4: Tall Ruderal



Arable

Arable fields were present on site which were being utilised for cauliflower and daffodil crop production.

Ephemeral/Short Perennial

Where arable fields on site were no longer being utilised for crop production ephemeral/short perennial vegetation had begun to establish itself. Species present included a mix of dandelion,

common nettle, shepherds purse *Capsella bursa-pastoris*, common ragwort, spear thistle *Cirsium vulgare*, chickweed *Stellaria media*, fat hen *Chenopodium album* and colts foot *Tussilago farfara*. All vegetation within this habitat was sporadically present and dispersed between previously cultivated bare ground.

Figure 5: Ephemeral/Short Perennial



Intact Species Poor Hedgerow

Six hedgerows were located on site. A description of each hedgerow is provided below under the relevant headings

H1

H1 was located along the sites southern boundary, the hedgerow was subject to regular management, approximately 3m tall, 1m wide and 100m long. The hedgerow was dominated by cypress with a small patch of elder *Sambucus nigra* noted. Ground flora was typical of those species listed under Poor Semi-improved Grassland section of this report.

H2

H2 was a cypress hedgerow located along the western boundary, the hedgerow was approximately 3m tall 1m wide and 35m long. It was also noted this hedgerow was regularly managed. Ground flora was typical of those species listed under Ephemeral/Short Perennial Section of this report.

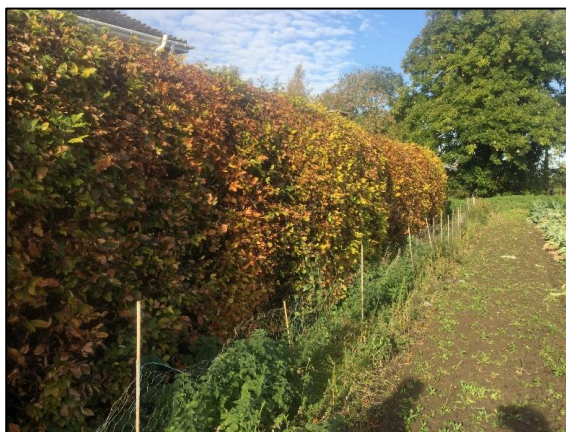
H3

This was a cypress hedgerow with rare occurrences of holly *Ilex aquifolium*, and an garden privet *Ligustrum ovalifolium* noted within its canopy. This hedgerow was approximately 30m long, 2m tall and 1m wide. This hedgerow adjoined H4 and was located along the western boundary. Ground flora within H3 comprised species typical of those listed under Poor Semi-improved Grassland Section of this report.

H4

H4 was dominated by beech *Fagus sylvatica* with occasional elder noted. This hedgerow was 2.5m tall, 1m wide and 50m long. H4 ground flora comprised species typical of those listed under tall ruderal vegetation.

Figure 6: H4

H5

H5 was a very short cypress hedgerow which was approximately 10m long, 0.5m wide and 2m tall. The hedgerow was subject to recent management and was surrounded by tall ruderal vegetation.

H6

H6 was located along the south-eastern boundary. This hedgerow was dominated by cypress with occasional occurrences of holly noted. H6 was approximately 1.5m tall, 1m wide and 40m long. Ground flora comprised a combination of bare ground and species typical of those listed under Ephemeral/Short Perennial Section of this report.

All hedgerows were subject to further assessment under the Hedgerow Evaluation and Grading System (HEGS) and the Hedgerow Regulations (1997). The details of which are summarised in Table 7.

Table 7: Hedgerows Summary Table

Hedgerow number	'Important' under the Hedgerow Regulations (1997)	HEGS assessment score	NERC Act (2006) priority habitat
1	No hedgerow qualified as Ecologically Important.	Category 4- low conservation value.	Does not qualify.
2		Category 4- low conservation value.	Does not qualify
3		Category 4- low conservation value.	Does not qualify
4		Category 4+ low conservation value.	Whilst H4 qualifies under NERC criteria, this hedgerow is species poor and do not fit either Hedgerow regulations or HEGS criteria as ecologically important receptors.
5		Category 4- low conservation value.	Does not qualify
6		Category 4- low conservation value.	Does not qualify

Fence

A wire fence formed part of the sites eastern boundary. This fence had several gaps along its length and was not considered likely to inhibit dispersal of fauna.

Wall

A brick wall was present along the majority of the sites eastern boundary. This was in good condition at the time of survey and was considered a partial barrier to faunal species dispersal towards site.

Dry Ditch

A dry ditch (D1) was located along the northern boundary of the site. The ditch supported a combination of steep and shallow earth banks and was around 1m deep. The ditch vegetation had been recently mown. Vegetation associated with the ditch was considered typical of those species listed under the tall ruderal section of this report. However, common reed was considered the locally dominant species along a section of the ditches southern bank. No other vegetation typical of an aquatic/marshy habitat were noted.

Figure 7: D1



Buildings

Ten buildings were located on site. All of which will be discussed in detail within the bat survey section of this report.

Bare Ground

Bare ground was present on site at the margins of the arable fields and where regular trampling by vehicles and people had stripped away any vegetation.

Hardstanding

Hardstanding was present within the site to facilitate vehicular access.

Target Note 1 and 2

Both Target Notes represent areas of deadwood/wood pallet piles. These may provide a potentially valuable habitat feature to faunal species.

Figure 8: Wood/rubble Pile



Preliminary Protected / Notable Species Assessment

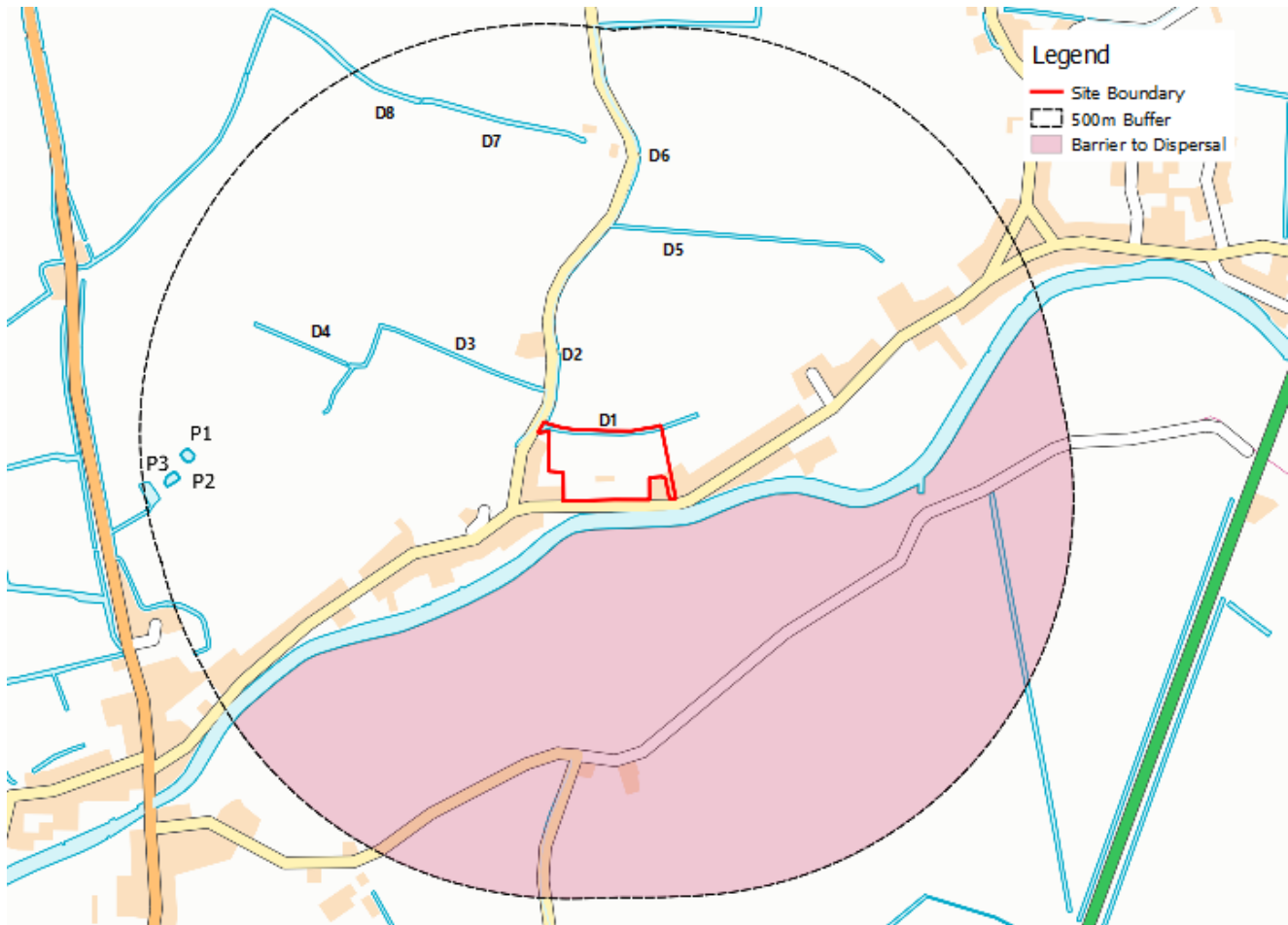
The potential for protected species to be present on site and impacted by the proposals is discussed under the headings below.

Great Crested Newt (GCN)

11 waterbodies were identified from Ordnance Survey maps within 500m of the site that may have the potential to support breeding amphibian; see Figure 9. This included three ponds (P1-3) and eight ditches (D1-8). However, during the site survey D1, D2 and D5 were found to be dry. As such these ditches were not considered suitable for breeding and on that basis, will not be considered further in relation to waterbodies utilised by breeding GCN. Any water bodies located south of the River Glen were also discounted from the assessment as the river and Station Road are considered to represent a significant barrier to newt dispersal.

The majority of the terrestrial habitats within the site were considered sub-optimal for GCN. However, poor semi-improved grassland, the dry ditch (D1), tall ruderal vegetation, wood piles (see Target Note 1; Appendix 1) and hedgerows provided suitable terrestrial habitat for the species on site. Furthermore, the network of ditches and arable field margins in the surrounding landscape to which the site is directly connected by D1 provide a potential corridor for which GCN could naturally disperse towards the site, if GCN are present in the area.

Figure 9: Waterbodies Plan



Reptiles

For the most part the site was considered to have limited suitability to reptiles and is a regularly disturbed area of land in current and continued use. However, the small areas with suitability to reptiles on site comprised poor semi-improved grassland, the dry ditch (D1), tall ruderal vegetation, B3, wood piles (see Target Note 1; Appendix 1) and hedgerows.

Birds

The trees, buildings and hedgerows provide potential bird nesting sites and are likely to support a range of common garden/farmland bird species. During the survey, incidental sightings of feral pigeons *Columba livia domestica*, wren *Troglodytes troglodytes*, and robin *Erithacus rubecula* were noted. However, none of the aforementioned birds were displaying any nesting behaviours.

Badgers and Other Notable Fauna

There were no field signs characteristic of badger, brown hare or hedgehog found either on site or immediately surrounding the site. However, given the rural context of the site and presence of arable vegetable crops/pastoral fields, hedgerows and woodland the presence of foraging and commuting mammals including badger, hedgehog and brown hare cannot be ruled out on site.

Water Vole, Otter and White Clawed Crayfish

No standing water or running watercourses were present on site and the dry ditch was not connected to the River Glen. Furthermore, the disturbed nature of the site reduces the chance of any of these species being present on site. As such it is considered unlikely these species occur on site and they will not be considered further within this report.

Invasive Species

No invasive species were noted on site during the survey. On that basis, they will not be discussed further within this report and pose no constraint to any development of the site.

Foraging Bats

The site was found to support peripheral habitat features with suitability to foraging bats. These included D1, scattered trees and hedgerows. Furthermore, the site is situated within a rural landscape with woodland, ditches, ponds, hedgerows and the immediately adjacent River Glen in its surrounds. As such the site is likely to support a range of different foraging bat species. In consideration of these factors the site was assessed as being of 'moderate' value to foraging bats against best practise guidance (Collins J *eds* 2016, 3rd).

Roosting Bats

None of the trees on site were considered suitable for roosting bats. Ten buildings were assessed against best practise guidelines to ascertain their suitability to roosting bats. The details of which are provided in Table 8 overleaf.

Table 8: Bat Building Assessment Summary

Bldg. Ref:	Description	Potential Access Points	Evidence	Grading	Photographs
B1	Single storey, wood panel structure with a large double wooden door, single glazed windows and a pitched corrugated mineral fibre roof. Internally the building has a false ceiling with no accessible void. However, in places the roof material was visible demonstrating a lack of underlining through the loose installation of the false ceiling.	No bat roosting potential	No evidence of roosting bats noted	Negligible	
B2	This was a single storey, brick built building which was heavily clad with ivy. B2 was open fronted and had missing windows. The building supported a large chimney stack and a corrugated material roof. The buildings chimney was around 6m tall and was in good condition with no gaps visible from its exterior. Internally the building was utilised as a potato storage space. The walls and floor supported exposed brick and concrete. B2 supported no roof void with exposed timbers and no	Access to the buildings internal area was possible through lack of doors and windows. Internally gaps between the walls, roof material and supporting timbers provide opportunities for roosting bats.	No evidence of roosting bats noted	Moderate	

Bldg. Ref:	Description	Potential Access Points	Evidence	Grading	Photographs
	underlining exposing the building's roof material.				
B3	B3 was a single storey, brick/breezeblock built, open fronted garage. The building was completely covered in dense ivy cladding which had grown down and into the internal area of the building making the buildings physical structure completely obscured from view.	No bat roosting potential.	No evidence of roosting bats noted	Negligible	

Bldg. Ref:	Description	Potential Access Points	Evidence	Grading	Photographs
B4	Open fronted, single storey breeze block structure with a flat corrugated material roof which was exposed internally. The space was utilised for parking farming vehicle/plant.	No bat roosting potential	No evidence of roosting bats noted	Negligible	
B5	Large single storey pre-fabricated, wood panel portacabin with single glazed windows and a flat bitumen lined roof. Internally the building was utilised as a billiards room with a false ceiling and no accessible void present.	No bat roosting potential.	No evidence of roosting bats noted	Negligible	

Bldg. Ref:	Description	Potential Access Points	Evidence	Grading	Photographs
B6,7 and 8	Three wooden sheds in a deteriorated state supporting bitumen lined roof. Internally the building supported wood panels no void with exposed roof timbers and flake board underlining.	No bat roosting potential	No evidence of roosting bats noted	Negligible	
B9	Small single storey, brick built former toilet building with a wood single glazed window, half pitched corrugated material roof and an opening where a door had been removed. This gap was now filled with waste/equipment from the farm. The building had a plastered ceiling with no accessible void.	No bat roosting potential	No evidence of roosting bats noted	Negligible	

Bldg. Ref:	Description	Potential Access Points	Evidence	Grading	Photographs
B10	Large single storey glass house utilised for crop production.	No bat roosting potential	No evidence of roosting bats noted	Negligible	

6. Discussion & Recommendations

Habitats on Site

Generally, the habitats on site were of poor inherent value however the trees and hedgerows provide some, limited ecological value for nesting birds and foraging bats although these hedgerows are largely species-poor non-native hedgerows. Overall the arable, cultivated nature of the site provides limited ecological value although the neglected areas, which were species poor, provide scope for refuge for herpetofauna. As such mitigation/recommendations for further surveys have been provided under the relevant headings later within this report including the retention and enhancement of the dry ditch on site. Table 9 below provides a summary evaluation of each habitat noted on site.

The River Glen is 10m south of the site boundary and on the opposite side of Station Road. Direct impacts are considered to be negligible, however mitigation in regard to indirect impacts caused during construction should be considered. Any development of the site should therefore consult the Environment Agency PPG5¹⁶ document for guidance only on how to alleviate the risk for pollution to watercourses during construction.

Table 9: Individual Habitats Summary

Habitat	JNCC Code	Area (m ²)	Proportion of Site Area	Ecological Importance & Outcome of Proposal
Scattered Trees	A3.1	22	1	Semi-mature/mature scattered trees on site of some limited botanical value. Furthermore, trees considered a potentially important habitat feature for fauna. As such retention is recommended as well as new planting within Enhancement Section.
Poor Semi-Improved Grassland	B6	2343	17	Of little floristic value. However, this habitat was considered to provide a potential for faunal refuge and foraging. On that basis mitigation provided later within this report to implement alongside the likely clearance of these habitats.
Tall Ruderal	C3.1	1038	7	
Arable	J1.1	1820	13	Of little to no ecological value in its current state and will be entirely lost to facilitate development. These impacts are of no ecological concern with regards to a development on site.
Ephemeral, Short Perennial	J1.3	3881	27	
Intact Species Poor Hedgerow	J2.1.2	737	5	None of the hedgerows on site qualified as important under the Hedgerow Regulations (1997) and were also considered to be of low conservation value following a HEGS assessment. H4 was the only hedgerow on site which qualified under NERC (2006) criteria, however the hedgerow was species poor and of limited ecological value. All hedgerows on site excluding H1 are proposed for retention although consideration could be given with regard to replacement with native species rich hedgerows; see Enhancement Section.

¹⁶ Environment Agency Pollution Prevention Guidance (5)- pollution prevention guidance document

Habitat	JNCC Code	Area (m ²)	Proportion of Site Area	Ecological Importance & Outcome of Proposal
Dry Ditch	J2.6	390	3	Of limited floristic value. However, habitat has the potential to be utilised as a commuting/foraging route by protected/notable faunal species. As such its retention is recommended and its potential for enhancement could be considered.
Buildings	J3.6	2685	19	Generally of limited value and will be lost to facilitate works. A single building has been identified for its potential as a bat roost site and further investigation is recommended. Additionally nearly all structure provide scope for nesting birds and should be removed at appropriate times of year.
Bare Ground	J4	313	2	Of little to no ecological value current state. Wide scale impacts likely as part of development. These impacts are of no ecological concern with regards to a development on site.
Hard Standing		1078	7	

Statutory Designated Site

Given the small scale of any development of the site adverse impact are considered unlikely to any nearby statutory designated site. This is because the nearest is the Surfleet Lows SSSI which is 370m from the western boundary.

Non-Statutory Designated Sites

Given the proximity of the site to the River Glen LWS which is 10m south of the site across Station Road some consideration must be given at the construction phase to avoid pollution. As detailed earlier Environment Agency PPG5 should be consulted to inform good working practises to implement particularly within the southern section of the site. However, given the small scale of any eventual development of the site adverse impacts are considered unlikely to any further afield non-statutory site or NERC priority habitat; the nearest of which was 370m from the boundary.

Fauna

Great Crested Newt

Excluding D1, D2 and D5 which were found to be dry at the time of the survey, a number of ditches and ponds may have suitability to GCN within 500m of the boundary. Furthermore, terrestrial habitats on site with suitability to the species which are likely to be lost include poor semi-improved grassland, tall ruderal vegetation, wood piles, H1, the densely vegetated/deteriorated B3.

Whilst it is acknowledged no records of GCN have been received within 2km of the site the lack of records does not necessarily demonstrate absence of the species but could be an under recording of GCN in the area. In consideration of those details provided above a suite of Habitat Suitability Index surveys are recommended to determine the suitability of the other waterbodies within 500m of the development site to GCN these include P1-3, D3, 4 and 6-8; for specific locations see Figure 9. Where waterbodies are found to have the potential to support GCN a suite of presence/absence surveys may be required and an eventual application to Natural England for an European Protected Species Mitigation licence may be required to implement alongside a development of the site.

Reptiles

Habitats on site with suitability to reptiles which are likely to be impacted/lost include poor-semi-improved grassland with heightened sward, the densely vegetated/deteriorated B3, H1, wood piles and tall ruderal vegetation. However, hedgerows, their verges and D1 along the northern boundary are to be retained as part of eventual development of the site; all of which provide optimal habitat for these species. On that basis, it is considered that only minimal losses of well suited habitat are likely to occur on site as a result of the development reducing the likelihood of impacts to individual reptiles. Furthermore, where enhancements proposed later within this report are implemented the site is likely to be subject to overall gains in habitat which is well suited to reptiles.

In consideration of these factors the main risk to reptiles, if occurring on site, is through temporary displacement which in the absence of any mitigation may cause injury or harm. As losses of well suited habitat are considered limited a full suite of surveys is considered inappropriate. Instead a Precautionary Method of Works should be implemented when clearing/demolishing poor semi-improved grassland, tall ruderal vegetation, wood piles and B3.

This should include works limited to when temperatures are above 11°C between April and September. Finger-tip searches/soft demolition by hand/hand tools and systematic clearance towards boundary hedgerows or D1 to allow for natural dispersal of reptiles if present.

All mitigation in relation to reptiles is pending the results of GCN HSI surveys.

Roosting Bats

B2 was considered to have 'moderate' potential to support roosting bats. It is recommended that the ivy which obscured views of the building and chimney stack is removed as soon as possible and the building reassessed. If on further inspection, suitable roosting locations are recorded, they should be inspected using an endoscope. If bats are confirmed as present, or their presence cannot be ruled out by these investigations, up to three further nocturnal surveys would be required between May and September. Where bats are found to be utilising B2 three surveys would be needed so that roost size and class can be determined and an application to Natural England for an EPS mitigation licence can be made prior to its demolition.

Foraging Bats

For the most part Hedgerows, trees and the dry ditch on site are to be retained as part of the development proposals. H1 is proposed for removal to allow for access, however, replanting will compensate this loss.

As these features are to be retained it is unlikely any major impacts will occur in terms of the sites suitability to foraging bats as current potential flight lines will remain intact. Furthermore, Enhancements including new planting of trees/scrub detailed later within this report could lead to overall gains in terms of the sites suitability to foraging bats; if implemented as part of developments landscaping proposals.

Given the sites rural location and potential suitability to foraging bats consideration must be given to any associated lighting implemented as part of the development. To prevent impacts of lighting associated with the eventual proposals a bat friendly lighting scheme must be implemented. These should follow the guidelines set out in Bats and Lighting in the UK (BCT, 2009). Therefore, associated site lighting proposals must consider the following:

- Avoid lighting where possible;
- Install lamps and the lowest permissible density;
- Install lamps with the shortest permissible column height;
- Lamps must be fitted with light spill accessories directing light to the road and avoiding upward spill and spill onto the neighbouring properties, hedgerows, trees or the dry ditch;

- Use of low intensity bulbs to minimise light intensity and impacts to bats;
- The use of timers and dimmers to avoid lighting areas of the site all night is recommended.

Badger and Other Notable Fauna

No physical evidence of badger, brown hare or hedgehog was encountered during the site survey. However, the sites marginal habitats are potentially of limited ecological value to these species for commuting and foraging. Furthermore, the rural location and historic records of these species locally received within the desk study increase the likelihood of these species occurring on site. Therefore, during the construction phase the presence of open excavations, pipes and site equipment has the potential to cause harm to animals in the local area. To that end, it is recommended that the following precautions are observed:

- Mammal ladders (such as a plank) or earth ramps to be placed in any open excavations at the end of each day;
- Any open pipework to be capped overnight to prevent larger mammals from accessing the pipe work and becoming stuck;
- Night work should be avoided where possible, and any flood lighting should face away from the site boundaries; and
- Any chemicals or machinery are to be stored in a secure compound

Birds

The sites trees, buildings and hedgerows provide suitability to nesting bird species. Whilst losses to suitable nesting bird habitat is likely through the proposed demolition of buildings on site, trees and hedgerows are to be retained. Furthermore, enhancements recommended later within this report including installation of nest boxes and tree/scrub planting could lead to an overall increase in the suitability of the site to both nesting and foraging birds.

As the site has potential to support nesting birds mitigation has been recommended with regards to any well suited vegetation pruning or building demolition. This should be carried out between October and February (outside of the nesting bird season). This is to avoid potentially 'damaging or destroying the nest of any wild bird whilst it is in use or being built', which would be an offence under the Wildlife and Countryside Act 1981 (as amended).

If it is not possible to avoid the bird breeding season (i.e. with regards to B3 to allow for mitigation in relation to reptiles to be followed) then an ecologist will need to carry out a check of the vegetation prior to removal of all habitats listed earlier in this section. If a nest is discovered, then a stand-off zone surrounding that nest will need to be implemented until all young have fledged.

Enhancement Recommendations

The enhancement of the dry ditch along the northern boundary of the site would provide compensation for those losses of central vegetation which is likely to occur as a result of a development on site; as per the increase in the habitat areas along the northern boundary proposed within the ECOP. Furthermore, the enhancement in these areas is considered a potentially valuable ecological gain for the site.

Additionally, a diverse range of native botanical species could be used to replace the current non-native hedgerows and provide a far more valuable ecological resource by comparison. Species could include a range of hawthorn, blackthorn, elder, crab apple *Malus sylvestris*, willow *Salix* sp, cherry *Prunus* sp, rose *Rosa* sp and elm *Ulmus* sp. As well as improvements to the botanical value of the site creation of hedgerows between property boundaries will allow for faunal species dispersal around the site and lead to an increase in the sites overall refuge/foraging potential for fauna.

Native standard trees should also be planted in association with hedgerows or around the site within residential property gardens. Species should include a range of the following oak *Quercus robur*, silver birch *Betula pendula*, lime *Tilia* sp. Horse chestnut *Aesculus hippocastanum* and rowan *Sorbus aucuparia*.

Other enhancements that could easily be met include the incorporation of bird and hedgehog boxes within proposals. Bird boxes could be placed either on new buildings or on retained trees away from bat boxes within the site boundary whereas hedgehog boxes could be placed within marginal habitats suited to the species.

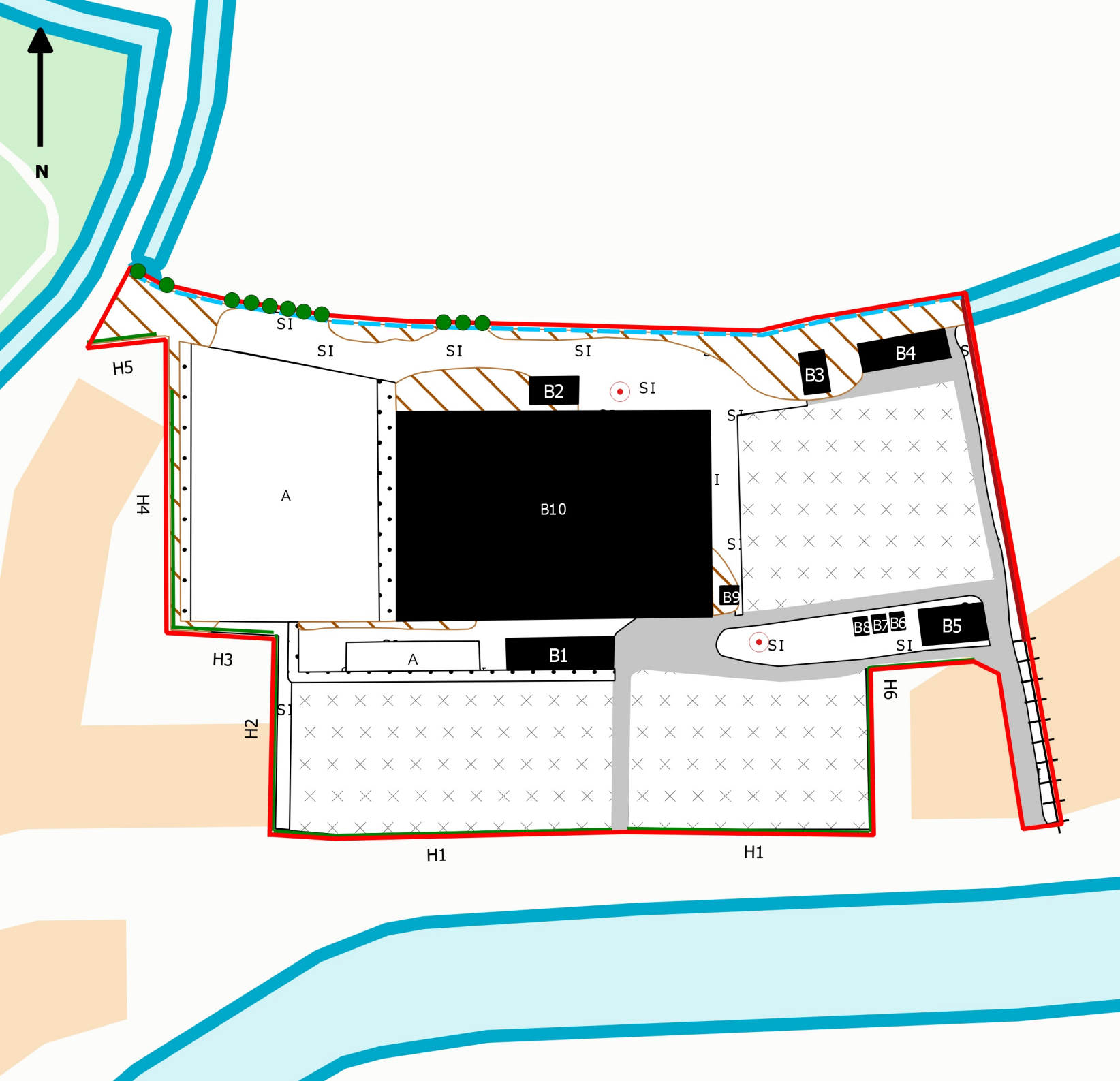
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Appendix 1 - Phase 1 Habitat Survey Plan

Legend

- Scattered Trees
- SI Poor Semi-Improved Grassland
- Tall Ruderal Vegetation
- A Arable
- Ephemeral, Short Perennial
- Intact Species Poor Hedgerow
- Fence
- Wall Boundary
- Dry Ditch
- Buildings
- . Bare Ground
- Hard Standing
- Site Boundary
- Target Note (Wood Piles)



Client: Mrs G Needham
 Drawing Title: RSE_801 D1 V1 KL
 Site Address: Station Road, Surfleet
 Drawn By: KL
 Date: 1.12.16
 Scale: Not To Scale

Phoenix House, Merlin Way, Quarry Hill
 Industrial Estate, Ilkeston, DE7 4RA