THE ELMS, COLSTON BASSET

Preliminary Ecological Appraisal Report (PEAR) and Bat Building Assessment



Client: Aitchison Raffety

Report Reference: RSE_3322_01_V1 Issue Date: December 2019



ECOLOGY
 FLOOD RISK
 ARBORICULTURE
 HABITATS

East Midlands:	West Midlands:	Yorkshire:	London:
Osprey House	Bee Hive	Unit 9	Keltan House,
Merlin Way	Dunston Business Village	Globe Works	115 Mare St.,
Quarry Hill Industrial	Stafford Road	Penistone Road	London,
Estate	Stafford	Sheffield	E8 4RU
llkeston	Staffordshire	S6 3AE	
Derbyshire	ST18 9AB	[T] 0114 243 9179	
DE7 4RA	[T] 01785 711 575		
[T] 0115 930 2493			info@rammsanderson.com
(Issuing Office)			www.rammsanderson.com

Project Details	
Client:	Aitchison Rafferty
Project:	The Elms, Wash Pit Lane, Coston Basset
Reference	RSE_3322_01_V1
Report Title	Preliminary Ecological Appraisal and Bat Building Assessment Report

DISCLOSURE:

The information provided within this report has been prepared and provided as true and in accordance with the Chartered Institute of Ecology and Environmental Management's (CIEEM) Code of Professional Conduct. It is intended for the sole use of the Client and their agents in accordance with the agreement under which our services were performed. Unauthorised communication, reproduction or usage of this report by any party other than the aforementioned is prohibited. No warranty, express or implied, is made as to the advice in this report or any other service provided by RammSanderson Ecology Ltd. This report has been prepared by an ecological specialist and does not purport to provide legal advice. RammSanderson is a trading name of RammSanderson Ecology Limited, as registered in England & Wales (Company No.: 8999992).









Document Control			
Originated:	Vicky Rowe BSc ACIEEM	Senior Ecologist	16/12/2019
Technical Reviewed:	Nick Sanderson BSc MSc MCIEEM	Director	11/12/2019
Issued to Client:	Vicky Rowe BSc ACIEEM	Senior Ecologist	12/12/2019
Revisions:			



1 EXECUTIVE SUMMARY

1.1 Background

- RammSanderson Ecology Ltd was instructed by Aitchison Rafferty to carry out a Preliminary Ecological Appraisal and Bat Building Assessment at The Elms, Wash Pit Lane, Colston Bassett, to inform a planning proposal for residential development of the site. The report provides ecological information to submit with a planning application.
- ii The site comprised of a residential property with the main house, and a total of 4 outbuildings, areas of short mown amenity grassland, areas of bare earth and a number of mature scattered trees. And located within a relatively rural setting.
- iii Further surveys for bats are recommended to inform a subsequent Ecological Impact Assessment (EcIA) to be made for this site. In addition, recommendations for mitigation and compensation may also be outlined below to negate or minimise potential ecological impacts:

1.1.2 Great Crested Newt

iv No ponds were located onsite. One pond was identified approximately 360m southeast of the site but it is located on the opposite side of the River Smite which is likely to function as a barrier to dispersal. The site is considered to be largely unsuitable for GCN consisting of buildings, short amenity grassland, bare earth and scattered trees affording no ground cover. As the majority of works will be undertaken on existing building footprints and the site is considered to be largely unsuitable for be largely unsuitable further surveys are not considered necessary.

1.1.2 Bats

V

The site contained an occupied residential property as well as an additional 4 outbuildings. These were all assessed during the survey with the house containing a confirmed roost due to the presence of droppings, B1 and B2 considered to be of moderate potential and B3 and B4 considered to have low potential. As such further nocturnal surveys of all the buildings are recommended as the intention is to demolish and re-build all of the buildings in existing footprints. The house will require three nocturnal surveys B1 and B2 will require 2 surveys and B3 and B4 will require a single nocturnal survey to be completed between May and August.

iv The site contained a large number of mature scattered trees that provide onsite foraging opportunities and provide connectivity to the surrounding landscape. It is not anticipated that trees will be removed and none had obvious potential roosting features, however should additional trees be removed it may be necessary to complete a short visual inspection to determine if features are present prior to removal. If large numbers of trees are to be removed than further assessment would likely be require to determine potential impacts to foraging and commuting bats. Given the nature of the proposal large amounts of external lighting are not anticipated however should any new lighting be installed this should be designed to be sensitive to nocturnal fauna in particular to bats and should not be direct towards and roost entrances, trees or boundaries of the site.

1.1.4 Birds

vii The trees and buildings on site offered suitable habitat for nesting birds, any vegetation clearance / tree pruning or demolition works should be completed outside of the bird nesting season (which is considered to be March to September inclusive). If this is not possible the area 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 they are no longer in-use.



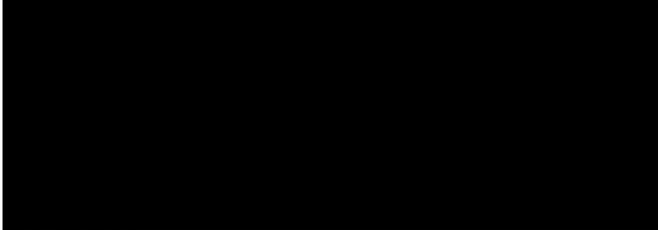
1.1.5 Reptiles

viii The overall site was considered to be of very limited value for reptiles, consisting largely of amenity grassland, bare earth and building. The sites peripheral habitats, potentially of some value for refuge and foraging reptiles, are being retained by the proposals. The site is however in a rural setting surrounded by more optimal habitats for reptiles. As such further survey for reptiles on this site is considered disproportionate as it lacks suitable habitat heterogeneity for reptiles to persist on site and the majority of works will be on the existing building footprints. It is recommended that the amenity grassland continue to be managed to maintain the short sward height to retain the sites low suitability for reptiles.

1.1.6 Water Vole, Otter and White-Clawed Crayfish

ix

There is no suitable habitat for these species on site or in the surrounding landscape, and as such the proposal is considered unlikely to impact on these species and therefore no further surveys are considered necessary or proportionate.



1.1.8 Other Priority Fauna

xii Given the general absence of ecologically valuable habitat and lack of ground cover the site is generally considered to be of low suitability for priority species. There is potential for hedgehogs to be present within the surrounding landscape. It was noted during the survey that a wire mesh fence encircled much of the site and may function as a barrier to movements through the site. I simple improvement would be to provide small gaps at the base of the wire mesh approximately 15cm x 15cm which would allow them free movement through the site.

1.1.9 Habitats

xiii Overall the habitats within the site were considered to be of limited ecological value, with only small areas considered to have the potential to support protected/Priority faunal species (as per those listed above). The trees are being retained within the development and potential enhancements could be made.

1.1.10 Enhancements

xiv Retention of the scattered trees and implementing of additional native planting would benefit local flora and fauna through the improvement of ecological corridors. Additional enhancements easily achievable within the development would be to retain small areas of the site as unmanaged to provide additional ground cover and provide small refuges for wildlife within the overall site.



1.1.11 Ecological Constraints and Opportunities Plan

xv 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.



Figure 1: Ecological Constraints and Opportunities Plan



High Risk Item: Further survey requirements or effect on European Protected Species requiring either mitigation or further survey

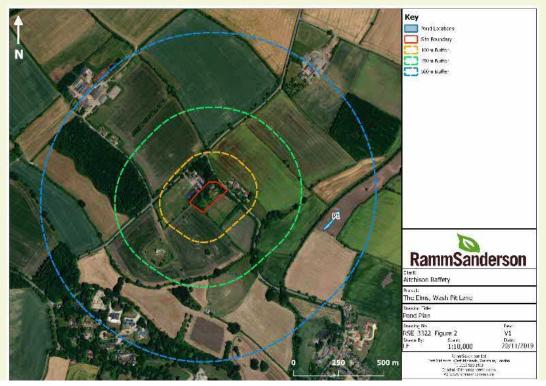
The house and additional 4 buildings were inspected for bat roost potential, the house was confirmed as a roost due to the presence of droppings and the other 4 out buildings were all considered to be of moderate or low suitability for roosting bats and as such further nocturnal surveys are recommended for all of the buildings. The house will require three surveys and B1 and B2 will require two nocturnal surveys and B3 and B4 will require a single nocturnal survey. These can be completed between May and mid-September and should ideally be spaced through the season and consist of at least on dusk and one dawn survey.

Moderate Risk Item: *Mitigation required for protected or Priority species*

The mature scattered trees and buildings afforded birds with nesting opportunities. The trees are to be retained and the buildings will be rebuilt. Demolition or vegetation clearance if required should be completed between October and February, outside of the nesting bird season. If this is not possible, a licensed ecologist should be present to check for active nests prior to the commencement of works.

The trees also provide connectivity to the surrounding site, afford bats with foraging opportunities and to a lesser extend may provide roosting opportunities although no obvious features were identified during the survey. It is not anticipated that trees will require removal if this alters further surveys may be necessary depending on number of trees to be removed.

Figure 2: Pond Reference Plan



No ponds were located onsite however one pond was identified approximately 360m southeast of the site and located on the opposite side of the River Smite which is likely to function as a barrier to dispersal. The site is considered to be largely unsuitable for GCN consisting of buildings, short amenity grassland, bare earth of scattered trees affording no ground cover. No Further surveys are therefore considered necessary or proportionate.

Low risk Item: Mitigation / Works procedures adopted for potential species which may pass through site during construction phases

There is a high possibility of transient badgers as well as other small mammals may pass through the site although there is a perimeter fence which almost entirely encircles the site therefore precautionary measures are recommended. These include, providing a ramp / slope in any open excavations and capping any exposed pipework at night.

The site currently contains no suitable habitat for reptiles consisting of bare earth or short mown amenity grassland, further surveys are therefore not considered necessary or proportionate given the nature of the proposal.

Enhancement Opportunities: possible enhancements suitable for this site given its context

Retain trees where possible. Any landscaping should consider use of native species or those considered to be beneficial for wildlife either providing a food source (nectar or fruiting) or alternatively provide ground cover and refuge. Areas of the site could be left unmanaged and incorporate static features such as log piles, toad house or insect hotel.



CONTENTS

<u>1</u>	EXECUTIVE SUMMARY	3
1.1	Background	3
<u>2</u>	INTRODUCTION AND BACKGROUND	9
2.1	PURPOSE AND SCOPE OF THIS REPORT	9
	2 ZONE OF INFLUENCE 3 SITE CONTEXT AND LOCATION	10 10
2.0	S SITE CONTEXT AND EDGATION	10
<u>3</u>	METHODOLOGY	12
3.1	PRELIMINARY APPRAISAL	12
3.2		12
	B PHASE 1 HABITAT SURVEY	13
3.4		13
3.5		13
3.6	S LIMITATIONS	14
3.7	ACCURATE LIFESPAN OF ECOLOGICAL DATA	14
<u>4</u>	RESULTS	15
11	Surveyors	15
4.2		15
	BLSK STODT B HABITAT CONNECTIVITY ANALYSIS AND CLOSEST RELEVANT RECORDS	16
	Phase 1 Habitat Survey	19
	5 BAT BUILDING ASSESSMENT	22
	PRELIMINARY PROTECTED / PRIORITY SPECIES ASSESSMENT	24
<u>5</u>	DISCUSSION & RECOMMENDATIONS	27
E 1	STATUTORILY AND NON-STATUTORILY DESIGNATED SITES	07
5.1 5.2		27 27
5.2		28
5.3 5.4		28
5.4 5.5		30
5.6	S RIPARIAN SPECIES	31
5.8	B PRINCIPAL SPECIES	31 32
<u>6</u>	ENHANCEMENT RECOMMENDATIONS	33
6.1	L HABITATS	33

<u>7</u> <u>REFERENCES</u>

APPENDIX 1: LEGISLATION AND PLANNING POLICY

7.2	GENERAL & REGIONALLY SPECIFIC POLICIES	36
7.3	BATS AND GREAT CRESTED NEWTS	36
7.4	Birds	37
7.5	Reptiles	37
7.6	WATER VOLE	37
7.7	WHITE-CLAWED CRAYFISH	38
7.8	OTTER	38
		38
7.10	D HEDGEHOGS AND COMMON TOADS	38
7.11	1 Hedgerows	38

APPENDIX 2: PHASE 1 HABITAT SURVEY PLAN

40

34

36

FIGURES

FIGURE 1: ECOLOGICAL CONSTRAINTS AND OPPORTUNITIES PLAN	6
FIGURE 2: POND REFERENCE PLAN	6
FIGURE 3: SITE LOCATION PLAN	11
FIGURE 4: SITE HABITAT CONNECTIVITY	18
FIGURE 5 MIXED SCATTERED TREES	19
FIGURE 6: AMENITY GRASSLAND	20
FIGURE 7: VIEW OF RESIDENTIAL PROPERTY	20
FIGURE 8: BARE EARTH	21
FIGURE 9: POND LOCATION PLAN	25

TABLES

TABLE 1: CONSULTED RESOURCES	12
TABLE 2: CRITERIA FOR BAT ROOST POTENTIAL ASSESSMENT OF BUILDINGS AND TREES	13
TABLE 3: SUMMARY OF CONDITIONS DURING SURVEY	15
TABLE 4: STATUTORILY DESIGNATED SITES WITHIN 5KM OF SITE BOUNDARY	15
TABLE 5: HABITATS OF PRINCIPAL IMPORTANCE WITHIN 1KM OF THE SITE	16
TABLE 6: PHASE 1 HABITAT TYPES AND THEIR ECOLOGICAL IMPORTANCE	27
TABLE 7: NATURAL ENGLAND RAPID RISK ASSESSMENT	28
TABLE 8: SUMMARY OF BADGER DISTURBANCE DISTANCES	31

APPENDICES

APPENDIX 1: LEGISLATION AND PLANNING POLICY	36
APPENDIX 2: PHASE 1 HABITAT SURVEY PLAN	40



2 INTRODUCTION AND BACKGROUND

2.1 Purpose and Scope of this Report

- RammSanderson Ecology Ltd was commissioned Aitchison Rafferty to assess the potential for protected species and habitats to be present on the site proposed for redevelopment at The Elms, Wash Pit Lane, Colston Basset.
- II To complete a preliminary ecological assessment of the proposals, a desk-based assessment (excluding biological records data), Extended Phase 1 Habitat Survey, and a preliminary protected species assessment including a Bat Building Assessment (BBA) 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; it is not intended that this report should be submitted with a full planning application for development of the site, unless supported by the results of further surveys and a detailed assessment of the effects of the proposed development. Therefore, 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', which can be used to lawfully determine a planning application in line with current planning policy¹. A standalone PEAR can be used for the following (all other circumstance will require an EcIA for planning permission):
 - Scoping for an Environmental Impact Assessment (EA);

an assessment as to whether a particular site should be included as an allocated site in a development plan;

nature conservation development plans;

sustainability appraisals (e.g. BREEAM); or

an assessment of likely compliance with statutory obligations for developments which do not require planning consent or under Permitted Development Rights.

- iii The study area was defined depending on the proposals, desk study and applicable legislation (Appendix 1) as shown in the enclosed Site Location Plan (Figure 3) and Phase 1 Habitat plan (Appendix 2) 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 National Planning Policy Framework (NPPF, 2018).

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



- 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).

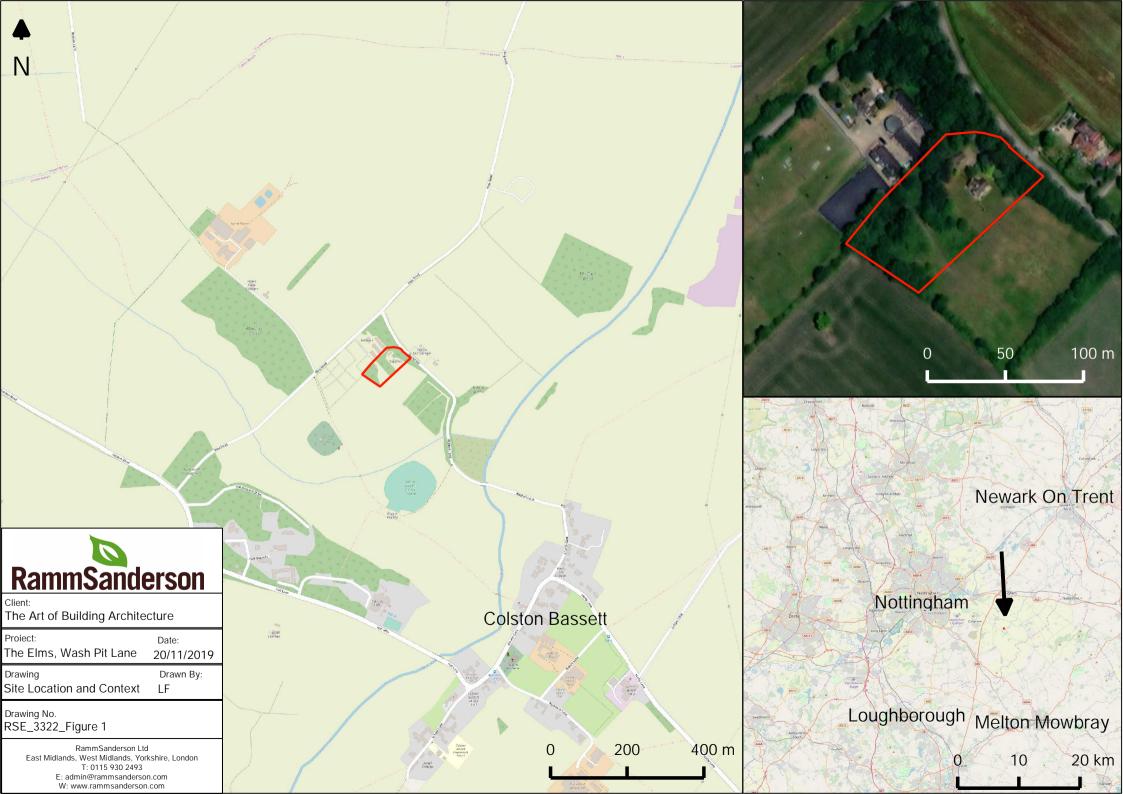
2.1 Zone of Influence

- 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 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.
- 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

The site consisted of a residential property and associated outbuildings with areas of amenity grassland, bare ground and mature scattered trees. The site was located at The Elms, Wash Pit Lane, Colston Basset, NG123FR (central grid reference SK 69663 34055) which comprises an occupied private residence. The site was located to the south west of Wash Pit Lane in an intrinsically rural setting to the north of the village of Colston Basset. To the north east the site is bound by Spring Hill Road, bounding the site to the north is a small parcel of woodland, to the west there is a stable yard and farm house and to the south the site there were area of arable farmland and grazing areas.





3 METHODOLOGY

2.3 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.
- 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

Data regarding statutory and non-statutory designated sites, plus any records of protected or Priority species and habitats was completed using online resources, details of which are provided in Table 1 below. Due to the small scale of the site and the proposal biological records data was not requested form the local records centre.

Table 1: Consulted resources

Consultee/Resource	Data Sought	Search Radius from Boundary
www.magic.gov.uk ^{2 3}	Statutory Site Designations Habitats of Principal Importance (NERC Act, 2006)	20km 1km

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 21/11/2019

3.2 Phase 1 Habitat Survey

- An extended Phase 1 Habitat Survey of the site was completed to identify habitats present within the site.
 All habitats within and adjacent to the site boundary 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).

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*).
- ii The full scope of species assessments and survey methods are detailed in Appendix 3. Any incidental sightings of individual species or field signs such as footprints, latrines or feeding remains discovered during the survey were noted.

3.2 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 site, including the 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 Table 2.

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

Table 2: Criteria for bat roost potential assessment of buildings and trees



Roost Potential	Description	Surveys Required (Buildings)	Surveys Required (Trees)
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.

3.2 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.

- ii 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.
- iii B4 was not entered during the survey due to concerns regarding the structural integrity of the building owing to the walls bowing at the top.

3.2 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.



4 RESULTS

2.1 Surveyors

I The survey was carried out by Vicky Rowe BSc (Hons) ACIEEM and Katie Lawrence BSc (Hons). Vicky also holds a class one licence for GCN (2015-18127-CLS-CLS), a class 2 licence for bats (2019-39607-CLS-CLS) and has been a professional ecologist for the past nine years. The survey was completed during suitable conditions as detailed in the table below.

Table 3: Summary of conditions during survey

Abiotic Factor	Survey 1
Survey type	PEA
Date completed	18.11.19
Temperature	14° C
Wind speed (Beaufort Scale)	1
Cloud cover (Oktas Scale)	20%
Precipitation	0

2.3 Desk Study

A total of 3 statutory designated sites were recorded within the search area, the details of which are summarised in Table 1 below. The site is located within the Impact Risk Zone (IRZ) of one statutory designated site identified (Kinoulton Marsh and Canal). MAGIC was accessed on 21/11/2019.

Table 4: Statutorily Designated Sites within 5km of Site Boundary	
---	--

Site Name	Designation	Location	Brief Description
Kinoulton Marsh and Canal	SSSI4	3.9km SW	Kinoulton Marsh and Canal supports some of the richest marsh and open water habitats remaining in Nottinghamshire, representation of wetland plant communities on relatively base – rich soils in Central and Eastern England.
Barnstone Railway Cutting	SSSI	4.7km E	This site is classified due to the presence of the largest population of a nationally scarce moth. The site also supports a significant assemblage of notable and local insects, particularly beetles, moths and flies, characteristic of limestone grassland and wetlands of Eastern England. The cutting is a habitat mosaic of long grassland and scrub.

⁴ SSSI – Site of Special Scientific Interest



Site Name	Designation	Location	Brief Description
Bingham Linear Park	LNR ⁵	4.7km NE	Dismantled railway line with a variety of fauna and flora present onsite; inclusive of wildflower meadows. The old railway line provides a variety of slopes, surface types and aspects which encourages a diverse array of wildlife.

- ii The Site lies within 3.9km of Kinoulton Marsh and Canal. The proposals are not of a type that is included within the Impact Risk Zones for these National designated sites as the planning application does not involve aviation or the construction of livestock & poultry units.
- iii There are 5 Habitats of Principle 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 regarding the site referenced. The closest is a parcel of primarily broad-leaved woodland south of the planning application site.
- iv Habitats of Principal Importance (HPIs under NERC Act, 2006) within 1km of the site were identified and are shown in table 6. There closest is a parcel of wood pasture and parkland areas 240m north east of the site.

 Table 5: Habitats of Principal Importance within 1km of the Site

Habitat	Quantity	Closest Habitat - Distance to Site	Closest Habitat - Direction to Site
Costal and floodplain grazing marsh	1	313m	South East
Deciduous woodland	14	0.6km	South West
Wood pasture and parkland	1	0.6km	West

- A total of three previous European Protected Species Licenses (EPSL) were identified within a 5km search area around the site. These were all for bat licences, the closest of which was for common pipistrelles approximately 360msouth west of the site.
- iv No previous licences for GCN were identified within the 5km search area.

2.3 Habitat Connectivity Analysis and Closest Relevant Records

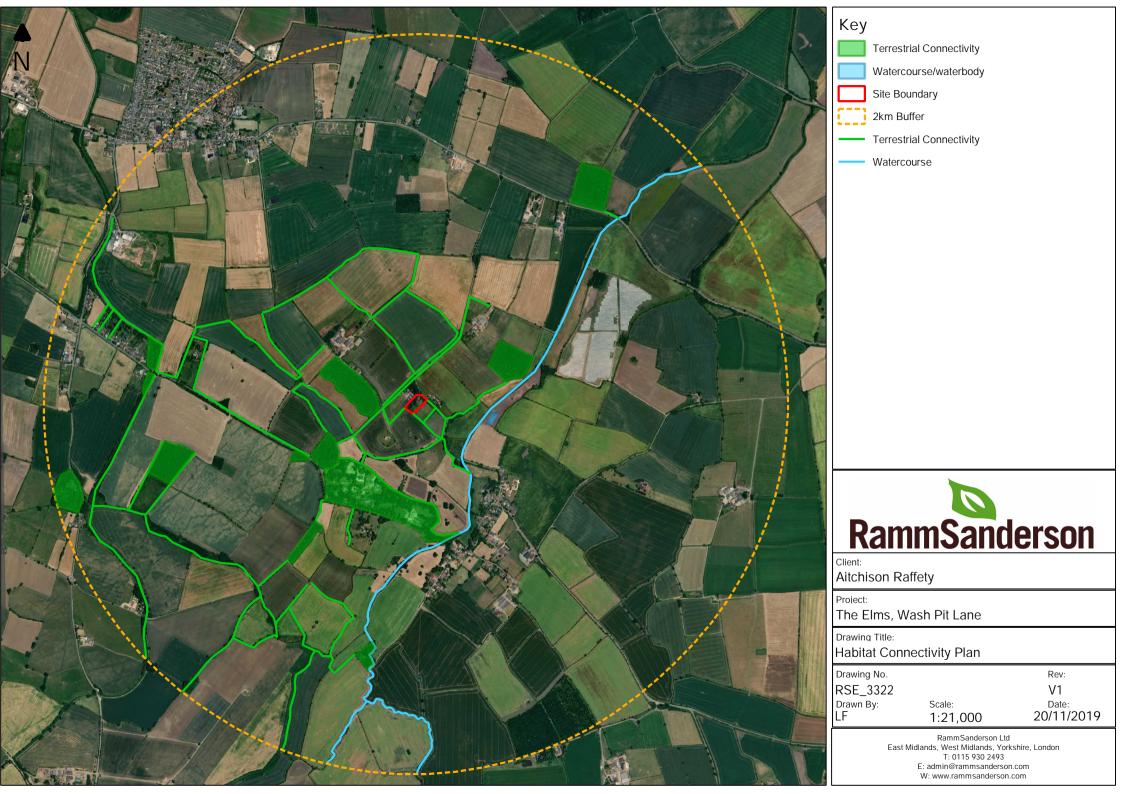
- In assessing the site, a review of online resources and desk study data was undertaken to assesses the site with respect to its connectivity to the wider environment, particularly along linear features (rivers, railways, canals etc.) and any designated or protected sites. The figure below highlights the site and any such habitat connectivity. This assessment enables the evaluation of a particular proposal in context of the wider environment with regard to the site itself and any species which may utilise the site.
- As Figure 4 below shows, the site has a good level of connectivity to the surrounding landscape as a result of tree lines that extend out from the site and connect to hedgerows that extend into the surrounding landscape in all directions. The two small rural roads that wrap around the site to the north, west and east

⁵ LNR – Local Nature Reserve



are unlit and vegetated with no kerbs and therefore are unlikely to function as a barrier to dispersal. There are numerous small woodland parcels in the surrounding landscape with connectivity to the site that would be accessible for more mobile species such as birds, bats and larger mammal as well as the River Smite which would provide a habitat link to areas north and south of the site.





4.4 Phase 1 Habitat Survey

- I The site comprised of a residential site with the house and a number of associated out buildings, areas of short mown amenity grassland, bare ground and mature scattered trees and a timber post and rail fence that encircled the site. Full habitat descriptions and photos are provided below. For a Phase 1 Habitat Survey Plan refer to Appendix 2.
- Habitats 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.

4.4.2 Mixed Scattered Trees

iii A number of mature trees were present and scattered throughout the site with a small stand of trees located adjacent to Spring Hill Road. Broad leaved species were dominant with a single Scott's pine (*Pinus sylvestris*) being recorded. Other broad leaved species recorded included; silver birch (*Betula pendula*) sycamore tree (*Acer pseudoplatanus*), field maple (*Acer campestre*), Swedish whitebeam (*Sorbus intermedia*), ash (*Fraxinus excelsior*), horse chestnut (*Aesculus hippocastanum*), turkey oak (*Quercus cerris*), beech (*Fagus sylvatica*) grey poplar (*Populus × canescens*).

Figure 5 Mixed scattered trees



4.4.2 Amenity Grassland

iv

Roughly half of the site comprised of short mown amenity grassland, due to the regular management of the grassland combined with time of year of the survey it was difficult to identify species of grass present but is considered likely to comprise commonly encountered amenity species such as perennial rye (*Lolium perenne*), Yorkshire-fog (*Holcus lanatus*), cock-s foot (*Dactylis glomerata*) with grass species being dominant. Forbs rarely recorded during the survey included dandelion (*Taraxacum spp*), daisy (*Bellis perennis*), white clover (*Trifolium repens*) and ribwort plantain (*Plantago lanceolata*),



Figure 6: Amenity Grassland



4.4.4 Buildings

v The site contained a total of five buildings these included the main residential dwelling which was occupied at the time of the survey, and a total of four outbuildings which were either used for storage or empty. These were all assessed for their potential to provide bats with roosting opportunities and are discussed further in the bat building assessment section of the report below.

Figure 7: View of Residential Property



4.4.2 Bare Ground

iv Approximately half of the site towards the southwest boundary consisted of bare earth with no associated flora other than a number of scattered trees discussed above.



Figure 8: Bare Earth



4.4.4 Boundaries

vii In addition to the habitats above, there was a post and rail fence with wire mesh to the rear encircling the site and forming the site boundary.

4.4.2 Non-Native Species

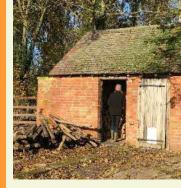
viii No Schedule 9 species of the Wildlife and Countryside Act 1981 including Japanese knotweed Himalayan bals am and giant hogweed were observed during the survey.



2.3 Bat Building Assessment

Bldg. ref	Description	Potential Access Points	Evidence	Grading	Photographs
House	A solid brick two storey structure with an apex clay tiled roof and UPVC doors and windows. The building was occupied and generally considered to be in a good state of repair with no major defects in the brickwork or roof. There was a small single storey section with a tiled pitched roof which also formed a small porch over the front door. There were a total of three dormer windows as well as a bay window with a pitched tiled roof, with timber barge boards at the gable ends. Internally the roof was found to be constructed of modern sawn timbers, with no roofing felt so that the underside of the tiles was visible. Although there was an accessible roof void, due to the roofs in part being located within the roof space the height of the roof void was reduced (approx. 1.5m) with narrow sections sloping down below the jois around the sides of the dormer windows.	Gaps were noted in the main roof as a result of slipped or missing tiles, with light ingress points recorded in the roof void. The roof extended beyond the wall in a number of places with gaps visible at the top of the wall plate. There was a section of lifted lead flashing below one of th dormer windows as well as, gaps at the apex of the gable ends where bean extend from the roof. It was also notec that the porch, dormer windows and bay window all had small accessible void: present either as a result of slipped o missing tiles or gaps at the eves.	Droppings were scattered throughout the roof void which was roughly T shaped and orientated northwest to southeast and northeast to southwest, it was noted that the northeast to southwest section had a higher proportion of droppings with a small collection identified at the gable end of the northeast southwest section of the roof. It was also noted that there were a number of conspicuously clear gaps above the ridge board. The droppings were characteristic of BLE and may account for the scattering of droppings throughout the roof void as individuals undertake pre- emergent flight within the roof void prior to emerging.	Confirmed	<image/>
B1	A small single storey solid brick structure with a clay tiled apex roof, split into two small rooms used to sto firewood. Generally considered to be in a good state or	Gaps were present all along the eves of the building where the timber roof rafters extend over the top of the wall. There were	No evidence was identified but access was limited due to presence of large amounts of firewood.	Moderate	

repair. The roof was supported on modern sawn timbers also a number of small gaps in the brick with no roofing felt present. The interior was nc work as a result of missing mortar. thoroughly inspected due to the large volume of fire wood in each room.











Bldg. ref	Description	Potential Access Points	Evidence	Grading	Photographs
B2	A small single storey solid brick structure with a clay tiled apex roof. The building had an open section in the middle forming a car port and a small storage room either side as well as a small room to the rear of the building. The roof was supported on modern sawn timbers with no roofing felt present in the middle and north storeroom. The south storeroom was noted as having a false ceiling comprising of MDF and cardboard creating a small void. Internally there were a large number of gaps present within the brickwork as a result of missing bricks (mortar or structural cracks that may provide roosting opportunities.	Free access at the eves where e number of gaps were noted as well as via slipped or missing tiles. Free access to the central section as this is open with no doors.	No evidence identified	Moderate	
Β3	A small single storey solid brick structure with a black felt apex roof. The building was in a dilapidated state with no doors or windows present. Internally the building looked to have been relatively recently re-roofed with modern sawn timbers and plywood boards between the beams and external roofing felt. There was a gap identifiec around on of the window frames as well as a lare number of gaps internally as a result of missing bricks, structural cracks and at the wall plate in the gable ends.	The Absence of glazing in the window frames and absence of a door provides free access into the building.	No evidence identified	Low	
Β4	A small single storey solid brick structure with a clay tiled apex roof forming a single roof. The building was in a dilapidated state with one of the walls noticeably leaning out at the top. There was a small section of timk weather boarding at the north gable end which other than this was entirely absent. There were a number of doorways located along the south west aspect. Due to the potential for structural weakness owing to the bowed walls the building was not entered. Internally the roof was supported on modern sawn timbers with no roofing felt present on the underside of the tiles.	Open gable end, doorways and slipped and missing tiles on the roof.	No evidence but internal inspection was not carried out.	Low	









L

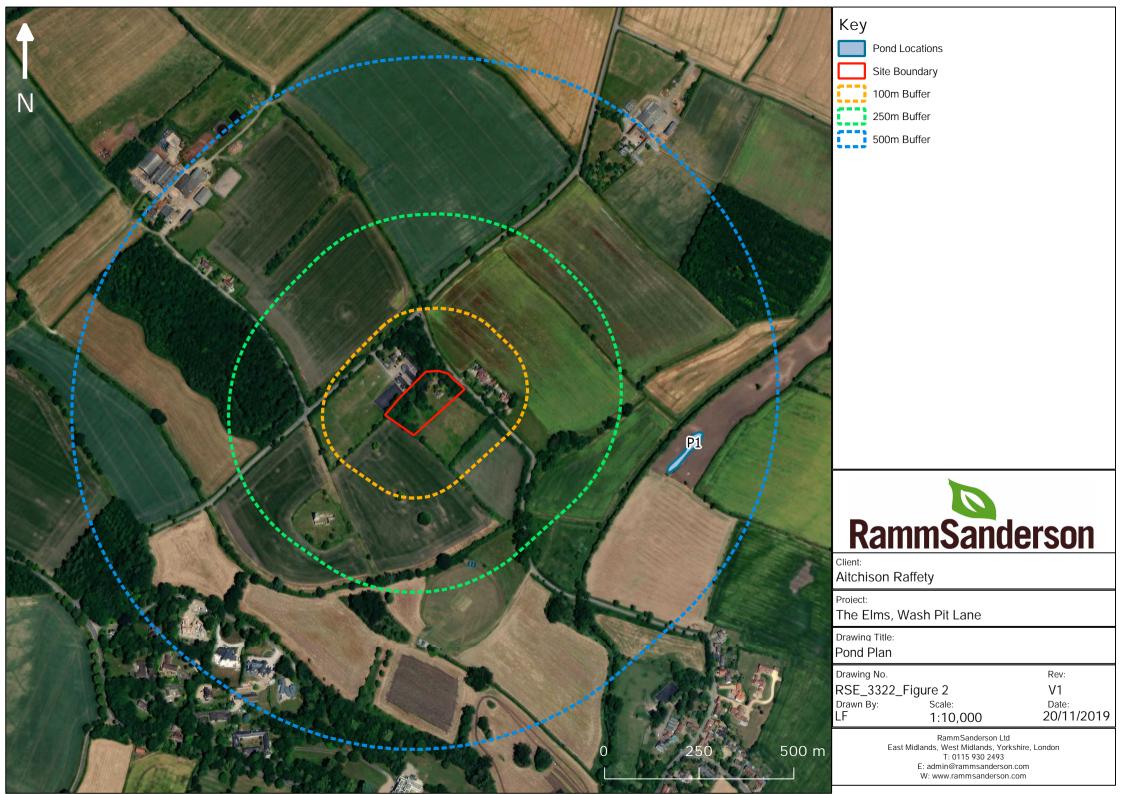
3.2 Preliminary Protected / Priority Species Assessment

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

4.4.2 Great Crested Newt (GCN)

- No ponds were located on site, however one pond was identified approximately 360m southeast of the site beyond the 250m zone of influence and located on the opposite side of Wash Pit Lane which is not considered to function as a barrier to dispersal being a relatively quiet countryside road with no hard kerb. However the River Smite is also located between the site and pond and is likely to function as a barrier to dispersal. Due to its location on private land in the middle of a field it was not possible to complete a Habitat Suitability Index Assessment.
- iii The site was assessed as containing no suitable habitat for GCN consisting predominantly of short mown amenity grassland or bare earth.





4.6.3 Bats

Trees

iv The site contains a large number of mature scattered trees given the residential nature of the site. None of the trees contained obvious defects however as removal was not anticipated the trees were not thoroughly inspected.

Foraging Habitat

- The mature trees provide some on site foraging opportunities and to some degree provide connectivity to the surrounding landscape. The rest of the site however consisting predominantly of bare ground and short mown amenity grassland was considered to be of limited value to foraging and commuting bats.
 Buildings
- vi The site contained a total of 5 buildings which are discussed further in relation in the bat building assessment table above. A number of the outbuildings were identified as containing old birds nests with all having free access to the interior either as a result of missing doors and windows or large air gaps at the eves.

4.6.4 Birds

- vii The trees located on site are suitable habitat for bird nesting sites and are likely to support a range of common garden bird species and as mentioned above a number of nests were identified in the outbuildings.
- viii It is noted however, that a breeding bird survey is beyond the remit of this survey.

4.6.5 Reptiles

ix The site is considered to be of low suitability for reptiles with little in the way of ground cover consisting of short mown amenity grassland and bare earth. Reptiles therefore do not pose a constraint to development of the site and will therefore not be discussed further.

4.6.6 Water Vole, Otter and White Clawed Crayfish

x The site contains no habitat suitable for any of the species. Furthermore, the areas immediately bounding the site also have no suitable habitat for these species and as such do not pose a material constraint to development of the site and therefore will not be discussed further.

4.6.8 Other Priority Fauna Species

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



5 DISCUSSION & RECOMMENDATIONS

5.1 Statutorily and Non -Statutorily Designated Sites

- 4.4.2 Assessment of Ecological Effects
- I The nearest statutorily designated site was Kinoulton Marsh and Canal SSSI located approximately 3.9km southwest of the site. This is considered to be too far afield for any impacts to occur as a result of the development on site and as such, are not considered to be at any risk. In addition the proposal to redevelop the site was not of the type (poultry production or aviation for example) that requires additional consideration in terms of potential for impacts.

4.4.2 Mitigation

Given the distance of the site from the identified designated sites and the small scale of the proposal predominantly on existing building footprints no mitigation is proposed in relation to designated sites.

4.4.2 Further Survey

iii No further surveys are required to assess the impacts of the proposals on statutory designated sites.

2.3 Habitats

4.4.2 Assessment of Ecological Effects

- I The majority of habitats on site were generally of limited botanical interest and poor species diversity. The value of habitats such as the scattered broad-leaved trees and buildings were largely noted for their potential to support a range of protected / Priority faunal species rather than for their botanical value. The scattered trees offered some value as ecological corridors for the dispersal of fauna and flora and providing some degree of connectivity to the wider countryside. It is not anticipated that any trees will require removal as buildings will be demolished and re-built on the existing footprints.
- ii 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. The table below summarises the habitat types identified on site and the potential impacts as a result of the proposals and their ecological significance.

Habitat	JNCC Code	Area (m²)	Proportion of Site Area	Ecological Importance & Outcome of Proposal
Mixed scattered trees	A3.3	15	<1%	Of ecological value, providing connectivity to the surrounding landscape and opportunities for bats and birds. To be retained within the proposal
Amenity Grassland	J1.2	2150	37%	Of low ecological value due to limited species diversity. Majority to be retained
Buildings	J3.6	238	4%	House confirmed as a bat roost, and outbuildings all considered to have some degree of roosting potential for bats as well as nesting opportunities for birds. All to be demolished and re-built.

Table 6: Phase 1 habitat types and their ecological importance



Habitat	JNCC Code	Area (m²)	Proportion of Site Area	Ecological Importance & Outcome of Proposal
Bare ground	J4	3247	%	No botanical value. It is likely that this area will be landscaped or re-seeded as part of the final development.

4.4.2 Mitigation

All trees and hedgerows should be protected in accordance with BS 5837:2012. This will include suitable fencing to maintain root protection zones during construction and pollution preventative measures.

4.4.2 Further Survey

iv No further habitat surveys are required for this site as all habitats present are common and widespread with low floristic value.

2.3 Great Crested Newts

- 4.4.2 Assessment of Ecological Effects
- I There are no waterbodies (including ponds suitable for amphibian breeding) within the site and the site comprises terrestrial habitats considered to be unsuitable for amphibians consisting of short mown amenity grassland or bare earth with more suitable habitat present within the surrounding landscape.
- ii The nearest pond, P1 was 360m southeast of the site (therefore beyond the 250m 'intermediate zone' as categorised by Natural England) and also located on the opposite side of the River Smite which is considered to function as a barrier to dispersal.
- iii In assessing this loss against the Natural England Rapid risk assessment, the total loss within the 250m intermediate zone will be 0ha, and the loss beyond the 250m zone will be approximately 0ha of suitable GCN habitat.
- iv The table below identifies the Rapid risk assessment components based on the above and confers that risk of an offence is highly unlikely.

Table 7: Natural England Rapid Risk Assessment

Component	Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)	Notional offence probability score
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	No effect	0
Land 100-250m from any breeding pond(s)	0.001 - 0.01 ha lost or damaged	0.000
Land >250m from any breeding pond(s)	1 - 5 ha lost or damaged	0.00
Individual great crested newts	No effect	0
	Maximum:	0.00



Rapid risk assessment result:

GREEN: OFFENCE HIGHLY UNLIKELY

v The risk assessment above purposefully has not allocated a score for the component of 'individual great crested newt'. This is because, as stated, works will be contained to the existing building footprints within habitats that consist of short mown amenity grassland and bare earth in which GCN and other amphibians are unlikely to persist within. Thus potential risks associated with this site with respect to GCN are only that of potential killing and injury of individual newt which as discussed are highly unlikely to be present within the construction area due to the habitat type and absence of additional ponds within the surrounding landscape with habitat connectivity to the site.

4.4.2 Mitigation

- iv Given the absence of suitable habitat on site and lack of connected ponds in the surrounding landscape no further mitigation is recommended as the likelihood on GCN being present within the works areas which consists of the existing building footprints is considered to be highly unlikely.
- 4.4.2 Further Survey
- vii No additional surveys are recommended for this species.

3.2 Bats

- **4.4.2** Assessment of Ecological Impacts
- I The mature trees on site provide foraging and commuting opportunities for bats and provide the site with connectivity to the surrounding landscape. No obvious roosting features were identified during the survey and it is not anticipated that any of the trees will require removal to facilitate the development and as such it is not anticipated that there will be an loss of connectivity to the surrounding landscape or availability of on site foraging resources.
- ii The buildings on site were all assessed for their potential to support roosting bats. The house was confirmed as a roost due to the presence of fresh droppings within the roof void. Buildings 1 and 2 were assessed as having a moderate potential and buildings 3 and 4 as having low potential to be utilised by rooting bats however no evidence was identified within these buildings. The current proposal seeks to rebuilding the buildings on the existing footprints. As a result the current proposal will result in destruction of and exiting roost and destruction of potential roosting sites in the absence of mitigation.

4.4.2 Mitigation

- iii In order to legitimise any works to buildings containing roosts a European Protected Species Licence would be required form Natural England. In order to complete this application further surveys are required as discussed below. Once these have been completed the information would be utilised to formulate a mitigation strategy for bats which would include providing similar roosting provisions within the final development.
- iv Artificial lighting can affect the way that bats use habitats in a number of ways, depending on the species and proximity to a roost. Direct bright lighting of a roost can cause bats to delay emergence from a roost and could even cause them to desert the roost or become entombed within it (BCT and ILP, 2018). The prey items for British bats are flying insects, and many flying insects are attracted to certain types of artificial light sources, especially those that emit light with an ultraviolet component or have a high blue spectral component (BCT and ILP, 2018). Some species of bat recorded are known to be attracted to insects gathered around light sources (such as pipistrelle, noctule, Leisler's and serotine), whereas other species actively avoid



lit areas (such as long-eared bats, Myotis species, barbastelle and greater and lesser horseshoe bats). Lighting within the Site could therefore be expected to affect the ways that the bats in the area are able to use the Site. As a result, it is recommended that construction works are to be undertaken in daylight hours only with no night hours work permitted.

v Sensitive lighting on site should follow the guidance set out in Bats and Lighting in the UK (BCT and ILP, 2018). Therefore, associated site lighting proposals must consider the following:

Avoid lighting where possible; Install lamps and the lowest permissible density; Lamps should be positioned to direct light to avoid upward spill onto any green corridors that could be used by commuting bats or features with bat roost potential; LED lighting – with no/low UV component is recommended; Lights with a warm colour temperature – 3000K or 2700K have significantly less impact on bats; Light sources that peak higher than 550nm also reduce impacts to bats; and The use of timers and dimmers to avoid lighting areas of the site all night is recommended.

4.4.2 Further Surveys

- iv Buildings due to be demolished will first require further nocturnal surveys to either confirm the species and numbers utilising the building as is the case for the house where bat presence has already been confirmed, or alternatively determine bat presence or absence prior to the works and inform an eventual European Protected Species Licence for the site.
- vii In line with the Bat Conservation Trust Best Practice Guidelines (Collins J eds, 2016) further nocturnal emergence of re-entry surveys would be required, for confirmed roosts site three surveys would be required, for moderate potential buildings two surveys would be require and low potential buildings a single survey would be required. These would need to comprise separate dusk and dawn surveys for moderate potential buildings and an additional dusk or dawn survey for the house. Surveys can be undertaken from May to mid-September, should ideally be spaces through the active season and be separated by at least two weeks.

2.3 Birds

I

4.4.2 Assessment of Ecological Impacts

The scattered trees within the site provide suitable habitat for nesting birds as do the buildings with the outbuildings all having free access to the interior to some degree. Given the limited habitats on site and the small scale of the site it is not considered to contain any suitable habitat for Schedule 1 species and the bird assemblage is likely to be comprised of common and widespread species with little conservation value.

4.4.2 Mitigation

ii Demolition of the buildings and any tree management works (although none is anticipated) should take place outside the bird nesting season to ensure compliance with the general protection afforded to wild birds under the Wildlife and Countryside Act 1981 (as amended). If this is unavoidable, the buildings and trees should be carefully checked, by a suitably qualified ecologist, prior to removal. Where active nests are found, working restrictions would be put in place until follow up survey can demonstrate that all chicks have fledged.

4.4.2 Further Surveys

iii Due to the low quality and small areas of habitat present alongside proposals to retain these features, further bird surveys are deemed disproportionate.



5.5.4 Reptiles

iv The site is considered to contain no suitable habitat for reptiles and the works will predominantly be completed on existing building footprints. Mitigation or further surveys for reptiles is therefore considered to be unnecessary and disproportionate.

5.6 Riparian Species

5.6.1 Assessment of Ecological Effects

 The site and the immediately surrounding landscape contain no suitable habitat for riparian species and as such no impacts are anticipated and therefore further surveys and mitigation are not considered necessary.



iii

Other than access points into the site (driveway for example) the site is encircled by a post and rail fence with a wire mesh to the rear however given the suitability of the surrounding badgers as well as other small mammals traversing the site at night during the construction phase cannot entirely be ruled out.

- iv As and additional safeguard the precautionary approach below is recommended during the construction phase.
 - Mammal ladders (such as a plank) or earth ramps to be placed in any open excavations at the end of each day;
 - Cap off any open pipes at the end of each day;



Cover any open holes, or install mammal ladders or earth ramps in any open excavations at the end of each day to prevent animals from becoming trapped;

Keep all fuel and other harmful substances in a locked area;

Ensure any spillages are treated with spill kits;

Night work should be avoided where possible, and any flood lighting should face away from the Site boundaries; and

If any fresh sett digging is observed notify an ecologist immediately and leave a 20m buffer around the area until an assessment can be made.

4.4.2 Further Surveys

It is recommended that prior to the commencement of works to be undertaken within 30m of this northern boundary fence (in close proximity to building 1) that may result in disturbance (excavations to install new footings or services for example) or collapse of and tunnels that may extend under the boundary fence into the site that a visual inspection is completed to confirm absence of any setts in this area.

2.3 Principal Species

- 4.4.2 Assessment of Ecological Effects
- iv Given the limited habitats present on site and lack of ground cover with over half of the site consisting of bare ground that it is unlikely to be used by other notable of protected species.

4.4.2 Mitigation

vii Although the site is generally considered to contain very limited habitats affording little in the way of ground cover and so likely to be of reduced suitability for a range of species the potential for fauna to traverse the site in the evening during the construction phase cannot entirely ruled out so the precautionary mitigation method detailed above for badgers will also afford any other terrestrial species with additional safeguards.

4.4.2 Further Surveys

viii No surveys are recommended for species of principal importance.



6 ENHANCEMENT RECOMMENDATIONS

5.1 Habitats

- ix 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. Any landscaping that is to be included within the final scheme should seek to utilise either native species or those considered to be beneficial to wildlife producing nectar, fruit or nuts and provide additional ground cover and additional refuge opportunities for invertebrate.
- x Given that the house has been identified as a confirmed bat roost utilising plants with tube shaped flowers such as honeysuckle to attract moths and butterflies, those light blue in colour or white as these area easier to detect in low light levels and night scented flowers such as evening primrose to help attract night-flying insects and providing additional foraging opportunities for bats and a range or other flora.
- ix Water is also important for a range of wildlife, while pond creation would be beneficial and provide a whole range of opportunities this could be as simple as a bucket, water butt or similar sunk into the ground or left standing proud and regularly topped up to provide opportunities which would be particularly valuable during the hot summer months.
- xii Given that the site forms a private residence with a relatively large garden retaining small unmanaged areas which incorporate static features such as log piles, insect hotels, toad or hedgehog houses would be beneficial for a whole range of species groups either providing additional cover or foraging opportunities.



7 REFERENCES

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
viii	Biggs J, Ewald N, Valentini A, Gaboriaud C, Griffiths RA, Foster J, Wilkinson J, Arnett A, Williams P and Dunn F
	2014. Analytical and methodological development for improved surveillance of the Great Crested Newt.
	Appendix 5. Technical advice note for field and laboratory sampling of great crested newt (<i>Triturus cristatus</i>)
	environmental DNA. Freshwater Habitats Trust, Oxford.
xiv	BS 42020:2013 Biodiversity – Code of Practice for Planning and Development 2013: The British Standards
	Institution.
XV	Chanin, P. (2003) Ecology of the European Otter. Conserving Natura 2000 Rivers Ecology Series No. 10.
	English Nature, Peterborough.
iii	Chartered Institute of Ecology and Environmental Management, 2018. Guidelines for Ecological Impact
	Assessment in the UK and Ireland. Terrestrial, freshwater and Coastal. 2nd ed. Winchester: CIEEM.
iv	Chartered Institute of Ecology and Environmental Management, 2017. Guidelines for Preliminary Ecological
	Appraisal. 2nd ed. Winchester: CIEEM.
viii	Clements, D. & Tofts, R., 1992. Hedgerow Evaluation and Grading Systems (HEGS). s.l.:s.n.
xvii	Collins J eds. 2016. Bat Surveys: Good Practice Guidelines, 3rd Edition. London: Bat Conservation Trust.
xviii	Dean, M. et al. (2016). The Water Vole Mitigation Handbook. The Mammal Society, London
xix	Department of Communities & Local Government, 2018. National Planning Policy Framework, London: DCLG.
XV	English Nature, 2001. Great Crested Newt Mitigation Guidelines. Peterborough: English Nature.
xxi	Froglife (1999) Reptile Survey: An Introduction to Planning, Conducting and Interpreting Surveys for Snake
	and Lizard Conservation. Froglife Advice Sheet 10. Froglife, Halesworth.
xvii	Gent, A. H., and Gibson, S. D., eds. (2003) Herpetofauna Workers' Manual. Peterborough, Joint Nature
	Conservation Committee.
xxiii	Harris S, Cresswell P and Jefferies D (1989) Surveying Badgers, Mammal Society.
xxiv	Joint Nature Conservancy Council, 2010. Handbook for Phase 1 habitat survey. Peterborough: JNCC.
XXV	Joint Nature Conservation Committee, 2004. Bat Workers Manual. 2nd ed. Peterborough: s.n. Kennedy, C & Southwood, T (1984). The Number of Species of Insects Associated with British Trees: A Re-
xxiii	analysis. Journal of Animal Ecology, 53:455-478.
xxvii	Natural England (2009) Interpretation of 'Disturbance' in relation to badgers occupying a sett, WMLG16.
~~~	Natural England, Peterborough.
xxviii	Natural England (2009) Guidance on 'Current Use' in the definition of a Badger Sett, WMLG17. Natural
,	England, Peterborough.
xviii	Neal J, and Cheeseman C, (1996) Badgers, Poyser Natural History.
XXV	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.
xxiii	Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great
xxxii	Crested Newt (Triturus cristatus). Herpetological Journal 10 (4), 143-155.
xxxiii	Roper T.J., (2010) Badger. Collins New Naturalist.



xxviii Reading, Chris & Jofré, Gabriela. (2009). Habitat selection and range size of grass snakes *Natrix natrix* in an agricultural landscape in southern England. Amphibia-Reptilia. 30. 379-388.

xxxv Strachan, et al. (2011). Water Vole Conservation Handbook. 3rd Ed.



## APPENDIX 1: LEGISLATION AND PLANNING POLICY

### 7.2 General & Regionally Specific Policies

 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 (2019); ODPM Circular 06/2005 (retained as Technical Guidance on NPPF 2019); Local planning policies 16 and 17 (Nottingham City Council); The Conservation of Habitats and Species Regulations 2017; 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; and Local Biodiversity Action Plan for Nottinghamshire

### 5.1 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.

This law is reinforced by the UK's transposition of the EU Habitats Regulations under *The Conservation of Habitats and Species Regulations* 2017. 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.

- 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.
- 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 2019 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.

## 2.1 Birds

iii 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.

- iv 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.
- v 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.

#### 5.1 Reptiles

vi 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.

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 and Species Regulations (2017). 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).

vii 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 2018 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.

#### 5.1 Water Vole

viii 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.

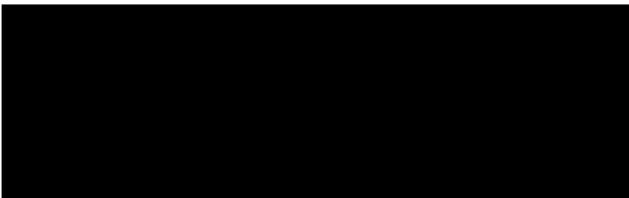
#### 7.7 White-clawed Crayfish

ix 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 Habitat Regulations 2010 (as amended), requiring the designation of Special Areas of Conservation to protect important populations of this species.

#### 7.8 Otter

xi

- x 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 and Species Regulations 2017. 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
  - A convicted offence could get an unlimited fine and up to 6 months in prison.



## 7.10 Hedgehogs and Common Toads

xiv Under the NERC Act 2006, the hedgehog (*Erinaceus europaeus*) and common toad (*Bufo bufo*) are categorised as a 'Species of Principal Importance' (SPI) for biodiversity. Furthermore, both are 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

- ii 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.
- iii 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
- iv Any person wishing to remove a hedgerow is required to submit a hedgerow removal notice to the LPA.
- v 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 The UK Biodiversity Action Plan (UK BAP) The conservation of habitats and species regulations 2017



