

Preliminary Ecological Appraisal

Land Adjacent to Stubbin Wood Nursery, 16 Burlington Avenue, Shirebrook, Nottinghamshire Report Reference: BG25.134

February 2025



For every environment



For every environment

Liability

Brindle & Green has prepared this report for the sole use of:

INCO Construction & Development Consultants

The report is in accordance with the agreement under which our services were performed. No warranty, express or implied, is made as to the advice in this report or any other service provided by us. This report may not be relied upon by any other party except the person, company, agent or any third party for whom the report is intended without the prior written permission of Brindle & Green.

The content of this report is, at least in part, based upon information provided by others and on the assumption that all relevant information has been provided by those parties from whom it has been requested. Information obtained from any third party has not been independently verified by Brindle & Green unless otherwise stated in the report.

Copyright

© This report is the copyright of Brindle & Green. Unauthorised reproduction or usage by any person is prohibited.

www.brindlegreen.co.uk

Head Office

Brindle & Green Limited
Unit 3 Silverhill Court, Radbourne, Derby, DE6 4LY

Tel: 0800 222 9105

Sheffield Office Brindle & Green Li

Brindle & Green Limited Horizon House Whiting Street Sheffield S8 9QR

Barnsley Office

Brindle & Green Limited Sergeants House 36 Edderthorpe Lane Barnsley S73 9AT

London Office

Brindle & Green Limited Nutter Lane Wanstead London E11 2HZ

Kent Office

Brindle & Green Limited Sandy Lane Sevenoaks Kent TN13 3TP

Document Control

Report	Name	Signature	Date
Prepared by	Josh Bowler Graduate Ecologist	N/A	
1 st Check by	Harry Huddart Senior Ecologist		
2 nd Check by	Kerry Baker Senior Ecologist		
Issued by (PDF)	Harry Huddart Senior Ecologist	Low Hall	
REV1 Issued by	N/A	N/A	N/A

Revision Details

Revision	Approved	Revision Details
N/A	N/A	N/A

Project Details

Project carried out by:

Brindle and Green

Unit 3, Silverhill Court Radbourne Derby. DE6 4LY

Head Office: 01332 825771 Email: info@brindlegreen.co.uk Website: www.brindlegreen.co.uk

Project carried out for:

INCO Construction & Development Consultants

c/o Leeven Fleet 120 Green Lane Derby Derbyshire DE1 1RY

Project site:

Land Adjacent to Stubbin Wood Nursery

16 Burlington Avenue Langwith Junction Shirebrook Mansfield Nottinghamshire NG20 9AD

Grid reference: SK 52533 68540 W3W: extent.hunches.potions

Contents

Docu	ıment	Control	3
Revi	sion De	etails	3
1	Sumn	mary	8
2	Intro	duction	10
3	Meth	odology	11
	3.1	Desk Study	11
	3.2	Surveyors	11
	3.3	Survey Conditions	11
	3.4	Extended Phase 1 Habitat Survey	12
	3.5	Site Evaluation	12
	3.6	Limitations	13
	3.7	Report Lifespan	14
4	Site	Context	15
	4.1	Site Description	15
	4.2	Zone of Influence	16
5	Resul	lts	17
	5.1	Desk Study	17
	5.2	Habitats	18
	5.3	Fauna	22
6	Evalu	ation	26
	6.1	Development Proposals	26
	6.2	Desk Study Impacts	26
	6.3	Habitats	26

	6.4	Breeding Birds	27
	6.5	Bats	27
	6.6	Mammal Species of Principal Importance	28
7	Reco	mmendations	29
	7.1	Habitats	29
	7.2	Nesting Birds	30
	7.3	Roosting Bats	31
	7.4	Herptiles	32
	7.6	Mammal Species of Principal Importance	33
Appe	endix 1	1 - Phase 1 Habitat Plan	34
Арре	endix 2	2 - Phase 1 Target Notes	35
Appe	endix (3 – General References	39
Арре	endix 4	4 – Legislation, Policy and Guidance	41
Арре	endix (5 – Legislation, Guidance and Methodology	42
Арре	endix (6 – Proposed Plans	50
Арре	endix ⁻	7 – MAGIC data	51
Арре	endix 8	3 – Building Photographs and Potential Roost Features Plan .	58
Flaur			
Figur		on of the analyst site and common ding and Dod line houndary devicts application	o!+o
		ap of the project site and surrounding area. Red line boundary depicts application r blue line ownership boundary	
		of Moderate Amenity Grassland positioned around the centre of the site	
		d species discovered within semi-improved grassland.	
		of Moderate Amenity Grassland positioned around the centre of the site	
		ng 1 and associated hardstanding car park located to the east of the site	
		t Note 1	
		t Note 2	

Figure 8: Target Note 3	36
Figure 9: Target Note 4	37
Figure 10: Plan showing Potential Roost Features	60
Tables	
Table 1: Ecological recommendations	9
Table 2: Ecological Data Resources	11
Table 3: Definitions of each of the six evaluation brackets, indicating the importance of each	habitat type
and an example of their possible habitat status. (Table constructed following The CIEEM Ecl	A Guidelines,
Terrestrial, Freshwater and Coastal (2016) pages 16 -17)	12
Table 4: Summary of Designated Sites within a 2km radius of the application site	17
Table 5: Summary of relevant protected and priority species records	17
Table 6: JNCC Habitat Types found on site and inclusion within UK BAP/HPI habitats	19
Table 7: Summary of bat roost suitability and evidence found within each of the buildings / s	tructures on
site (Supporting Figures within Appendix 8)	23
Table 8: Phase 1 target notes and associated photos.	35
Table 9: Plant Species List with DAFOR Scale	38
Table 10: Guideline for assessing the suitability of a structure to support roosting habitat ar	nended from
Collins, J (2023)	43
Table 11: Guideline for assessing the suitability of a tree to support roosting habitat an	nended from
Collins, J (2023)	44
Table 12: Potential suitability of foraging and commuting habitat within an application boundary	ary. Features
should be assessed following this guide and professional judgement. Adapted from Collins,	J (2023)45
Table 13: Building Photographs showing Potential Roost Features	58

1 Summary

- 1.1.1 Brindle & Green Ltd were commissioned by INCO Construction and Development Consultants to undertake a Preliminary Ecological Appraisal incorporating a Phase 1 Habitat Survey and Protected Species Assessment at the Land Adjacent to Stubbin Wood Nursery, 16 Burlington Avenue, Shirebrook, Nottinghamshire. This report summarises the potential ecological constraints to the full planning application for site clearance to facilitate the development of an additional single storey classroom building with associated external play areas and sheltered walkway. Design plans are provided within Appendix 6 of this report. The survey was carried out on the 11th of February 2025.
- 1.1.2 The red line boundary is approximately 0.13ha in extent and comprises a portion of amenity grassland forming a school playing field with school building to the northeast, tarmac hardstanding road forming the eastern boundary and various scattered trees particularly to the southeast. There were no other discernible boundary features on any other side. The site was evaluated to support 'Site' value on a regional scale.
- 1.1.3 The habitats described within this report have the potential to support protected and/or notable species. As such, this report outlines important measures to protect species during site clearance, and recommendations to improve the biodiversity status of the site post development.
- 1.1.4 A full description of the recommendations can be found within Chapter 7.
- 1.1.5 Table 1 is a summary of the ecological issues recommended for further consideration as a result of our initial investigations.
- 1.1.6 Results and recommendations contained within this report have been prepared by an experienced ecologist and are therefore the view of Brindle & Green Limited. The survey is based on information provided by our client, the development proposals, results of the desk study and our survey of the site. This report pertains to this information only.

Table 1: Ecological recommendations

Ecological Consideration	Recommendations (e.g. further survey, mitigation)	Timing	
Habitats	Biodiversity Impact Assessment is recommended to inform the units required to achieve no net loss and ideally a net gain, detailed in Chapter 7.	During Design Phase	
	A further botanical surveys is recommended to identify the botanical value of the site and inform an accurate categorisation, species composition and condition assessment of the grassland. This is also required to inform the Biodiversity Impact Assessment baseline habitat values for Biodiversity Net Gain both on and offsite. One botanical assessment during site visits during optimal survey periods (April – August, inclusive)		
Nesting Birds	Works should be sympathetic to this group of species, with vegetation clearance undertaken following Reasonable Avoidance Measures (RAMS) outlined in chapter 7.	During Site Clearance (Optimal timing between October - March outside of breeding bird season)	
Roosting Bats	Works should be sympathetic to this group of species through sensitive lighting, detailed in Chapter 7. Any lighting and/or light spillage must avoid any potential bat roosting features. Lighting strategy should be secured through a condition.	During and post construction	
Foraging and Commuting Bats	Works should be sympathetic to this group of species through sensitive lighting, detailed in Chapter 7.	During and post construction	
Amphibians and Reptiles	Reasonable Avoidance Measures are recommended during site clearance and construction phase, detailed in chapter 7.	March – September (optimal timing April-May or September)	
Mammal Species (Hedgehog)	Reasonable Avoidance Measures are recommended during site clearance and construction, detailed in chapter 7.	During development	
Invasive Species	Removal of buddleia and cotoneaster on site and suitable disposal by a suitably qualified contractor, detailed in chapter 7.	Year round	

2 Introduction

- 2.1.1 The purpose of this assessment was to provide a Preliminary Ecological Appraisal of the site incorporating a Phase 1 Habitat Survey and Protected Species Assessment to establish the likelihood of the site supporting protected species. The survey provides detail on the need for any additional, more detailed protected species surveys, likely mitigation, and any opportunities for enhancement.
- 2.1.2 The red line boundary is approximately 0.13ha in extent and comprises a comprises a field of amenity grassland used as part of a school field with school buildings and hardstanding access road forming the eastern boundary. There were no discernible boundary features on any other side, as the red line boundary forms only a segment of a much larger playing field. The wider blue line boundary is bordered by hedgerows forming boundaries to residential dwellings to the north and amenity playing fields to the west, and no discernible boundary features to the south. The site is located on the northern side of the town of Shirebrook, approximately 7.5km north of the town of Mansfield in Nottinghamshire. Residential and commercial development associated with Shirebrook dominates the immediate surroundings on all sides, most closely to the immediate adjacent north, with amenity grassland playing fields to the immediate south and west. In addition, pockets of deciduous woodland exist to the southwest and northeast of the site boundary and arable fields are present to the north and east beyond the immediate residential and commercial development.
- 2.1.3 The site is the subject of a full planning application for site clearance to facilitate the development of a new classroom building with associated external play areas, sheltered walkway and 10 car parking spaces. Design plans are provided within Appendix 6 of this report.
- 2.1.4 The legislation relevant to protected species within the United Kingdom is summarised within Appendix 4.
- 2.1.5 Results and recommendations contained within this report have been prepared by an experienced ecologist and are therefore the view of Brindle & Green Limited. The survey is based on information provided by our client, the development proposals, results of the desk study and our survey of the site. This report pertains to this information only.

3 Methodology

3.1 Desk Study

- 3.1.1 Desk study data from the local records centre (Derbyshire Biological Records Centre (DBRC)) have not been requested to date. This decision is based on the small scope and scale of the proposed development, as well as the limited area of impact within the red line boundary. Given these factors, it is unlikely that additional data would hold further significant information in the evaluation of the potential impacts to designated sites, protected, and Priority species
- 3.1.2 Table 2 lists organisations and/or resources used as part of the desk study process. A data search from the local resource centre was not carried out at the request of the client. Data regarding any known statutory or non-statutory sites, in addition to any records for protected species, were requested from the following sources:

Table 2: Ecological Data Resources

Consultant	Requested data	Search radius	Date requested
Multi Agency Geographic Information for the Countryside (MAGIC)	 National and International site Designations Granted European protected species Development (EPS) Licenses Priority Habitat Inventory 	2km	18/02/2025

3.2 Surveyors

- 3.2.1 The survey was carried out by Harry Huddart (BSc), GCN Licence 2022-10607-CL08-GCN, Senior Ecologist.
- 3.2.2 The survey was overseen by Lucinda Sweet PhD, MCIEEM Natural England Bat Licence (Class Level 2, 2019-9122-CLS-CLS), Great Crested Newt Licence (Class Level 1, 2016-22852-CLS-CLS), Director.

3.3 Survey Conditions

3.3.1 The survey was undertaken at 10:30am on the 11th of February 2025. The outside temperature was recorded as 3°C, wind speed was recorded as 1 BF, with light rain, and 8/8 cloud cover.

3.4 Extended Phase 1 Habitat Survey

- 3.4.1 A Phase 1 habitat survey was undertaken following survey guidance (JNCC 2007) to establish the presence and distribution of habitat types within the site and potential ecological constraints to development. However, this was converted to the UK Habitat Classification (V2.01) for Biodiversity Net Gain (BNG) calculations within the statutory metric. A Phase 1 Habitat Map was produced (Appendix 1) and where additional details were required Target Notes have been provided (Appendix 2). A plant species list (Appendix 2) summarising all plants identified on site was produced during the survey and all scientific nomenclature was produced according to Stace (2010).
- 3.4.2 This survey was extended to note the potential for habitats on site to support protected and/or notable species and for evidence of any such species. The habitats on site were assessed for their suitability to support protected species in relation to the habitat type found at the site. Any incidental sightings or field signs were noted at the time of survey. Where evidence of, or the confirmed presence of a protected species was identified, further species-specific surveys may be recommended to ensure that the presence or otherwise of a legally protected species is fully considered prior to the determination of any planning approval or to guide an EPS development licence.
- 3.4.3 Legislation, guidance and methodology for species relevant to this site are presented in full within Appendices 4 and 5 of this report.

3.5 Site Evaluation

3.5.1 Following the ecological appraisal, the site was classified into one of six groups (Table 3), to indicate whether the site is considered to hold ecological value on a local, national or international scale. This evaluation is intended as a guide and only targeted survey work can establish the significance of protected species populations onsite.

Table 3: Definitions of each of the six evaluation brackets, indicating the importance of each habitat type and an example of their possible habitat status. (Table constructed following The CIEEM EcIA Guidelines, Terrestrial, Freshwater and Coastal (2016) pages 16-17)

Ecological Value	Comparable Example
International	An internationally designated site or candidate site, including habitat or species included within Special Protection Areas (SPA) / Special Areas of Conservation (SAC), Ramsar Sites, listed under Annex 1 of the Habitats Directive

Ecological Value	Comparable Example
National	Sites designated at UK level, e.g. Sites of Special Scientific Interest (SSSI), supporting species considered nationally threatened or rare
Regional	A regularly occurring regionally or county significant population/number of any nationally important species
County	A feature identified as of critical importance within Section 41 of the NERC Act (2006)
District	Key Habitat type included within the National Biodiversity Action Plan (BAP) /NERC Habitat of Principle Importance (HPI). A regularly occurring, locally significant number of a regionally important species
Local/Site	Designated sites, such as Sites of Biological Importance (SBIs) or viable habitat / species populations of value at a county level (LBAP)

3.6 Limitations

- 3.6.1 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment. The protected and notable species assessment provides a preliminary view of the likelihood of these species occurring on site, based upon the suitability of the habitats, known distribution of the species in the local area and any direct evidence on site. It should not be taken as providing a full and definitive survey of any protected species group.
- 3.6.2 The assessment was undertaken outside of the optimal survey period for phase 1 survey. Certain habitat types such as hardstanding and buildings can be surveyed at any time of the year where the species that they comprise vary very little. Where habitats are more complex and support species with different growing seasons, they may be recommended for further, more detailed assessments at the appropriate time of the year. The school playing field (semi-improved grassland) was found to contain some indicator species conducive of a higher value grassland. Therefore, recommendations for further botanical surveys to be undertaken at an appropriate time of year have been included below to address this limitation.
- 3.6.3 Internals of the two buildings present within the site boundary could not be accessed due to child safeguarding reasons for this survey. However, the small scale of the proposed development and presence of external Potential Roost Features provide enough scope for recommended future surveys to evaluate likely presence/absence of roosting bats.

3.6.4 A 2km local data records search was not undertaken, under the request of the client.

3.7 Report Lifespan

3.7.1 Given the transient nature of the subject, we would consider the survey results contained to be accurate for 2 years.

4 Site Context

4.1 Site Description

- 4.1.1 The application site can be found at grid ref SK 52533 68540, positioned on the northern region of the town of Shirebrook located in the District of Bolsover, Derbyshire. The site comprises of a patch of semi-improved grassland that is part of a wider school playing field, bordered by a school building and hardstanding road to the east, with no discernible boundary features on any other side. Beyond the red line boundary to the south, west and north lies further school playing field, which borders with Stubbins Wood, a deciduous woodland, to the southwest.
- 4.1.2 The wider blue line boundary also featured small regions of ornamental tree planting and willow trees adjacent to the western boundary of the application site. In addition, a small wooden rain shelter structure and wooden children's play apparatus can be found beyond the western boundary of the site. Adjacent to the eastern boundary, a length of green metal fencing, single storey active use concrete panel school building (Building 1) and tarmac road used for access and parking is present. Further ornamental planting, tree species and a small pile of hand-cleared wood can be found towards the southeast of the site. No hedgerows or water bodies are found within the red line boundary.
- 4.1.3 The application boundary forms part of a larger school playing field; therefore the semi-improved grassland (school field) extends to the south, north and west. Patches of deciduous woodland lie approximately 50m to the southwest (Stubbins Wood) and 270m northeast (Bradshaw Wood) of the site. The residential and commercial development associated with Shirebrook dominates the majority of land on all sides. As a result the surrounding areas is considered to be urbanised presenting barriers to terrestrial species dispersal. However, some connectivity to species dispersal is considered present from the southwest of the site, in the form of the woodland, 50m from the site boundary.



Figure 1: OS map of the project site and surrounding area. Red line boundary depicts application site, within the wider blue line ownership boundary.

4.2 Zone of Influence

4.2.1 The zone of influence describes the geographic extent of potential impacts of a proposed development. The small scale of the proposed development reduces the likelihood of impact to the surrounding area, however suitable connective vegetation could influence the presence of protected species within the application boundary. The zone of influence was considered to be 250 metres from the application boundary for amphibians and reptiles, 30 metres for terrestrial mammals such as badgers, and within the area of impact for bats and breeding birds.

5 Results

5.1 Desk Study

Designated Sites

- 5.1.1 The site was subjected to a search for designated sites within a 2km radius of the site using data supplied by the online desk-based resource MAGIC. A data search using the local records centre was not undertaken at the request of the client.
- 5.1.2 A search of the online resource Magic Maps found one Statutory and one Non-Statutory designation within the 2km radius search.

Table 4: Summary of Designated Sites within a 2km radius of the application site

Site Name	Grid Ref.	Status	Reason for Designation	Distance from site
Lord Stubbins Wood	SK 53707 68698	Site of Special Scientific Interest (SSSI)	Semi-natural broad-leaved woodland of Regional importance.	390m NE

Protected Species Assessment

5.1.3 Magic Maps revealed seven granted EPS licence within 2km of the site:

Table 5: Summary of relevant protected and priority species records

Species	License Number	Approximate Distance from Site	Description
Common Pipistrelle (Pipistrellus pipistrellus)	2015-15976-EPS- MIT	Within / adjacent to site boundary	Damage to and Destruction of a resting place
Common Pipistrelle	EPSM2013-5746	620m SW	Destruction of a resting place
Common Pipistrelle, Whiskered Bat (Myotis mystacinus)	2015-17119-EPS- MIT	710m NW	Damage to a resting place and breeding place

Species	License Number	Approximate Distance from Site	Description
Common Pipistrelle, Whiskered Bat	2015-17119-EPS- MIT-1	710m NW	Affects and damages a resting and breeding place
Common Pipistrelle	EPSM2011-3014	830m W	Destruction of a resting place
Common Pipistrelle, Brown Long Eared Bat (Plecotus auritus)	EPSM2010-2292	1.34km SW	Unknown
Brandt's Bat (Myotis brandtil), Common Pipistrelle, Whiskered Bat	2020-50340-EPS- MIT	1.95km NE	Damage to and Destruction of a resting place

Priority Habitats

5.1.4 Data supplied by MAGIC includes a UKBAP priority habitat inventory. MAGIC returned no priority habitat within the application site. However, priority habitat pertaining to Deciduous Woodland is located approximately 50m of to the application site to the southwest. This area is designated as Stubbins Wood. However, due to the small scale of the proposed development and the location of the development site within an existing amenity grassland school playing field, it is not expected that the development will negatively impact the Priority Habitat.

5.2 Habitats

- 5.2.1 The habitat types recorded on site are summarised below, and the frequency and distribution of habitat types is displayed within a Phase 1 Habitat Survey Map (Appendix 1 and 2).
- 5.2.2 Table 6 provides a list of habitat types present on site along with their inclusion (or otherwise) as a National and / or Local Habitat of Principal Importance (HPI) (Previously referred to as Biodiversity Action Plan (BAP)) (It should be noted that additional information is included within the text where a classification under Phase 1 survey methodology does not mirror habitat types considered to be conservation priorities).

Table 6: JNCC Habitat Types found on site and inclusion within UK BAP/HPI habitats

Habitat Type	N HPI	L HPI	N/A
Semi-improved grassland	To be confirm	ned following fur	ther surveys
Buildings and Hardstanding			✓
Scattered Trees			✓

Semi-improved Grassland

- 5.2.3 The majority of the site consisted potentially of semi-improved grassland, is managed for and currently used as a school playing field (Figure 2). The grassland is approximately 0.11ha in extent and is frequently mown with a sward height of <5cm. Species included abundant perennial ryegrass (*Lolium perenne*), as well as occasional **cock's foot** (*Dactylis glomerata*), frequent common dandelion (*Taraxacum officinale*), abundant moss species (*Bryophyta sp.*), occasional **Dove's foot cranesbill** (*Geranium molle*), sedge species (*Carex sp.*) and occasional yarrow (*Achillea millefolium*). An orchid (*Orchidaceae sp.*) species was also found within this grassland (Figure 3). Due to the protection status granted to orchids, further botanical surveys are required to determine the exact species and abundance of orchid onsite.
- 5.2.4 Scattered TreesError! Reference source not found. Several scattered trees were located within a nd adjacent to the site boundary. A circle of 17 willow trees was located adjacent to the west of the site (Figure 4). A large willow, two ornamental conifers and a small number of ash (*Fraxinus excelsior*) and willow (*Salix sp.*) saplings were recorded in the south and southeast of the site.



Figure 2: Area of Moderate Amenity Grassland positioned around the centre of the site



Figure 3: Orchid species discovered within semi-improved grassland.



Figure 4: Area of Moderate Amenity Grassland positioned around the centre of the site

Buildings and Hard standing

5.2.5 The eastern boundary of the site was formed by an area of tarmac hardstanding that formed an area of car park, access road and school ground. Within this school ground were located Buildings 1 and 2. Building 1 (Figure 5) was a single storey school building constructed of concrete render panels and with a concrete flat roof and PVC window and door frames.



Figure 5: Building 1 and associated hardstanding car park located to the east of the site

Invasive Weeds Assessment

- 5.2.6 An assessment of the site was made to establish the presence of invasive weeds included on schedule 9 of the Wildlife and Countryside Act 1981 (as amended).
- 5.2.7 The Schedule 9 invasive species Cotoneaster (*Cotoneaster horizontalis*) was recorded at the approximate grid reference SK 52552 68520 (TN3) and the non-Schedule 9 invasive species Buddleia (*Buddleja davidii*) was recorded at the approximate grid reference SK 52492 68510 (TN1).

5.3 Fauna

Breeding Birds

5.3.1 The assessment was undertaken outside of the breeding bird season. Four species of bird were recorded on site during the survey including black-headed gull (*Chroicocephalus ridibundus*), dunnock (*Prunella modularis*), greenfinch (*Chloris chloris*) and great spotted woodpecker (*Dendrocopos major*). All bird species were seen on adjacent offsite habitats but included for fullness of the assessment.

- 5.3.2 Woodland, scattered trees, hedgerows, scrub and grassland on and adjacent to site provide suitable nesting habitat for birds, including birds of conservation concern such as the greenfinch.
- 5.3.3 Building 1 onsite were not considered suitable for breeding birds due to a lack of access points to Building 1. However, the vegetation on site including grassland, individual trees and ornamental shrub was considered suitable for nesting birds, although none were identified during this preliminary survey.

Bats

5.3.4 The MAGIC data search returned seven records of EPS licenses granted in relation to roosting bats within 2km of the site boundary, with the closest record located within the application boundary pertaining to the destruction of a resting place for a common pipistrelle.

Roosting Bats

- 5.3.5 Building 1 within the site possessed features that could provide potential refuge for roosting bats. Existing bat boxes were located outside the redline boundary affixed onto trees to the southeast of the boundary and on the adjacent turning circle. MAGIC data search returned an existing EPS license for destruction of a bat resting place within the application boundary or adjacent to. As such it is reasonable to be exercise strong caution regarding roosting bats in the area.
- 5.3.6 Building 1 was assessed to support 'Moderate' suitability to support roosting bats. The extent of the suitability pertained to lifted fascia board, gaps between soffits and wall and gaps in concrete render panels. The main structural features of the building, and their suitability for supporting roosting bats are summarised below (Table 7), and associated figures can be found with Table 13 in Appendix 8. A potential roosting features plan has also been included in Appendix 8.

Table 7: Summary of bat roost suitability and evidence found within each of the buildings / structures on site (Supporting Figures within Appendix 8)

Higi		Moderate	LOW		Negligible	None
Building Number		Description			Evidence / poter sting Features (P	Roost Suitability
В1	External	:		Exter	nal:	Moderate

Building Number	Description	Bat Evidence / potential Roosting Features (PRFs)	Roost Suitability
	Single storey classroom building constructed of concrete render panels. Featured concrete flat roof, PVC window and door frames, wooden soffits and plastic fascia board. External lighting present.	 Gaps in concrete render panels. Gap between wooden soffit and top of internal wall. 2x Lifted plastic fascia board. All found on the western elevation of Building 1. 	
	Internal: Not accessed.	Internal: Not accessed.	

Foraging and Commuting Bats

5.3.7 The application site was positioned within a largely residential suburban area with some suitable vegetative foraging areas in the wider environment, such as hedgerows and deciduous woodland. These areas have some connectivity to the site; however, the site boundary itself features little suitable foraging habitat, largely composed a small section of amenity grassland with some immature scattered trees present. The grassland is regularly mown with a sward height of approximately 5cm throughout, reducing suitability for invertebrate species for bats to predate upon. Connectivity for local foraging and commuting bat species could be provided by a combination of woodland, scattered trees and residential gardens that surround the site on all sides. However, the impacts of the proposals are considered 'Negligible' for foraging and commuting bats, however it is expected that bats may be present in the local area.

Badgers

- 5.3.8 Records relating to certain protected species including badger sett locations are sensitive in nature, and due to the risk of public interference are kept confidential.
- 5.3.9 No evidence of badger setts, or activity such as mammal runs, snuffle holes and latrines were found during the ecological appraisal of the site. Additionally, the site supported no habitat features such as dense scrub and woodland. The extent of the site, its exposure and the location within an urbanised environment, with surroundings dominated by residential and commercial property, suggests that this site is highly unlikely to support resident badger populations and

unlikely to support badger foraging and commuting to and from the site. Therefore, this species is not considered further in this report.

Great Crested Newts

5.3.10 No ponds were recorded within the site nor within 500m of the surrounding area. The site does contain habitat such as grassland, small scrub, tree roots and man-made debris that have potential to provide refuge for GCN during its terrestrial phase. Furthermore, the semi-improved grassland was considered sub-optimal for GCN due to its short and intensively managed sward. In addition, due to the lack of proximity and connectivity to any potentially suitable waterbodies, the risk to GCN as a result of this development is considered to be negligible. Due to the habitats and surroundings of the site, a data search including great crested newts and other amphibians was considered disproportionate.

Reptiles

5.3.11 The grassland onsite was heavily managed with a max sward height of 5cm, therefore lacking structural diversity for refuge. Some suitable habitats could be found in habitats directly adjacent to the site boundary such as tussocky grassland to the northwest of the site and the ornamental shrub section to the southwest both offer some suitable foraging and resting habitat. However, due to their isolated nature and high levels of disturbance, it is considered highly unlikely reptiles will be present onsite. As such, the risks to reptiles as a result of development of this site is considered 'Negligible'.

Mammal Species of Principal Importance

5.3.12 The NERC Act 2006, Section 41 highlights 17 species of principal importance within England.

Western European Hedgehog (Erinaceus europaeus)

5.3.13 Grassland within the application boundary and hedgerow at the border of the site were considered suitable for supporting foraging and commuting Western European hedgehog.

6 Evaluation

6.1 Development Proposals

6.1.1 The site is the subject of a full planning application for the clearance of semi-improved grassland and section of hardstanding, to facilitate the development of a single storey classroom building with an associated external play areas and sheltered walkway. Design plans are provided within Appendix 6 of this report.

6.2 Desk Study Impacts

- 6.2.1 Direct impacts on nearby designated sites as a result of the proposed development are considered unlikely. The application site is positioned 390m west of the only statutory designation within 2km, Lord Stubbins Wood. The site is separated from this SSSI by an area of residential and commercial development, as well as a functioning railway line. This, along with the small scope and scale of the proposed development, supports the position that this development will not negatively affect any nearby designations (Appendix 7).
- 6.2.2 The site lies within an Impact Risk Zone (IRZ) for Lord Stubbins Wood SSSI, however, the proposed development does not meet the criteria for the IRZ, as such no further action is required. Overall, it is considered that impacts on nearby designated sites as a result of the proposed development are unlikely.

6.3 Habitats

- 6.3.1 The habitats on site have been evaluated as having 'Site' value in relation to the immediate surroundings and a regional context.
- 6.3.2 The site was dominated by amenity grassland (school playing field), buildings and hardstanding and individual scattered trees located on the school playing field. No priority habitats were recorded on site. However, a species of orchid was recorded within the grassland, which is to be lost as a result of the proposals. Orchids are a protected plant species under Schedule 8 of the Wildlife and Countryside Act 1981 and therefore further botanical surveys are recommended for this site in order to fully assess the botanical value of the site.
- 6.3.3 In England, Biodiversity Net Gain (BNG) is mandatory from February 2024 under Schedule 7A of the Town and Country Planning Act 1990, as inserted by Schedule 14 of the Environment Act.

Therefore, the site must undergo a Biodiversity Net Gain assessment, further details of which are provided in Chapter 7.

6.4 Breeding Birds

- 6.4.1 All wild birds, their eggs and nests 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 whilst nesting, or take, damage or destroy the nest of any such bird while in use or being built. In addition, species listed on Schedule 1 of the Wildlife and Countryside Act 1981 or their dependant young are afforded additional protection from disturbance whilst they are at their nests.
- 6.4.2 The vegetation associated with the grassland and trees on site was considered to provide limited but suitable nesting habitat for common bird species. In the absence of mitigation direct or indirect impacts on individual birds, their young, eggs and habitats could occur during site clearance.
- 6.4.3 Chapter 7 provides recommendations relating to the need for working methods; aimed at clarifying the value of the habitats for birds on site before assessing impact.

6.5 Bats

6.5.1 All bats in the United Kingdom and their habitats are fully protected under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2017 (as amended). It is an offence to damage or destroy any bat roost, intentionally or recklessly obstruct a bat roost, deliberately, intentionally or recklessly disturb a bat or intentionally kill, injure or take any bat.

Roosting Bats

6.5.2 Building 1 was identified as having 'Moderate' suitability to support roosting bats due to the presence of PRFs within the building's external features. The proposed plans show the erection of a newbuilding with a walkway between the existing building and proposed new classroom including a canopy cover. However, the proposed plans (Appendix 6) demonstrates that a sufficient gap is present between the canopy cover of the walkway and this potential roosting feature upon building 1. This will avoid obstruction to this potential roosting feature and potential flighting paths away from the site and therefore, the direct impacts to this potential roosting feature are considered negligible.

- 6.5.3 However, indirect impacts to this potential roosting feature may result through the installation of external lighting along the walkway, resulting in lighting spill into this feature. If the development was to continue as planned, it may lead to the indirect disturbance of a roosting site of a European protected species. A previous EPS licence for the destruction of a resting place for a common pipistrelle was recorded from a MAGIC data search, additionally two bat boxes were located within the site ownership at the southeastern corner of the site. This suggests that individual bats may be still roosting in the area and further supports the need for further mitigation measures to prevent the risk or disturbance to roosting bats as a result of this proposed development.
- 6.5.4 Chapter 7 set out important guidance relating to the implementation of a sensitive lighting scheme for bats, should external lighting be installed, necessary to avoid impacts on this species and measures to support its conservation status.

6.6 Mammal Species of Principal Importance

6.6.1 The NERC Act 2006, Section 41 highlights 17 species of principal importance within England. This includes several species of bat; however, these have been addressed in section 6.5.

Western European Hedgehog

- 6.6.2 The habitats on site were considered conducive to supporting foraging Western European hedgehog. Habitats including the hedgerows, grassland, and patches of scrub provide suitable foraging, refuge and commuting habitats for this species.
- 6.6.3 Chapter 7 provides recommendations aimed at safeguarding this species during construction, and measures to facilitate their use of the site post-development.

7 Recommendations

The site should be the subject of further ecological survey works, where the following indices will be assessed and evaluated further to establish the extent of impact to the ecological receptors recorded within the zone of influence of the site.

This survey can be used to guide the Master Plan layout to ensure that mitigation is employed to retain and enhance local biodiversity where possible. Efforts should be made to support National and Local Biodiversity Action Plans, achieve a 10% Biodiversity Net Gain Post development and seek opportunities to incorporate ecological enhancements within the proposed development as detailed within the National Planning Policy Framework (December 2024), which seeks biodiversity enhancements through the planning process, and the Environment Act 2021.

7.1 Habitats

Habitats	Timing
Recommendations	
The majority of the site is composed of semi-improved grassland; however, an orchid species was found within the site area. Due to the protected status of this group of species, further survey work is recommended.	A botanical walkover visit to be undertaken from April/May to September.
To appropriately establish the botanical value of these areas, the site should be the subject to a botanical survey, conducted during the optimum survey period. Further measures may be required dependent on the rarity of any orchid species located within the development footprint. This may require translocation of orchid(s) to nearby receptor site to habitat similar to that found onsite.	
The results of the findings will provide information to accurately condition assess the grassland habitat which can then be input into the Statutory Biodiversity Metric.	
Alongside the botanical walkover, the wider blue line boundary will be condition assessed to determine the baseline condition of the grassland, whereby calculations can then be made to offset the loss of onsite habitats. Where possible, areas of the playing fields to the north will be enhanced to achieve a minimum statutory 10% net gain.	

Habitats	Timing
Recommendations	
The site should be subjected to a Biodiversity impact Assessment to ascertain habitat value and number of post development units to achieve a minimum statutory 10% net gain.	During design stage
Enhancement Prescriptions	
Soft landscaping proposals should seek to include areas of open space to be enhanced with native planting for the benefit of biodiversity, guided by a biodiversity impact assessment to achieve a minimum 10% net gain.	During design stage

7.2 Nesting Birds

Breeding Birds	Timing
Recommendations	
Vegetation associated with grassland and scattered trees on site may provide suitable habitat for nesting birds.	Works outside of the breeding season (Oct-Feb)
Given their protection, development must be sympathetic to the value of this habitat and potential impacts on nesting birds, their eggs, nests and young. The breeding bird season is generally accepted as being between March and September. Consideration and implementation must be given to the following options most appropriate to the scheme. a) Undertake vegetation clearance between the months of October and February where possible. b) Where this is not possible, clearance between the months of March and September should be subjected to a search for active birds' nests 24 hours prior to commencement of works.	If unachievable, follow steps in recommendation.
Enhancement Prescriptions	
Bird boxes such as the Woodstone Estella House Sparrow Nest Box or similar approved could be integrated into the exterior of the new classroom to enhance nesting potential for bird species. Integration conditions will vary according to bird box type and target species.	During design stage

7.3 Roosting Bats

Roosting Bats	Timing
Recommendations	
Artificial security lighting should not ideally be installed on the. However, should external lighting be installed, retained buildings (Building 1) with bat roosting potential should have indirect disturbance avoided through the implementation of a sensitive lighting scheme during construction works and the operational phase of the development, in line with the BCT Guidance Note 08/24 – Bats and artificial Lighting At Night (BCT, 2023). This lighting scheme should be secured by a condition of any consent and should be designed in which lighting is directed away any notable potential bat roost features (Appendix 1).	During and post development
The measures to be implemented should include the following: - Use only the minimum amount of light needed for safety. - LED, warm white light sources (<2700k) should be adopted to reduce blue light components. - Where appropriate, external lighting should be set on motion-sensors and timers. - Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt - Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.	
Enhancement Prescriptions	
Design proposals may require amendment following the results of further survey work.	During construction
Habibat built in bat boxes 001 (or similar approved) to be integrated into the external fabric of the new classroom positioned on a southwestern elevation at a height of at least 5 metres with an unobstructed flight path.	

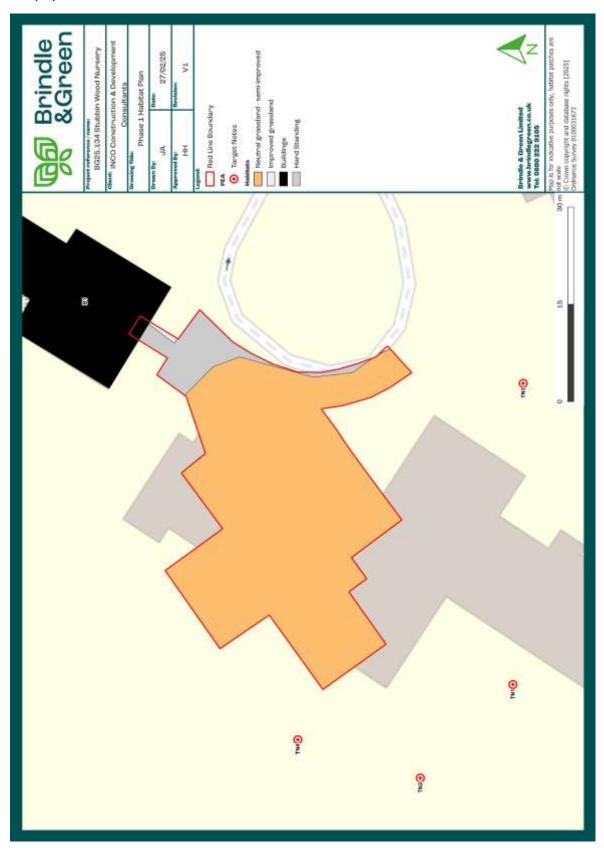
7.4 Herptiles

Herptiles	Timing
Recommendations	
 Where grassland clearance or trenching are required within habitats considered suitable for reptiles and amphibians, an Ecological Clerk of Works is required on site to supervise works: Removal of any log piles and brash piles to be carefully done by hand to ensure any reptiles present can disperse safely from the application area. Removal of any neutral grassland or scrub must be undertaken following a supervised directional clearance method, to allow for the dispersal of reptiles into retained adjacent habitat. Tree-felling and scrub clearance will be supervised by a suitably experienced ecologist, including pre-clearance checks of the area to be affected. These areas will be systematically stripped / destructively searched under ecological supervision with arisings moved away. No temporary brash piles or artificial refugia will be stored in construction areas, as this creates refuge for reptiles. Exposed pipework to be capped at the end of each day, and any trenches filled to prevent entrapment. If filling cannot be undertaken a suitable means of escape such as plank of wood will be positioned to prevent entrapment. Construction materials to be stored on pallets or on hard standing. Vegetation waste to be stored in a skip or removed from site immediately with no brash piles left on site If individual reptiles are identified, they will be moved to the receptor area in comparable habitat. Any individuals found will be recorded within the site log. 	During clearance and development.
Enhancement Prescriptions	
Design proposals may require amendment following the results of further survey work. Potential offsite grassland habitats to be enhanced as part of Biodiversity Net Gain Assessment, which could provide suitable habitat for herptiles.	During construction

7.6 Mammal Species of Principal Importance

Man	nmal Species of Principal Importance	Timing
Reco	ommendations	
Hedo	gehogs may use the site for foraging or commuting purposes.	During clearance and development
The follo	recommended reasonable avoidance measures should be wed:	
a)	Any temporarily exposed open pipes are to be capped to prevent hedgehogs or brown hare gaining access.	
b)	Undertake works during daylight hours only.	
C)	The vegetation should be checked prior to removal.	
d)	Search areas of deadwood, brash, and discarded items by hand before removing.	
e)	If burning any cleared vegetation, carry out immediately after piling to prevent hedgehogs moving in prior to burning.	
f)	Any exposed excavations to be left overnight are to be covered at the end of each working day, or include a means of escape for any fallen animals (e.g., a scaffolding plank).	
Enha	ancement Prescriptions	
simil	inclusion of 'hedgehog house' such as from Riverside Woodcraft or ar approved can be implemented whereby a wooden shelter can onstructed for hedgehogs.	During design stage

Appendix 1 - Phase 1 Habitat Plan



Appendix 2 - Phase 1 Target Notes

Table 8: Phase 1 target notes and associated photos.

Target note number	Description	Grid Reference
1	Ornamental plants on concrete pad, consisting of rosemary, willow species, conifer species and invasive buddleia. Ground flora grassland similar to that of surroundings.	SK 52492 68510
2	Ring of 17 willow trees with same grass species as the surroundings without presence of herb species.	SK 52484 68540
3	Cotoneaster and small area of piled hand-cleared wood.	SK 52552 68520
4	Wooden shelter structure/ Located adjacent to the site boundary.	SK 52497 68523



Figure 6: Target Note 1



Figure 7: Target Note 2



Figure 8: Target Note 3



Figure 9: Target Note 4

Table 9: Plant Species List with DAFOR Scale

Scientific nomenclature follows Stace (2010) for vascular plant species and common names follow BSBI List of British & Irish Vascular Plants and Stoneworts.

Please note that this plant species list was generated as part of a Phase 1 Habitat survey and does not constitute a full botanical survey.

Abundance was estimated using the DAFOR scale as follows:

D = dominant, A = abundant, F = frequent, O = occasional, R = rare, LF = locally frequent

Common Name	Scientific Name	Estimated Abundance (DAFOR)
Ash	Fraxinus excelsior	F
Bracken	Pteridium aquilinum	0
Bramble	Rubus fruticosus	0
Buddleia	Buddleja davidii	0
Cherry spp.	Prunus spp.	R
Clover	Trifolium repens	F
Cock's Foot	Dactylus glomerata	F
Common Daisy	Bellis perennis	F
Conifer spp.	Coniferae spp.	0
Conman Dandelion	Taraxacum officinale	А
Cotoneaster	Cotoneaster horizontalis	R
Creeping Buttercup	Ranunculus repens	А
Creeping Thistle	Cirsium arvense	А
Daffodill	Narcissus pseudonarcissus	0
Dock spp.	Rumex spp.	0
Dove's Foot Cranesbill	Geranium molle	0
False Oat Grass	Arrhenatherum elatius	0
Goat Willow	Salix caprea	R
Greater Plantain	Plantago major	F
Greater Willowherb	Epilobium hirsutum	0
Lime spp.	Tilia spp.	0
Meadow Grass spp.	Poa spp.	0
Moss spp.	Bryophyta spp.	0
Oak spp.	Quercus spp.	R
Orchid spp.	Orchidacaeae sp.	R
Perennial Rye Grass	Lolium perenne	D
Plantain spp.	Plantago spp.	А
Quaking Grass	Briza media	0
Ragwort	Senecio jacobaea	0
Ribwort Plantain	Plantago lanceolata	А
Rosemary	Salvia rosmarinus	F
Silver Birch	Betula pendula	0
Thistle spp.	Cirsium spp.	0
Vetch spp.	Vicia spp.	R
Wild Strawberry	Fragaria vesca	R
Willow spp.	Salix spp.	F
Yarrow	Achillea millefolium	0

Appendix 3 - General References

Bell, S. McGillivary, D. (2006) Environmental Law. 6th ed. Oxford University Press.

British Standards Institution (2013) BS 42020: Biodiversity – Code of practice for planning and development, British Standards Institution London

Byron, H (2000) Biodiversity and Environmental Impact Assessment: A Good Practice Guide for Road Schemes. The RSPB, WWF-UK, English Nature and the Wildlife Trusts, Sandy.

CIEEM (2017) Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.

CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines, (4th edition). Bat Conservation Trust, London. ISBN-978-1-7395126-0-6

Defra (2007) Hedgerow Survey Handbook; A standard procedure for local surveys in the UK. Defra, London.

Harris S, Cresswell P and Jefferies D (1989). Surveying Badgers.

Joint Nature Conservation Committee (JNCC) Handbook for Phase 1 habitat survey (2003). JNCC.

Langton T, Beckett C and Foster J (2001) Great Crested Newt Conservation Handbook. Froglife, Halesworth.

Mitchell-Jones A.J. McLeish, A.P. (2004) Bat Workers Manual (3rd Edition). Joint Nature Conservation Committee.

Mitchell-Jones A.J. Bat Mitigation Guidelines 2004. English Nature.

Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M. (2000). Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus). Herpetological Journal 10 (4), 143-155.

Rodwell, J.S. Joint Nature Conservation Committee (JNCC). National Vegetation Classification: Users' handbook (2006). JNCC.

Rose, F. (2006). The Wild Flower Key (Revised edition). Penguin books Itd, London

Stace, C. (2010). Field Flora of the British Isles. Cambridge University Press

Sutherland, W.J. (1996) Ecological Census Techniques. Cambridge University Press.

Treweek, J. (1999) Ecological Impact Assessment. Blackwell Science.

Williams, C. (2010) Biodiversity for Low and Zero Carbon Buildings, A Technical Guide for New Build. Riba Publishing.

Appendix 4 - Legislation, Policy and Guidance

Articles of British wildlife and countryside legislation, policy guidance and both Local and National Biodiversity Action Plans (BAPs) are referred to. The articles of legislation are:

- The Wildlife and Countryside Act 1981 (as amended)
- The Conservation of Habitats and Species Regulations 2017 (as amended)
- Department for Communities and Local Government. National Planning Policy Framework. (2023)
- EC Council Directive on the Conservation of Wild Birds 79/409/EEC
- The Protection of Badgers Act 1992
- The Natural Environment and Rural Communities Act 2006 (Including National and Local Biodiversity Action Plan (LBAP / HPI))
- Hedgerow Regulations 1997
- The Environment Act 2021
- Town and Country Planning Act 1990

Appendix 5 - Legislation, Guidance and Methodology

Breeding Birds

All nesting birds are protected under the Wildlife and Countryside Act 1981, 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. In addition, for species listed on Schedule 1 of the Wildlife and Countryside Act 1981 it is an offence to intentionally or recklessly cause disturbance at, on or near an 'active' nest.

The bird breeding season is typically accepted to start in February/March and continue through until September/October, however breeding birds can be found all year round depending on the given species and climatic conditions.

A sites habitat composition, locality, association to designated sites as well as current usage and management are all considered in the decision as to whether further bird related surveys are required. In addition, surveys may be recommended based on incidental bird records collected during a Preliminary Ecological Appraisal, species identified within an ecological data search or target species listed within a local biodiversity action plan.

Bird surveys are carried out in accordance with:

- Gilbert G, Gibbons DW, Evans J. (1998) Bird Monitoring Methods. RSPB.

Bats

Roosting Bats

All bats in the United Kingdom and their habitats are fully protected under the Wildlife and Countryside Act 1981 (as amended), and the Conservation of Habitats and Species Regulations 2017 (as amended). It is an offence to damage or destroy any bat roost, intentionally or recklessly obstruct a bat roost, deliberately, intentionally or recklessly disturb a bat or intentionally kill, injure or take any bat.

Areas of concern; can be encountered in many types of structure and care should therefore be taken when undertaking maintenance or demolition of suitable structures and trees.

Site assessments of buildings, commuting and foraging habitat and trees are undertaken in accordance with:

Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines, (4th edition). Bat Conservation Trust, London. ISBN-978-1-7395126-0-6 (Table 10, Table 11 and Table 12).

Preliminary Ecological Surveys look for evidence of bat presence such as feeding remains, bat droppings, roosting individuals and staining around potential access points. The suitability of site features are also assessed because absence of bat evidence, is not confirmation of a negative result.

Within trees, features searched for include; natural holes, woodpecker holes, cracks/splits in major limbs, loose bark, hollows, and dense cover of ivy over the tree. If evidence is found, or a building supports features conducive to supporting roosting bats then further presence / absence bat surveys and/or roost characterisation surveys will be recommended.

Foraging and Commuting bats

Habitat features on site are assessed for their suitability to support foraging and commuting bat populations. This assessment is independent from the suitability of the site to support roosting bats, and provides information on the likeliness of bat foraging activity within the local environment, and the dependence of individuals on these features for commuting to alternative roosting sites, foraging and migration.

 $Table \ 10: Guideline \ for \ assessing \ the \ suitability \ of \ a \ structure \ to \ support \ roosting \ habitat \ amended \ from \ Collins, \ J \ (2023)$

Category	Description of Roosting Habitat	Number of additional presence / absence surveys required
None	No habitat features on site likely to be used by roosting bats at any time of year (complete absence of potential roosting features).	None
Negligible Suitability	Suitable cavities may exist, but these are less than ideal. Uncertainty remains as bats can use these features on occasion.	None
Low Suitability	A structure with one or more potential roost sites that could be used by individual bats opportunistically. The feature and surrounding habitat do not provide enough shelter, conditions* space for larger roost types such as a maternity or hibernation roost.	One survey between May and August

Category	Description of Roosting Habitat	Number of additional presence / absence surveys required
Moderate Suitability	A structure considered to have one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions* and surrounding habitat but are unlikely to support a roost of high conservation status (With regard to roost type only – assessments are made irrespective of species conservation status, which is established after presence is confirmed).	Two surveys between May and September (with at least one survey undertaken between May and August). Surveys should be spaced at least 3 weeks apart.
High Suitability	A structure with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions* and surrounding habitat.	Three surveys between May and September (with at least two surveys undertaken between May and August). Surveys should be spaced at least 3 weeks apart.
Confirmed	This category is where positive evidence of bats has been recorded. For example, bats are found; bat droppings may be present at a suitable location for roosting bats; existing bat records may be associated with the structure.	

^{*} In this context conditions refers to the level of disturbance, light, height above ground, temperature, and humidity etc Table 11: Guideline for assessing the suitability of a tree to support roosting habitat amended from Collins, J (2023)

INITIAL STAGE (Sit	te scoping/PEA/PRA)	
Category	Description	Survey effort to establish the presence/absence of bats
NONE	Either no PRFS in the tree or unlikely to be any	None
FAR	Further assessment required to establish if PRFs are present in the tree	Ground Level Tree Assessment (GLTA) to further assess suitability
PRF	A tree with at least one PRF present	Ground Level Tree Assessment (GLTA) to further assess suitability
DETAILED STAGE (PEA/PRA/GLTA)	
PRF - I	PRF only suitable for individual bats or small numbers of bats due to size or lack of suitable surrounding habitats	None – precautionary method of works for removal and provision of roosting compensation

INITIAL STAGE (S	Site scoping/PEA/PRA)	
Category	Description	Survey effort to establish the presence/absence of bats
PRF - M	PRF suitable for multiple bats and may therefore be used by a maternity colony	Three Climbing inspection surveys for features to be undertaken May to September with at least 2 May to August. Surveys should be 3 weeks apart.
		If climbing and inspection not possible, 3 dusk emergence surveys with NVAs (Night Vision Aids) to be undertaken May to to September with at least 2 May to August. Surveys should be 3 weeks apart.
		Should a maternity colony be confirmed less invasive methods, such as dusk emergence survey with NVAs should employed.
Known roost	Known roost present through local records, evidence, sightings, etc	Three Climbing inspection surveys for features to be undertaken May to September with at least 2 May to August. Surveys should be 3 weeks apart.
		If climbing and inspection not possible, 3 dusk emergence surveys with NVAs (Night Vision Aids) to be undertaken May to to September with at least 2 May to August. Surveys should be 3 weeks apart.
		Should a maternity colony be confirmed less invasive methods, such as dusk emergence survey with NVAs should employed.

Table 12: Potential suitability of foraging and commuting habitat within an application boundary. Features should be assessed following this guide and professional judgement. Adapted from Collins, J (2023)

Category	Description of commuting and foraging habitat	Survey effort to establish the value of commuting and foraging habitat**
Negligible Suitability	Negligible habitat features on site likely to be used by commuting or foraging bats.	None

Category	Description of commuting and foraging habitat	Survey effort to establish the value of commuting and foraging habitat**
Low Suitability	Habitat which could be used by low numbers of commuting bats such as an isolated gappy hedgerow, or an unvegetated stream unconnected to suitable habitat in the wider environment. Suitable, yet isolated habitat that could be used by foraging bats such as individual trees, or a patch of scrub.	Nighttime bat walk (NBW) survey: One survey visit per active season (Spring – April/May, Summer (June/July/August) – autumn – September/October). AND Static automated surveys: Data to be collected over a five-night period, per season. (Spring – April/May, Summer (June/July/August) – autumn – September/October).
Moderate Suitability	Continuous habitat connected to the wider landscape that could be used by commuting bats, notably tree lines, hedgerows or linked back gardens. Habitat that is connected to the wider landscape which could be used by bats for foraging such as trees, open water, scrub or grassland.	Nighttime bat walk (NBW) survey: One survey visit per active season (Spring – April/May, Summer (June/July/August) – autumn – September/October). AND Static automated surveys: Data to be collected over a five-night period, per month (April to October)
High Suitability	Continuous, High-quality habitat that is well connected to the wider landscape which is considered to be highly conducive to commuting bats including river valleys, stream, hedgerows, and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree lined watercourses, and grazed parkland. Site is close to and connected to known roosts.	Nighttime bat walk (NBW) survey: One survey visit per active season (Spring – April/May, Summer (June/July/August) – autumn – September/October). AND Static automated surveys: Data to be collected over a five-night period, per month (April to October)

^{**} This is only a guide for survey effort required, the complexity of the site and the proposed disturbance / loss of features will determine the extent of works required on a site by site basis

Badgers (Meles meles)

Badgers are protected under the Protection of Badgers Act 1992. It is illegal to wilfully kill, injure, disturb or take any badger, or attempt to do so and it is an offence to intentionally or recklessly damage, destroy, or obstruct access to any part of a badger sett.

Site assessments are undertaken in accordance with:

- Harris S, Cresswell P and Jefferies D (1989). Surveying Badgers.

During the PEA, the site and the 30-metre zone of Influence considered for this species are searched for evidence of badger activity. The surveyor will identify evidence of activity, or habitat suitability for this

protected species. Even If no evidence of badger activity is found, if local conditions suggest that the habitat may be suitable for badger, further surveys will be recommended.

Amphibians

The great crested newt and natterjack toad are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981. The legislation protects these amphibians and their place of shelter or protection which may extend 500m from the breeding pond.

Great Crested Newt (*Triturus cristatus*)

The great crested newt, is fully protected under the Conservation of Habitat Regulations 2017 (as amended), making it an offence to intentionally or recklessly kill, injure, disturb or take great crested newts, intentionally or recklessly damage destroy or obstruct access to any place used by the animal for shelter or protection.

The legislation protects these amphibians and their place of shelter or protection which may extend 500m from the breeding pond. Sites should be considered suitable to support great crested newts if distribution and historical records suggest newts may be present, there is a pond within 500m of the development or the development site includes suitable terrestrial habitat refuges.

Great crested newt site assessments are undertaken in accordance with:

- English Nature. (2001) Great Crested Newt Mitigation Guidelines. English Nature, Peterborough.
 and
- Langton T, Beckett C and Foster J (2001) Great Crested Newt Conservation Handbook. Froglife,
 Halesworth.

Prior to a site visit, a desk study pond search is undertaken. When searching for ponds, Brindle & Green apply a total of 4 sources to establish their location. The following online sources are used:

- OS MAPPING VIA EMAPSITE
- GOOGLE EARTH PRO,
- GOOGLE MAPS and
- MAGIC MAPS

Each identified pond (Access permitting) is subjected to a Habitat Suitability Index (HSI) assessment providing a score for each pond. This survey should be undertaken during the summer period to be fully accurate, however assumptions can be made out of season to guide survey recommendations.

Reptiles

Two species of reptile, the sand lizard and smooth snake, and their habitats are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981. All other native British reptiles are protected against intentional killing and injury.

British reptiles are found in exposed, undisturbed areas, such as areas without cultivation with differing areas of grassland sward length. Suitable areas include abandoned sand quarries, fallow farmland land, heathland, post-industrial land, railway corridors etc. If these types of suitable features are found then further reptile surveys are recommended.

- Edgar P, Foster J and Baker J (2010) Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth.
- Gent T and Gibson S (2003) Herpetofauna Workers Manual. JNCC, Peterborough.

Invasive non-native weeds

Plant species such as Japanese knotweed (Fallopia japonica), Himalayan balsam (Impatiens glandulifera) and giant hogweed (Heracleum mantegazzianum) are examples of invasive non-native weeds classified under Part II of Schedule 9 of the Wildlife and Countryside act 1981. Any person who causes these species to grow or spread in the wild by dumping or other means is guilty of an offence. The plant and the soil these species are found growing in are classified as waste material and should be treated as such.

A simple walk over survey of the site to determine if these species are present was carried out during the PEA. A full list of Schedule 9 species can be found at Plantlife.org

Ecological Enhancement

In March 2023 the Department for Communities and Local Government published the National Planning Policy Framework. This sets out planning policies on protection of biodiversity through the planning system. The document states - opportunities to incorporate biodiversity in and around developments should be encouraged.

For new buildings guidance such as in the following will be used:

Williams, C. (2010) Biodiversity for Low and Zero Carbon Buildings, A Technical Guide for New Build.
 Riba Publishing.

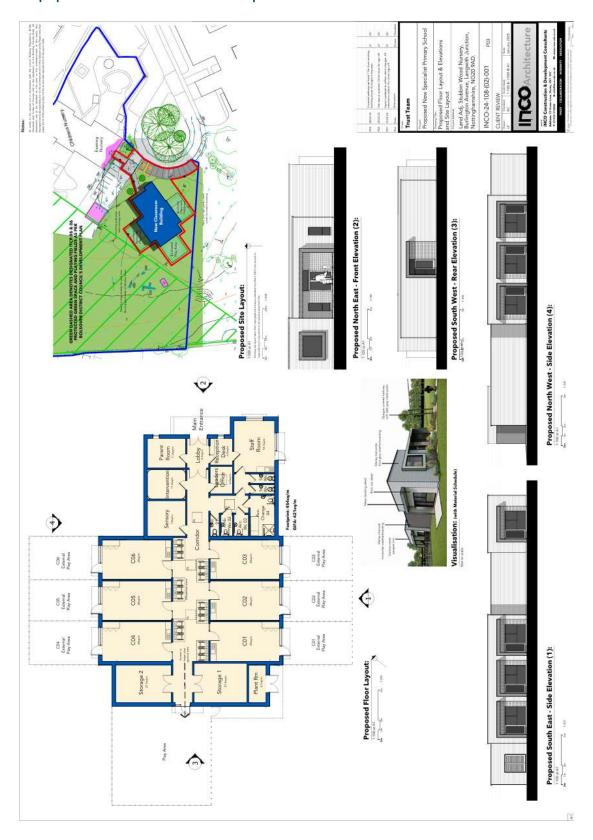
Designated Sites

Designated areas are Sites of Special Scientific Interest (SSSI) while others have been designated as having European protection status. Local authorities can also designate areas for nature conservation and in doing so may impose local authority byelaws to support local nature conservation objectives.

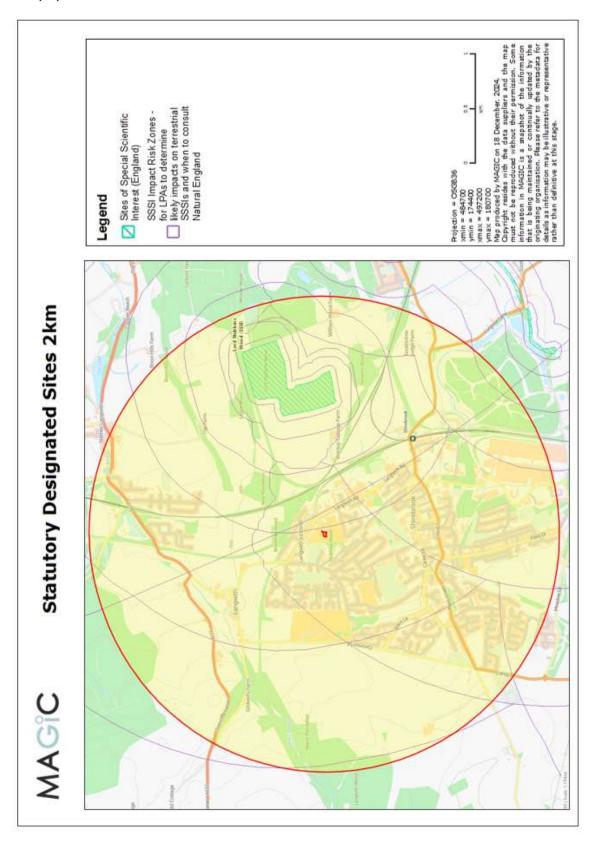
European designated status includes Special Protection Areas (SPAs) that preserve areas for birds and Special Areas of Conservation (SACs) which provides protection for habitats and the species which these habitats support.

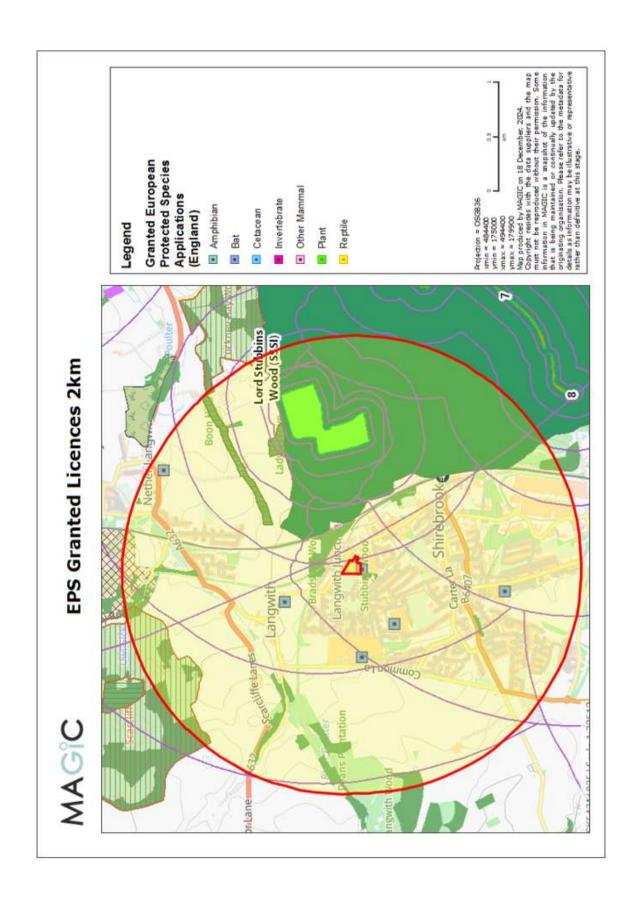
Information of Designated Protected Areas is received through Ecological Data Searches and Magic Map searches.

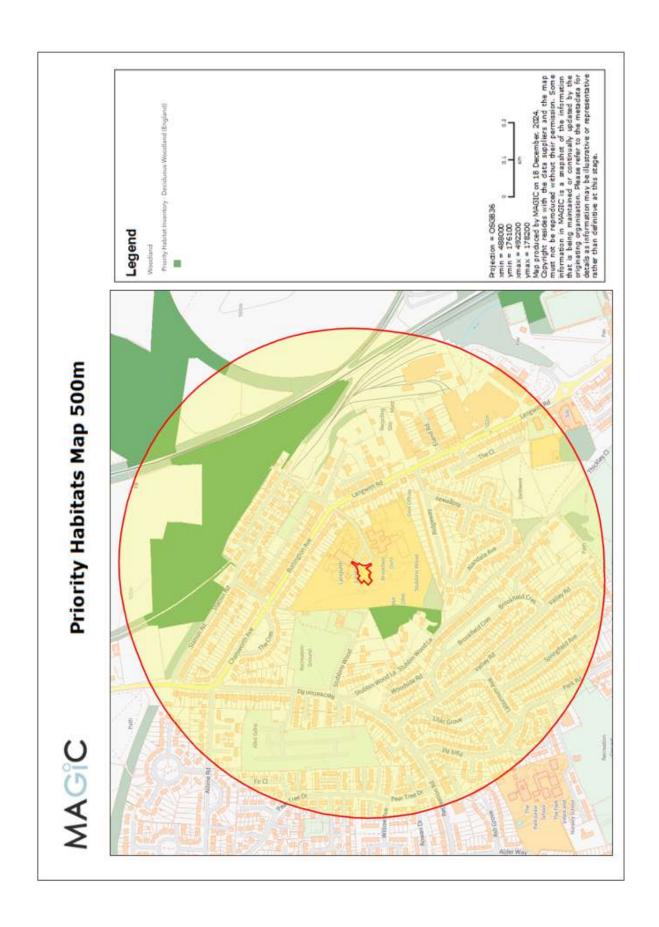
Appendix 6 - Proposed Plans

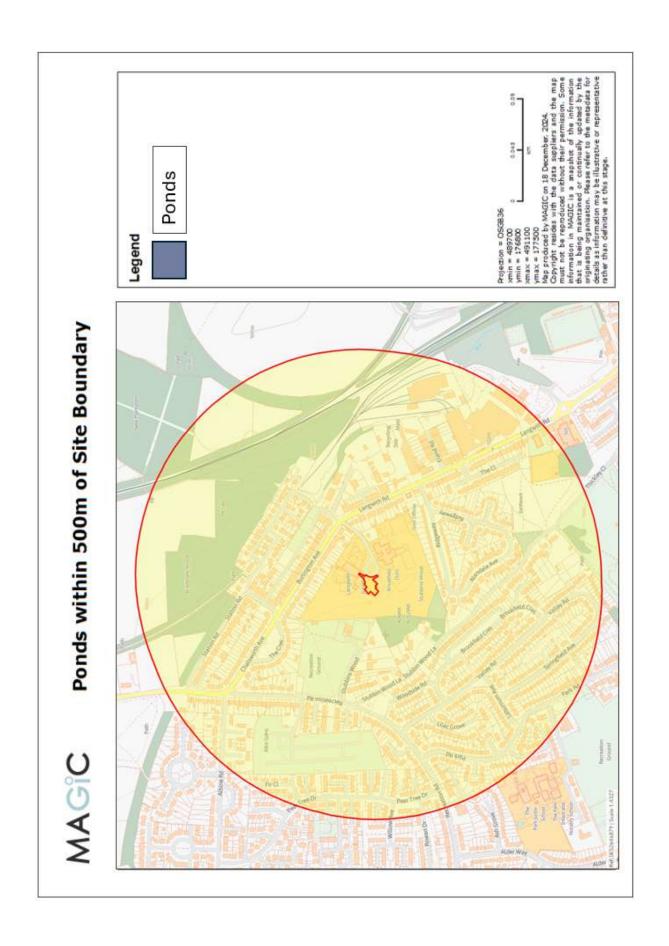


Appendix 7 - MAGIC data









Does the proposed development match any of the descriptions below?

- Infrastructure: Pipelines and underground cables, pylons and overhead cables (excluding upgrades and refurbishment of existing network). Any transport proposal including new or extended footways, cycleways, roads/car parks, railways and waterways (excluding routine maintenance). Airports, helipads and other aviation proposals.
- Minerals, Oil and Gas: Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.
- Air Pollution: Any industrial/agricultural development that could cause AIR POLLUTION (including: industrial processes, livestock & poultry units with a floorspace > 500m², slurry lagoons > 200m² & manure stores > 250 tonnes).
- Combustion: General combustion processes > 20MW energy input. Incl: energy from waste incineration, other incineration, landfill
 gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/combustion.
- . Waste: Landfill. Including: inert landfill, non-hazardous landfill, hazardous landfill.
- Compost: Any composting proposal with more than 75000 tonnes maximum annual operational throughput, Incl. open windrow composting, in-vestel composting, anaerobic digestion, other waste management.
- Discharge: Any discharge of water or liquid waste of more than 5m³/day that is discharged to ground (le to seep away) or to surface water, such as a beck or stream.
- Water Supply: Large infrastructure such as warehousing/industry where the total net additional gross internal floorspace following development is 1,000m⁶ or more.



Impact Risk Zones for Sites of Special Scientific Interest

For local planning authorities to determine if a proposed development is likely to affect a terrestrial Sité of Special Scientific Interest and when to consult Natural England.

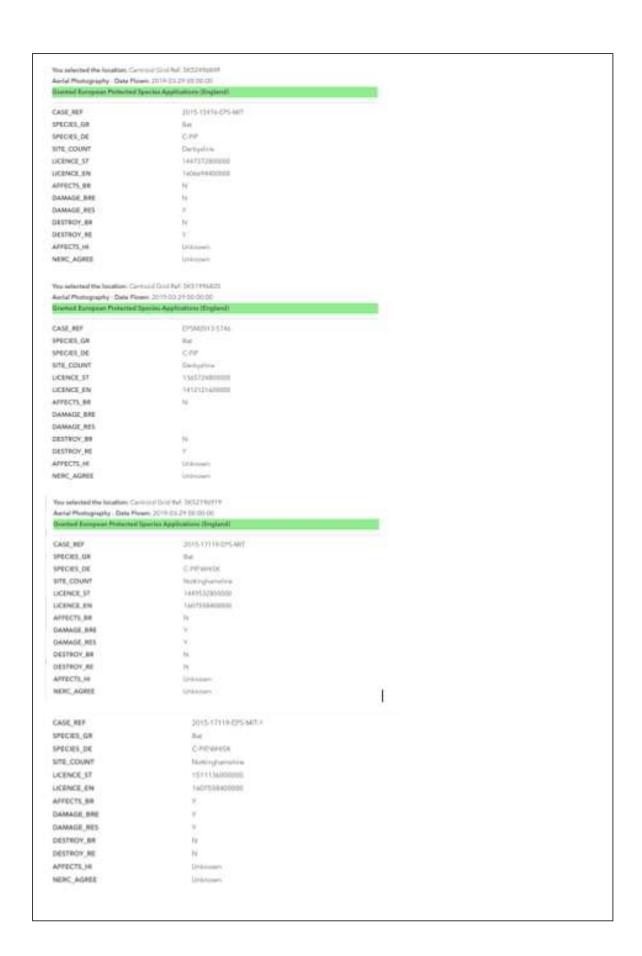
You do not need to consult Natural England on the proposed development at this location.

The Impact Risk Zones for Sites of Special Scientific Interest (SSSI IRZs) indicate that at the location selected, the proposed development is unlikely to have a harmful effect on terrestrial Sites of Special Scientific Interest (SSSIs) and the Special Areas of Conservation (SACs), Special Protection Areas (SPAs) or Ramsar sites that they underpin.

Therefore, you do not need to consult Natural England on the likely impacts of development on terrestrial SSSIs and the SACs, SPAs or Ramsar sites that they underpin.

Discretionary Advice

Natural England may provide pre-application advice on other biodiversity or natural environment impacts or opportunities. <u>Developers Get</u>
Environmental Advice - GOV UK (www.gov.uk) provides information on Natural England's pre-application discretionary advice service (DAS).

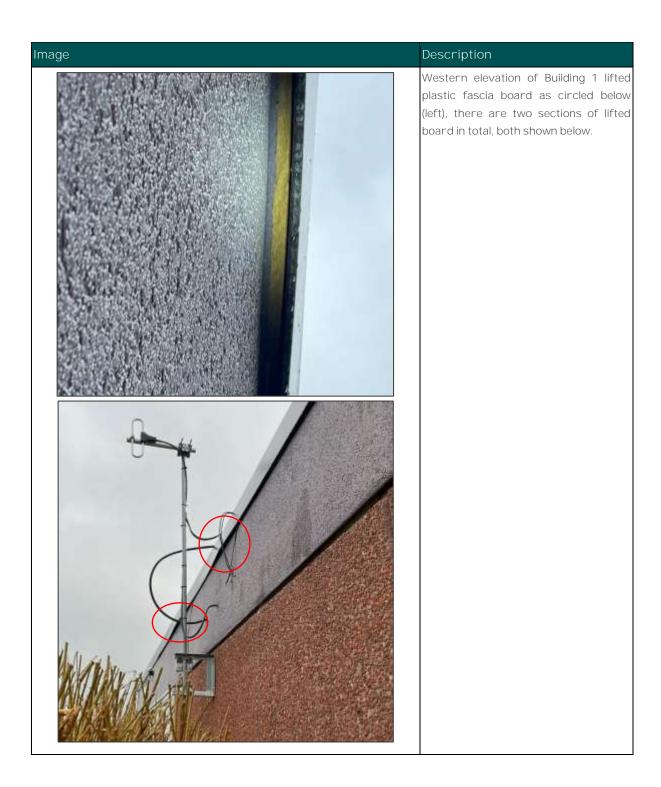


You selected the location: Car	and the talk that the transparent	
Aerial Photography - Date Fig		
	Species Applications (England)	
CASE REF	EPSM2011-3014	
SPECIES_GR	the .	
SPECIES DE	C-P/P	
SITE COUNT	Dertryshine	
UCENCE ST	1902825600000	
LICENCE_EN	1380499200000	
AFFECTS_BR	N	
DAMAGE BRE		
DAMAGE RES		
DESTROY_BR	N	
DESTROY_RE	¥	
AFFECTS_HI	Unknows	
NERC_AGREE	Unknown	
You selected the location: Co Aerial Photography - Dute Flo	remid Grid Ref. SKS2306719	
The second secon	Species Applications (England)	
	A CONTRACTOR OF THE CONTRACTOR	
CASE_REF	EP5M2010-2292	
SPECIES_GR	Bat	
SPECIES_DE	CPP.0CE	
SITE_COUNT	Charloyshina	
LICENCE_ST	1266150400000	
DCENCE_EN	1344729900000	
AFFECTS_BR	N	
DAMAGE_BRE		
DAMAGE_RES		
DESTROY_BR	N	
DESTROY_RE	N	
AFFECTS, HI	Unknown	
NERC_AGREE	Unknown	
You selected the location: Ca	entrand Grid Ref: SXS3407030	
Aerial Photography - Date FI		
Gramed European Protected	Species Applications (England)	
CASE BEE	2000-50040-EPS-MIT	
CASE_REF SPECIES_GR	Bat State St	
SPECIES_DE	BRANC PIPWHISK	
SITE_COUNT	Nothinghamphile	
LICENCE_ST	1611167290000	
LICENCE_EN	1777507200000	
AFFECTS_BR	N	
DAMAGE_BRE	N N	
DAMAGE RES	\$	
	N	
DESTROY_BR	v v	
	'y' Unincent	

Appendix 8 - Building Photographs and Potential Roost Features Plan

Table 13: Building Photographs showing Potential Roost Features





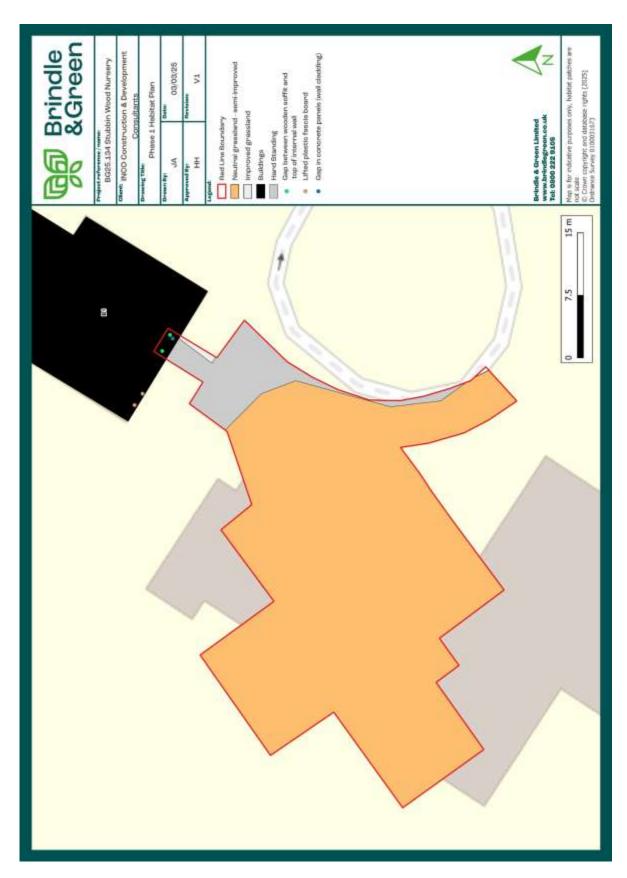


Figure 10: Plan showing Potential Roost Features