Newark Road,
Sutton-in-Ashfield

Ecological Impact Appraisal

Client:

Hallam Land Management Ltd

Report Reference:

RSE_6136_R1_V2_EclA

Issue Date:

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ECOLOGY
FLOOD RISK
ARBORICULTURE
HABITATS
TRAINING

CIEEM
REGISTERED
PRACTICE 2022-2023

PROJECT			
Client:	Hallam Land Management Ltd		
Project:	Newark Road, Sutton-in-Ashfield		
Reference	RSE_6136_R1_V1_PEAR		
Report Title	Preliminary Ecological Appraisal Report		

DOCUMENT CONTROL

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DISCLOSURE:

1 EXECUTIVE SUMMARY

1.1 Background

i RammSanderson Ecology Ltd was instructed by Hallam Land Management Ltd to assess the potential for protected species and habitats to be present on the site Newark Road located in Sutton-in-Ashfield.

ii The site is comprised of two arable fields, with associated grassland, hedgerows and scrub. The land adjacent the site includes industrial estates to the north, arable land to the south and east. A residential estate borders part of the site to the west.

Table 1: Summary of Ecological Features

Ecological Feature	Comment	Further Surveys Recommended	Avoidance	Mitigation	Compensation/Enhancement	Residual Impact
Designated Sites	Works are not of a type that are likely to trigger the need for further impact appraisal in regard to the Impact Risk Zones of nearby designated sites.	No	N/A	N/A	N/A	Negligible
Habitats	Majority of habitats of limited ecological value. Hedgerows, scrub and lines of trees offered high ecological value.	No	N/A	N/A	Majority of hedgerows and lines of trees to be retained.	Negligible
Great Crested Newt	One ditch located onsite – D1. Terrestrial habitats on site poor, however some areas of more optimal habitat. Five waterbodies scoped out due to barrier to dispersal.	Yes - eDNA to determine presence/absence of GCN within D1. **This survey has been completed and results are anticipated to be returned from our laboratory partner shortly and will be**	N/A	In case of a positive eDNA result, an outline Mitigation Strategy is provided in Section 6.	TBC	Possible – depending on results of eDNA survey

Ecological Feature	Comment	Further Surveys Recommended	Avoidance	Mitigation	Compensation/Enhancement	Residual Impact
		reported on during the determination period.				
Bats	Trees – T17 & T23 were assessed as having high bat roost potential. The illustrative masterplan shows T17 as requiring removal to facilitate the scheme.	3 x Presence/likely absence surveys for roosting bats should be undertaken during the active period for bats (May-September). **These surveys are underway and will be reported on during the determination period**	No	TBC	The addition of bat boxes to the remaining trees onsite.	Possible – depending on results of nocturnal surveys.
Birds	Potential for works to disturb nesting birds.	No	Conduct works over winter outside breeding bird season	Nesting bird check by ecologist immediately prior to works if occurring March – September.	N/A	Negligible
Reptiles	Marshy grassland, dense scrub, tall ruderal, hedgerows and arable verges provided suitability for foraging, refuge seeking and commuting for reptiles, albeit limited.	Yes – a suite of seven reptile surveys to determine presence/likely absence of any reptile populations on site. **These surveys are underway and will be reported on during the determination period**	N/A	TBC	TBC	Possible – depending on results of reptile surveys.

Ecological Feature	Comment	Further Surveys Recommended	Avoidance	Mitigation	Compensation/Enhancement	Residual Impact
Water Vole, Otter, White-clawed crayfish (WCC)	No water course onsite. Due to the lack of optimal habitats on site, it is considered unlikely for riparian species to be present.	No	N/A	N/A	N/A	N/A
Badger	No setts or signs recorded but habitat on site is suitable and there are historical setts recorded on site. Dense scrub limited visibility, in particular where historical setts were recorded. It is therefore likely that transient or sett building badger are using the site.	Yes – vegetation clearance near the historical badger setts alongside a further badger survey to assess for any setts on site. **This work is underway and will be reported on during the determination period** A pre-commencement check prior to development to check for any newly developed badger setts.	TBC	TBC	TBC	Possible – depending on results of badger surveys.
Principal Species	Species such as brown hare and hedgehog are present locally, and habitat within the site suitable for brown hare and hedgehog.	No	N/A	Precautionary methods of works to prevent injury to small mammals.	N/A	N/A
Invasive species	Two stands of Japanese knotweed were recorded on site.	No	N/A	Treatment and eradication of	N/A	Possible – potential spread if removal not

Ecological Feature	Comment	Further Surveys Recommended	Avoidance	Mitigation	Compensation/Enhancement	Residual Impact
				Japanese knotweed prior to development.		undertaken prior to development.
Biodiversity Net Gain	Removal of low diversity and common habitats that support only limited protected species. The site contains 45.85 baseline biodiversity units for habitat areas.	No	N/A	Additional planting of trees, native scrub, hedgerows and wildflower meadows could help to offset the net loss.	TBC	TBC

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2 INTRODUCTION AND BACKGROUND

2.1 Purpose and Scope of this Report

i RammSanderson Ecology Ltd was commissioned by Hallam Land Management Ltd to assess the potential for protected species and habitats to be present on the site Newark Road, Sutton-in-Ashfield.

ii To complete a preliminary ecological assessment of the proposals, a desk-based assessment, Extended Phase 1 Habitat Survey, and a preliminary protected species assessment were carried out. Taken together, in common with the Chartered Institute of Ecology & Environmental Management's (CIEEM) 2017 publication this is termed as a Preliminary Ecological Appraisal (PEA). This report aims to provide general advice on ecological constraints associated with any development of the site and includes recommendations for further survey: 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 Impact Assessment' of supported by supplementary reports, which can be used to lawfully determine a planning application in line with current planning policy[1].

iii The study area was defined within the plans provided by the client (EMS.2254_102E-01) as well as considering desk study data and applicable legislation (Appendix 2) as shown in the enclosed Site Location Plan (Figure 1) and Phase 1 Habitat plan (Appendix 3) plus a buffer zone extended to include the Zone of Influence (see section below) of the proposals (hereafter referred to as the "Site").

iv This preliminary 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 site based on standard Phase 1 Habitat survey methodology;
- Evaluate any potential for protected or priority species/habitats to be present;
- Identify any ecological constraints that may affect the scheme design;
- 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 obtained for a subsequent EcIA in order for a planning decision to be concurrent with current planning policy; and
- Identify opportunities for ecological enhancement to provide net biodiversity gain in line with the Environment Act 2021 and the National Planning Policy Framework (NPPF, 2021).

v 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.

vi 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).

2.2 Zone of Influence

i The Zone of Influence (ZoI) is used to describe the geographic extent of potential impacts of a proposed development. The Zone is determined by the development proposals in relation to individual species ecological requirements indicated in best practice guidelines.

ii In relation to great crested newts (GCN), the ZoI 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. However, for this site the ZOI is only considered for water bodies within 250m of the site boundary. Guidance

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

set out within Natural England's Method Statement template, to be used when applying for a Great Crested Newt development licence, states that surveys of ponds within 500m of the site boundary are only required when '(a) data indicates that the pond(s) has potential to support a large great crested newt population, (b) the footprint contains particularly favourable habitat, (c) the development would have a substantial negative effect on that habitat and (d) there is an absence of dispersal barriers.' Given that in this instance, the terrestrial habitat surrounding the site is generally considered 'suboptimal' with hardstanding, and grassland lacking a tussocky thatch to support GCN refuge and the scheme is small in scale with localised impacts, it is considered that survey of ponds within 500m of the site boundary is not required, and that survey of ponds within 250m represents adequate survey effort.

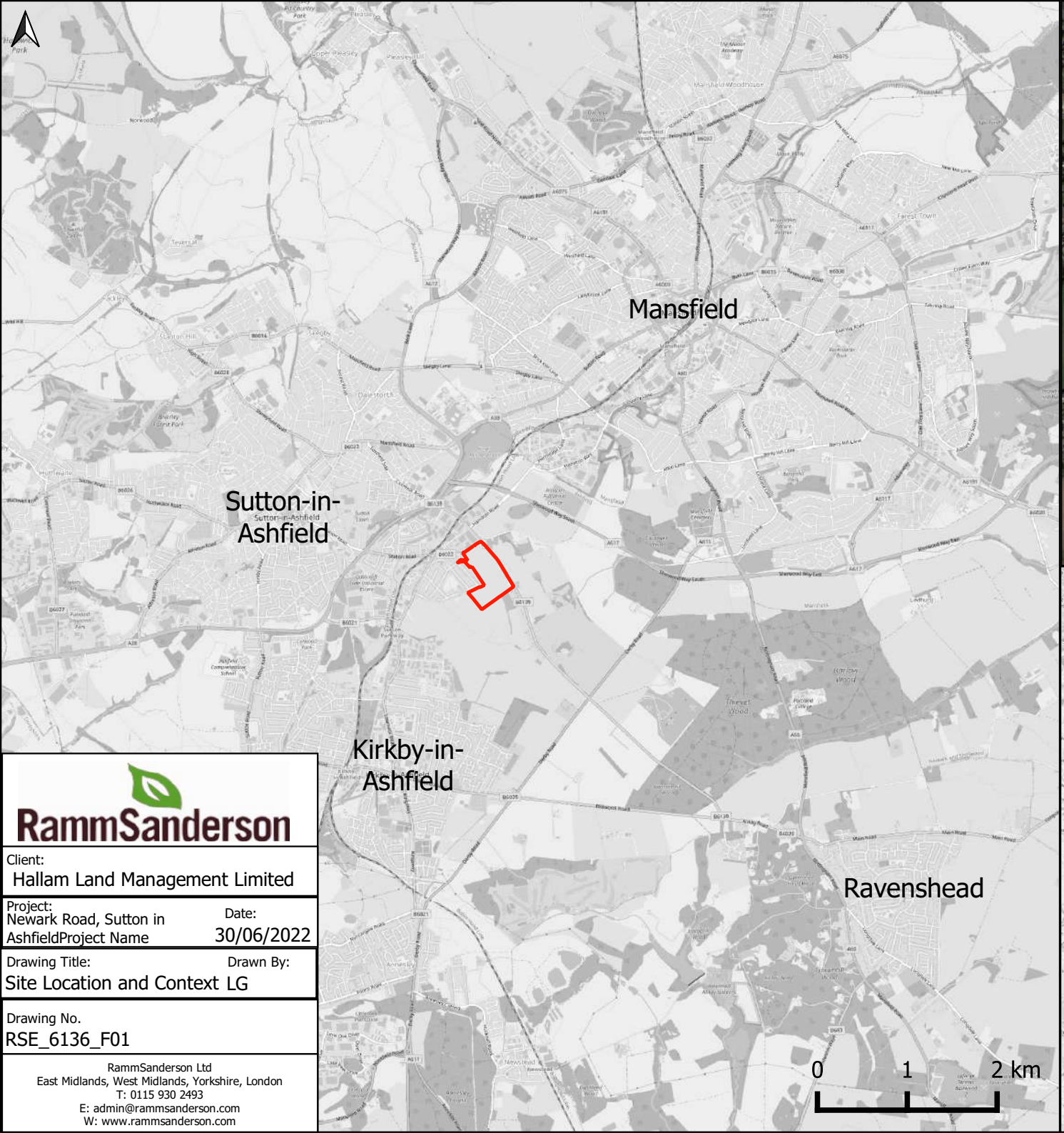
iii For badgers, the zone of influence is typically 30-50m from the Site boundary as this is the distance within which a sett can be damaged or disturbed by heavy machinery.

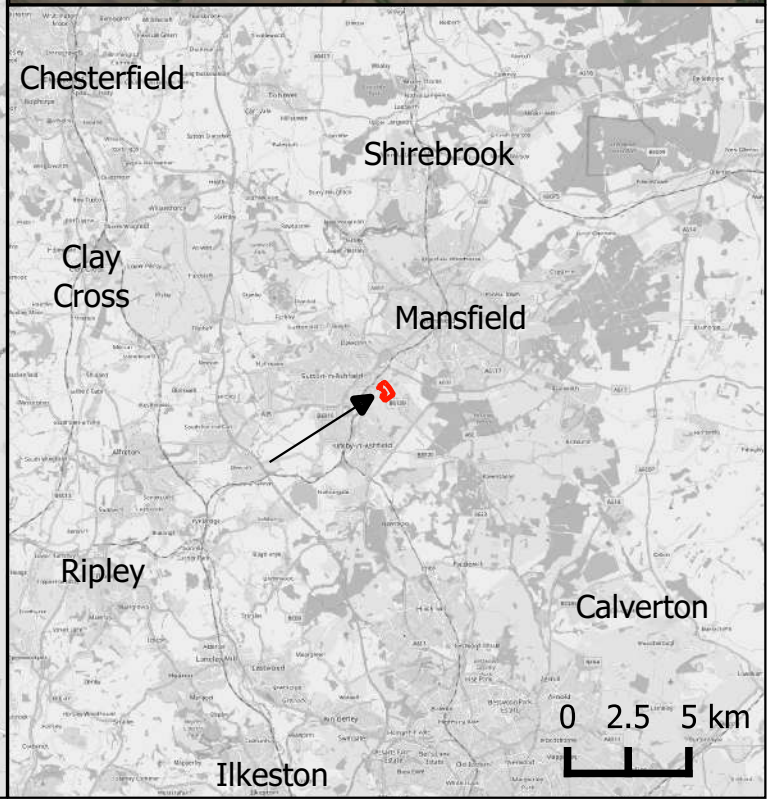
iv As bats are highly mobile species, the ZoI for these can be 5km from a site wherein high-quality habitat will be impacted by proposals.

v For designated sites, the Zone of Influence can be >10km from the site and this is termed the Impact Risk Zone (IRZ). Where sites occur within an IRZ the requirement for a Habitat's Regulations Assessment or Environmental Impact Assessment may be triggered.

2.3 Site Context and Location

i The site is located in the town of Sutton-in-Ashfield, Nottinghamshire (central grid reference SK 51681 58259). The site comprised of two arable fields with associated hedgerows, dense scrub and lines of trees. To the north of the site is Mansfield, and to the west Sutton-in-Ashfield. To the south was a block of arable fields.





RammSanderson

Client:
Hallam Land Management Limited

Project:
Newark Road, Sutton in AshfieldProject Name

Date:
30/06/2022

Drawing Title:
Site Location and Context

Drawn By:
LG

Drawing No.
RSE_6136_F01

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3 METHODOLOGY

3.1 Preliminary Appraisal

i The preliminary ecological appraisal is based on the standard best practice methodology provided by the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017). 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 Local Biodiversity Action Plans. Based upon this, recommendations for further, more detailed surveys are made as appropriate to confirm presence / likely absence of a protected species.

ii In identifying constraints, the review considers the Client's Site proposals and any subsequent recommendations made are proportionate / 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.

3.2 Desk Based Assessment

i Data regarding statutory and non-statutory designated sites, plus any records of protected or Priority species and habitats was requested from the local ecological records centre and online resources, details of which are provided in Table 2 below.

Table 2: Consulted resources

Consultee/Resource	Data Sought	Search Radius from Boundary
Nottinghamshire Biological and Geological Records Centre	Non-Statutory Site Designations	2km
	Protected/Principal Species Records	2km
www.magic.gov.uk[2] [3]	Statutory Site Designations (Impact Risk Zones)	5km
	Habitats of Principal Importance (NERC Act, 2006)	1km
	European Protected Species Licences	5km

NB: Desk study data is third party controlled data, purchased or consulted 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.

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

[3] MAGIC resource was reviewed on the 26/07/2022

3.3 Phase 1 Habitat Survey

i An extended Phase 1 Habitat Survey of the site was completed to identify habitats present. All habitats within the site boundary were described and mapped following standard Phase 1 Habitat Survey methodology (JNCC, 2016), which categorises habitat type through the identification of individual plant species.

ii 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).

3.4 Protected / Priority Species Scoping Assessment

i The habitats on site were assessed for their suitability for supporting any legally protected or Priority species that would be affected by the proposed development. This includes invasive non-native plant species such as Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and giant hogweed (*Heracleum mantegazzianum*).

3.5 Tree Bat Roost Suitability Assessment

i The site, including the buildings, trees and boundary trees, were assessed by an ecologist and graded as to their suitability for supporting roosting bats using the Bat Conservation Trust's *Bat Surveys for Professional Ecologists: Good Survey Guidelines* (Collins, J. Eds. 2016), an extract of which is provided interpreted in the table below.

Table 3: Criteria for bat roost potential assessment of buildings and trees

Roost Potential	Description	Surveys Required (Trees)
Confirmed roost	Evidence of roosting bats found during initial daytime inspection.	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
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
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.	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

** 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.*

3.6 Biodiversity Impact Assessment

3.6.1 Outline Procedure

i It is understood that a Biodiversity Impact Assessment of proposals will be carried out by a third party in accordance with guidelines published by DEFRA and via the DEFRA Metric Calculation Tool 3.1. The existing value of individual habitats on site has been calculated by accurately mapping the proposed development site from information collected during a Biodiversity Scoping Assessment/Phase 1 Habitat Survey and by dividing the land into individual habitat parcels. This part of the study is informed by JNCC Phase 1 habitat and UK HAB habitat classification systems. The distinctiveness, condition, connectivity, and strategic significance of these parcels is then assessed and together with the area of each habitat, a value is assigned to form an accurate baseline value of the site. Details of how habitat distinctiveness, condition assessment, connectivity and strategic significance is determined is detailed within DEFRA best practice literature.

3.6.2 Calculation

ii Once the habitat types have been input into the Biodiversity Impact Assessment calculator, along with their area, distinctiveness, condition, connectivity, and strategic significance an overall score in biodiversity units is calculated using proposed layout/masterplan drawings. This element of the work will be carried out by another consultant.

3.7 Limitations

i 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.

3.8 Accurate lifespan of ecological data

i 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 18 months from the date of survey, notwithstanding any considerable changes to the site conditions, the presence of mobile species such as bats, otters and badgers or where species/county specific guidance dictates otherwise (CIEEM, 2019).

4 RESULTS

4.1 Surveyors and Survey Conditions

i The initial Phase 1 survey was carried by Aleah Maltby MSc, whom has been a professional ecologist for 4 years and is appropriately experienced and qualified to undertake this type of survey. The surveys were completed during suitable conditions as detailed in the table below.

Table 4: Summary of conditions during survey

Abiotic Factor	Survey 1
Survey type	PEA
Date completed	21/06/2022
Temperature (°C)	24
Wind speed (Beaufort Scale)	1
Cloud cover (Oktas Scale)	0
Precipitation	0

4.2 Desk Study

i A total of 11 statutory designated sites were recorded within the search area, the details of which are summarised in the Table below.

Table 5: Statutory Designated Sites

Site Name	Designation	Location	Brief Description
The Hermitage	LNR[4]	1.2km	Mill pond with reedbeds surrounded by deciduous woodland and good ground flora/ 46 bird species recorded.
Oakham	LNR	1.6km NE	Grassland site with good grassland, wetland and scrub habitats present
Quarry Land	LNR	2km NE	Deciduous woodland and riparian habitats along the river Maun with mill pond and rock exposures.
Kirby Grives	SSSI[5]	2.7km SW	Agricultural site to the SW with broadleaved, mixed and yew woodland, named a SSSI for lack of corrective works and inappropriate scrub control
Portland Park	LNR	3km SW	High quality limestone grassland (of national importance). Supports a range of invertebrate and bird species who feed on the former.

[4] LNR – Local Nature Reserve
[5] SSSI - Sites of Special Scientific Interest

Site Name	Designation	Location	Brief Description
Brierly Forest Park	LNR	3km NW	Major habitats present are species rich calcareous grassland, neutral grassland, spring line flushes old species-rich hedgerows, tall herb communities, mixed and broadleaved plantation woodlands, standing water and running water.
Teversal/Pleasley Network	LNR	3.1km NW	Former disused railway line that contains varied and botanically rich range of habitats. Contains region calcareous grassland. A range of common butterflies, birds and bats recorded along the trail. Several rare orchids within the LNR, including frog orchids.
Teversal Pastures	SSSI	3.7km NW	Pasture site named a SSSI for unfavourable recovery
Maun Valley Park	LNR	4.5km NE	Ancient Oak (*Quercus spp.)* woodland, grassland, water meadows and wetland habitats.
Ravensdale	LNR	4.6km NE	Oak coppice woodland, scrub and acid grassland habitat plus heathland. Common bird species present onsite.
Annesley Woodhouse Quarries	SSSI	4.6km SW	Agricultural land named a SSSI for inappropriate dredging, freshwater fish stock, lack of corrective works, inappropriate scrub control. Declining due to increased presence of fish in two of the amphibian breeding ponds and excessive dominance of Typha in one pond.

ii The Site is within the buffer zone of the potential proposed Special Protection Area Sherwood Forest, a candidate site for SPA classification. However the site contains no suitable nesting or foraging habitat for any of the candidate species which comprise of nightjar *Caprimulgus europaeus,* woodlark *Lullula arborea* and honey buzzard *Pernis apivorus.*

iii The Site lies within 5km of The Hermitage (LNR) and Kirby Grives (SSSI). The proposals are not of a type that is included within the Impact Risk Zones for these statutorily designated sites.

- **Infrastructure:** Airports, helipads and other aviation proposals
- **Air pollution:** Livestock and poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t.
- **Combustion:** General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.

iv Five non-statutorily designated sites were also identified within the search radius, details of which are provided in the table below.

Table 6: Non-Statutory Designated Sites

Site Name	Designation	Location	Brief Description
Hamilton Hill	LWS	200m NE	A remnant acid grassland on an isolated hill.
Coxmoor Golf Course	LWS	0.3km SE	This golf course contains a variety of habitats including important relict grass heath communities on the 'roughs', wooded areas and a small pond which adds further interest. An important area

Site Name	Designation	Location	Brief Description
			botanically is a wet flush on a north facing slope which has a large population of Common Spotted-orchids (*Dactylorhiza fuchsii*) plus Marsh Thistle (*Cirsium palustre*), Large Bird's-foot-trefoil (*Lotus pedunculatus*), abundant Common Fleabane (*Pulicaria dysenterica*) and various sedge (*Carex*) and rush *(Juncus*) species.
Kings Mill Reservoir	LWS	0.7km N	The edges of the reservoir are mainly wooded. A variety of willow species (*Salix*) grow at the waters edge along with Alder (*Alnus glutinosa*). Elsewhere Wych Elm (*Ulmus glabra*), Sycamore (*Acer pseudoplatanus*), Hawthorn (*Crataegus monogyna*) and Silver Birch (*Betula pendula*) frequent the canopy with a ground flora typical of secondary woodland.
Cauldwell Brook Marsh	LWS[6]	1.0km E	This area of marshy grassland is situated in a willow plantation alongside a tributary of the Cauldwell Brook. The sward contains such species as Pignut (*Conopodium majus*), Amphibious Bistort (*Persicaria amphibia*), Floating Sweet-grass (*Glyceria fluitans*), Meadow Foxtail (*Alopecurus pratensis*), Common Spotted-orchid (*Dactylorhiza fuchsii*) and Cuckooflower (*Cardamine pratensis*).
Cauldwell Dam and Drain	LWS	1.0km E	The large pond on this site is used for fishing. The deep water lacks a submerged aquatic flora, but the pond margins support species such as Greater Willowherb (*Epilobium hirsutum)*, Water Figwort (*Scrophularia auriculata)* and Celery-leaved Buttercup (*Ranunculus sceleratus)*. A botanically rich area of swamp can be found where the Cauldwell Brook feeds into the pond from the south.

v There are 29 Habitats of Principal Importance under Section 41 of the NERC Act, 2006 located within a 1km radius of the site. These are shown in a table below, with the distance and direction of the closest habitats in regard to the site referenced. The closest is a parcel of deciduous woodland located across Coxmoor Road which runs along the eastern boundary of site.

Table 7:Habitats of Principal Importance within 1km of the Site

Habitat	Quantity	Closest Habitat - Distance to Site	Closest Habitat - Direction to Site
Deciduous woodland	14	15m	East
Lowland heathland	12	396m	East
Lowland dry acid grassland	1	470m	Northeast
Lowland fens	1	0.7km	South southeast
Reedbeds	1	0.7km	North

[6] LWS – Local Wildlife Site

vi Records of previous European Protected Species Licences (EPSL) were discovered within a 5km search area around the site.

This included 26 records of bat licences.

- The closest bat licence (2016-25075-EPS-MIT) was located 1.8km west and allowed for the destruction of common pipistrelle resting places.
- The most recent licence (2020-50366-EPS-MIT) was granted in 2020 and allowed for impact upon and damage to the breeding sites of brown long-eared, common pipistrelle, and soprano pipistrelle bats.

Five records of great crested newt licences.

- The closest licence (2016-26062-EPS-MIT-5) was located 0.8km east. This allowed for the damage to and destruction of great crested newt resting places.
- The most recent licence (2016-26062-EPS-MIT-5) was granted in 2019 and allowed for the damage to and destruction of great crested newt resting places.

vii Protected species records were received from Notts Biological and Geological Records Centre. A summary of the records considered most relevant to the site and proposed development are provided in the table below. Full species records are available to view upon request.

Table 8: Summary of Protected and Notable Species Records

Common Name	Scientific Name	Records	Conservation Status
Amphibians			
Common frog	*Rana temporaria*	10 records; closest record 0.61km N	Partial protection under WCA
Common toad	*Bufo bufo*	6 records; closest record 0.71km N	NERC, Partial Protection under WCA
Smooth newt	*Lissotriton vulgaris*	19 records; closest record 0.71km SE	Partial protection under WCA[7]
Great crested newts	*Triturus cristatus*	4 records; closest record 1.01km NE	EPS[8], NERC[9], WCA (5)[10]
Palmate newt	*Lissotriton helveticus*	1 record, 1.17km NE	Partial protection under WCA
Mammal			
Common pipistrelle	*Pipistrellus pipistrellus*	40 records; closest record 1m SW	EPS, WCA
European hedgehog	*Erinaceus europaeus*	10 records; closest record 39m NW	NERC
Brown long-eared bat	*Plecotus auritus*	2 records; closest record 140m W	EPS, WCA, NERC
Pipistrelle sp.	*Pipistrellus sp.*		
Noctule	*Nyctalus noctula*	12 records; closest record 140m W	EPS, WCA, NERC
Nyctalus sp.	*Nyctalus sp.*	3 records; closest record 140m W	
Lesser horseshoe bat	*Rhinolophus hipposideros*	4 records; closest record 140m W	EPS, WCA, NERC
Soprano pipistrelle	*Pipistrellus pygmaeus*	16 records; closest record 140m W	EPS, WCA, NERC
Water vole	*Arvicola amphibius*	42 records; closest record 0.61km N	WCA, NERC
Brown hare	*Lepus europaeus*	1 record, 0.68km NE	NERC
Water shrew	*Neomys fodiens*	1 record, 0.71km N	WCA

[7] WCA – Wildlife & Countryside Act (1981) Section 5 protecting against trade or sale of species.
[8] EPS – European Protected Species - protected by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019
[9] NERC – Species of Principal Importance under Section 41 of the Natural Environment Rural Communities Act (2006) Species of Principal Conservation Importance; UKBAP & LBAP
[10] WCA (5) – Schedule 5 protected species - Wildlife & Countryside Act (1981)

Common Name	Scientific Name	Records	Conservation Status
Myotis sp.	*Myotis sp.*	9 records; closest record 0.73km NE	
Daubenton's	*Myotis daubentonii*	1 record, 0.81km N	
Eurasian badger	*Meles meles*	1 record within 2km of the site.	PBA[11]
Birds			
Willow tit	*Poecile montanus*	61 records; closest record 107m SE	BoCCRed, NERC
Arctic tern	*Sterna paradisaea*	3 records; closest record 0.81km N	BoCCAmber
Barn owl	*Tyto alba*	3 records; closest record 0.81km N	BoCCGreen, WCA (1)
Barnacle goose	*Branta leucopsis*	1 record, 0.81km N	BoCCAmber
Black-headed gull	*Chroicocephalus ridibundus*	156 records; closest record 0.81km N	BoCCAmber
Brambling	*Fringilla montifringilla*	2 records; closest record 0.81km N	BoCCGreen, WCA (1)
Common gull	*Larus canus*	45 records; closest record 0.81km N	BoCCAmber
Common redstart	*Phoenicurus phoenicurus*	1 record, 0.81km N	BoCCAmber
Common sandpiper	*Actitis hypoleucos*	20 records; closest record 0.81km N	BoCCAmber
Common scoter	*Melanitta nigra*	4 records; closest record 0.81km N	BoCCRed, WCA (1), NERC
Common tern	*Sterna hirundo*	59 records; closest record 0.81km N	BoCCAmber
Curlew	*Numenius arquata*	2 records; closest record 0.81km N	BoCCRed, NERC
Dunlin	*Calidris alpina*	2 records; closest record 0.81km N	BoCCAmber
Dunnock	*Prunella modularis*	90 records; closest record 0.81km N	BoCCAmber
Fieldfare	*Turdus pilaris*	3 records; closest record 0.81km N	BoCCRed, WCA (1)

[11] PBA – Protection of Badgers Act 1992

Common Name	Scientific Name	Records	Conservation Status
Gadwall	*Anas strepera*	154 records; closest record 0.81km N	BoCCAmber
Garganey	*Anas querquedula*	6 records; closest record 0.81km N	BoCCAmber, WCA (1)
Golden plover	*Pluvialis apricaria*	1 record, 0.81km N	BoCCGreen
Golden eye	*Bucephala clangula*	11 records; closest record 0.81km N	BoCCRed
Grasshopper warbler	*Locustella naevia*	1 record, 0.81km N	BoCCRed
Great black-backed gull	*Larus marinus*	5 records; closest record 0.81km N	BoCCAmber
Great white egret	*Ardea alba*	5 records; closest record 0.81km N	BoCCAmber
Greenshank	*Tringa nebularia*	1 record, 0.81km N	BoCCAmber
Grey wagtail	*Motacilla cinerea*	93 records; closest record 0.81km N	BoCCAmber
Greylag goose	*Anser anser*	56 records; closest record 0.81km N	BoCCAmber
Herring gull	*Larus argentatus*	20 records; closest record 0.81km N	BoCCRed, NERC
Hobby	*Falco subbuteo*	9 records; closest record 0.81km N	BoCCGreen, WCA (1)
House martin	*Delichon urbicum*	44 records; closest record 0.81km N	BoCCAmber
House sparrow	*Passer domesticus*	137 records; closest record 0.81km N	BoCCRed, NERC
Kestrel	*Falco tinnunculus*	4 records; closest record 0.81km N	BoCCAmber
Kingfisher	*Alcedo atthis*	23 records; closest record 0.81km N	BoCCAmber, WCA (1)
Kittiwake	*Rissa tridactyla*	6 records; closest record 0.81km N	BoCCRed
Lapwing	*Vanellus vanellus*	90 records; closest record 0.81km N	BoCCRed, NERC
Lesser black-backed gull	*Larus fuscus*	126 records; closest record 0.81km N	BoCCAmber
Lesser redpoll	*Acanthis cabaret*	3 records; closest record 0.81km N	BoCCRed, NERC
Little grebe	*Tachybaptus ruficollis*	148 records; closest record 0.81km N	BoCCGreen

Common Name	Scientific Name	Records	Conservation Status
Little gull	*Hydrocoloeus minutus*	10 records; closest record 0.81km N	BoCCAmber, WCA (1)
Little tern	*Sternula albifrons*	1 record, 0.81km N	BoCCAmber, WCA (1)
Mallard	*Anas platyrhynchos*	187 records; closest record 0.81km N	BoCCAmber
Marsh tit	*Poecile palustris*	1 record, 0.81km N	BoCCRed, NERC
Mistle thrush	*Turdus viscivorus*	25 records; closest record 0.81km N	BoCCRed
Moorhen	*Gallinula chloropus*	156 records; closest record 0.81km N	BoCCAmber
Oystercatcher	*Haematopus ostralegus*	3 records; closest record 0.81km N	BoCCAmber
Peregrine	Falco peregrinus	2 records; closest record 0.81km N	WCA1
Pink-footed goose	*Anser brachyrhynchus*	2 records; closest record 0.81km N	BoCCAmber
Pintail	*Anas acuta*	24 records; closest record 0.81km N	BoCCAmber
Pochard	*Aythya ferina*	168 records; closest record 0.81km N	BoCCRed
Red breasted merganser	*Mergus serrator*	1 record, 0.81km N	BoCCAmber
Red kite	*Milvus milvus*	3 records; closest record 0.81km N	WCA1
Redshank	*Tringa totanus*	1 record, 0.81km N	BoCCAmber
Redwing	*Turdus iliacus*	19 records; closest record 0.81km N	BoCCRed, WCA (1)
Reed bunting	*Emberiza schoeniclus*	38 records; closest record 0.81km N	BoCCAmber, NERC
Rook	*Corvus frugilegus*	2 records; closest record 0.81km N	BoCCAmber
Ruff	*Philomachus pugnax*	5 records; closest record 0.81km N	BoCCRed, WCA (1)
Sand martin	*Riparia riparia*	69 records; closest record 0.81km N	BoCCGreen
Sandwich tern	*Thalasseus sandvicensis*	2 records; closest record 0.81km N	BoCCAmber
Scaup	*Aythya marila*	2 records; closest record 0.81km N	BoCCRed, WCA (1)

Common Name	Scientific Name	Records	Conservation Status
Sedge warbler	*Acrocephalus schoenobaenus*	18 records; closest record 0.81km N	BoCCAmber
Shelduck	*Tadorna tadorna*	4 records; closest record 0.81km N	BoCCAmber
Skylark	*Alauda arvensis*	9 records; closest record 0.81km N	BoCCRed, NERC
Snipe	*Gallinago gallinago*	165 records; closest record 0.81km N	BoCCAmber
Song thrush	*Turdus philomelos*	46 records; closest record 0.81km N	BoCCRed, NERC
Sparrowhawk	*Accipiter nisus*	21 records; closest record 0.81km N	BoccAmber
Spoonbill	*Platalea leucorodia*	1 record, 0.81km N	BoCCAmber
Spotted flycatcher	*Muscicapa striata*	2 records; closest record 0.81km N	BoCCRed, NERC
Starling	*Sturnus vulgaris*	21 records; closest record 0.81km N	BoCCRed, NERC
Stock dove	*Columba oenas*	59 records; closest record 0.81km N	BoCCAmber
Swallow	*Hirundo rustica*	53 records; closest record 0.81km N	BoCCGreen
Swift	*Apus apus*	86 records; closest record 0.81km N	BoCCAmber
Tawny owl	*Strix aluco*	1 record, 0.81km N	BoCCAmber
Teal	*Anas crecca*	2 records; closest record 0.81km N	BoCCAmber
Tree sparrow	*Passer montanus*	3 records; closest record 0.81km N	BoCCRed, NERC
Tufted duck	*Aythya fuligula*	169 records; closest record 0.81km N	BoCCGreen
Turnstone	*Arenaria interpres*	1 record, 0.81km N	BoCCAmber
Turtle dove	*Streptopelia turtur*	1 record, 0.81km N	BoCCRed, NERC
Wheatear	*Oenanthe oenanthe*	2 records; closest record 0.81km N	BoCCGreen
Whooper swan	*Cygnus cygnus*	8 records; closest record 0.81km N	BoCCAmber
Wigeon	*Mareca penelope*	13 records; closest record 0.81km N	BoCCAmber
Willow warbler	*Phylloscopus trochilus*	33 records; closest record 0.81km N	BoCCAmber

Common Name	Scientific Name	Records	Conservation Status
Woodcock	*Scolopax rusticola*	1 record, 0.81km N	BoCCRed
Wood pigeon	*Columba palumbus*	118 records; closest record 0.81km N	BoCCAmber
Wood sandpiper	*Tringa glareola*	1 record, 0.81km N	BoCCAmber
Wren	*Troglodytes troglodytes*	130 records; closest record 0.81km N	BoCCAmber
Yellow-legged gull	*Larus michahellis*	8 records; closest record 0.81km N	BoCCAmber
Yellow wagtail	*Motacilla flava*	4 records; closest record 0.81km N	BoCCRed, NERC
Invasive Species			
Japanese knotweed	*Fallopia japonica*	14 records; closest record 44m NW	WCA (9)[12]
Himalayan balsam	*Impatiens glandulifera*	17 records; closest record 403m NW	WCA (9)

[12] WCA (9) - Schedule 9 Wildlife and Countryside Act 1981 (as amended)

4.3 Phase 1 Habitat Survey

i Full habitat descriptions and photos are provided below. For a Phase 1 Habitat Survey Plan refer to Figure 2.

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

Table 9: Results of Site Survey

Habitat	Description	Area (m^2)	Proportion of site (%)	Ecological Importance & Outcome of Proposal	Photograph
A2.1 Dense Scrub	Areas of dense scrub were present on site bordering the arable fields. These were dominated by bramble (*Rubus fruticosus agg.*) with abundant cleavers (*Galium aparine*) and nettle (*Urtica dioica*) and greater willowherb (*Epilobium hirsutum).* Occasionally, silver birch (*Betula pendula*) and goat willow (*Salix caprea)* saplings and hedge bindweed (*Calystegia sepium*) were recorded.	3202	1.5	Moderate ecological value, some likely to be lost in proposals.	
A3.1 Broadleaved parkland/scattered tree line	A line of broadleaved trees was located along the northern boundary of the site. This consisted of Ash (*Fraxinus excelsior)* and hawthorn (*Crataegus monogyna)*.	N/A	N/A	High ecological value. Some to be retained within the current proposals.	

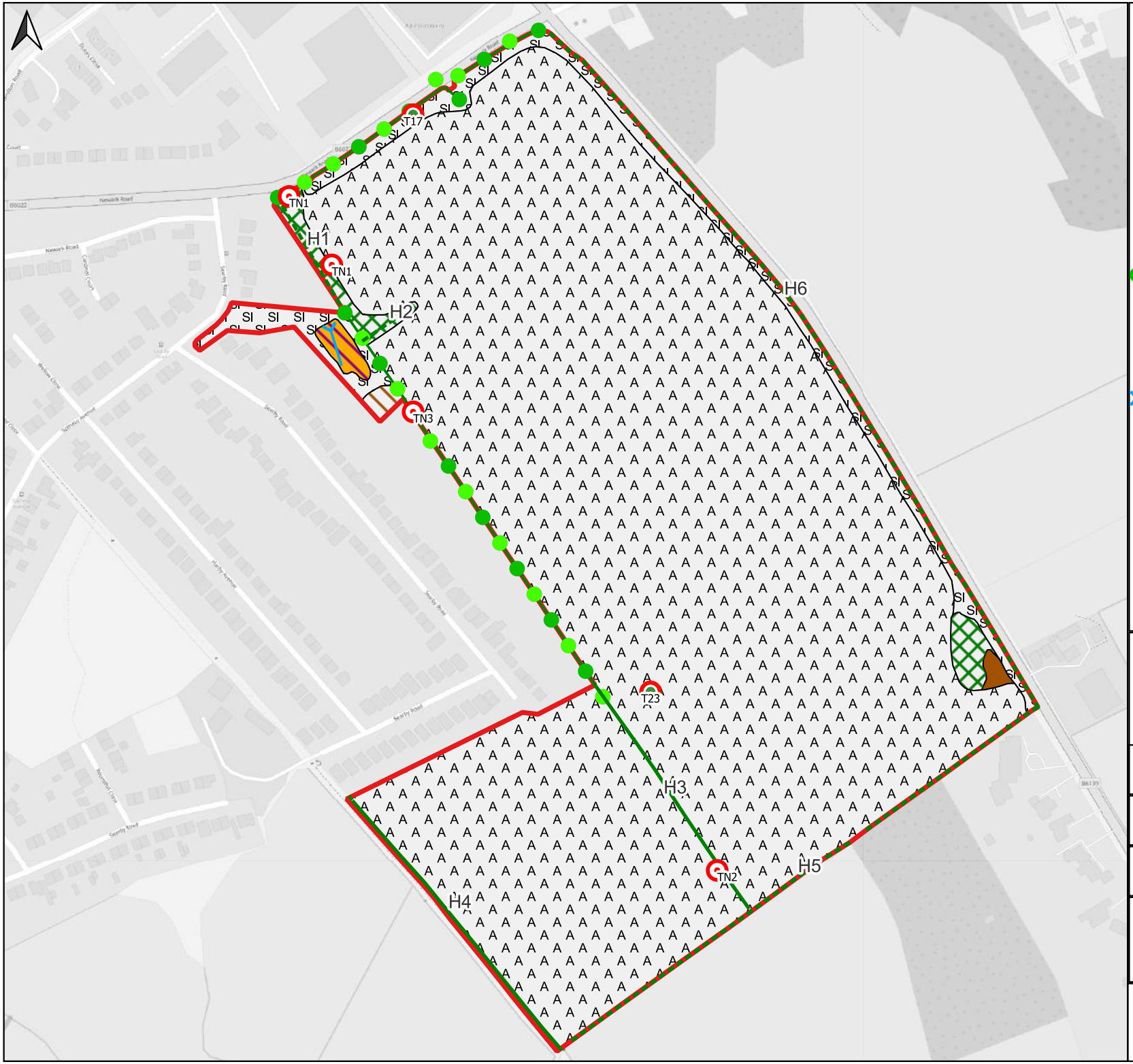
Habitat	Description	Area (m^2)	Proportion of site (%)	Ecological Importance & Outcome of Proposal	Photograph
A3.3 Mixed Parkland/scattered tree line	A line of mixed trees, mostly broadleaved was located along the western boundary of the northern arable field. This consisted of silver birch (*Betula pendula*), hawthorn, goat willow (*Salix caprea*), ash, elder (*Sambucus nigra*) and pine (*Pinus*).	N/A	N/A	High ecological value. Some to be retained within the current proposals.	
B5 Marshy Grassland	There was a small area of grassland which was noted as often inundated. It was dry at the time of the survey but consisted of soft rush (*Juncus effesus*) predominantly, with abundant greater willowherb (*Epilobium hirsutum*), broad leaved dock (*Rumex obtusifolius*) and common sorrel (*Rumex acetosa)*.	887	0.4	Moderate ecological value, some likely to be lost in proposals.	

Habitat	Description	Area (m^2)	Proportion of site (%)	Ecological Importance & Outcome of Proposal	Photograph
B6 Poor semi-improved grassland	Poor semi-improved grassland was located to the west of the arable fields. This was dominated by perennial rye grass (*Lolium perenne)* with abundant Yorkshire fog (*Holcus lanatus)* and cocks foot (*Dactylis glomerata*). Frequently occurring were broad leaved dock, and common sorrel, with occasional white clover (*Trifolium repens*), comfreys (*Symphytum officinale*) and false oat grass (*Arrhenatherum elatius*). Birds foot trefoil, annual beard grass (*Polypogon monspeliensis)* and scentless mayweed (*Tripleurospermum inodorum)* rarely occurred. Scattered scrub was located within the sward consisting of spear thistle (*Cirsium vulgare*), bristly ox tongue (*Helminthotheca echioides*), bramble.	9608	4.5	Moderate ecological value, some likely to be lost in proposals.	
C1.1 Dense continuous bracken	An area of dense continuous bracken (*Pteridium aquilinum)* was located to the south-eastern corner of the site before changing to dense scrub.	391	0.2	Some ecological value, some likely to be lost in proposals.	

Habitat	Description	Area (m^2)	Proportion of site (%)	Ecological Importance & Outcome of Proposal	Photograph
C3.1 Tall Ruderal	To the south of the poor semi-improved grassland was an area of tall ruderal consisting of common sorrel and greater willowherb, with frequent broadleaved dock. This area had wet and dry ditches from run-off of the arable fields.	480	0.2	Some ecological value, some likely to be lost in proposals.	
J1.1 Arable	The majority of the site consisted of two arable fields that are separated by a hedgerow.	198662	93	Limited ecological value.	

Habitat	Description	Area (m^2)	Proportion of site (%)	Ecological Importance & Outcome of Proposal	Photograph
J2.1.2 Intact hedge – species poor	Hedgerow 3 and 4 were located along the eastern and western peripheries of the second arable field to the west. Both were managed but not in the recent season and were approximately 1.5m in height and width. Both hedgerows were dominated by hawthorn with occasional elder.	N/A	N/A	High ecological value. Some to be retained within the current proposals.	
J2.2.2 Defunct hedge – species poor	Hedgerow 1 was located along the western periphery of the northern field and was approximately 3m in height and 2m in width. It was unmanaged and defunct. The hedgerow consisted predominantly of hawthorn with some blackthorn (*Prunus spinosa*) and elder present. Hedgerow 2 was located within the arable field and was approximately 3m in height and 1.5m in width. It was largely unmanaged and defunct. This hedgerow consisted predominantly of hawthorn. Hedgerow 5 was located along the southern extent of the site, and was managed somewhat in areas. Hedgerow 6 was located along the north-eastern periphery. Both were approximately 3-4m in height and 1.5m in width. These hedgerows consisted of hawthorn predominantly and occasional elder.	N/A	N/A	High ecological value. Some to be retained within the current proposals.	 

Habitat	Description	Area (m^2)	Proportion of site (%)	Ecological Importance & Outcome of Proposal	Photograph
J2.6 Wet Ditch	A wet ditch was located within the poor semi-improved grassland which was sourced from any runoff of the arable fields.	N/A	N/A	High ecological value. Some to be retained within the current proposals.	
Invasive Species	Two stands of Japanese knotweed *(Reynoutrica japonica*) were recorded within dense scrub on the site.	N/A	N/A	Schedule 9 invasive species. Must be removed prior to development.	



Key

- Site Boundary
- A2.1 - Scrub - dense/continuous
- B5 - Marsh/marshy grassland
- B6 - Poor semi-improved grassland
- C1.1 - Bracken - continuous
- C3.1 - Other tall herb and fern - ruderal
- J1.1 - Cultivated/disturbed land - arable
- A3.3 - Mixed Parkland/scattered trees
- J2.1.2 - Intact hedge - species-poor
- J2.2.2 - Defunct hedge - species-poor
- Deciduous Tree with Bat Potential
- G2.1 - Running water
- Target Note

TN1 - Japanese knotweed
TN2 - Mammal hole
TN3 - Area of open bare ground potentially was sett here previous but nothing now

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Client:
Hallam Land Management Limited

Project:
Newark Road, Sutton in Ashfield

Drawing Title:
Phase 1 Habitat Plan

Drawing No.	Rev:
RSE_6136_F03	V3
Drawn By:	Scale @A4:
LG	1:3800
	Date: 15/07/2022

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4.4 Preliminary Protected / Priority Habitats Assessment

4.4.1 Statutorily and Non-Statutorily Designated Sites

i The Site is within the buffer zone of the potential proposed Special Protection Area Sherwood Forest, a candidate site for SPA classification. However the site contains no suitable nesting or foraging habitat for any of the candidate species which comprise of nightjar *Caprimulgus europaeus,* woodlark *Lullula arborea* and honey buzzard *Pernis apivorus.*

ii The Site lies within 5km of two SSSIs, however, the proposals are not of a type that is included within the Impact Risk Zone for these nationally designated sites as it does not fall into any of the following categories.

- **Infrastructure:** Airports, helipads and other aviation proposals
- **Air pollution:** Livestock and poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t.
- **Combustion:** General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.

iii The closest non statutory site is Hamilton Hill LWS 200m north-east of the site. This is designated for its acid grassland and is not connected to the site terrestrially.

4.4.2 Habitats

iv The majority of habitats on site were generally of limited botanical interest and poor species diversity. The value of habitats such as hedgerows, tree lines, dense scrub were largely noted in their potential to support a range of protected / Priority faunal species rather than for their botanical value. The treelines and hedgerows offered some value as ecological corridors for the dispersal of fauna and flora into the wider countryside, particularly those located adjacent to the southern boundary.

v No protected or Priority plant species were observed, and all plant species encountered were common, widespread, and characteristic of the common habitat types they represent.

4.4.3 Invasive Floral Species

vi Japanese knotweed was recorded within two areas on site. This is a Schedule 9 (Wildlife and Countryside Act, 1981 *as amended*), under which it is an offence to cause them to spread in the wild. These were also recorded during the historical ecological surveys.

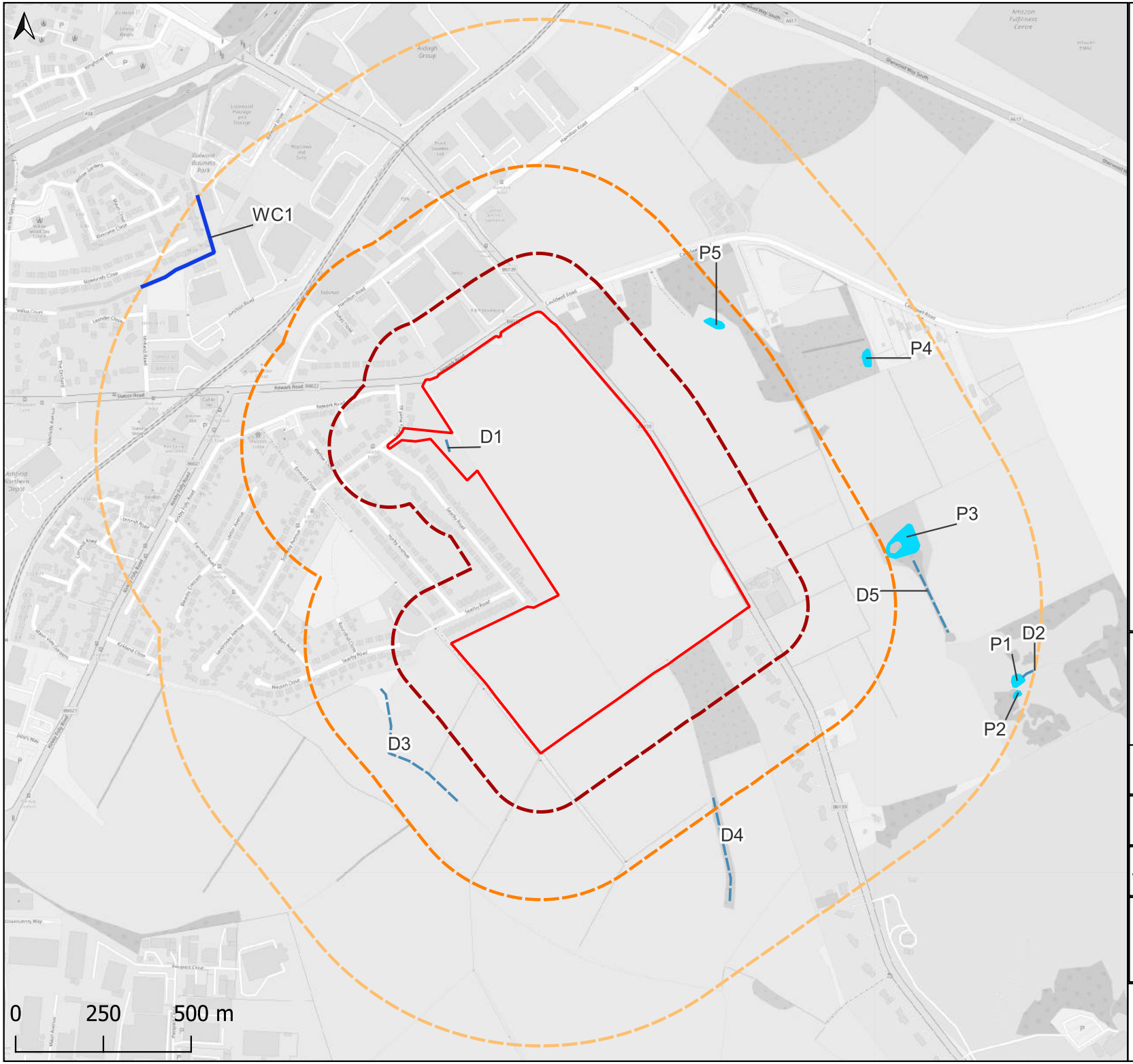
4.5 Preliminary Protected / Priority Species Assessment

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

4.5.2 Great Crested Newt (GCN)

ii One wet ditch was located on site. A further five ponds were located within 500m of the site which were separated by a barrier to dispersal in the form of main road, and so these further ponds were scoped out for GCN breeding potential.

iii Terrestrial habitats on site were dominated by arable field, providing limited opportunities for foraging, refuge and commuting GCN. However, the poor semi-improved grassland, marshy grassland, hedgerows and scrub provided some opportunity as terrestrial phase amphibian habitat. Four records of GCN were recorded during the desk study, the closest record was 1km north-east of the site.



Key

- Site Boundary
- 100m Buffer
- 250m Buffer
- 500m Buffer
- Pond
- River
- Ditch/Drain

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Client:
Hallam Land Management Limited

Project:
Newark Road, Sutton in Ashfield

Drawing Title:
Waterbody Plan

Drawing No.		Rev:
RSE_6136_F02		V3
Drawn By:	Scale @A4:	Date:
LG	1:14650	07/07/2022

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4.5.3 Bats

Trees

iv All of the trees on site were subject to a ground level tree assessment. Tree T17 was located along the northern periphery of the site and had features present. Tree T23 was located within the middle of an arable field and was assessed as having a high potential to support roosting bats due to a multitude of features present. All other trees were assessed as having negligible Bat Roosting Potential. A full table of results is located within Appendix 2.

Foraging Habitat

v The treelines, hedgerows and poor semi-improved grassland provided potential foraging and commuting habitat, as well as providing connectivity to the wider landscape. Multiple records of bats were returned during the desk study, the closest being a common pipistrelle, adjacent the southwest of the site.

4.5.4 Birds

vi The scrub, treeline, arable and hedgerows on site are suitable for bird nesting sites. However, no suitable nesting habitat for Schedule 1 birds was recorded on site and these are considered likely absent.

4.5.5 Reptiles

vii No records of reptiles were returned during the desk study. Terrestrial habitats on site were dominated by arable field, providing low opportunities for foraging, refuge seeking and commuting reptiles, however some basking opportunity. The dense scrub, marshy and poor semi-improved grassland and hedgerows provide opportunity.

4.5.6 Water Vole, Otter and White Clawed Crayfish

viii Habitats on site were deemed negligible for the above species to persist and it is therefore considered unlikely for riparian species to be present or affected by proposals.

4.5.7 Badgers

ix No badger setts or field signs were recorded during the site walkover, however setts were identified within the 2017 ecological report. It is worth noting that the dense scrub along the arable margins restricted visibility. The site represents good foraging habitat and sett building areas. In addition, local records for the species were returned. Therefore, it is likely that badgers are entering the site to forage and historically have used the site to sett build in the past.

4.5.8 Other Priority Fauna Species

x The habitats on site were suitable for hedgehogs *Erinaceus europaeus* and brown hare *Lepus europaeus* Records were identified for brown hare and hedgehog, and they are considered likely present on site.

xi Due to a lack of suitable habitats, the site is not considered likely to support any other legally protected or Priority species.

4.5.9 Biodiversity

xii The site contains 45.84 baseline biodiversity units for habitat areas, 8.64 hedgerow units and 0.21 river units.

5 DISCUSSION & RECOMMENDATIONS

5.1 Protected / Priority Species and Habitats Impact Appraisal

i The potential for protected species or habitats to be present on site and impacted by the proposals is provided below.

Table 10: Assessment of Likelihood of Impacts to Protected Species/Habitats

Species/Habitat	Suitable Habitat on Site	Local Records	Likelihood of Impacts by Proposals	Mitigation	Further Survey
Designated sites	No	Yes	None anticipated	N/A	No
Habitats	Majority of habitats of limited ecological value. Hedgerows, scrub and lines of trees offered high ecological value.	N/A	Majority of hedgerows and lines of trees to be retained.	N/A	No
Great crested newt	Wet ditch on site. Five other waterbodies scoped out due to barrier to dispersal. Terrestrial habitat mostly suboptimal.	Yes	Wet ditch on site. Potential for killing/injury/disturbance of individuals.	Mitigation strategy as outlined in Section 6.	Yes – eDNA to determine presence/absence of GCN within D1. Surveys underway and will be reported on in an addendum.
Bat tree roosts	Yes – T17 and T23 high bat roosting potential.	No	T17 will be removed during development. Potential for disturbance of individuals roosting within T23.	TBC	Yes – Surveys underway and will be reported on in an addendum.
Bat activity	Yes – tree lines, hedgerows and scrub forms low suitability for bat foraging and commuting lines.	Yes	Majority of linear features to be retained. However, low increased ambient lighting levels across the site can impact bats.	No night working during construction phase. Sensitive bat lighting strategy detailed within a CEMP	Yes – Surveys underway and will be reported on in an addendum

Species/Habitat	Suitable Habitat on Site	Local Records	Likelihood of Impacts by Proposals	Mitigation	Further Survey
Birds	Yes – Lines of trees, hedgerows, scrub and arable.	Yes	Majority of linear features to be retained. However, loss of arable field. Potential for damage or destruction of nests.	Avoid clearance of vegetation or demolition of buildings in bird nesting season (March – September). If not possible have an ecologist on site to check for nests immediately prior to works.	No – but ecologist may be needed on site for nesting bird check. While suitable habitats for BoCC are to be lost, these are limited in extent and unlikely to support significant populations,
Reptiles	Yes – marshy grassland, dense scrub, tall ruderal, hedgerows and arable verges provided suitability for foraging, refuge seeking and commuting for reptiles, albeit limited.	No	Majority of linear features to be retained, however grasslands and arable to be lost.	TBC	Yes – Surveys underway and will be reported on in an addendum
Otter, Water vole and White clawed crayfish	No – habitat on site not suitable for these species to persist, nor anything immediately adjacent.	Yes	N/A	N/A	No
Badger	Yes – badger setts historically recorded on site. Hedgerows, tree lines, scrub and arable provide opportunity for sett building and foraging.	Yes	No setts recorded but possible impacts during construction to foraging animals on site at night	Follow precautionary measures detailed in PMW and/or CEMP	Yes – vegetation clearance near the historical badger setts alongside a further badger survey to assess for any setts on site. Surveys underway and will be reported on in an addendum. A pre-commencement check prior to development to check for any newly developed badger setts.

Species/Habitat	Suitable Habitat on Site	Local Records	Likelihood of Impacts by Proposals	Mitigation	Further Survey
Priority Species	Yes - grassland for brown hare and hedgehogs, marshy grassland for common toad	Yes	Resting places for these species unlikely to be affected	PMW to prevent injury to small mammals to be followed	No
Invasive species	Yes – Two stands of Japanese knotweed located on site during the updated walkover.	Yes	Likely to be disturbed and spread on site as part of the proposals.	Removal of Japanese knotweed using licenced treatment prior to development on site.	Eradication plan for Japanese knotweed.
Biodiversity	Yes –tree lines, hedgerows, dense scrub and marshy grassland offer habitats of ecological value	N/A	Removal of low diversity and common habitats that support only limited protected species.	TBC.	Biodiversity Impact Assessment required to demonstrate net gain.

6 GREAT CRESTED NEWT – OUTLINE MITIGATION STRATEGY

i In advance of the eDNA survey and pending a subsequent positive result, an outline mitigation strategy has been proposed which can easily be accommodated within the landscape and drainage areas provided within the site masterplan.

ii The ditch and the surrounding grassland parcel is to be retained within the development, and a wildlife pond will be created as an enhancement within this area.

1. Pre and Mid Construction Phase – Precautionary Method of Works

iii Given the distance of the site to D1 (approx. 65m) and the majority of the works being confined to the arable field which was considered to be of negligible potential to support terrestrial phase GCN, further surveys would be considered disproportionate. Therefore, it is recommended that the clearance of the site is undertaken following a Precautionary Method of Works.

iv The PMW will include the following rules which should be adhered to on site:

- Works should be undertaken within the summer period, when GCN are closer to any breeding ponds and thus less likely to be within the working area.
- Prior to works commencing the site ecologist will provide a toolbox talk to all site operatives and this GCN mitigation strategy document will be signed by operatives once the talk has been completed. The toolbox talk will outline the legislation amphibians, and the penalty of injuring or harming them. Identification of the species listed above will also be demonstrated to make all contractors aware of what they look like, how to correctly identify them and where they are most likely to be found.
- This document should be included within any site briefing document and be controlled by the site foreman and a nominated site 'biodiversity champion'. The site "biodiversity champion" will be a nominated member of the site team, most commonly a foreman or site manager, who will be responsible for keeping all documentation relating to ecology issues on site, maintaining communication with the ECoW or site ecologist, and ensuring that ecological recommendations made within this document are followed. It is recommended that this document is briefed to all managers on site and any operatives working within areas with ecological constraints.
- The primary risk to amphibians at the site is the mortality of any amphibians present within the scrub on site, of which there is minimal present within the working area. No night-working will be permitted at the site to reduce the risk of harm, in particular to Great Crested Newt, which are active during nocturnal hours.
- Any clearance of any hedgerow or scrub should be undertaken in the presence of an ecologist. Works should start at the northern end of the site, working towards the south. This will allow any present herpetofauna to disperse safely to the south where optimal habitat is present.
- Clearance of vegetated areas should first be cut to a length of 150mm where possible and then subject to a fingertip search by an ecologist. Once the ecologist confirms absence, the works will be allowed to commence in the checked area only. This should also be conducted over temperatures of 11°C when herpetofauna are active to enable them to disperse of their own accord.
- In the extremely unlikely event, a reptile or common amphibian is seen during these works, they should be allowed to escape unharmed at their own pace where possible. An ecologist may choose to move the animal if it is in immediate danger or unable to disperse.
- Any spoil or equipment left overnight should be stored above ground or covered over or compacted to reduce the likelihood of spoil being used for refuge purposes.

6.1.2 Enhancement Wildlife Pond Area

i A specifically designed and planted wildlife pond will be provided on site as an enhancement for great crested newt, which could provide significant ecological enhancement to the site. Areas of permanent wet waterbodies and associated vegetation can provide an important invertebrate habitat area and increasing the foraging capacity of the site for fauna, including these protected amphibian species. The value of these ponds for wildlife can be maximised by utilising the following principles, recommended from the Freshwater Habitats Trust:

- Creating complexes of ponds rather than single waterbodies
- Include both permanent and seasonal ponds
- Almost all pond slopes are at least 12° in gradient
- Create broad, undulating wetland areas around and between ponds
- Create underwater bars and shoals to benefit aquatic plant

Figure 4: Pond Complex Example

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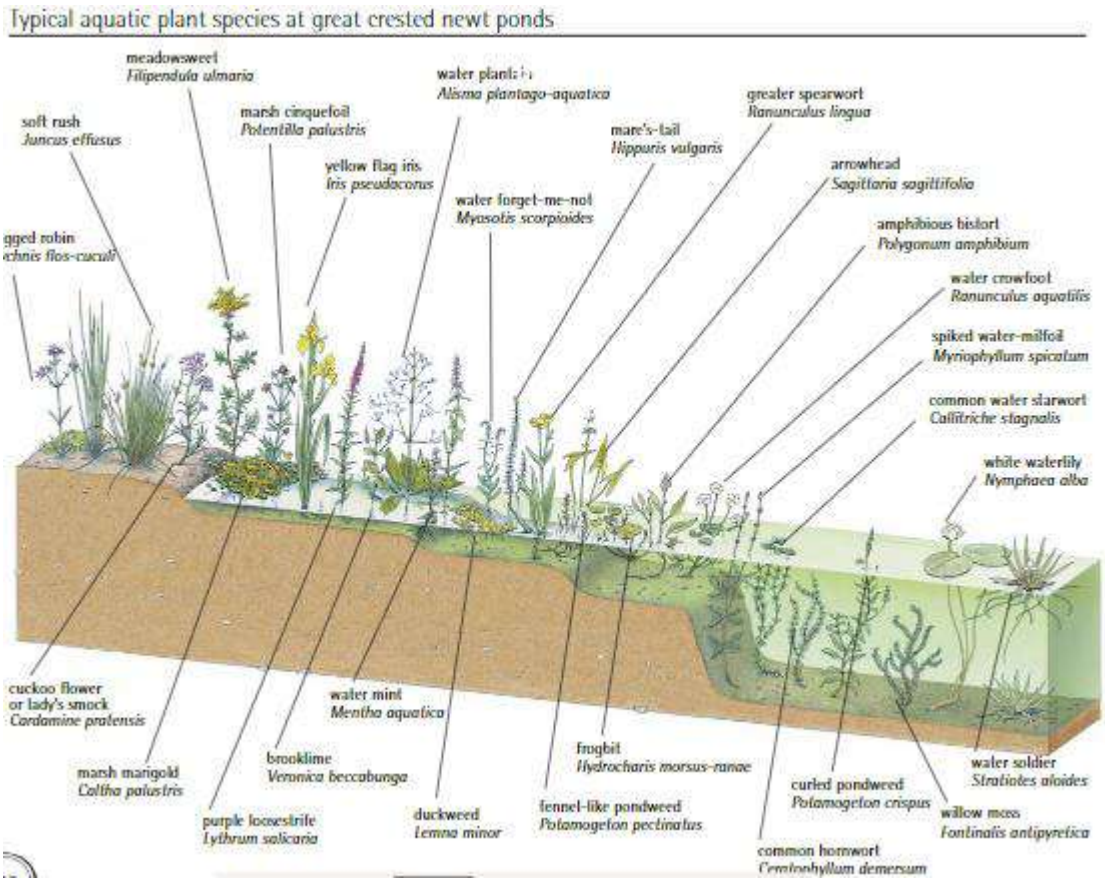
ii Where the ponds are designed to hold some degree of permanent standing water, they could be planted with native marginal plug plant species and with marginal vegetation, such as Naturescapes N8 Water's Edge Meadow Mixture is recommended. This comprises 24 wildflower species and 9 grass species. The species in this mix will tolerate flooding once established, and many would grow in the ponds themselves.

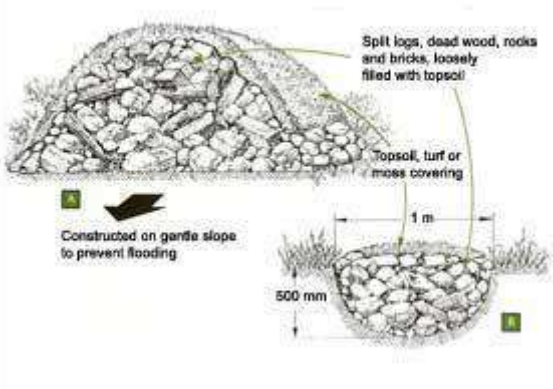
Figure 5: Typical Wildlife Pond planting and profile



6.1.3 Hibernacula

iii Log piles, rocks and dead wood under dense ground cover could also be created across the Site for amphibian hibernacula. These will provide important places for amphibians to rest during the day or during cold or dry weather. Hibernacula should be c. 2m² long, a minimum of 0.5m wide and c.1m in height and comprise log or debris piles with a cap composed of topsoil and a turf covering.

Figure 6: Hibernacula Example



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7 FURTHER ENHANCEMENTS

2. Habitats

i The National Planning Policy Framework and local development plan requires ecological enhancement of sites subject to development proposals to the extent that they provide a net biodiversity gain.

3. Protected/Principal Species

i Additional enhancements that could easily be met within the development scope include the incorporation of bat and bird nest boxes. Boxes could be placed on retained trees within the Site boundaries. The tree mounted bat boxes should face south (for additional warmth), and be positioned at least 4 metres from the ground, with the entrances being free of overhanging branches. It is also recommended that bird nest boxes be placed 1.5m below each bat box, to ensure that the birds have somewhere to nest and do not inhabit the bat boxes. Use of boxes such as the Vivara woodstone box provide a long-term nest box solution requiring limited replacement unlike wooden boxes which need regular replacement as a result of weathering. Suitable bat box dimensions are 430mm high X 270mm wide X 140mm deep. The boxes are designed to mimic natural roost sites and to provide a stable environment.

Figure 7: Bat Box Example

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Figure 8: Bird Box Example

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ii Additional enhancements for invertebrates could also be easily met within the development scope by including insect houses on any retained trees on site. These nest boxes will help to provide a variety of niches for a diverse spectrum of invertebrates to inhabit, and therefore help to increase the terrestrial invertebrate species diversity on site.

Appendix 1: References and consulted industry guidance

i Amphibian and Reptile Groups of the United Kingdom, 2010. 'ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index'. s.l.:s.n.

ii Institution of Lighting Professionals and Bat Conservation Trust,2018. 'Bats and Artificial Lighting in the UK – Bats and the Built Environment Series Guidance Note'. 08/18

iii BS 42020:2013 'Biodiversity – Code of Practice for Planning and Development 2013: The British Standards Institution'.

iv Chanin, P. 2003 'Ecology of the European Otter'. *Conserving Natura 2000 Rivers Ecology Series No. 10*. English Nature, Peterborough.

v Chartered Institute of Ecology and Environmental Management (CIEEM), 2019. 'Advice Note: on the Lifespan of Ecological Report and Surveys'. Winchester: CIEEM.

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ix Dean, M. *et al*. 2016. 'The Water Vole Mitigation Handbook'. The Mammal Society, London

x Department of Communities & Local Government, 2021. 'National Planning Policy Framework', London: DCLG.

xi Environment Agency, 2013. 'Pollution Prevention Guidelines: PPG1'

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xiii Harris S, Cresswell P and Jefferies D 1989, 'Surveying Badgers', Mammal Society.

xiv Joint Nature Conservancy Council, 2016. 'Handbook for Phase 1 habitat survey'. Peterborough: JNCC.

xv Office of the Deputy Prime Minister, 06/2005.' Government Circular: Biodiversity and Geological Conservation - Statutory Obligations and their impact within the planning system'. London: ODPM.

xvi Crested Newt (*Triturus cristatus*)'. *Herpetological Journal* 10 (4), 143-155.

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xviii Strachan, *et al*. 2011, 'Water Vole Conservation Handbook'. 3rd Ed.

Appendix 2: Legislation and Planning Policy

7.2 General & Regionally Specific Policies

i 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 Environment Act (2021)
- The National Planning Policy Framework (2021)
- ODPM Circular 06/2005 (retained as Technical Guidance on NPPF 2021)
- Local planning policies EV1 & EV2 (Ashfield District Council)
- The Conservation of Habitats & Species (Amendment) (EU Exit) Regulations 2019 (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;
- Local Biodiversity Action Plan for Nottinghamshire.

ii In relation to these proposals relevant sections of the NPPF, 2021 are:

"promote the conservation restoration and enhancement of priority habitats and ecological networks and the protection and recovery of priority species…identify and pursue opportunities for securing measurable net gains for biodiversity (174b)"

"minimising impacts on and providing net gains for biodiversity (170d)"

"if significant harm to biodiversity resulting from a development cannot be avoided, adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused (175)"

7.3 Bats and Great Crested Newts

i Great crested newt and species of British bats are fully protected within UK Law under *Wildlife and Countryside Act 1981* (as amended) through their inclusion in Schedule 5. Under the Act, they are protected from:

- Intentional or reckless killing, injury, taking;
- Damage to or destruction of or, obstruction of access to any place of shelter, breeding or rest;
- Disturbance of an animal occupying a structure or place;
- Possession or control (live or dead animals);
- Selling, bartering or exchange of these species, or parts of.

i This law is reinforced by the UK's transposition of the EU Habitats Regulations under *The Conservation of Habitats & Species Amendments (EU Exit) Regulations 2019 (as amended)*. These Regulations also prohibit:

- the deliberate killing, injuring or taking of great crested newt or bats;
- the deliberate disturbance of any great crested newt or bat species in such a way as to be significantly likely to affect:
- their ability 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;
- the possession or transport of great crested newt or bats or any other part of.

ii 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.

iii In addition, 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)*.

iv Under the National Planning Policy Framework 2021 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.

7.4 Birds

i The Wildlife and Countryside Act 1981 (as amended) is the Priority legislation affording protection to UK wild birds. Under this legislation all birds, their nests and eggs are protected by law and it is an offence, with certain exceptions, to recklessly or intentionally:

- Kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird while it is in use or being built;
- Take or destroy the egg of any wild bird.

ii For birds listed on Schedule 1 of the Act, it is an offence to disturb any bird while it is building a nest, is at or near a nest with young; or disturb the dependant young of such a bird.

iii Species listed in Annex 1 of the EU Birds Directive 1994 (e.g. barn owl) are required to have special conservation measures taken to preserve their habitats and sites to be classified as Special Protection Areas (SPAs) where appropriate.

7.5 Reptiles

iv All reptile species are partially protected under Schedule 5 (Sections 9(1) and 9(5)) of the Wildlife and Countryside Act 1981 (as amended). This legislation protects these animals from:

- Reckless or intentional killing and injury;
- Selling, offering for sale, possessing or transporting for the purpose of the sale or publishing advertisements to buy or sell a protected species.

ii In addition to the above legislation, UK rare reptiles; sand lizards (*Lacerta agilis*) and smooth snakes (*Coronella austriaca*), are listed under The Conservation of Habitats & Species Amendments (EU Exit) Regulations 2019 (as amended). This makes it an offence to;

- Capture, kill, injure and disturb;
- Take or destroying eggs;
- Damage or destroy breeding/resting places;
- Obstruct access to resting places; and
- Possess, advertise for sale, sell or transport for sale, live or dead (part or derivative).

v Where these animals are confirmed as present on land that is to be affected by development guidance recommends that:

- The animals should be protected from injury or killing during construction operations;
- Mitigation should be provided to maintain the conservation status of the species locally;

- Under the National Planning Policy Framework 2021 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.

7.6 Water Vole

vi Water voles (*Arvicola amphibius*) are protected under Schedule 5 Section 9 of the Wildlife & Countryside Act 1981 (as amended). It is an offence to intentionally kill, injure or capture a water vole, to intentionally or recklessly damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection or to disturb water voles while they are using such a place.

7.7 White-clawed Crayfish

vii White-clawed crayfish (*Austropotamobius pallipes*) are protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended and under the Act it is an offence to intentionally take white-clawed crayfish from the wild and to sell them. This species is also protected under the Habitats Directive, requiring the designation of Special Areas of Conservation to protect important populations of this species.

7.8 Otter

viii The European otter (*Lutra lutra*) is the only native UK otter species. It is fully protected under Schedule 5 of the Wildlife and Countryside Act 1981. This law is reinforced by the UK's transposition of the EU Habitats Regulations under The Conservation of Habitats & Species Amendments (EU Exit) Regulations 2019 (as amended). Together, these Regulations make it an offence to:

- capture, kill, disturb or injure otters (on purpose or by not taking enough care)
- damage or destroy a breeding or resting place (deliberately or by not taking enough care)
- obstruct access to their resting or sheltering places (deliberately or by not taking enough care)
- possess, sell, control or transport live or dead otters, or parts of otters

ix A convicted offence could get an unlimited fine and up to 6 months in prison.

7.9 Badgers

x Badgers (*Meles meles*) and their setts are protected by the Protection of Badgers Act 1992. This makes it an offence to:

- intentionally capture, kill or injure a badger;
- damage, destroy or block access to their setts;
- disturb badgers in setts;
- treat a badger cruelly;
- deliberately send or intentionally allow a dog into a sett; and
- bait or dig for badgers.

xi Case law for this species contains example prosecutions of imprisonment for six months and heavy fines.

7.10 Hedgehogs and Common Toads

xii Under the NERC Act 2006, the hedgehog (*Erinaceus europaeus*) is categorised as a 'Species of Principal Importance' (SPI) for biodiversity. Furthermore, hedgehog is also a local biodiversity action plan species (LBAP) for Nottinghamshire. Listing as SPI reflects concerns that populations have suffered a rapid and sustained decline in the UK. As such, they are a material consideration during planning.

7.11 Hedgerows

iii All native hedgerows (including species-poor ones) are listed under Section 41 of the NERC Act (2006) and are a Local Biodiversity Action Plan (LBAP) habitat. All native hedgerows are considered to be of high conservation value.

iv The Hedgerow Regulations (1997) classifies a hedgerow as 'important' if it:

- Satisfies at least 1 of the criteria listed in Part II of Schedule 1
- Has existed for 30 years or more

v Any person wishing to remove a hedgerow is required to submit a hedgerow removal notice to the LPA.

vi Items of Legislation that are pertinent regarding hedgerows include:

- Hedgerow Regulations 1997
- The countryside Rights of Way Act 2000
- Natural Environment and Rural Communities Act (NERC) 2006
- Planning Policy Statement (PPS) 9: Biodiversity and Geological Conservation

Appendix 3: Protected Species results

Tree ref.	Description	Potential Access Points	Evidence	Grading	Photographs
T17	Dead tree on road verge – English elm	Areas of lifted bark on southern aspect. Multiple splits in tree limbs where limbs have failed.	**None.**	High	 

Tree ref.	Description	Potential Access Points	Evidence	Grading	Photographs
T23	Mature Ash tree in middle of arable field.	Large trunk cavity in bottom on northern elevation. Extended upwards. Split in limb at northern extent approximately 6m in height. Multiple woodpecker holes and callous rolls present.	**None.**	High	 

Key

- **Site Boundary**
- **Public Open Space**
  Existing contours, 1m increments
- **Development Area**
  10.62Ha - Up to 300 dwellings
- **Primary Street**
  Illustrative location dependent on RM application
- **Secondary Street**
  Illustrative location dependent on RM application
- **Street & Lanes**
  Illustrative location dependent on RM application
- **Shared Private Drive**
  Illustrative location dependent on RM application
- **Feature Road Infrastructure**
  Potential road narrowing, surface change, raised table etc.
- **Existing Trees & Vegetation**
- **Proposed Buffer Planting**
- **Proposed Street Trees**
- **Drainage Areas**
- **Swales**
- **LEAP**
  Play Space with 20m buffer
- **Pedestrian Connectivity**
- **Pedestrian links**
- **Public right of way**

B6022 Newark Road

Newark Road

Searby Road

B6139 Coxmoor Road

Searby Road

Sotherby Avenue

Harby Avenue

John Whetton Park
Play area and recreation field

CENTRAL GREEN

LEAP

N 0 50 100 m

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