Extended Phase 1 Habitat Survey
Land west of Leconfield Road
Nanpantan
Loughborough
NGR SK50951 17549

Survey by
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smas worksafe consultant www.smasltd.com as recognised by SSIP SAFETY SCHEMES IN PROCUREMENT	Report prepared by: C Barker	Date Issued: 23 November 2020
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Non-Technical Summary

The site is a roughly rectangular parcel of grassland situated on the western end of Leconfield Road, Nanpantan, Loughborough, Leicestershire centred on grid reference SK50951 17549. The site is situated between residential development to the north, east and south and a block of deciduous woodland identified as Burleigh Wood to the west.

There are no Statutory sites within a 1km radius of the area surveyed but there are a number of potential Local Wildlife Sites within 1km. One of these, Burleigh Wood is located adjacent to the western boundary of the site.

Within the area surveyed and immediately adjacent areas the following habitats were identified:

- Neutral Grassland – likely to have previously been grazed or cut but now becoming rank
- Boundary trees within adjacent residential gardens
- Semi-natural broad-leaved woodland adjacent to the western boundary

Species	Present within 1km	Suitable habitat on site / evidence of presence	Likelihood of presence on site	Mitigation
Nesting Birds	Yes	Unmanaged grassland is becoming suitable for nesting but is close to houses with predatory cats which will restrict ground nesting. Nesting along the boundary hedgerows quite likely.	Low within the site interior but likely with hedgerows and mature boundary trees.	Inspection by an ecologist prior to any vegetation clearance within the nesting season
Reptiles	Yes Slow Worm	Site is becoming increasingly suitable for reptiles such as grass snake and slow worm. No evidence of reptiles found on the site.	Low – due to site location. Low numbers of reptiles may be present within the boundary hedgerows and scrub along the woodland edge.	Directional vegetation clearance under supervision by an ecologist.
Amphibians	No	Habitat within the majority of the site interior is unsuitable and there are no aquatic habitats present of in adjacent land.	Low – due to site location. Low numbers of amphibians such as common toad and common frog may be present within the boundary hedgerows and adjacent gardens.	None required.
Bats	Yes	Foraging along the site boundaries and particularly along the Burleigh Wood boundary is very likely.	Moderate for foraging along the field boundaries. No structural features with roost potential present.	Activity survey recommended to advise mitigation measures and lighting design
Badger and larger mammals	Yes	Field signs of badger were identified – two outlier sett entrances along the edge of Burleigh Wood and badger trails in the western part of the site area.	Foraging by badger confirmed to be taking place across the site with sett entrances on the edge of the site.	Construction methods to protect badgers and buffer zone along Burleigh Wood boundary.

Constraints:

- The potential for bats to foraging within and around the boundary of the adjacent woodland and across the field edge should be taken into consideration.
- The potential for the woodland edge and hedgerows to be used by nesting birds.
- The presence of badgers within the adjacent woodland foraging within the field.
- The potential for occasional reptiles within the grassland area, particularly along the boundary near Burleigh Wood.

Conclusions
Burleigh Wood is a Local Wildlife Site and this will lie adjacent to the western edge of the development area. Provided there is a suitable landscaped buffer zone along the western edge of the development to provide protection to this woodland it is unlikely and direct impact would occur on this woodland area from development.

The survey area comprises a field of neutral grassland that was, until quite recently, used for agricultural purposes. The field is still highly fertile land on which the grassland dominates but a number of common species able to colonise fertile unmanaged grassland are present. The range of species is still limited and no evidence of any rare of unusual plant species or plant communities was noted during the inspection. The woodland to the west is not within the proposed development area and is not likely to be directly impacted by any proposed residential development.

The access to the new residential housing is from the east via Leconfield Road and the Conceptual development plan shows a significant landscaped buffer zone area adjacent to Burleigh Wood and other habitat creation areas within the development. It is considered likely that development of the site area surveyed could be carried out in a manner that does not have any significant impact on local biodiversity.

The inspection completed in October 2020, following on from an earlier inspection in September 2018 has identified some evidence of badger activity along the western edge of the field associated with Burleigh Wood and also identified the potential for foraging bats and nesting birds to be present. The badger sett entrances identified along the edge of Burleigh Wood just within the edge of the field where it is sheltered by overhanging tree canopies will need to be given sufficient space and a buffer zone is recommended along the entirely of the Burleigh Wood boundary as has been shown within the Conceptual Development Plan.

Christopher Barker ACIEEM CEnv

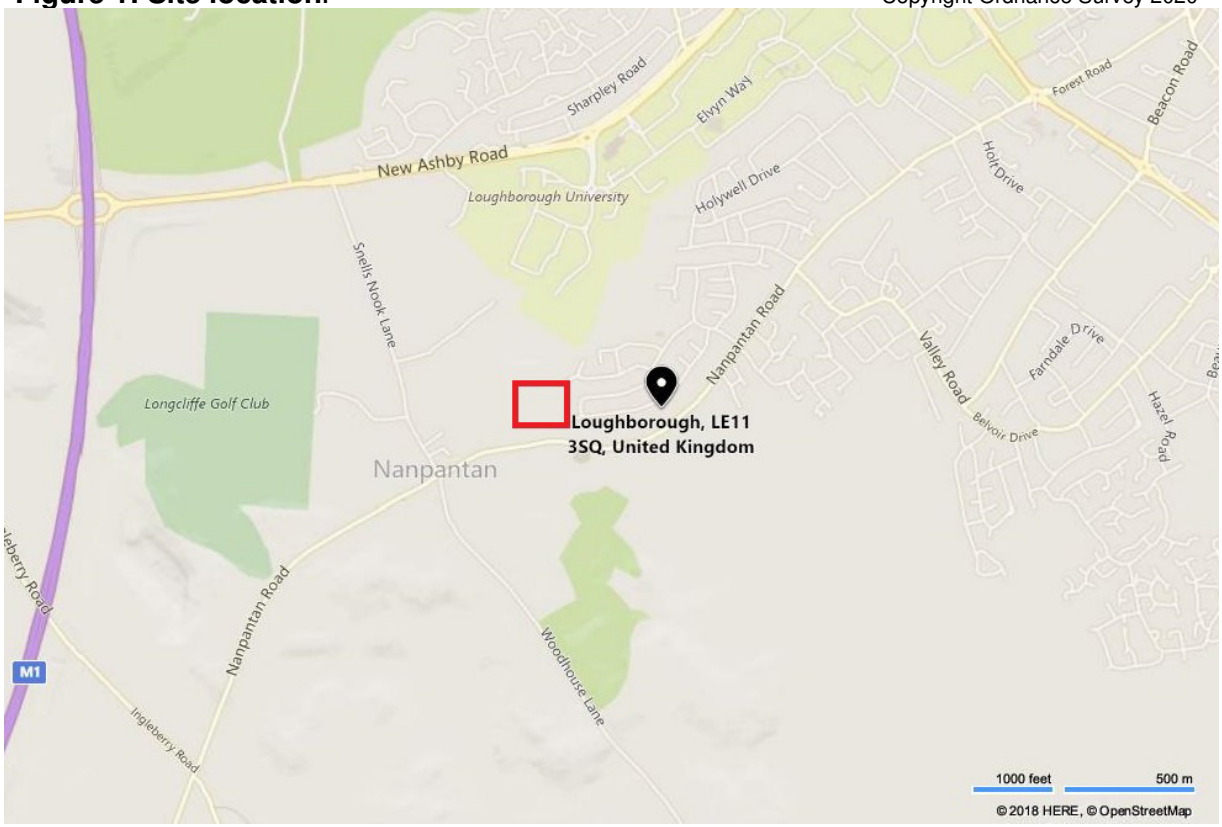
Part 1: Site Details

1. Introduction

1.1 Site Description and Location

The site is a roughly rectangular parcel of grassland situated on the western end of Leconfield Road, Nanpantan,Loughborough, Leicestershire centred on grid reference SK50951 17549. The site is situated between residential development to the north, east and south and a block of deciduous woodland identified as Burleigh Wood to the west. The location of the site is shown on the plan within **Figure 1** and an aerial photograph has been provided within **Figure 2** to place the site in context. The site was originally surveyed on the 12 September 2018 but a further inspection was completed on 23 October 2020 to update the surveys and prepare the final report. A photographic record of the site and any key locations is provided in Section 3.

Figure 1: Site location.



The Applicant has requested an ecological survey of the land to determine whether there is anything of ecological value or any evidence of protected species present. A photographic record of key areas is included alongside target notes within the report and an indicative species list is included within **Appendix 1.** A tree Survey to BS5837:2012 was completed at the same time and has been reported separately.

Date	Time	Location	Weather
23/ 10 /2020	08.00am	*Land off Leconfield Road, Loughborough Leicestershire LE11 3SP*	Overcast with significant clear spells. Wind 7mph from the south west. Temperature 11degrees C humidity 92%.
Accessibility	All areas of the site accessible to search for evidence of protected species.		

The survey area is a field of grassland situated on the margin of Loughborough and Nanpantan with housing to the north, east and south side and a large area of broadleaved woodland to the west. An aerial photograph has been provided below to place the site in context.

Figure 2: Contextual Aerial Photograph. Copyright 2020 Microsoft Corporation

1.2 Objective of the Report

This report is an extended Phase 1 Habitat Survey and ecological appraisal of the area identified in yellow within the aerial photograph above. The objective of the ecological appraisal is to identify the habitat(s) present on, and surrounding, the site area being assessed. Development of the site for the purpose of constructing new residential houses will require planning approval and this report has been prepared to provide information as part of any future planning application process. To this end the report is required to comply with the recommendations and principles set out in the National Planning Policy Framework 2019 as amended (NPPF). The report contains Biological Records and has been prepared to meet the standard required by BS42020 (British Standard for Biodiversity and Development).

Chapter 11 of the National Planning Policy Framework (NPPF) describes the Government's national policies on promoting 'an effective use of land in meeting the need for homes and other uses, while safeguarding and improving the environment.' NPPF is accompanied by Planning Practice Guidance on 'Biodiversity, ecosystems and green infrastructure' (2014) and ODPM Circular 06/2005.

The National Planning Policy Framework 2019 Chapter 15 sets out the Government's objectives for planning in regard to the protection of habitats and biodiversity. The planning objectives in relation to biodiversity and the natural environment are stated within paragraph 170 of the NPPF 2019 and are as follows:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan).

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland.

c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate.

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate."

Within the NPPF the planning policy context requires that Planning policies and decisions should be based on up to date information about the natural environment and other characteristics of the area including an assessment of existing and potential components of ecological networks (NPPF paragraph 43).

The above approach encapsulates the 'mitigation hierarchy' described in British Standard BS 42020:2013 which involves the following stepwise process:

• **Avoidance** – avoiding adverse effects through good design,
• **Mitigation** – where it is unavoidable, mitigation measures should be employed to minimise adverse effects,
• **Compensation** – where residual effects remain after mitigation it may be necessary to provide compensation to offset any harm,
• **Enhancement** – planning decisions often present the opportunity to deliver benefits for biodiversity, which can also be explored alongside the above measures to resolve potential adverse effects.

The measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development (BS 42020:2013, section 5.5).

This ecological appraisal provides information on the existing ecological and biodiversity value of the land on the site and also reports any evidence of protected species or significant habitats present. It has been provided to provide information to the Planning Authority in order to help meet the requirements of the NPPF and enable the Authority to assess the site area in accordance with the Code of Practice within BS42020 and guidelines issued by CIEEM in 2012. The report also identifies any habitats or species present that require more detailed surveys prior to any improvements being undertaken.

Part 2: Methodology and Survey Results

2. Appraisal Methodology

2.1 Baseline Study

Within NPPF it states that there are three dimensions to sustainable development: "economic, social and environmental." The environmental role includes "contributing to protecting and enhancing our natural, built and historic environment" and, as part of this, helping to improve biodiversity.

Within the NPPF 2019 it states that: *"Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas and should be given great weight…." Paragraph 172*

Within paragraphs 174 and 175 of NPPF 2019 the principles by which the protection and enhancement of biodiversity and geodiversity within the context of proposed development are described. These principles state in Paragraph 174 that any development proposal should:

*a) **Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks**, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and steppingstones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and*

*b) **promote the conservation, restoration and enhancement** of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for **securing measurable net gains for biodiversity**.*

Paragraph 175: When determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest.

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

The biodiversity of a site area and the potential presence of protected species are factors relevant to all developments irrespective of the size scale and will apply to any development on the site being assessed. Available information on the baseline ecology of the site and the presence of protected species within the locality has been obtained from the local biological records centre and reviewed (**Appendix 2)** and the records obtained are provided as separate appendices.

These data sources have been reviewed and the character and nature conservation value of habitats and species assessed. The aims of this appraisal of information are:

- To characterize all the existing available information regarding habitats and species that may be present at the site and provide up to date information about the environmental characteristics of the site area.
- To identify any habitats potentially present of nature conservation value in terms of local, regional and national context and within the context of local, regional and national policy; and,
- To identify any areas of ecological interest in order to either a) make recommendations to minimize the potential impact of any site works, or b) identify the need for a further survey work.

Following the appraisal of the available information, a site inspection has taken place to obtain specific site data at the site.

2.2 Habitats

The site was inspected in the first instance in September 2018 and then again on 23rd October 2020 in order to prepare this report. The inspection used the extended Phase 1 Habitat Assessment methodology as adopted by Natural England (Joint Nature Conservation Committee 1993) and in accordance with the Guidelines for Preliminary Ecological Appraisal (2012) issued by the Institute of Ecology and Environmental Management (IEEM) and BS42020 (British Standard for Biodiversity and Development).

The survey required a systematic walkover of the site to classify the habitat types present and was completed using standard Phase 1 Habitat Survey methodology whereby the habitat types present are identified and mapped, together with an assessment of the species composition of each habitat. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which require further survey. Any such areas identified can then be examined in more detail through Phase 2 surveys. This method was extended, in line with the Guidelines for Preliminary Ecological Appraisal to record details on the actual or potential presence of any notable or protected species or habitats.

Using the above method, the site was classified into areas of similar botanical community types, with a representative species list compiled for each habitat identified summarised within **Appendix 1**. A habitat base map and target notes have been prepared and included as **Figure 3** within section 3 of this report.

2.3 Protected Species

A methodical inspection was carried out to look for any evidence of protected species using the site and to identify any habitats with potential to provide significant shelter or foraging opportunities for these. The survey was carried out by Christopher Barker, an experienced ecological consultant and Chartered Environmentalist holding Class Licenses issued by Natural England.

The Conservation of Habitats and Species Regulations 2010 consolidates the various amendments that have been made to the Regulations. The original (1994) Regulations

transposed the EC Habitats Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Council Directive 92/43/EEC) into national law.

“European protected species” are those which are present on Schedule 2 of the Conservation of Habitats and Species Regulations 2010. They are subject to the provisions of Regulation 41 of those Regulations. All European Protected Species are also protected under the Wildlife and Countryside Act 1981 (as amended). Taken together, these pieces of legislation make it an offence to:

a. Intentionally or deliberately capture, injure or kill any wild animal included amongst these species

b. Possess or control any live or dead specimens or any part of, or anything derived from these species

c. deliberately disturb wild animals of any such species

d. deliberately take or destroy the eggs of such an animal, or

e. intentionally, deliberately or recklessly damage or destroy a breeding site or resting place of such an animal, or obstruct access to such a place

For the purposes of paragraph (c), disturbance of animals includes in particular any disturbance which is likely—

a. to impair their ability—
i. to survive, to breed or reproduce, or to rear or nurture their young, or

ii. in the case of animals of a hibernating or migratory species, to hibernate or migrate; or,
b. to affect significantly the local distribution or abundance of the species to which they belong.

Although the law provides strict protection to these species, it also allows this protection to be set aside (derogation) through the issuing of licences. The licences in England are currently determined by Natural England (NE) for development works. In accordance with the requirements of the Regulations (2010), a licence can only be issued where the following requirements are satisfied:

i) The proposal is necessary ‘to preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment’

ii) ‘There is no satisfactory alternative’

iii|) The proposals ‘will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

General faunal activity, such as mammals or birds observed visually or by call during the course of the surveys was recorded. Specific attention was also paid to the potential presence of any protected, rare or notable species, and specific consideration was given to bats, birds, badgers, amphibians and reptiles as described below.

Breeding Birds: All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. The inspection of the site included a search of hedgerows, ground vegetation and tree canopies looking for evidence of active or former nests.

Bats: All species of Bat within the UK are protected under the Conservation of Habitat and Species Regulations 2010 (Habitat Regulations) that amended and incorporated the Wildlife and Countryside Act 1981. These regulations make it an offence to:

- Intentionally kill, injure or take a bat [WCA section 9(1)]
- Possess or control any live or dead specimen or anything derived from a bat [WCA section 9(2)]
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a bat [WCA section 9(4)(a)]
- Intentionally or recklessly disturb a bat while it is occupying a structure or place which it uses for that purpose [WCA section 9(4)(a)]

Any building or significant trees present within the survey area have been assessed for their suitability to support roosting bats based on the presence of features such as holes, crevices, cracks, splits or loose bark. Potential bat roost locations in relation to buildings are described within this report (taken from Bat Survey Guidelines 2016) as:

Confirmed Roost – a structure with physical evidence confirming the presence of bats or bats visibly seen.
High – a structure with one or more potential roost features that are obviously suitable for use by a large number of bats on a regular basis and which is situated in an area of continuous high-quality foraging habitat suitable for bats.
Moderate – a structure with one or more potential roost features that could be used by bats, but which is unlikely to support a roost of high conservation status and which is in an area of connected habitat suitable for foraging by bats.
Low – a structure with one or more potential roost features that could be used by individual bats opportunistically. However, these potential roost features do not provide sufficient potential to be used by a larger number of bats or on a regular basis and the surrounding habitat is not of high value to foraging bats.
Negligible – a structure with negligible habitat features which is in a poor location making it highly unlikely roosting bats will be present.

Tree assessments were undertaken from ground level, with the aid of a torch and binoculars where required. During the survey features considered to provide suitable roost sites for bats such as the following were sought:

- Trunk / branch cavities – significant holes in the trunk caused by rot or injury.
- Trunk / branch split – split / fissure in trunk caused by rot or injury.
- Branch socket cavity – Where a fallen branch has resulted in the formation of an access point into a cavity.
- Woodpecker hole – created by nesting birds suitable for use by roosting bats.
- Lifted bark – bark which has rotted / lifted to form suitable access point/roost site for bats.
- Trunk hollows – decay in heartwood leading to internal cavity in trunk.
- Ivy cover – dense / mature ivy cover where the woody stems could create small cavities / crevices.

Common Reptiles: All species of British reptile are protected by the Wildlife and Countryside Act 1981 (as amended). The common species (adder, grass snake, slow worm and common lizard) are only protected against intentional killing and injuring (but not taking).

The survey included a search of all areas where suitable habitat for reptiles to shelter under or bask may be present, lifting logs and other suitable features to search underneath. The surveyor also maintained a careful watch whilst moving across the site to look for signs of reptiles moving to cover.

Great crested newts are afforded legal protection under European and UK law under the auspices of The Conservation (Natural Habitats &c.) (Amendment) Regulations which came into force on 21 August 2007, superseding the Habitat Regulations 1994. The 2007 amendments have increased the protection afforded to European Protected Species.

The law provides protection to adults, juveniles, efts (immature GCN) and eggs and it is an offence to intentionally or recklessly or as an incidental result of actions:

- Intentionally or deliberately capture, kill, or injure Great Crested Newts
- Intentionally or recklessly damage, destroy or obstruct access to any place used for shelter or protection (including resting or breeding places) whether occupied or not
- Deliberately, intentionally or recklessly disturb Great Crested Newts when in a place of shelter
- Possess a Great Crested Newt, or any part of it, unless acquired lawfully
- Sell, barter, exchange or transport or offer for sale Great Crested Newts or any part of them.

The survey included a search of any ponds and wetland areas within the site or immediate surrounding area nearby (where these features were accessible) and an assessment of ponds in the local area using Ordnance Survey Maps and aerial photographs to consider the potential for these species to access the site area.

Badger: Badgers are protected under the Protection of Badgers Act 1992. This makes it an offence to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it. A badger sett is defined in the legislation as "*a structure or place, which displays signs indicating current use by a badger*".

The survey searching for evidence of badger activity comprised two main elements. The first element involved searching for evidence of Badger setts. For any setts that were encountered, each sett entrance was noted and mapped. The following information was recorded:

- Number and location of well used / active entrances; these are clear from any debris or vegetation and are obviously in regular use and may, or may not, have been excavated recently.
- Number and location of inactive entrances; these are not in regular use and have debris such as leaves and twigs in the entrance or have plants growing in or around the edge of the entrance.
- Number of disused entrances; these have not been in use for some time, are partly or completely blocked and cannot be used without considerable clearance. If the
- entrance has been disused for some time all that may be visible is a depression in the ground where the hole used to be and the remains of the spoil heap.

The second element of the survey involved searching for signs of Badger activity such as well-worn paths and push-throughs, snagged hair, footprints, latrines and foraging signs, so as to build up a picture of any use of the site by Badger.

Invasive Species: Attention was paid to the presence of any invasive species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). However, the detectability of such species varies due to a number of factors, e.g. time of year, site management, etc., and hence the absence of invasive species should not be assumed even if no such species were detected during the Phase 1 survey.

A range of invasive non-native plant species are listed in Schedule 9 (Part 2) of the Wildlife and Countryside Act 1981, which makes it an offence to plant or cause these introduced

invasive plants to grow in the wild, effectively making it illegal to spread the plants during development operations.

2.4 Consultations

The evaluation of ecological features and resources is based on professional judgement whilst also drawing on the latest available industry guidance and research. The approach taken in this report is based on that described by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2016). In evaluating ecological features. The *Geographic Frame of Reference* is a key factor taken into account when assessing the potential ecological value of a site being surveyed. The value of an ecological feature or resource is determined within a defined geographical context using the following frame of reference:

- International.
- National.
- Regional.
- County (or Metropolitan).
- District (or Unitary Authority, City or Borough).
- Local (or Parish).
- Site level only.

Within this frame of reference, certain sites may carry a statutory ecological designation, e.g. Special Area of Conservation (SAC) for internationally important sites or Site of Special Scientific Interest (SSSI) for sites of national importance. Sites of more localised nature conservation importance do not receive statutory protection but may be designated by Local Planning Authorities or other bodies, e.g. Wildlife Trusts. Such non-statutory designations or 'Local Sites' include Local Wildlife Sites (LWSs) and Sites of Nature Conservation Interest (SNCIs), for example.

A review of the available data obtained from the Leicestershire Records Centre confirms that the site is not a Statutory or Non-Statutory of ecological significance. The records were originally purchased in October 2018 but as the character and management of the site has not changed, a review of data within NBN and MAGIC was carried out to update these and identify any significant changes in the data. There are no Statutory sites within a 1km radius of the area surveyed but there are a number of potential Local Wildlife Sites within 1km. One of these, Burleigh Wood is located adjacent to the western boundary of the site. The table below summarises the LWS and RIGS sites within 1km and the distance of these from the area being surveyed. A map showing the locations of the LWS and RIGS sites is provided within Appendix 1.

Site	Designation	Description	Distance (m)
Bucks Hill	Geology sites (RIGS)	Former quarry with geological exposures	617
Burleigh Wood	LWS	Broadleaved woodland	78
Hedgerows At Loughborough University	LWS	Species diverse hedgerows	428
Nanpantan Hall Wood	LWS	Broad leaved woodland	931
Buck Hill Knoll	LWS	Woodland knoll with grassland habitat	894
Nanpantan, the Home Farm Grassland	LWS	Neutral grassland habitat	717
Buck Hill	LWS	Woodland and mixed habitat around quarry	650
Loughborough, Snell's Nook and Burleigh Brook, Hedges and Trees	LWS	Hedgerows and trees	377

Holywell Wood	LWS	Broadleaved woodland	568
Nanpantan Reservoir	LWS	Reservoir site	376
Longcliffe Golf Course	LWS	Mosaic of scrub, grassland and woodland habitats	934
Buck Hill - Three Outcrops	LWS - Potential / Historic	Geological outcrops with scrub	509
Loughborough, Wood Brook Between Nursery End and Brookside Rd	LWS - Potential / Historic		850
Charnwood Canal and Woodland Strip	LWS - Potential / Historic		602
Beacon Hill, Hangingstone and Out Woods	National Site Designations		230

It is clear from the table that there is potential for Burleigh Wood LWS to be impacted either directly or indirectly from development within the site area due to the proximity of this and the sharing of a boundary. The other sites identified within the table above are either sufficiently distant from the survey area to avoid any direct impact or separated from this by residential or commercial areas and major roads. Indirect impact on some of these sites by increased recreation could possibly still occur.

A review of the data for protected species has identified a small number of significant records relating to the immediate vicinity of the site which are summarised within the table below.

Species		**Date range**	**Number of records**
Alcedo atthis	Kingfisher	2016	2
Fringilla montifringilla	Brambling	1006	1
Phoenicurus ochruros	Black Redstart	1996	1
Milvus milvus	Red Kite	2015	1
Tyto alba	Barn Owl	2012	1
Turdus pilaris	Fieldfare	2008 - 2010	2
Meles meles	Badger	1995- 2017	16
Anguis fragilis	Slow Worm	2003	2
Chiroptera	Non-species specific	1995 -2006	6
Myotis bats	Bats	2017	21
Barbastella barbastellus	Western Barbastelle	2017	1
Nyctalus leisleri	Lesser Noctule	2017	1
Myotis daubentonii	Daubenton's Bat	2017	1
Nyctalus noctula	Noctule Bat	2012 - 2017	27
Pipistrellus sp	Pipistrelle bat non-species specific	1995 - 2017	19
Pipistrellus pipistrellus	Common Pipistrelle	2017	55
Pipistrellus pipistrellus	Soprano Pipistrelle	2017	30
Plecotus auritus	Brown Long-eared bat	1995 - 2017	57

There are no records of Great Crested Newt (GCN) within 1km of the site and the site area contains no ponds, wetlands or other aquatic habitat. It is unlikely that the parcel of grassland being surveyed, isolated as it is by housing on three sides and mature broadleaved woodland on the western side, will be easily accessible to amphibians.

There are records of grass snake in this area but there is a record of Slow Worm at Nanpantan Hall 900m to the south west. The relative isolation of the area surveyed may make it difficult for reptiles to gain access to this site but Slow Worm are often found within suitable gardens where there are compost heaps and wild areas. The tall grassland and

boundary scrub does provide a suitable habitat for reptiles and the absence of records does not necessarily mean the absence of this species for the locality.

The site is a grassland area going to seed and being adjacent to established broad leaved woodland, it does offer a potentially attractive foraging area to a number of bird species. The presence of housing on three sides with the predatory cat population this will provide, makes the presence of ground nesting birds unlikely. However, the boundary scrub and hedgerows and the trees along the woodland edge will have greater attraction and provide nesting locations. Species such as Red Kite, Fieldfare and Barn Owl are noted within the local records.

There are numerous records of foraging bats in this area with two Pipistrelle, Brown Long-eared, Noctule and Leisler bats being recorded in the locality. These are species that would find the grassland and woodland edge habitat suitable for foraging. Whilst there are no trees or structures within the site area that could be used for roosting purposes, foraging is considered to be highly likely in this area and the site may be a significant foraging or commuting location.

There are records of badger within Burleigh Wood to the west of the site and it is quite possible that badger may access the grassland along the woodland edge for foraging purposes.

A plan showing the location of the site and the areas of ecological interest within the locality is provided within the separate Biological Records Appendix.

Figure 3 Habitat Plan

3. Survey Findings

3.1 Habitat Classifications and Target Notes

The 2018 and 2020 inspections of the site have identified the following habitats and evidence / potential for protected species:

Habitats:

- Neutral Grassland – likely to have previously been grazed or cut but no becoming rank
- Boundary trees and hedgerows within adjacent gardens
- Semi-natural broad-leaved woodland adjacent to the western boundary

Target Note: Neutral Grassland
The grassland is dense and highly fertile with no indication that it is species rich. It is dominated by common agricultural grasses such as Perennial Ryegrass (*Lolium perenne*) with abundant Yorkshire Fog (*Holcus lanatus*) and occasional Cocksfoot *(Dactylis glomerata*) in some areas. The sward has not recently been cut or grazed and it is starting to form tussocks as was the case in 2018 when the site was first inspected.

Nettle (*Urtica dioica*) and chickweed (*Stellaria media*) is quite abundant with occasional dock (*Rumex obtusifolius*), creeping thistle (*Cirsium arvense*), cut-leaved cranesbill (*Geranium dissectum*), shining cranesbill (*Geranium lucidum*) with hogweed (*Heracleum sphondylium*) and fat hen (*Chenopodium album*) colonising around the field margins. The species present and dense growth indicate fertile ground conditions and a dense thatch of dead grass has developed in many areas.

The margin of the grassland along the western boundary and in particular in the south western corner is becoming dominated by ruderals and perennials with some area where dense nettle

(*Urtica dioica*), creeping thistle (*Cirsium arvense*) and willowherb (*Epilobium montanum*) is beginning to dominate the sward. Closer to the woodland edge is one area of dense raspberry (*Rubus idaeus*) and suckering blackthorn (*Prunus spinosa*) is also present along this boundary invading the grass sward as a result of lack of recent grassland management.

Raspberry thicket near woodland edge

Raspberry, blackthorn and bramble

Target Note: Hedgerows
The field boundaries are a mix of hedgerow and fencing. Many sections comprise trimmed Holly (*Ilex aquifolium*) , trimmed Leylandii (X *Cupressocyparis Leylandii*), with sections of trimmed Cherry Laurel (*Prunus laurocerasus*) and trimmed Firethorn (*Pyracantha* sp). Along the eastern boundary is a thicket of dense mature Blackthorn (*Prunus spinosa*) encroaching the grassland. There are no species rich hedgerows along the boundaries of the site or within the site interior.

Hedgerow Regulations
A measure of statutory protection is afforded to hedgerows under the Hedgerow Regulations 1997, where any ecological or archaeological features are defined as being 'important'. The Removal of important hedgerows requires consent from the local planning authority, except in certain prescribed circumstances. The importance of hedgerows can be assessed according to the criteria identified in Part II Schedule I of the Hedgerow Regulations 1997. A hedgerow is identified as being 'Ecologically Important' if has existed for 30 years or more and satisfies at least one of the criteria listed below.

- *Criteria 6*: Contain certain categories of species of birds, animals or plants listed in the Wildlife and Countryside Act 1981 or the British Red Data Books
- *Criteria 7*: The hedgerows include:
  a) At least 7 schedule III woody species, on average in a 30m length;
  b) At least 6 schedule III woody species, on average in a 30m length and has at least 3 associated features;
  c) At least 6 schedule III woody species, on average in a 30m length, including a black popular tree, or large-leaved lime, or small-leaved lime or wild service tree;
  d) At least 5 schedule III woody species, on average in a 30m length and has at least 4 associated features.

  The associated features are:
  i. a bank or wall which supports the hedgerow along at least one half of its length;
  ii. gaps which do not exceed 10% of the length of the hedgerow;
  iii. on average, at least one tree per 50 metres;
  iv. at least 3 schedule 2 woodland species within one metre, in any direction, of the outermost edges of the hedgerow;
  v. a ditch along at least one half of the length of the hedgerow;

vi. connections with other hedgerows, woods or ponds scoring 4 points or more (where a connection to another hedgerow scores 1 and a connection to a broad-leaved wood or pond scores 2); or
vii. a parallel hedgerow within 15 metres of the hedgerow.

- *Criteria 8:* Run alongside a bridleway, footpath, road used as a public path, or a byway open to all traffic and includes at least 4 woody species, on average, in a 30m length and has at least 2 associated features as listed above.

In accordance with these regulations, regular 30m sections of the hedgerow at the site were sampled i.e. woody species were recorded for 30m out of every 100m in order to sample the hedgerow in a systematic way. The average number of species for each hedgerow was derived by totaling the number of species recorded and dividing by the number of sections. This gives an average to compare with the Hedgerow Regulations Criteria. Only when the average number of species is 5 or more are associated features taken into account. An average of 5 woody species and 4 associated features are needed for a hedgerow to be defined as important hedgerow in accordance with the regulations. The exception to this is when a hedgerow runs alongside a footpath or bridleway. In this case only 4 woody species and 2 associated features are needed.

Hedgerow H1 along south boundary of the field
The south boundary of the field is a combination of fencing and trimmed amenity hedgerows dividing the field from the adjacent gardens. This boundary has short sections of trimmed Hawthorn (*Crataegus monogyna*), Holly (*Ilex aquifolium*), Leylandii (*XCupressocyparis Leylandii*), Cherry Laurel (*Prunus laurocerasus*) and Firethorn (*Pyracantha* sp). There are a small number of Birch (*Betula pendula*) and Oak (*Quercus petraea*) specimen trees within the garden on the south eastern boundary and a large mature Ash (*Fraxinus excelsior*) in the garden near the south west boundary corner.

Individually each separate section of this hedgerow has limited diversity and overall there is an average of 2 woody species per 30m length and it is not considered to be important under the Hedgerow Regulations criteria although it does provide good screening along the southern boundary of the site area and screens the adjacent houses and gardens. The ownership of this hedgerow is not clear, and it may be part of the adjacent residential properties.

Hedgerow H2 along northern and eastern boundaries of the field
H2, similar to H1 is a combination of fencing and trimmed amenity hedgerows dividing the field from the adjacent gardens. These boundaries have short sections of trimmed Hawthorn (*Crataegus monogyna*), Blackthorn (Prunus spinosa), Holly (*Ilex aquifolium*) and Leylandii (*X Cupressocyparis Leylandii*). There are a small number of specimen trees within the adjacent gardens but none of large stature.

Individually each separate section of this hedgerow has limited diversity and overall there is an average of 2 woody species per 30m length and it is not considered to be important under the Hedgerow Regulations criteria although it does provide good screening along the northern and eastern boundaries of the site area and screens the adjacent houses and gardens. The ownership of these sections of hedgerow is not clear and it may be part of the adjacent residential properties.

H1 along south boundary

H2 along north and east boundaries

Target Note: Adjacent Broadleaved Woodland and Boundary trees
The woodland to the west (Burleigh Wood) is divided from the field being proposed for development by a post and rail fence which has become overgrown by dense Blackthorn (*Prunus spinosa*) and Hawthorn (*Crataegus monogyna*) along most of the boundary and covered by overhanging Oak (*Quercus petraea*) canopies in other parts so it has become hidden.

The woodland is mature and well-established and comprises Oak (*Quercus petraea*), Ash (*Fraxinus excelsior*) and Sycamore (*Acer pseudoplatanus*) with under canopy Holly (*Ilex aquifolium*), Elder (*Sambucus nigra*) and Hawthorn (*Crataegus monogyna*). There are a small number of mature Oak trees quite close to the boundary of the site with overhanging canopies.

Burleigh Wood is placed within JNCC A1.3.1 (mixed semi-natural woodland). The major trees within the copse are individually described within the BS5837 Tree Survey report.

Burleigh wood boundary

Burleigh wood boundary

Oak on south boundary

Ash on south boundary

Cypress on north boundary

Holly and Leylandii on north boundary

3.2 Evidence of Protected Species

During the inspections of the site completed in 2018 and more recently in 2020 notes were made on the suitability of habitats for protected species and any sightings or signs of protected species were recorded:

- The suitability of habitats for badger (*Meles meles*) was recorded and any evidence of badgers including setts, dung pits, badger paths, hairs, bedding, footprints and scratching trees was noted.
- Trees with features suitable for roosting bats were noted, such as hollows (e.g. old woodpecker holes), cracks and cavities within trunks and branches, crevices behind loose bark and ivy growth on trunks.
- The suitability of habitats was assessed for reptiles such as Grass snake (*Natrix natrix*) and amphibians (including great crested newts -*Triturus cristatus*).
- The suitability of site was assessed for nesting birds.

Whilst surveying in October is not an optimum time for many protected species, an experienced surveyor can make reliable judgements about the quality and composition of habitats and their potential suitability for protected species. The table below provides a summary of the potential for protected species to be present within the site.

Species	Present within 1km	Connectivity	Suitable habitat on site / evidence of presence	Likelihood of presence on site
Nesting Birds	Yes	Good via hedgerows and surrounding woodland to the west.	Unmanaged grassland is becoming suitable for nesting but is close to houses with predatory cats which will restrict ground nesting. Nesting along the boundary hedgerows quite likely.	Low within the site interior but likely with hedgerows and mature boundary trees.
Reptiles	Yes Slow Worm	Likely to be limited by the surrounding housing and major roads. Adjacent Burleigh Wood not highly suitable terrestrial habitat.	Site is becoming increasingly suitable for reptiles such as grass snake and slow worm. No evidence of reptiles found on the site.	Low – due to site location. Low numbers of reptiles may be present within the boundary hedgerows and scrub along the woodland edge.
Amphibians	No	Likely to be limited by the surrounding housing and major roads. Adjacent Burleigh Wood not highly suitable terrestrial habitat.	Habitat within the majority of the site interior is unsuitable and there are no aquatic habitats present of in adjacent land.	Low – due to site location. Low numbers of amphibians such as common toad and common frog may be present within the boundary hedgerows and adjacent gardens.
Bats	Yes	Reasonable due to the presence of extensive woodland to the west of the site.	Foraging along the site boundaries and particularly along the Burleigh Wood boundary is very likely.	Moderate for foraging along the field boundaries. No structural features with roost potential present.
Badger and larger mammals	Yes	Excellent due to the presence of Burleigh Wood to the west.	Field signs of badger were identified – two outlier sett entrances along the edge of Burleigh Wood and badger trails in the western part of the site area.	Foraging by badger confirmed to be taking place across the site with sett entrances on the edge of the site.

Reptiles – No physical evidence of reptiles was found within the site area inspected but the tall grassland is becoming a good terrestrial foraging habitat for species such as Grass Snake and Slow Worm and there are links to other natural areas along the edge of Burleigh Wood. Slow Worm are recorded in the area to the south west at Nanpantan Hall.

Since the grassland habitat is becoming suitable for reptiles, the presence of a small number of reptiles is possible across this site. The likelihood of significant numbers is low due to the location of the site and further reptile surveys are not recommended. However, measures to protect reptiles from harm should be taken during any site clearance.

Amphibians – There is no amphibian breeding habitat within the site and no ponds close to the area surveyed. There are no records of Great Crested Newt in this area and the site is isolated on three sides by residential houses and road.

No further surveys for amphibians are recommended as the potential for these species to be present is considered to be very low.

Nesting Birds – The tall grassland and boundary woodland and hedgerows offer potentially good locations for a range of nesting birds, particularly within the adjacent Burleigh Wood. Ground nesting is likely to be impacted by the presence of predatory cats. However, some nesting in quiet boundary areas of within the adjacent hedgerows and woodland should be assumed.

It is concluded that any development work would have to commence with ground and vegetation clearance outside of the bird nesting season unless this activity is supervised by an ecologist and a search for nesting birds is carried out beforehand.

Badger – During the inspection two burrows were found. During the 2018 survey these were identified as active outlier badger setts with clear entrances and badger trails leading into the wood to the west and also east into the field. It is assumed there is a larger main sett to the west within Burleigh Wood but no such sett was found within 30m of the field boundary.

The October 2020 inspection confirmed that the two outliers are still present but from the debris present within the entrances these have not recently been occupied. However, it is likely that these may be reoccupied in the future as outlier setts are often only occasionally used.

Debris over outlier entrance

Debris over outlier entrance

Badger trail leading into the field

Bats – There are no trees or structures within the site area that would provide potential roosting locations for bats. It is highly likely the woodland edge and other boundary areas of the grassland are used by foraging bats on a regular basis.

Prior to any development commencing a bat activity survey is recommended to assess the significance of the site for foraging and commuting bats and determine what, if any, mitigation measures might be appropriate within any development such as provision of roost boxes and a specification for dark corridors and directional / limited lighting.

3.3 Ecological Constraints and Opportunities

Constraints:
The following ecological constraints have been identified during the survey.

- The potential for bats to foraging within and around the boundary of the adjacent woodland and across the field edge should be taken into consideration.
- These potential for the woodland edge and hedgerows to be used by nesting birds.
- The presence of badgers within the adjacent woodland foraging into the proposed development area.
- The potential presence of reptiles within the grassland area.

It is concluded that mitigation measures for the presence of protected species, particularly badger along the western boundary of the site will be required. These will take the form of:

a) A minimum 30m stand off from the specific location of the two badger sett entrances
b) A minimum 10m wide 'buffer zone' along the woodland boundary on the western side of the site to provide space for foraging badger and a good commuting area along the woodland edge for this species
c) Implementation of badger protection construction methods which will require excavations to be covered or provided with badger escape routes, secure fencing around working areas, securing equipment and materials so these cannot be disturbed or knocked over by any inquisitive badger.
d) A bat activity survey should be carried out prior to the commencement of development to provide information on the level of bat activity and species present to enable the appropriate level of mitigation to be designed. This is likely to include low level and shielded lighting along boundary areas so that there is no significant increase in artificial light in these locations.
e) Avoidance of ground and vegetation clearance activity within the bird nesting season unless an by an ecologist is completed prior to the commencement of development to confirm that any activity will not impact nesting birds.
f) A reptile presence / absence survey to determine if any reptiles are present within the site, particularly along Burleigh Wood should be carried out prior to the commencement of development. If present, a reptile mitigation / method statement will be required.

Opportunities:

Given the proximity of the woodland to the west, there is potential for any landscaping design to be linked to this to the benefit of local wildlife.

Provision of a secluded landscaped buffer zone along the woodland suitable planted to provide foraging opportunities for badgers and other wildlife should be included within any development plan. The inclusion of a wetland / soakaway area with sympathetic native landscaping within the development to increase the diversity of habitats created is recommended.

Bat boxes and bird boxes could be erected at suitable positions to promote the use of this area by bats and birds, particularly along the western boundary where access to the woodland edge is assured. The provision of artificial refugia suitable for reptiles, hedgehogs and small mammals would be beneficial along the boundaries of the development area.

Part 3: Initial Ecological Appraisal

4. Impact of Proposed Site Development

Within the NPPF 2019, guidance on the provision or retention of biodiversity within any proposed areas for development and measures to ensure the safeguarding of protected species are provided. Development should seek to contribute a net gain in biodiversity with an emphasis on improving ecological networks and linkages where possible.

Based on the conceptual development plan provided, the proposed will comprise residential houses in the eastern and central areas of the site and a significant landscaped buffer zone area in the western part of the site adjacent to Burleigh Wood. Access will be via a new road extending Leconfield Road.

Figure 4 below is a copy of the conceptual development plan. This report is not intended to be a suitable alternative to an Ecological Impact Assessment (EcIA) in accordance with the CIEEM Guidelines on Ecological Impact Assessment, 2016.

Figure 4 – Conceptual Development Plan and Wider Landscape Plan

As noted within this report, the 'mitigation hierarchy' described in British Standard BS 42020:2013 should be applied in regard to biodiversity within sites being considered for development which is a stepwise process:

- **Avoidance** – avoiding adverse effects through good design.
- **Mitigation** – where it is unavoidable, mitigation measures should be employed to minimise adverse effects.
- **Compensation** – where residual effects remain after mitigation it may be necessary to

provide compensation to offset any harm.
• **Enhancement** – planning decisions often present the opportunity to deliver benefits for biodiversity, which can also be explored alongside the above measures to resolve potential adverse effects.

The measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development (BS 42020:2013, section 5.5).

The table below considers the features present on the site in the context of the hierarchy.

Feature	Ecological Significance	Hierarchy application	Impact of proposed development
Neutral grassland	Moderate	Avoidance / Mitigation	Grassland within the western part of the site will be retained but the remaining areas will be lost under development and require mitigation in the form of new landscaping.
Boundary hedgerows	High	Avoidance	The proposed development will retain the hedgerows and provide space to protect these.
Boundary Woodland (Burleigh Wood)	High	Avoidance	The proposed development will provide a significant landscaped buffer zone between the new housing and the woodland edge.

4.1 Potential Impact on nearby Statutory and Non-statutory sites

Burleigh Wood is a Local Wildlife Site and this lies adjacent to the western edge of the development area. Provided there is a suitable 30m wide landscaped buffer zone along the western edge of the development to provide protection to this woodland as shown in the conceptual development plan it is unlikely and direct impact would occur on this woodland area from development.

However, impact arising from access, lighting and disturbance during construction does need to be taken into consideration. There is a public footpath on the north western corner of the site which is in regular use which leads north along the edge of Burleigh Wood and it is assumed this will be linked into any new development to facilitate continued access. There are no direct paths into Burleigh Wood along the west edge of the field and it is presumed this will not change. There are already a number of well-used footpaths within Burleigh Wood for informal recreation.

In terms of lighting, measures will be needed to avoid significant increase in lighting along the woodland edge and a buffer zone is recommended. In addition, during construction, any lighting used within the site must be directional and face away from the woodland edge. Noise associated with any construction is likely to be limited in duration but in any event should not take place at dawn or into the evening period.

There are no nearby Statutory sites close by that could potentially be impacted by any proposed use of the land survey for the purposes of development.

4.2 Impact of the Proposals on Site Biodiversity

The level of biodiversity within the site being assessed must be a consideration in determining the impact on biodiversity that may arise from any development on the site. Within the NPPF 2019 it states that any development proposal should seek to "*contribute to protecting and*

enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change……."

Within the Guidance it specifically states that "*Planning…. decisions should contribute to and enhance the natural and local environment by……protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils……..recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland."*

The survey area comprises a field of neutral grassland that was, until quite recently, used for agricultural purposes. The field is still highly fertile land on which the grassland dominates but a number of common species able to colonise fertile grassland are present, particularly around the margins of the field and adjacent to Burleigh Wood. The range of species is still limited and no evidence of any rare of unusual plant species or plant communities was noted during the inspection.

The woodland to the west is not within the proposed development area and is not likely to be directly impacted by any proposed residential development as the Conceptual Development plan indicates a wide landscaped buffer zone is being provided.

Provided the access to any residential housing is from the east via Leconfield Road and the Conceptual development plan prepared appears to provide suitable protection to Burleigh Wood and any wildlife associated with this. It is therefore considered likely that development of the site area surveyed could be carried out in a manner that does not have any significant impact on local biodiversity.

4.3 Impact of the Proposals on Protected Species

The requirements of Part IV of ODPM / Defra Circular 06/2005 in regard to the protection of certain species are still applicable under NPPF. The presence of protected species at the site must be taken into consideration. Under the requirements of the NPPF provision in relation to the presence of protected species on, or making use of, a site proposed for any development must be taken into account. The presumption in favour of sustainable development does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined or where the impact on protected species is considered to outweigh the benefit of development.

The inspections completed in September 2018 and October 2020 have identified field signs of badger in the survey area and there is some potential for other protected species to be present which will require mitigation:

Nesting Birds: There is only low potential for nesting birds to be present within the open grassland areas due to disturbance from predatory cats. However, if the vegetation height continues to increase measures should be taken to ensure no nesting birds are disturbed by any proposals. The hedgerows have potential to support nesting birds and if any hedgerow sections need to be cleared, for instance to widen the existing field access, this should be completed outside of the nesting season or be preceded by an inspection by an Ecologist to ensure no nesting birds are present or determine what mitigation measures to protect nesting birds are required.

Badger: The badger sett entrances identified along the edge of Burleigh Wood just within the edge of the field where it is sheltered by overhanging tree canopies will need to be provided sufficient space and a buffer zone is recommended along the entirely of the Burleigh Wood boundary as has been shown within the Conceptual Development Plan.

Reptiles: the presence of a small number of reptiles in this grassland area and adjacent gardens cannot be entirely discounted. Measures to avoid harming reptiles should be taken during site clearance works. These should take the form of direction clearance and removal of the grassland in stages, the first cut being to not less than 10cm above ground level with the cuttings being cleared, the second cut being to 5cm.

Bats: The proposed development does not disturb any of the mature trees around the field margins or along the boundary with Burleigh Wood. The design of any external lighting associated with the new residential houses and access road should ensure that there is no light spill of the direction of the boundary areas, particularly Burleigh Wood which could impact bat foraging around this area.

Christopher Barker CEnv ACIEEM

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Web references

MAGIC: Designated area data downloaded from URL http://www.magic.gov.uk.html

National Biodiversity Network: Protected species data downloaded from URL http://data.nbn.org/interactive/map

Appendix 1 – Indicative Species List

Tree and Shrub Species	***Ground Flora and Perennial Species***
Apple (*Malus domestica*), Ash (*Fraxinus excelsior)* Birch *(Betula pendula)* Blackthorn (*Prunus spinosa*) Cherry (*Prunus avium Cul*) Cypress (*Cupressus* sp), Damson (*Prunus domestica*), Goat Willow (*Salix caprea*) Dog Rose (*Rosa canina)* Elder (*Sambucus nigra*) Firethorn (*Pyracantha sp)* Hawthorn (*Crataegus monogyna*) Holly (*Ilex aquifolium*) Ivy (*Hedera helix)* Laurel (*Prunus laurocerasus)* Non-native Oak (*Quercus* sp), Oak (*Quercus petraea)* Raspberry (*Rubus idaeus)* Sycamore *(Acer pseudoplatanus)*	bindweed (*Calystegia sepium*), bramble (*Rubus fruiticosa*) chickweed (*Stellaria media*) cleaver (*Galium aparine*) clover (*Trifolium repens*), cocksfoot *(Dactylis glomerata*) common vetch (*Vicia sativa*) cow parsley (*Anthriscus sylvestris*), cut-leaved cranesbill (*Geranium dissectum*) creeping thistle (*Cirsium arvense*), dandelion (*Taraxacum* sp), dock (*Rumex obtusifolius*), fat hen (*Chenopodium album*) ground elder (*Aegopodium podagraria*), hogweed (*Heracleum sphondylium*) lesser willowherb (*Epilobium hirsutum*) mayweed (*Chamomilla suaveolens*), meadow grass (*Poa trivialis*), milfoil (*Achillea millefolium*) mouse-ear hawkweed (*Hieracium pilosella*) mugwort (*Artemesia vulgaris)* nettle (*Urtica dioica*), perennial ryegrass (*Lolium perenne*) plantain (*Plantago lanceolata*) rough hawks beard (*Crepis biennis*) shining cranesbill (*Geranium lucidum*) spear thistle (*Cirsium vulgare)*, willowherb (*Epilobium montanum*) Yorkshire Fog (*Holcus lanatus*),

This species list records the species seen during the site inspection and is not presented as a detailed botanical survey of the site.

Appendix 2 – Biological Records from Leicestershire Records Centre

THESE RECORDS ARE CONFIDENTIAL AND HAVE BEEN PROVIDED SEPERATELY.

C.B.E. Consulting

Ecological and Arboricultural Initial Assessment
Land west of Leconfield Road
Loughborough
Leicestershire
NGR SK50951 17549

Appendix 1 Biological Records

Leicestershire & Rutland environmental records centre

LRERC Environmental Information Search - LR/E00204 (Public Version)

Search Details

Our Reference: LR/E00204

Your Reference: P1718 Leconfield

Requested By: Chris Barker, CBE Consulting

Data Users:

Search Date: 17/09/2018 13:46

Expiry Date: 17/09/2019

Data Request Type: Commercial

Search Location: Leconfield Road (SK50951754)

Important Issues

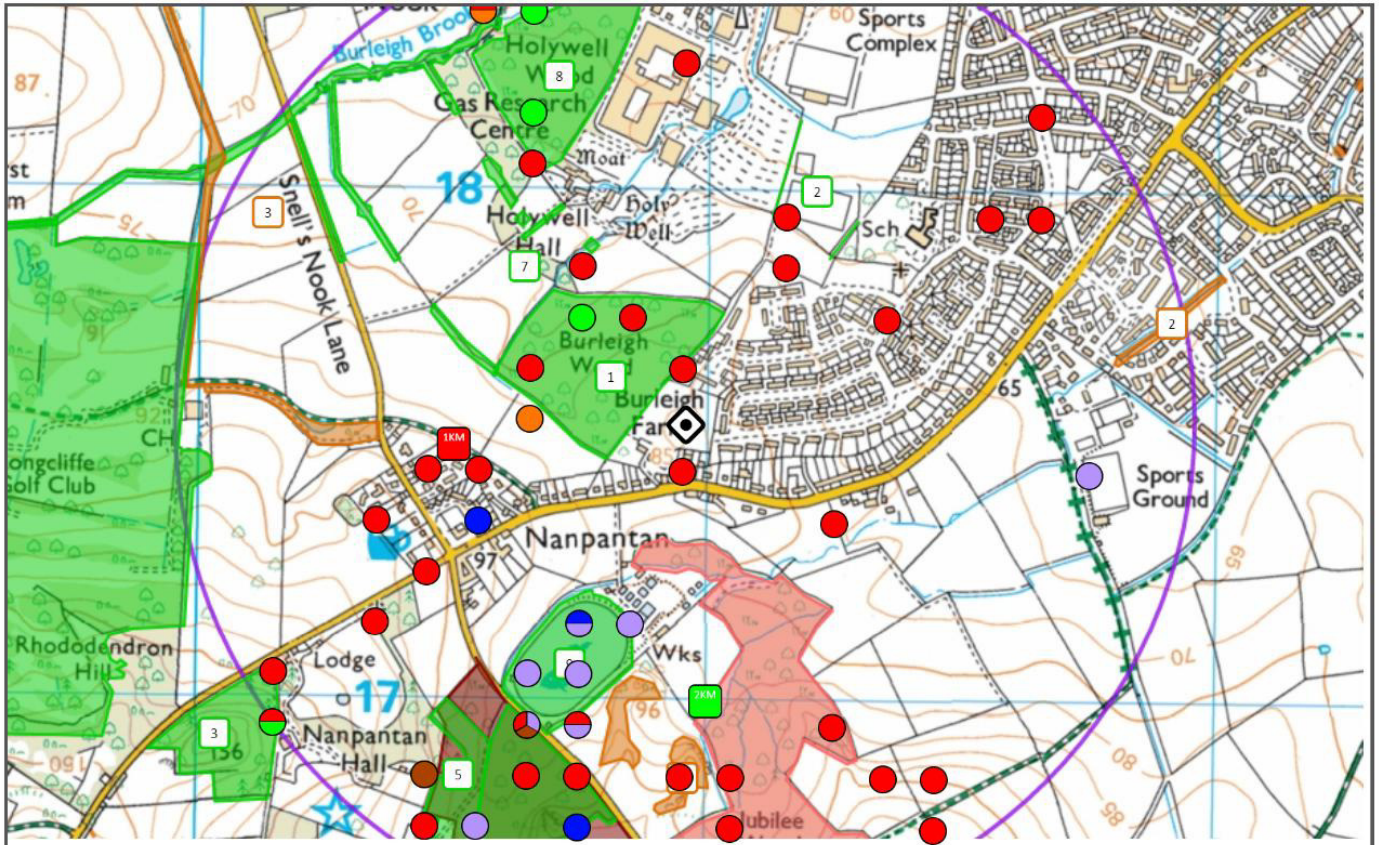
- Use of the data is governed by LRERC's Terms & Conditions, available from https://my.lerc.online/?page=terms&src=lr.
- Unless otherwise agreed, you **must not share the data or the method for accessing it**, e.g. an eMapper link, with anyone other than specified *Data Users*.
- Data marked as **confidential** or **sensitive** must not be released into the public domain, with the exception of the Public Version of the PDF report, which has had sensitive information removed or restricted.
- You should not amend any part of the downloaded records.
- Unless otherwise agreed, use of the data is valid until the *Expiry Date*.
- The data was generated on the *Search Date* and is not live.
- The *Dataset ID* associated with each record can be used to find information about the provenance of the data.
- Verification Levels are given for each record. For further information see our Data Quality Policy.
- Please contact us at lrerc@leics.gov.uk if you have any questions about using the data or wish to add further Data Users.

Data Description

Distance	Indicates the distance, in metres, between the GRID REFERENCE of the record (using the central point of the grid square) and the search location. For any Sensitive Species Records, this should not be released into the Public Domain.
Species Name	Name of the taxon (usually identified to species level) using the binomial system.
Grid Reference	Full grid reference based on the Ordnance Survey grid system. For any Sensitive Species Records, this cannot be released into the Public Domain.
Date	Date on which the record was made. In some cases this might be a date range, or a vague date such as 'Summer 2010'.
Recorder(s)	One or more people who made the original observation and recorded it in some way. It may have subsequently been included in a data collation by another person or it may have been submitted to the LERC directly.
Abundance	Number of individuals recorded. Where not specified it is assumed that at least one was present.
Record Type	A description of the type of record.
Site Name	The site name (if one has been supplied). For any Sensitive Species Records, this cannot be released into the Public Domain.
Comments	Any additional notes about the sighting. For any Sensitive Species Records, this cannot be released into the Public Domain.
Dataset ID	ID of this dataset. See 'Important Issues' for more details.
Lists	Any local, national or international conservation statuses or legal protection which apply to this species and whether it is included in any Local Biodiversity Action Plans. See 'Abbreviations' for more details.
V	An indicator showing the level of confidence held in the record's correct identification.

Contact Us

Leicestershire and Rutland Environmental Records Centre
Leicestershire County Council, County Hall, Room 200, Glenfield, Leicester, LE3 8RA
Tel: 0116 305 4108 **Email:** lrerc@leics.gov.uk **Website:** https://www.leicestershire.gov.uk/environment-and-planning/planning/planning-and-ecology



eMapper

Mapping System for LRERC
Leconfield Road – P1718 Leconfield / LR/E00204
leconfield

Key

- Search Location
- Search Buffer (1000m)

- **Birds**
- **Butterflies & Moths**
- **Mammals**
- **Other Invertebrates**
- **Plants**
- **Reptiles & Amphibians**

RIGS

1: Bucks Hill

LWS

1: Burleigh Wood
2: Hedgerows At Loughborough University
3: Nanpantan Hall Wood
4: Buck Hill Knoll
5: Nanpantan, the Home Farm Grassland
6: Buck Hill
7: Loughborough, Snell's Nook and Burleigh Brook, Hedges and Trees
8: Holywell Wood
9: Nanpantan Reservoir
10: Longcliffe Golf Course

Historic

1: Buck Hill - Three Outcrops
2: Loughborough, Wood Brook Between Nursery End and Brookside Rd
3: Charnwood Canal and Woodland Strip

NSD

1: Beacon Hill, Hangingstone and Out Woods

Site Records

Site Type	Site Name	Distance
Geology sites (RIGS)	Bucks Hill	617m
LWS - Notified/Candidate/Potential/ASNW	Buck Hill	650m
LWS - Notified/Candidate/Potential/ASNW	Buck Hill Knoll	894m
LWS - Notified/Candidate/Potential/ASNW	Burleigh Wood	78m
LWS - Notified/Candidate/Potential/ASNW	Hedgerows At Loughborough University	428m
LWS - Notified/Candidate/Potential/ASNW	Holywell Wood	568m
LWS - Notified/Candidate/Potential/ASNW	Longcliffe Golf Course	934m
LWS - Notified/Candidate/Potential/ASNW	Loughborough, Snell's Nook and Burleigh Brook, Hedges and Trees	377m
LWS - Notified/Candidate/Potential/ASNW	Nanpantan Hall Wood	931m
LWS - Notified/Candidate/Potential/ASNW	Nanpantan Reservoir	376m
LWS - Notified/Candidate/Potential/ASNW	Nanpantan, the Home Farm Grassland	717m
LWS - Potential / Historic	Buck Hill - Three Outcrops	509m
LWS - Potential / Historic	Charnwood Canal and Woodland Strip	602m
LWS - Potential / Historic	Loughborough, Wood Brook Between Nursery End and Brookside Rd	850m
National Site Designations	Beacon Hill, Hangingstone and Out Woods	230m

Species Group	Scientific Name	Common Name	Earliest Year	Latest Year	Total Records
Amphibian	Bufo bufo	Common Toad	2017	2017	1
Bird	Alcedo atthis	Kingfisher	2016	2016	2
Bird	Anser anser	Greylag Goose	2016	2016	1
Bird	Fringilla montifringilla	Brambling	2006	2006	1
Bird	Milvus milvus	Red Kite	2015	2015	1
Bird	Phoenicurus ochruros	Black Redstart	1996	1996	1
Bird	Turdus pilaris	Fieldfare	2008	2010	2
Bird	Tyto alba	Barn Owl	2012	2012	1
Crustacean	Austropotamobius pallipes	Freshwater White-clawed Crayfish	1993	2013	25
Flowering Plant	Hyacinthoides non-scripta	Bluebell	2001	2015	6
Insect - Butterfly	Satyrium w-album	White-letter Hairstreak	1997	1997	4
Reptile	Anguis fragilis	Slow-worm	2003	2003	2
Terrestrial Mammal	Arvicola amphibius	Water Vole	1995	1995	1
Terrestrial Mammal	Barbastella barbastellus	Western Barbastelle	2017	2017	1
Terrestrial Mammal	Chiroptera	Bat	1995	2006	6
Terrestrial Mammal	Meles meles	Badger	1995	2017	16
Terrestrial Mammal	Myotis	Myotis Bat species	2017	2017	21
Terrestrial Mammal	Myotis daubentonii	Daubenton's Bat	2017	2017	1
Terrestrial Mammal	Nyctalus	Nyctalus Bat species	2017	2017	9
Terrestrial Mammal	Nyctalus leisleri	Lesser Noctule	2017	2017	1
Terrestrial Mammal	Nyctalus noctula	Noctule Bat	2012	2017	27
Terrestrial Mammal	Pipistrellus	Pipistrelle Bat species	1995	2015	14
Terrestrial Mammal	Pipistrellus pipistrellus	Pipistrelle	2011	2017	5
Terrestrial Mammal	Pipistrellus pipistrellus	Common Pipistrelle	2017	2017	55
Terrestrial Mammal	Pipistrellus pygmaeus	Soprano Pipistrelle	2017	2017	30
Terrestrial Mammal	Plecotus auritus	Brown Long-eared Bat	1995	2017	57