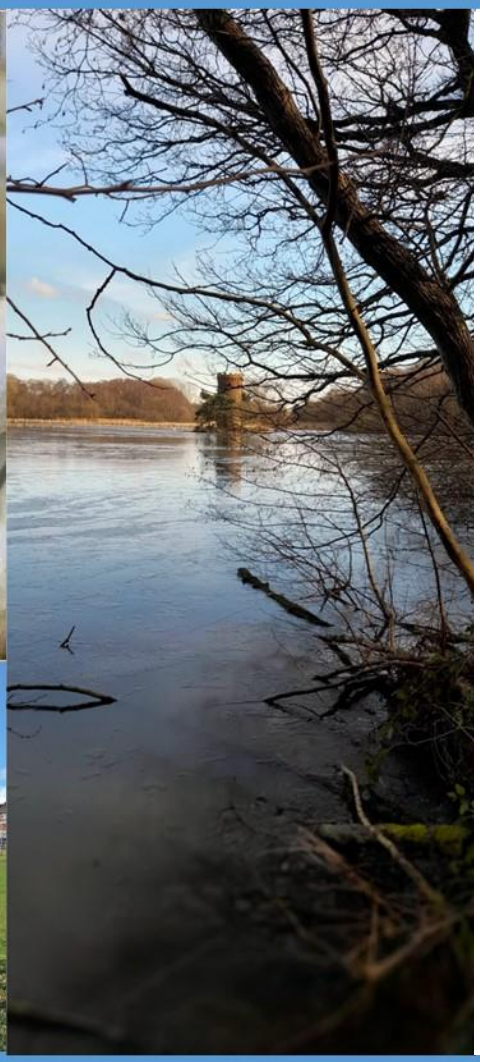

Land at Brixworth Cricket Club,
Brixworth,
Northamptonshire

Updated Preliminary Ecological Appraisal

Prepared by
Griffin Ecology Ltd.

Instructed by
Framptons Town Planning

On behalf of
Dr D. Burston

Project GE 0575

We assist our clients to deliver a measurable net gain in biodiversity.

Survey Date 25th September 2023

Report Version	Date	Author:	Quality check by:	Approved by:
Draft Report	15th November 2023	Casey-Ruth Griffin BSc (Hons) MCIEEM Principal Ecologist	Ian Griffin, Commercial Director	Casey-Ruth Griffin BSc (Hons) MCIEEM, Principal Ecologist
Final Report	31st January 2024	Casey-Ruth Griffin BSc (Hons) MCIEEM Principal Ecologist	Ian Griffin, Commercial Director	Casey-Ruth Griffin BSc (Hons) MCIEEM, Principal Ecologist

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The information contained within this report is of a sensitive nature and discloses information such as the location of badger setts therefore it should not be made publicly available without due consideration of the information contained herein.

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Table of Contents

1. Introduction

1.1 Background

Griffin Ecology Ltd. has been commissioned by the client, to undertake a Preliminary Ecological Appraisal of an area of land associated with Dallas Burston Cricket Grounds in Brixworth, Northamptonshire. This survey and report are provided in support of the proposed planning application for a mixed use development comprising commercial, business and service uses, and the provision of a Spa and Wellbeing Centre within Class E; mixed use restaurant and takeaway use (sui generis); and the provision of up to 16 Affordable Houses (Class C3). All matters reserved except for Access.

As this report seeks to update the existing ecological information it should be read in conjunction with the previous PEA, Griffin Ecology, Ref: BCC0001, dated June 2020.For the purposes of this report the "site" refers to the land within the red line boundary as illustrated by Figure 1.

1.2 Site description

The site (central grid reference: SP 74776 69403), is some 2.6ha in size and is associated with the existing Dallas Burston Cricket Club, situated off Northampton Road on the southern fringe of the settlement of Brixworth, Northamptonshire. The surrounding landscape offers a mosaic of agricultural land and residential areas. Pitsford Reservoir SSSI and Brixworth Country Park are located within 500m to the east of the site and provide good quality habitat for a range of species.

Figure 1: Site Boundary

1.3 Survey Purpose

The purpose of this survey is to inform an updated understanding of habitats present at the site, and to further consider the potential for the presence of protected and notable species within these habitats. This information would then serve to provide a determination of the ecological constraints and opportunities as well as inform the need for any further ecological surveys, should they be required. The aim being to understand the potential ecological impacts which may result from the proposed development in line with legislation (as detailed in appendix 1 of this report).

1.4 Proposed Plans

Griffin Ecology Ltd. has been provided with the Location Plan (Drawing Number: A_1908 EX100, Dated June 2020) and Proposed Site Plan (Job Number: 2023028, Drawing Number: A101) when compiling this updating report. It is understood that the proposals will include a mixed use development comprising commercial, business and service uses, and the provision of Spa and Wellbeing Centre within Class E; mixed use restaurant and takeaway use (sui generis); and the provision of up to 16 Affordable Houses (Class C3). All matters reserved except for access.

1.5 Relevant Planning Policies

The ODPM Circular 06/05 makes the presence of a protected species a material consideration within the planning process and therefore it is essential for the presence of protected species and the extent they may be affected by proposed development be established through appropriate surveys. These are required prior to the planning permission being granted. The ODPM Circular 06/05 also encourages the use of planning conditions to secure the long-term protection of such species.

The National Planning Policy Framework (NPPF) (2023) section 15 sets out applications to conserve and enhance the natural environment.

Paragraph 174 states:

"*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."

Paragraph 180 of the NPPF states:

"*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 reasons63 and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate."

Local Policy:

The West Northamptonshire Joint Core Strategy Local Plan, adopted in December 2014, sets out objectives for Northampton Borough, Daventry District, and South Northamptonshire Councils. Policies of relevance to ecology, biodiversity and nature conservation are provided below.

- Policy BN2 - Biodiversity

"*Development that will maintain and enhance existing designations and assets or deliver a net gain in biodiversity will be supported. Development that has the potential to harm sites of ecological importance will be subject to an ecological assessment and required to demonstrate:*

- *the methods used to conserve biodiversity in its design and construction and operation*
- *how habitat conservation, enhancement and creation can be achieved through linking habitats*
- *how designated sites, protected species and priority habitats will be safeguarded*

Development management decisions will reflect the hierarchy of biodiversity and geodiversity designations attaching appropriate weight to the status of the site which would be affected. In cases where it can be shown that there is no reasonable alternative to development that is likely to prejudice the integrity of an existing wildlife site or protected habitat appropriate mitigation measures including compensation will be expected in proportion to the asset that will be lost. Where mitigation or compensation cannot be agreed with the relevant authority development will not be permitted."

2. Methodology

2.1 Desk Study

A biological record search has been undertaken by Northamptonshire Biological Records Centre (NBRC) and Northants Bat Group. This data search sought to gain an understanding of the presence of priority habitats, both statutory and non-statutory designations as well as historic records of protected species within a 2km radius of the site.

In addition, the Multi-Agency Geographic Information for the Countryside (MAGIC) website has been searched for information of notable habitats, statutory designated sites and historic EPSL granted within a 2km radius of the site.

2.2 Site Visit

The site has been visited by a suitably experienced and licensed surveyor, Casey Griffin (Principal Ecologist, MCIEEM) on 25th September 2023. Weather conditions at the time of survey have been recorded. An informing walkover survey has been undertaken to cover the extent of the site and the adjoining habitats, where accessible.

2.2.1 UK Habitats Classification Survey

A walkover survey of the site has been carried out in accordance with the standard methodology published in the UK Habitat Classification User Manual and the CIEEM's guidelines for Preliminary Ecological Appraisals. The survey covered all areas of the site as well as surrounding habitats, where accessible. This survey sought to identify, describe and map habitats present within the site up to level 3 within the habitat key. The principal aim of UK Habitat Classification (UKHab) is to provide a rapid system for recording and classifying habitats. The system comprises a principal hierarchy (the Primary Habitats) - which include ecosystems, broad habitats, priority habitats and Annex 1 habitats - and non-hierarchical Secondary Codes. All habitats present on-site were recorded on a UKHab map (Appendix 2). Any Habitats of Principal Importance, or habitats that may support rare or scarce plant communities and/or invertebrate assemblages, were recorded during this site visit. Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 has been used to identify habitats that are considered a national conservation priority. The value of these habitats is recognised in the National Planning Policy Framework (NPPF) (MHCLG, 2019).

The habitats identified during the walkover survey have then been evaluated against the CIEEM EIA evaluating habitats and species guidelines (2016) in order to give them a scale of importance from low to high value in the context of the site (unless otherwise stated). Such criteria include size, species diversity, and presence of species or habitats.

The method for this assessment is based on the guidelines published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018). These guidelines provide a robust framework for ecological assessment.

2.2.2 Habitat Condition Assessment

Digital Ecology have proposed this method for undertaking condition assessments in England to support the delivery of Biodiversity Net Gain (BNG) assessments. The aim being to standardise the approach to carrying out condition assessments to aid repeatability and replicability. This seeks to ensure that ecologists and regulators can be confident that condition assessments have been carried out to a consistent and appropriate standard (Digital Ecology, 2023). The condition assessment methodology set out for Grassland is provided overleaf:

Table 1 – Grassland (Low distinctiveness)

Type	Criteria	Method
1	There must be 6-8 species per m^2. If a grassland has 9 or more species per m 2 it should be classified as a medium distinctiveness grassland habitat type. NB - this criterion is essential for achieving moderate condition.	Minimum of 3x 2m x 2m quadrat, record species present in each
2	Sward height is varied (at least 20% of the sward is less than 7cm and at least 20% more than 7cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Minimum 10x drop disc samples.
3	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Minimum 3x 10m x 10m quadrats
4	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Minimum 3x 10m x 10m quadrats
4	Cover of bare ground is between 1% and 10% including localised areas (for example, a concentration of rabbit warrens).	Minimum of 3x 2mx2m quadrats, record bare ground.
5	Cover of bracken is less than 20%	Minimum 3x 10m x 10m quadrats
6	There is an absence of invasive non-native species (as listed in Schedule 9 of WCA, 1981).	Minimum 3x 2m x 2m quadrats, record species present in each.

Digital Ecology, 2023

Table 2 – Grassland (Medium – Very High distinctiveness)

Type	Criteria	Method
1	The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat are very clearly visible throughout the sward. NB – This criterion is essential for achieving moderate condition for non-acid grassland types only.	Redundant criterion – ignore.
2	Sward height is varied (at least 20% of the sward is less than 7cm and at least 20% more than 7cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Minimum 10x drop disc samples.
3	Cover of bare ground is between 1 – 5%, including localised areas, e.g. rabbit warrens	Minimum of 3x 2mx2m quadrats, record bare ground,
4	Cover of bracken is less than 20% and cover of scrub (including bramble is less than 5%.	Minimum 3x 10mx10m quadrats.
5	There is an absence of invasive non-native species (as listed in Schedule 9 of WCA, 1981). Combined cover of species indicative of sub-optimal condition 1 and physical damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.	Minimum of 3x 2mx2m quadrats, record species present in each.

6	There are greater than 9 species per meter squared. NB – This criterion is essential for achieving good condition (non-acid grassland types only).	Minimum of 3x 2mx2m quadrat, record species present in each.

Digital Ecology, 2023

During the informing walkover survey, habitats on site have been subject to a condition assessment based on habitat extent, distinctiveness and condition in accordance with the published user guidance relating to The Biodiversity Metric v4.0.

The habitats and linear features on site have been identified during the walkover survey carried out in June 2023. Areas and lengths of the habitats and linear features have been determined using the QGIS Mapping tool and GPS data collected on site.

2.2.3 Protected Species Survey

The informing walkover survey also sought to enable the surveying ecologist to search for any evidence of protected species activity or potential for the site to support protected and/or notable species.

Bats – The site has been assessed for its suitability to support roosting, foraging and commuting bats, in accordance with the BCT guidelines (BCT, 2016). The inspection was aided by a one million candlepower torch, binoculars, and a rigid endoscope where suitable for detailed inspections of accessible areas.

Nesting birds – the site has been searched for areas of habitat that could be used for constructing a nest or for foraging, as well as any evidence of current or historic nesting.

Reptiles – the site has been searched for areas that could be used for sheltering, hibernating, basking, foraging and breeding (Froglife, 1999).

Amphibians – No suitably connected ponds or waterbodies have been identified within a 500m radius of the site, however, it is possible that smaller ponds may exist locally and not be recorded on aerial imagery resources. As such, an assessment of terrestrial habitat, for its suitability to support amphibians has been undertaken.

Badger *(Meles meles)* – the site has been searched for areas that might be used for foraging and sett building. Incidental foraging signs, tree scratching, paths, dung pits, latrines and setts have been recorded if found (Harris *et al.*, 1989). The site itself and land immediately adjacent (30m radius where accessible) to the site and visible from the site boundaries have been included within the survey.

Western European hedgehog (*Erinaceus europaeus*) – the site has been searched for evidence of this species including droppings, foraging signs and footprints. The habitats on site have also been assessed for their suitability to support this species.

Notable mammals – the site has been searched for evidence and suitable habitat for BAP/Priority Species mammals (Cresswell et al., 2012).

Invertebrates – the site has been searched for areas of habitat that may be used for shelter, basking and egg laying. An assessment of food plants present and species suitable for egg-laying has been undertaken.

Invasive species – the site has been searched for evidence of species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).

Other protected and notable species have been scoped out of this assessment due to an absence of records and lack of suitable habitat within the surrounding area.

The potential of the site to support protected or notable species has been assessed through field observations and desk study information. The likely presence of a species is ranked as follows:

> ***Negligible*** – while presence cannot be absolutely discounted, the site supports very limited or poor-quality habitat for a species or species group.
>
> ***Low*** – habitats within the site are of poor to moderate quality for a given species or species group, but presence cannot be discounted based on the national distribution, opportunities within the surrounding landscape and the results of the desk study.
>
> ***Moderate*** – habitats within the site are of moderate quality and provide opportunities for a given species or species group. The desk study has returned historic records and suitability is identified within the surrounding landscape.
>
> ***High*** – habitats within the site are of high quality for a given species or species group. The desk study returns historic records of local occurrence.

2.3 Survey limitations

Trees were only accessed from ground level and not subject to tree climbing inspection. As such, the assessment of their suitability for use by species such as bats and birds was limited to what was visible to the surveyor from ground level.

This survey was undertaken at a time of year when not all botanical species would be evident. However, sufficient species have been identified to confidently classify broad habitats found to be present at the site.

As is the nature of ecology surveys, this study serves to provide only a “snapshot” of the conditions prevailing at the time of survey.

3. Results

3.1 Desk Study

The data search, undertaken by the NBRC has revealed Brixworth Country Park some 390m to the east of the site and Pitsford Reservoir SSSI some 500m to the east of the site.

Brixworth Country Park is a non-statutory designation associated with the southern end of Pitsford Reservoir and offers woodland, scrub and meadow in addition to the water margins which hold most botanical interest. This designation is used by notable breeding birds including skylark and whitethroat.

Pitsford Reservoir SSSI offers value to a large number of breeding and feeding birds associated with the open water present. The mosaic of habitats present result in the presence of a n umber of county rare botanical species as well as nationally notable breeding and overwintering birds.

The data search returned a number of records for protected and notable species as detailed below and as further discussed within Section 3.2.3 of this report.

- Reptiles and amphibians recorded within a 1km radius of the site include smooth newt (*Lissotriton vulgaris*), common toad (*Bufo bufo*), common frog (*Rana temporaria*), slow worm (*Anguis fragilis*) and grass snake (*Natrix helvetica*).
- Bats - The data search by the Northants Bat Group reveals Pitsford Water SSSI and its surround habitat to offer valuable foraging opportunities for a range of bat species present locally. These include noctule (*Nyctalus noctula*), common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*) and brown long-eared (*Plecotus auritus*). These records include a number of confirmed roosting sites with three soprano pipistrelle, one noctule and seven BLE roosts noted within the 1km search radius. The nearest of these is a BLE roost recorded in 2001 along Northampton Road.
- Notable birds: The data search reveals a significant number of records for notable bird species locally. These are particularly associated with Pitsford Reservoir SSSI and include species listed as UK priority species within Section 41 of NERC, 2006, as well as Schedule 1 species listed under the Wildlife and Countryside Act. 1981. These include significant densities of notable breeding and overwintering wading birds in addition to rare and notable farmland bird species. None of these records are directly associated with the site.
- Notable plants recorded within a 1km radius of the site include; *Galium verum, Crepis capillaris, Geranium dissectum, Galium uliginosum, Stellaria graminea, Conopodium majus, Potentilla anserina, P. reptans, Phalaris arundinacea, Glyceria maxima, Arrhenatherum elatius, Dactylis glomerata, Cynosurus cristata, Arrhenatherum elatius, Alopecurus geniculatus, A. pratense, Elymus repens, Holcus lanatus, Juncus inflexus, Tripleurospermum inodorum, Filago uliginosum, Rumex spp., Geranium dissectum, Polygonum persicaria, Rorippa sylvestris, Limosella aquatica.*
- Notable mammals recorded within the 1km search radius include; brown hare (*Lepus europaeus*), Eurasian badger (*Meles meles*), harvest mouse (*Micromys minutus*) and otter (*Lutra lutra*).

A search of the MAGIC map resource, confirms a single granted EPS licence some 1.8km to the east of the site. This licence application relates to the destruction of a resting place for common pipistrelle and brown long-eared bat.

3.2 UK Habs Survey

The site has been visited by suitably experienced surveyor Casey Griffin (Principal Ecologist, MCIEEM,) on 25th September 2023.

An annotated UK Habs map is provided in appendix 2 of this report. This illustrates the location of all habitat types recorded at the site together with target notes depicting features of ecological interest.

3.2.1 Weather Conditions

The weather conditions recorded during the site visit are as follows:

Table 3: Weather conditions at the time of the survey

Parameter	Recorded Figure
Temperature	17°C
Cloud cover	10%
Precipitation	None
Wind speed (Beaufort scale)	0

3.2.2 Habitats

Modified grassland g4

The site includes a small portion of close mown amenity grassland to the periphery of the established cricket pitch. This area displays signs of regular mowing as part of site maintenance. The sward, across this habitat, is dominated by typical amenity grasses including Agrostis sp. and perennial ryegrass (*Lolium perenne*). Broadleaved species are limited within the sward, mostly likely as a result of the established regular mowing regime. Broadleaved species include; occasional white clover (*Trifolium repens*), ribwort plantain (*Plantago lanceolata*) and creeping buttercup (*Ranunculus repens*) with rarely occurring cleavers (*Galium aparine*), common nettle (*Urtica dioica*) and broadleaved dock (*Rumex obtusifolius*) to the edge when this habitat adjoins the neighbouring boundary vegetation.

Table 4: Habitat Condition Assessment - grassland

Number	Criteria	Result
1	There must be 6-8 species per m 2 . If a grassland has 9 or more species per m 2 it should be classified as a medium distinctiveness grassland habitat type. NB - this criterion is essential for achieving moderate condition.	Fail - >5 species per sample quadrat
2	Sward height is varied (at least 20% of the sward is less than 7cm and at least 20% more than 7cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Fail, grassland mown regularly to uniform length
3	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note - patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Pass, no scattered scrub recorded within samples
4	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Fall, damage resulting from regular mowing

5	Cover of bare ground is between 1 – 10%, including localised areas, e.g. rabbit warrens	Fail, areas of bare ground in excess of 5%
6	Cover of bracken is less than 20%	Pass, no bracken recorded
5	There is an absence of invasive non-native species (as listed in Schedule 9 of WCA, 1981).	Pass, no listed species recorded
Number of criteria passed		Condition score = 3 - poor

Digital Ecology, 2023

There is no indication that this habitat would support locally or nationally scarce or rare plants. This habitat is common and widespread locally and as such is considered to offer ecological value limited to within a local context. This habitat most closely represents g4 modified grassland when understood through the UK Habitat Classification key v2.0.

Grassland

This habitat is common and widespread, being easily recreated and as such is considered to offer ecological value limited to within a local context.

Other neutral grassland g3c

The site includes a single parcel of grassland, used for overflow car parking. This habitat is dominated by fast growing grasses including Agrostis sp., perennial ryegrass (*Lolium perenne),* cock's foot grass (*Dactylis glomerata)* with occasional false oat grass (*Arrhenatherum elatius).* Broadleaved species were limited within the sward and were most closely associated with the fringes of this habitat where regular mowing regime was less intensive. Species included; occasional white clover (*Trifolium repens*), ribwort plantain (*Plantago lanceolata*), chickweed (*Stellaria media)* and creeping buttercup (*Ranunculus repens*) with rarely occurring cleavers (*Galium aparine*), common nettle (*Urtica dioica*) and spear thistle (*Cirsium vulgare*). The species identified during this updating survey are representative of those identified during previous survey effort and as such, despite the suboptimal survey period for botanical species, an accurate identification of habitat type was considered appropriate.

This habitat has likely been historically modified as part of the typical management relating to its amenity use, although previous intensive mowing had been relaxed prior to this updating survey. Botanical species diversity is limited in its dominance by typical rank grasses. However, this habitat will likely offer some value to densities of commonly

occurring and widespread invertebrates. As such, species which rely on invertebrates as a food resource are likely to be provided some value by this habitat.

Grassland

There is no indication that this habitat would support locally or nationally scarce or rare plants given the substrate and disturbance through existing management practices. This is confirmed following the results of previous survey effort.

This habitat most closely represents g3c other neutral grassland when understood through the UK Habitat Classification key v2.0. This habitat is common and widespread, being easily recreated and as such is considered to offer ecological value limited to within a local context.

Table 5, below, details the results of this habitat condition assessment relating to other neutral grassland on site:

Project	Brixworth CC	Date	25/09/2023
Surveyor	Casey Griffin MCIEEM		
Criteria Number	**Criterion**	**Result**	
A	The appearance and composition of the vegetation closely matches characteristics of the specific grassland habitat type (see UKHab definition). Wildflowers, sedges and indicator species for the specific grassland habitat type are very clearly and easily visible throughout the sward. NB - This criterion is essential for achieving moderate condition for non-acid grassland types only	Redundant criterion – Pass	
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Pass – Recent relaxed management and good growing conditions prior to survey, with high levels of rainfall, had resulted is a vigorous sward with a varied sward length. It is however, likely that this would vary	

		dependent on when the survey is undertaken. i.e. soon after cut is taken.	
C	Cover of bare ground is between 1% and 5%, including localised areas, for example, rabbit warrens.	Fail – bare ground percentage cover is in excess of 5% including localised areas to gateways and rabbit damage.	
D	Cover of bracken is less than 20% and cover of scrub (including bramble) is less than 5%.	Pass – none recorded within sample quadrats	
E	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981). Combined cover of species indicative of sub-optimal condition 1 and physical damage (such as excessive poaching, damage from machinery use or storage, damaging levels of access, or any other damaging management activities) accounts for less than 5% of total area.	Fail – no listed species recorded and physical management minimal.	
F	There are greater than 10 vascular plants per metre squared. NB - This criterion is essential for achieving good condition (non-acid grassland types only).	Fail – less than 9 species recorded per sample quadrat.	
Condition Assessment Result		**Score**	**Result**
Passes 5 or 6 criteria, including A and F		Good	
Passes 3 – 5 criteria, including A		Moderate	
Passes 2 or fewer criteria; OR Passes 3 or 4 criteria excluding A and F		Poor	Passes 3 but fails F - ***Poor***

Other woodland – mixed – mainly broadleaved w1h5

A small stretch of planted shelterbelt extends along the northern boundary of the site as it abuts Merry Tom Lane. This planted woodland then extends to the south west of the site and beyond the extent of the site boundary. An assessment of the full extent of this woodland has been undertaken in order to provide context within the likely zone of influence relating to this development.

This habitat offers a good diversity of tree species including occasional horse chestnut (*Aesculus hippocastanum)*, oak (*Quercus robur*), ash (*Fraxinus excelsior*), dogwood (*Cornus sanguinea*), sycamore (*Acer pseudoplatanus*), blue cedar (*Cedrus atlantica glauca*), apple (*Malus domestica*), willow sp. and cherry sp. (*Prunus sp.).* This habitat covers a width of between 3m to 5m with the canopy extending beyond 5m in height.

This habitat offers a good diversity of tree species including occasional horse chestnut (*Aesculus hippocastanum*), oak (*Quercus robur*), ash (*Fraxinus excelsior*), dogwood (*Cornus sanguinea*), sycamore *(Acer pseudoplatanus*), sea buckthorn (*Hippophae rhamnoides*), apple (*Malus domestica*), willow sp., populus sp. cedrus sp. and cherry sp. (*Prunus sp*.).

This habitat is considered to offer value to a range of species, with fruiting trees providing a source of forage for birds, invertebrates and mammals alike. The structure of the canopy offers good opportunities for nesting birds and roosting bats.

Table 6, below, details the results of this habitat condition assessment relating to woodland on site:

Project	Brixworth CC	Date	25th September 2023
Surveyor	Casey Griffin MCIEEM		

Indicator		Good (3 points)	Moderate (2 points)	Poor (1 point)	Score per indicator
A	Age of distribution of trees	Three age-classes present	Two age-classes present	One age-class present	1
B	Wild, domestic and feral herbivore damage	No significant browsing damage evident in woodland	Evidence of significant browsing pressure is present in 40% or less of whole woodland	Evidence of significant browsing pressure in 40% or more of whole woodland	2 (deer and grey squirrel damage)
C	Invasive plant species	No invasive species present in woodland	Rhododendron or cherry laurel not present, other invasive species <10%	Rhododendron or cherry laurel present or other invasive species >10% cover	3
D	Number of native tree species	Five or more native trees or shrub species found across woodland parcel	Three to four native tree or shrub species found across woodland parcel	Two or less native tree or shrub species across woodland parcel	3 (plantation with good native mix)
E	Cover or native tree and shrub species	>80% of canopy trees and 80% of understory shrubs are native	50-80% of canopy trees and 50-80% of understory shrubs are native	>50% of canopy trees and 50% of understory shrubs are native	3
F	Open space within woodland	10-20% of woodland has areas of temporary open space. Unless woodland is <10ha, in which case 0- 20% temporary open space is permitted	21-40% of woodland has areas of temporary open space.	<10% or >40% of woodland has areas of temporary open space. But if woodland <10ha has <10% temporary open space.	1 (densely planted)
G	Vegetation and ground flora	Recognisable NVC plant community at ground layer present, strongly characterised by ancient woodland flora	Recognisable woodland NVC plant community at ground layer present	No recognisable woodland NVC plant community at ground layer present	1 (heavily shaded – guards still present)
H	Tree health	Tree mortality less than 10%, no pests or diseases and no crown dieback	11% to 25% mortality and/or crown dieback or low-risk pest or disease present	No recognisable woodland NVC plant community at ground layer present.	1

I	Vegetation and ground flora	Recognisable NVC plant community at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community at ground layer present	No recognisable woodland NVC plant community at ground layer present	1
J	Woodland vertical structure	Three or more storeys across all survey plots or complex woodland	Two storeys across all survey plots	One or less storey across all survey plots	2
K	Veteran trees	Two or more veteran trees per Ha	One veteran tree per Ha	No veteran trees present in woodland	1
L	Amount of deadwood	50% of all surveys plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing deadwood, large branches or stems, stubs and stumps, or an abundance of small cavities	1
M	Woodland disturbance	No nutrient enrichment or damaged ground evident	Less than 1ha in total of nutrient enrichment across woodland area and or less than 20% of woodland area has damaged ground	More than 1ha of nutrient enrichment and or more than 20% of woodland area has damaged ground	3
Total Score (out of possible 39)					23
Condition Assessment Result			Condition Assessment Score		Result Achieved
Total score <26 (13 to 25)			Poor (1)		Poor

Woodland to north and west of site

Woodland to south west of boundary

Deciduous woodland represents a UK BAP Priority Habitat and this habitat is considered to offer moderate ecological value limited to within a local context.

Sparsely vegetated urban land u1f

The site includes an area of previously developed and disturbed land adjacent to the cricket pitch, part of which functions as overflow carparking. Located within this area is a square walled structure, constructed in block with a rendered finish. It remains unclear as to the historic purpose of this structure. Although this habitat type does provide intrinsic biodiversity value to plants, mosses, lichens and invertebrates, it does not meet the five qualifying criteria for classification as biodiversity importance, Open Mosaic Habita as defined within the UKHabs V2. The main limiting factor relates to the size of the habitat present being <0.25ha in size.

As a result of seasonal limitations, not all botanical species may have been evident at the time of this informing survey. However, the surveying ecologist did record locally abundant communities of blue fleabane (*Erigeron acris*), cats ear (*Hypochaeris radicata*), weld (*Reseda luteola*) as well as localised communities of lichens and liverworts indicative of such habitat types.

Open mosaic

Lichen

Bryophyte communities

Additionally areas of scattered scrub encroachment are recorded particularly to the base of the walled structure. When understanding the nature of this habitat type it has the potential to offer value to a range of notable invertebrate and plants, however, its limited size and extent restricts its ecological value to within a local context.

Hedgerows and Tree line

Managed hedgerows run the length of the eastern boundary and along both sides of the existing access drive.

H1 most closely represents h2b, non-native and ornamental hedgerow, when considered through the UK Habs classification key v.2. This boundary feature extends along the eastern boundary as it abuts the A508. This feature provides a good diversity of woody species including abundant blackthorn with frequently occurring hawthorn, willow (*Salix sp.)* and blue cedar and rarely occurring Japanese barberry (*Berberis thunbergii*). When assessed in line with the Hedgerow Regulations, 1997, this hedgerow is unlikely to qualify as important. However, it offers a good canopy structure with an average height of between 2m to 3m and an average width of between 2m and 3m.

H2 and H3 most closely represents h2a, native hedgerow, when considered through the UK Habs classification key v.2. This feature extends the length of the southern boundary and is managed to a height of around 1.2m and a width of around 0.5m. This feature is dominated by beech *(Fagus sylvatica*) and when assessed in line with the Hedgerow Regulations 1997, is not likely to represent an important hedgerow.

The location of these hedgerows are illustrated on Figure 2:

Figure 2: Location of hedgerows

The existing access road is lined to both sides by standard trees. These have been planted at a 1:1 ratio of lime (*Tillia x europaea*) to *laburnum sp*.. To the roadside of these trees is additional linear shrub planting. These features are >0.5m in height and comprised entirely of berberis sp.. These features most closely represents h2b, non-native and ornamental hedgerows, when considered through the UK Habs classification key v.2.

H2 and tree lined access road

H3 and tree lined access road

When assessing the trees on site, none are noted to meet sufficient qualifying criteria for classification as veteran (PTES, 2017).

The linear features, associated with the site are likely to represent limited value as connective habitat across the site and within a local context.

Table 7, below, details the results of this habitat condition assessment relating to hedgerows on site:

Project		Brixworth CC		Date	25/09/2023	
Surveyor		Casey Griffin MCIEEM				
Criteria Number	**Attributes and functional grouping**	**Criteria – the minimum requirements for "favourable condition"**	**Criterion description**	**Reference – Criterion passed (Yes or No)**		
				H1	**H2**	**H3**
A1	Height	>1.5 m average along length	The average height of woody growth estimated from base of stem to the top of the shoots, excluding any bank beneath the hedgerow, any gaps or isolated trees. Newly laid or coppiced hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice). A newly planted hedgerow does not pass this criterion (unless it is > 1.5m height).	Yes	No	no
A2	Width	>1.5m average along length	The average width of woody growth estimated at the widest point of the canopy, excluding gaps and isolated trees.	Yes	No	No

			Outgrowths (such as blackthorn suckers) are only included in the width estimate when they are >0.5m in height. Laid, coppiced, cut and newly planted hedgerows are indicative of good management and pass this criterion for up to a maximum of four years (if undertaken according to good practice).			
B1	Gap – hedge base	Gap between ground and base of canopy <0.5m for 90% of length	This is the vertical "gappiness" of the woody component of the hedgerow, and its disturbance form the ground to the lowest leafy growth. Certain exceptions to this criterion are acceptable.	Yes	Yes	Yes
B2	Gap – hedge canopy continuity	Gaps make up <10% of the total length; and No canopy gaps >5m	This is the horizontal "gappiness" of the woody component of the hedgerow. Gaps are complete breaks in the woody canopy (no matter how small). Access points and gates contribute to the overall "gappiness" bat are not subject to the >5m criterion (as this is the typical size of a gate).	Yes	Yes	Yes
C1	Undisturbed ground and perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	The indicator species used are nettle, cleavers and docks. Their presence, either singly or together, does not exceed the 20% cover threshold.	No	No	No
C2	Nutrient-enriched perennial vegetation	Plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground.	The indicators species used are nettles, cleavers and docks. Their presence, either singly or together, does not exceed the 20% cover threshold.	No	No	No
D1	Invasive and neophyte species	>90% of the hedgerow and undisturbed ground is free of invasive non-native plant species and	Recently introduced species refer to plants that have naturalised in the UK since AD 1500 (neophytes). Archaeophytes count as natives.	No	Yes	Yes

		recently introduced species.				
D2	Current damage	>90% of the hedgerow or undisturbed ground is free of damage caused by human activity.	This criterion addresses damaging activities that may have led to or lead to deterioration in other attributes. This could include evidence of pollution, piles of manure or rubble, or inappropriate management practices.	Yes	No	No
Condition Assessment Result			Condition Assessment Score			
Good			No more than 2 failures in total: AND No more than 1 failure in any functional group.			
Moderate			No more than 4 failures in total; AND Does not fail both attributes in more than one functional group	X		
Poor			Fails a total of more than 4 attributes; OR Fails both attributes in more than one functional group		X	X

3.2.3 Species

Nesting birds

The data search reveals a number of records for notable bird species associated with Pitsford Reservoir to the east of site. No records are associated with the site and the site does not have habitat of a suitable quality, size or extent to support notable populations of breeding or foraging birds.

A search of the site has not revealed any evidence of active or historic bird nesting. However, the canopy structure provided within the woodland, trees and hedgerows offers opportunities for a wide range of common and generalist bird species.

As such, the site is afforded ***moderate*** value to common and generalist nesting birds who may be present locally.

Bats

The data search by the Northants Bat Group reveals Pitsford Water SSSI and its surrounding habitat to offer valuable foraging opportunities for a range of bat species that are present locally. These include noctule, common pipistrelle, soprano pipistrelle and brown long-eared (BLE). These records include a number of confirmed roosting sites with three soprano pipistrelle, one noctule and seven BLE roosts noted within the 1km search radius. The nearest of these is a BLE roost recorded in 2001 along Northampton Road.

The Brampton Valley Way Country Park is located some 1.3km to the west of the site. This disused railway line and its associated linear habitats are likely to provide valuable commuting and dispersal routes for bats within the surrounding landscape.

Information provided by Northants Bat Group indicated that the county recorder would also expect Daubenton's *(Myotis daubentonii*), Natterer's (*Myotis nattereri*) and whiskered/Brandt's (*Myotis sp.)* bats to be present in this search area.

A ground based assessment of the trees within the site and along the access road reveals them to offer no visible bat roosting features such as crevices or cavities resulting from dieback within the canopy, rot holes, cracks or fissures within the bark. Their suitability for bat roosting is likely to increase as these trees naturally age.

The habitats on site are likely to support good densities of invertebrates and subsequently provide a food resource for bats. This foraging resource would however, be limited by the extent and size of the habitats present.

The shelterbelt, tree lines and boundary hedgerows are considered likely to offer valuable connectivity, at canopy height, for commuting and dispersing bats as they commute across the site and through the wider landscape.

Furthermore, nearby established roosts are likely to be heavily dependent on foraging opportunities within their Core Sustenance Zones (CSZs) (BCT; Core Sustenance Zones: Determining zone size; 2016) of which the site will form a small part of.

An inspection of the walled structure reveals this to have been constructed in block and finished with a render. The site survey has revealed this structure to be in relatively good condition with only one area, on the internal side of the wall, where the rendered finish had deteriorated. However, the block structure underneath remains in a sound and well-sealed condition.

Walled structure

Damaged render, block below sealed

When considering the habitats on site in line with the Bat Conservation Trust's "Bat Surveys for Professional Ecologists, Good Practice Guidelines", which attributes suitability for bat roosting and foraging based on features offered and habitat present within the locality, the site is afforded ***low*** suitability for use by roosting bats and ***moderate*** suitability for use by foraging and dispersing bats.

Amphibians

The data search has returned a number of records for common frog, common toad and smooth newt within a 1km radius of the site. None of these records are associated with the site or any connected habitat.

The desk study reveals no suitably connected waterbodies within a 500m radius of the site boundaries, with Pitsford Reservoir separated by the adjacent A road, representing a significant barrier to dispersal.

An assessment of the terrestrial habitats on site reveals suitable foraging and sheltering opportunities for amphibians within the grassland, woodland and hedgerows.

Species such as great crested newt (GCN) are heavily dependent on a well-connected network of suitable waterbodies to successfully breed. Such a network is not present within a typical dispersal radius of the site.

The site is afforded ***negligible*** suitability to support great crested newts. However, it is possible that more common and widespread species such as common frog and common toad may enter the site whilst naturally dispersing from habitats further afield.

Reptiles

The data search includes records for grass snake and slow worm within the 1km search radius. These are all located beyond the A508. The informing desk study has revealed a reptile survey (Ecolocation, 2019) to have been undertaken on site in 2019, relating to granted planning approval DA/2013/0510. No reptiles were recorded on site during this survey.

The grassland, woodland and hedgerows provide sheltering and commuting opportunities. The open mosaic habitat provides opportunities for basking reptiles.

Species, such as grass snake are known to commute over large distances and are reliant on habitats associated with watercourses or waterbodies (present locally) for foraging. Therefore it is possible that this species may commute through the site as they naturally disperse between foraging resources and breeding habitats further afield. The site is not of a sufficient size nor does it offer habitats typically suitable for dependent populations of reptile.

As such, the site is afforded ***low*** suitability for use by reptiles.

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Badger

The data search returned a number of records for badger locally. The surrounding landscape does provide good opportunities for this species and their presence locally is considered to be likely.

A search of the site and neighbouring habitats, where accessible, has revealed a number of mammal paths through the woodland and hedgerows as well as evidence of disturbance to the ground through snuffling or digging.

Digging within grassland – possible indication of foraging badger

Badger clans have territory ranges that vary in size dependent on existing environmental factors such as availability of forage and sett building habitat. Good quality foraging habitat is present on site and the adjacent woodland provides good quality sett building habitat. A search of the site and neighbouring habitats during the informing survey, has confirmed the presence of three probable badger setts within a 30m radius of the site.

Sett 1 is located within a earth bank at the base of the wider woodland parcel to the south west of the site boundary. This sett displayed signs of recent badger activity including footprints, fresh bedding and badger guard hairs within excavated spoil. Sett entrances were linked with established well-worn paths suggesting that they relate to a single sett.

Two typical sett entrances

Path linking entrances on both sides of earth mound

Footprints at sett entrance

Sett 2 is located within the base of encroaching bramble to the A508 side of the walled structure. The full extent of this sett has not been visible at the time of survey with dense bramble concealing the surveyors view. At least one sett entrance was visible with paths noted leading to an area of recent digging within the adjacent managed grassland. Again, no direct evidence of current occupation by badger has been noted, such as the presence of footprint or badger guard hairs. However, given the wider evidence of badger activity within the immediate landscape it is concluded likely that this feature has been used in some capacity by the resident badger clan.

Figure 3 seeks to illustrate the locations of probable badger setts in relation to the site.

Location of sett 3

Path leading towards entrance within bramble stand

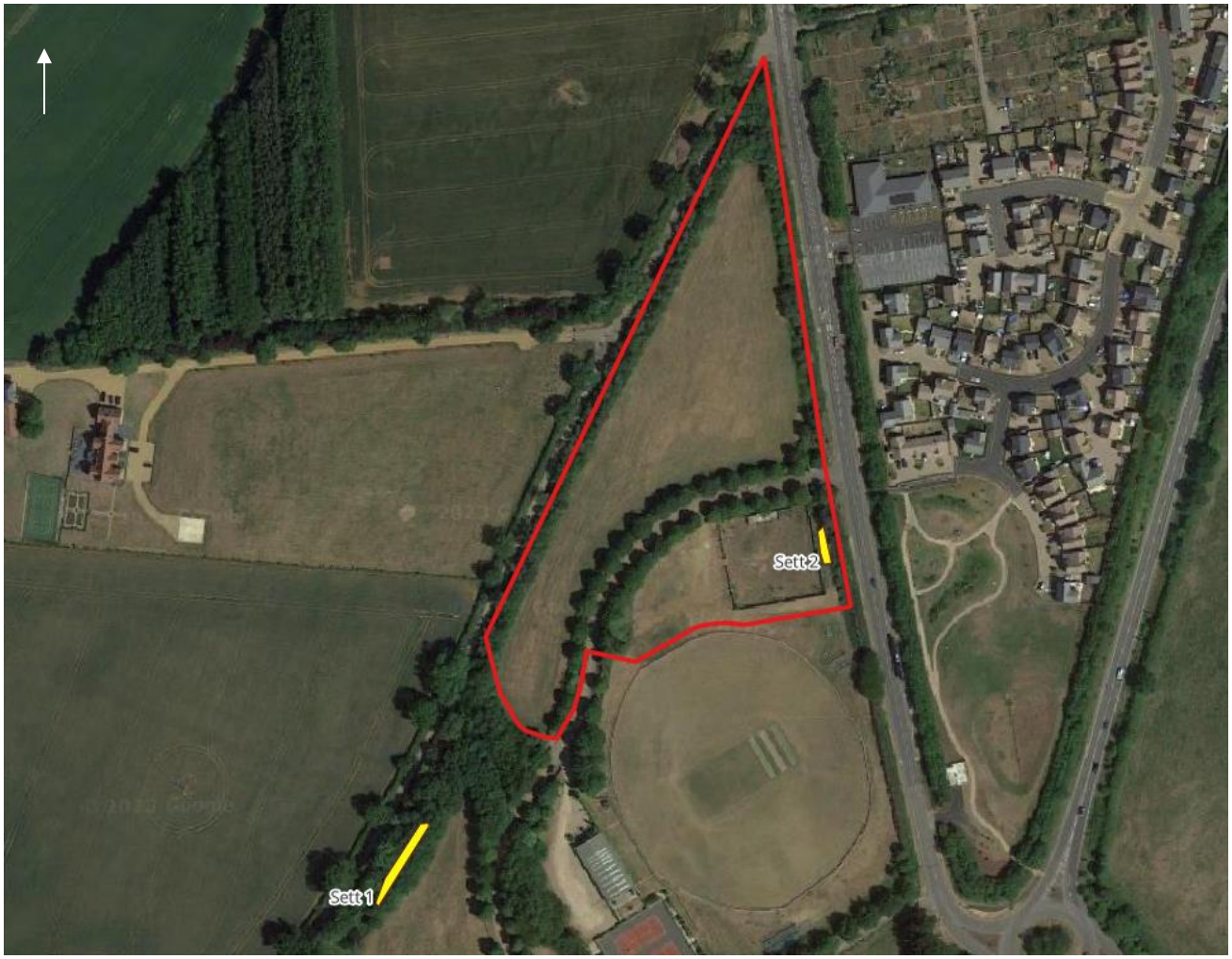

Figure 3: location of badger setts

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Presence of badger has been confirmed on site and further survey effort to inform a suitable mitigation strategy is required.

In addition to badger activity, a rabbit warren has been recorded within the walled structure. No direct evidence of occupation by badger was noted, such as the presence of footprint or badger guard hairs.

Rabbit warren

Rabbit warren

Invertebrates

The data search returned a good number of records for notable invertebrate species locally, the majority of which are associated with the local designations.

The vegetation on site is likely to support a range of invertebrates with the microclimates provided on the previously disturbed land having the potential to support notable and scares invertebrates. This value is however limited by the size and extent of valuable invertebrate habitat present on site.

The site is afforded ***low*** suitability for invertebrates, limited to within a local context.

Notable mammals

The habitats on site offer suitable foraging opportunities for hedgehog. This species are a Species of Principal Importance under the NERC Act 2006. The habitats present on site, given their size and extent, are unlikely to form a key resource for the local hedgehog population as they would be provided with greater foraging opportunities within the wider landscape. The site is therefore considered to offer ***low*** value to hedgehog.

Invasive Species

The informing walkover survey of the site reveals the presence of Virgina creeper (*Parthenocissus quinquefolia*) to the entrance gate as the existing access road enters the site. This species is listed under Schedule 9 of the Wildlife and Countryside Act and should not be allowed to spread into the wild.

4. Potential Ecological Impacts and Recommendations

4.1 Summary of the Proposed Development

Planning permission is sought for the construction of a local service centre, 16 semi-detached affordable homes and a spa & wellness centre with associated infrastructure, parking and landscaping. The following impact assessment is based on the Proposed Site Plan (Dwg. No. 2023028 A101).

Proposals will result in the loss of existing grassland and sparsely vegetated land. The existing treelined access road will be retained within the scope of this development, however internal access requirements will result in the loss of a small number of existing urban trees. On site habitat creation will include the construction of a SUDs, vegetated gardens, tree planting and soft landscaping.

A Construction Environmental Management Plan (CEMP) will be prepared to detail how the retained habitats within and surrounding the site will be protected during the construction phase in order to avoid unlawful acts in relation to wildlife legislation. The CEMP will include details of appropriate fencing to restrict access into key ecological areas, information on any timing restrictions and measures to prevent damage to retained habitats. Typically the preparation of a CEMP will be a conditional requirement of the planning permission.

In accordance with the requirements of the NPPF, a biodiversity Net Gain Feasibility Study and supporting Landscape and Environmental Management Plan (LEMP) should be prepared for the proposed development and should cover how retained habitats and newly landscaped areas will be managed so as to maximise their biodiversity value and achieve the objectives for the delivery of a biodiversity net gain in accordance with local and national planning policy. The LEMP will also set out any measures necessary to ensure protected species are appropriately accommodated within the operational site.

Ecological Impact Assessment

Designations:

The site has no statutory designations for nature conservation within its boundaries or adjacent to them. When considering the likely scale and extent of the proposed works, no such designations are expected to be adversely impacted.

Habitats:

It is recommended that any proposed development of the site should seek to ensure the retention and protection, through appropriate buffering, of valuable habitats on site and those rarely occurring locally. The deciduous woodland on site has the potential to meet the qualifying criteria for allocation as priority habitat as per Section 41 of the NERC Act 2006. Therefore the impacts of the loss of this habitat should be appropriately considered. The mitigation hierarchy, as described in Paragraph 175 of the National Planning Policy Framework and reiterated in British Standard 42020:2013 (Biodiversity), states that impacts should be avoided wherever possible in the first instance, with mitigation or compensation applied when avoidance is not achievable.

Furthermore, in line with the requirements of the NPPF a measurable Biodiversity Net Gain (BNG) will be required as a result of development. Once suitable mitigation and layout design have been informed the finalised proposals should be considered in accordance with the Statutory BNG Metric seeking to demonstrate a BNG is achievable as a result of the proposed.

Measurable opportunities for biodiversity enhancement should be agreed within a tailored LEMP, providing a prescribed and appropriate approach to the management of biodiversity enhancements for the lifetime of the development.

Protected species:

Badger

Badger presence has been confirmed and further badger surveys are being undertaken to inform appropriate mitigation. These have been underway at the time of finalising this report and a finalised mitigation strategy will be provided by Pearce Environment Ltd. However, it is understood that one sett (sett 2) is located within 10m of the proposed works. There is potential to retain this sett. If this is not possible, this sett will need to be excluded under licence. Badgers and their setts are protected in accordance with the Protection of Badgers Act (1992).

The site provides good quality foraging habitat for badger, located near to an established range of the neighbouring clan. The available foraging habitat on site will be partially lost to enable the development, although a good proportion of this foraging resource will be retained. Badgers would continue to have access to further foraging habitat within the wider landscape.

Badgers are capricious animals that move between setts in response to changes in environmental factors and the activity level of the identified sett may fluctuate during the year. Therefore it is important to regularly monitor badger activity on site, both prior to and during the construction phase. As such, a pre-commencement badger check, by a suitably qualified ecologist, should be undertaken prior to development and any recommendations following this check should be followed.

Roosting Bats

Where the proposed development requires the felling or arboricultural management of woodland and mature trees on site, these should be subject to an aerial tree climbing inspection to determine bat roosting suitability in accordance with current survey guidelines Bat Surveys for Professional Ecologists: Good Practice Guidelines 3rd edition (Collins, 2016).

The types of feature which are known to have potential to be used by roosting bats in trees include woodpecker holes, rot holes, hazard beams, cracks and splits, knot holes, cavities, loose bark and partially detached ivy (Andrews, 2013). Where present these features should be subject to an endoscopic search to classify bat roosting suitability.

Nesting birds

Construction and preparation activities on the site have the potential to result in disturbance to nesting birds through vegetation clearance as well as increased movement, noise and construction traffic in proximity to the retained habitats. Should these potentially disturbing activities be undertaken during the breeding season, this could potentially result in the damage or destruction of nesting sites. Any such damage or destruction of an active nest could have an adverse effect on populations of breeding birds, which would be significant at the Local level. It would also constitute an offence under the Wildlife and Countryside Act 1981 and so will be a legislative consideration during the operational phase of the proposed works.

Works to or in close proximity to the trees and woodland habitat should be scheduled to only occur outside of typical bird nesting season (March-August inclusive). If this is not possible, a check should be carried out by a suitably qualified ecologist no more than 24 hours in advance of clearance works. If an active birds' nest is found within the proposed clearance zone, suitable avoidance measures should be installed, such as creating a buffer zone with barrier tape around the nest to ensure that the nest is not damaged or destroyed by the works. The nest should then be monitored until all chicks have fledged and a suitably experienced ecologist confirms the nest is no longer active and fledglings are no longer dependent on the nest before works can proceed.

Hedgehog

Hedgehog may be present within the wider landscape and as such, it is possible that individuals of this species may cross the site whilst naturally dispersing in search of forage or commuting. Should this species enter the site during construction, effects may include entrapment. It is considered unlikely that proposals will have any significant effect on the favourable conservation status of this species. However, precautionary measures such as pre-commencement checks and the installation of sloping boards within any excavation left open overnight should be implemented to further reduce any indirect impacts to this species. These measures should be secured and detailed within a supporting CEMP.

Herpetofauna

The informing desk study has revealed a reptile survey (Ecolocation, 2019) to have been undertaken on habitats adjacent to this site in 2019 and relating to granted planning approval DA/2013/0510. No reptiles were recorded on site during this survey.

The site is dominated by frequently disturbed grassland, providing suboptimal opportunities for reptile. However, where the grassland ward is allowed to establish adjacent to woodland, potential dispersal and sheltering opportunities for reptiles may be created. As such, it is considered reasonable and proportionate to undertake works under a suitable working Risk Avoidance Method Statement. Further details on a RAMS is provided below:

RAMS:

The Principal Contractor will be responsible for communicating any changes to the development works to the appointed ecologist so that they may advise accordingly any potential changes to the implementation of ecology protection measures. This will include changes to the design, lighting, layout, and scheduled timings of development works.

Method: Site clearance and Habitat manipulation

- The existing grassland will continue to be managed to a sward height of less than 15cm during the period prior to commencement of works in an effort to ensure further suitable reptile habitat is not inadvertently created prior to commencement of works.
- The site induction, undertaken by the appointed ECoW, will offer training in relation to reptile identification and stress the importance of the implementation of precautionary working practices on site.
- Prior to the commencement of works, the site will be walked by the appointed ECoW and members of the construction team to ensure the recommended protective fencing securing the adjacent habitats is in place and fit for purpose. Any on site recommendation made by the appointed ECoW should be implemented in full.
- Should any non-protected species be discovered on site these will be moved safely by hand to the nearby retained hedgerow vegetation. Handling should be kept to a minimum and latex gloves should be avoided. Vinyl, Nitrile and other non-latex gloves are acceptable and should be used where possible.
- Should evidence of protected species be discovered during works, works should temporarily stop while Griffin Ecology Ltd. or the local office of Natural England are contacted for advice on the best way to proceed.

Method: Storage of building materials.

- Any stored building materials, plastics or fuels will be appropriately and securely stored to avoid risk of accidental pollution or contamination of the adjacent habitats.
- Spill kits and drip trays will be located on site at all times and all static plant equipment, when not in use, will be positioned away from retained woodland and atop hardstanding where possible.
- All stored materials will be raised off the ground on pallets or skids and located on hardstanding to remove any refuge potential for herpetofauna.

- Aggregates such as gravel and sand must be delivered in bulk bags and stored on pallets within hardstanding areas.

Method: Avoiding capture in excavations.

- Any excavations must be back-filled overnight, if this isn't possible then earth ramps must be left in the trench to allow animals to easily climb out.
- The developer/contractor or the appointed ECoW must inspect the site each morning to check that reptiles are not present in any excavations.
- If protected species are found during the search, work must stop and while Griffin Ecology Ltd. or the local office of Natural England are contacted for advice on the best way to proceed.
- Should any non-protected species be discovered on site these will be moved safely by hand to the nearby retained vegetation. Handling should be kept to a minimum and latex gloves should be avoided. Vinyl, Nitrile and other non-latex gloves are acceptable and should be used where possible

6. References

Birds of Conservation Concern 3: The Population Status of Birds in the UK, Channel Islands and the Isle of Man (Various, 2009).

CIEEM, 2015. Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester

Circular 06/2005: Biodiversity and geological conservation: Statutory obligations and their impacts in the planning system

CIEEM, 2015. Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM, 2016. Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal. 2nd ed. Winchester: Chartered Institute of Ecology and Environmental Management.

CIEEM, 2017. Chartered Institute of Ecology and Environmental Management Website. [Online] Available at: www.cieem.net

Biodiversity Net Gain; Good Practice Principals for Development, CIEEM, CIRIA, IEMA, 2016

Cresswell WJ, Birks J, Dean M, Pacheco M, Trewhella WJ, Wells D and Wray S (2012) UK BAP Mammals: Interim Guidelines for Survey Methodologies, Impact Assessment and Mitigation. The Mammal Society, Southampton.

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

Institute of Environmental Assessment, 1995. Guidelines for Baseline Ecological Assessment. London: E & FN Spon.

Google Earth Pro.

Northamptonshire Biological Records Centre

Northants Bat Group

2016. Bat Surveys: Good Practice Guidelines. 3rd edition. London: Bat Conservation Trust.

JNCC, 2004. Bat Workers Manual. 3rd edition.

National Planning and Policy Framework, 2021.

The Conservation of Habitats and Species Regulations, 2012.

Stace, C., 1997. New flora of the British Isles. Cambridge: Cambridge University Press.

Southwood, T.R.E. (1961) The numbers of species of insect associated with various trees. J. Animal Ecology 30: 1-8

Appendix 1 – Legislation

Legislation & Planning Policies

A number of UK and European policies and legislation deal with the conservation of biodiversity.

Protected habitats & species

The Wildlife and Countryside Act 1981 (as amended by the Countryside Rights of Way Act 2000) Section 9 protects great crested newt and all UK species of bat and their resting places from disturbance, damage and destruction. The Conservation of Habitats and Species Regulations 2010 additionally lists great crested newt and all UK species of bat as European Protected Species, and additionally prohibits killing or injury of individuals, as well as protecting their resting places from disturbance and destruction.

Common reptiles (grass snake, adder, common lizard and slow worm) are listed under Schedule 5 of the Wildlife and Countryside Act (as amended) and are protected from killing and injury.

The Wildlife and Countryside Act 181 (as amended) provides protection to all species of wild bird and their nests. Under Section 1 it is an offence to intentionally or recklessly take, damage, destroy, or otherwise interfere with nests or eggs, or to obstruct or prevent any wild bird from using its nest.

Under the Protection of Badgers Act 1992 it is an offence to disturb, kill, injure or take a badger or to disturb, damage, obstruct access to, allow a dog to access or destroy a sett.

Priority habitats & species

The NERC Act 2006 places a duty on public authorities to conserve biodiversity. Additionally, this Act states that a list of priority species and actions must be drawn up and published, to contain species and habitats of principal importance for the purpose of conserving biodiversity. These lists of Priority Species and Priority Habitats, which encompass the previous UK Biodiversity Action Plan (BAP) habitats and species, are those identified as being the most threatened and requiring conservation action. Priority habitats and species were chosen based on international importance, rapid decline and high risk. The list contains over 1000 habitats and species in total.

Invasive species

Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) contains introduced species which have been identified as having a severe economic and ecological impact through their introduction. It is an offence to release or allow to escape into the wild any species which is listed under Part I or Part II of Schedule 9, or any species which is not native.

Appendix 2 – UK Habs Map