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PRELIMINARY ECOLOGICAL APPRAISAL AND BAT SURVEY REPORT

LAND OFF CARR HOUSE DRIVE, NEWTON HALL, DURHAM

August 2023 – Version 1

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Disclaimer:

Ecology surveys are carried out in good faith, to the relevant professional guidelines. Where variation from these guidelines is necessary, this is outlined in the report. Any comments regarding condition of buildings or trees are in relation to the use of the building/tree by bats and birds, and should not be considered as a building survey or arboricultural opinion on the condition of those features.

The client should be aware that the mitigation recommendations in ecology reports are often translated directly into planning conditions, and as such these should be studied closely and agreed with any contractors in advance of site works commencing.

It is the client's responsibility to commission, in writing, any additional survey effort/licence requirements detailed within this report with RH Ecological Services.

Mitigation recommendations should be clearly marked on the Architect's Plans or included in any Method Statements submitted with any planning or other consent.

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IT IS THE CLIENT'S RESPONSIBILITY TO COMMISSION ANY MITIGATION MEASURES OR RECOMMENDATIONS DETAILED WITHIN THIS REPORT.

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Preliminary Ecological Appraisal and Bat Survey Report – Land off Carr House Drive, Newton Hall, Durham

Summary

A Preliminary Ecological Appraisal and bat transect survey was carried out to inform a planning application for a residential property to be constructed on land off Carr House Drive, Newton Hall (NZ 27974 45032). No planning application reference is currently available. Planning consent was previously granted in 2003, 2006 and 2008.

Land within the redline boundary is an area of woodland, with primarily broadleaved trees. The site is approximately 0.16ha.

Some of the trees may have Potential Roost Features (PRFs) for bats present, however this could not be ascertained due to dense ivy growth on the higher-risk trees and thick foliage. Vantage point bat surveys were considered and discussed with the council ecologist, however it was felt such surveys would not be able to differentiate between bats flying through the trees and emerging from a crevice in a tree. **As a result a check of the trees when the foliage has fallen for the winter with ecological supervision is recommended regarding the ivy removal to ascertain if there are any crevices suitable for bats.**

A separate tree report has been undertaken (Adams, D., 2023) and should be read alongside this report.

A single bat transect activity survey was undertaken in August 2023 to ascertain the level of bat activity around the site and what species are present. The dusk transect survey recorded a low level of bat activity with 3 common pipistrelle bats seen foraging above the woodland. Several bats, common pipistrelle and the occasional soprano pipistrelle and noctule were recorded as 'heard not seen'. No comment can be made on roosts/potential roosts due to the dense tree canopy and ivy-covered trees.

Some of the trees with the potential for bat Potential Roost Features (PRFs) have had work recommended on them. Several of the recommendations mention partially removing epicormic growth/crown reduction *etc.* and then re-inspecting the trees. This should be done with an ecologist present to check for the presence of bat PRFs. Work should be done slowly and with regular checks for PRFs. Should any PRFs be noted then works should immediately stop on that tree until a further assessment for bats can be carried out.

Trees on site have a Woodland Group Tree Preservation Order[1] on them. The root systems of retained trees are likely to be present in areas where foundations or underground utilities are provided. Development of the site cannot take place without encroachment into tree Root Protection Areas (RPAs), therefore works will need to comply with a detailed Arboricultural Method Statement (AMS). Details are provided in the arboricultural report.

Site lighting, including the position of internal lighting within the property should be carefully considered to keep the trees in darkness. Guidance is provided for this in the ILP/BCT (2023) 'Bats and Lighting' document[2].

[1] www.durham.gov.uk/article/3914/Protected-trees

[2] https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/

Birds are likely to nest within the woodland and any site clearance should avoid the bird nesting season (March-August inclusive). Although site checks by an ecologist is often recommended with regard to breeding birds due to dense tree cover this is likely to miss nests so clearance should be avoiding during the nesting period. With regard to other building works involving noise or site clearance, works should be undertaken outside the bird breeding season (March-August inclusive) unless the site is checked by a suitably experienced ecologist within 48 hours prior to works commencing. Any nests present should be allowed to remain undisturbed until the young have fledged. No sign of owl was noted.

No signs of any badger, red squirrel or other protected species were noted on site. Hedgehog may be present on site.

A pollution prevention plan should be put in place both during the construction phase and during operational use of the site.

The nearest Designated [wildlife] Sites is Low Newton Junction LNR, located ~330 metres east. The site falls within the Impact Risk Zones for Sites of Special Scientific Interest (SSSI), although no impacts are expected.

There are no Priority Habitats on/adjacent to the development site. Deciduous Woodland Priority Habitat lies to the north of the site, beyond Carr House Drive. Woodland impacts – such as lighting and habitat fragmentation should be addressed.

The site is in located within flood zone 1, an area with a low probability of flooding[3].

No other ecological records have been sought at this stage as it is felt that Precautionary Working Methods will be suitable as the development is within a small land parcel.

Before any works on the site commence the following must be in place:

Pollution Prevention Plan.

Root Protection Areas (RPAs) should be marked up around nearby retained trees. Refer to '*British Standard 5837:2012 Trees in relation to design, demolition and construction*'. The Root Protection Plan should also include measures to protect any exposed roots during the construction phase.

In line with planning and ecological policy any habitats lost must be compensated for.

The biggest impact of the development is loss of trees on site and potential fragmentation, disturbance and increased lighting to a woodland band / wildlife corridor.

No tree work should occur without an aerial tree assessment for bats. This may require some tree work alongside to aid the inspection.

Integrated bat and bird boxes should be included in the design of the proposed new dwelling. A hibernaculum pile should be created to provide refugia for amphibians and small mammals.

Aside from trees and possibly bats, any potential impacts can be suitably dealt with *via* a Precautionary Working Method Statement (**appendix 1**) without the need for further survey work. These should be conditioned as part of a planning application.

This report is valid for two years.
An updated assessment will be required should work not commence by August 2025.

[3] https://flood-map-for-planning.service.gov.uk/

1. Introduction and proposed works

The development proposal is for a residential property to be constructed on land off Carr House Drive, Newton Hall (NZ 27974 45032). The site is approximately 0.16ha. No planning application reference is currently available. Planning consent was previously granted in 2003, 2006 and 2008.

Access will be *via* Carr House Drive to the south.

The site location is shown in **figure 1** below, with the proposed site layout shown in **figure 2**.

Figure 1. Site map.

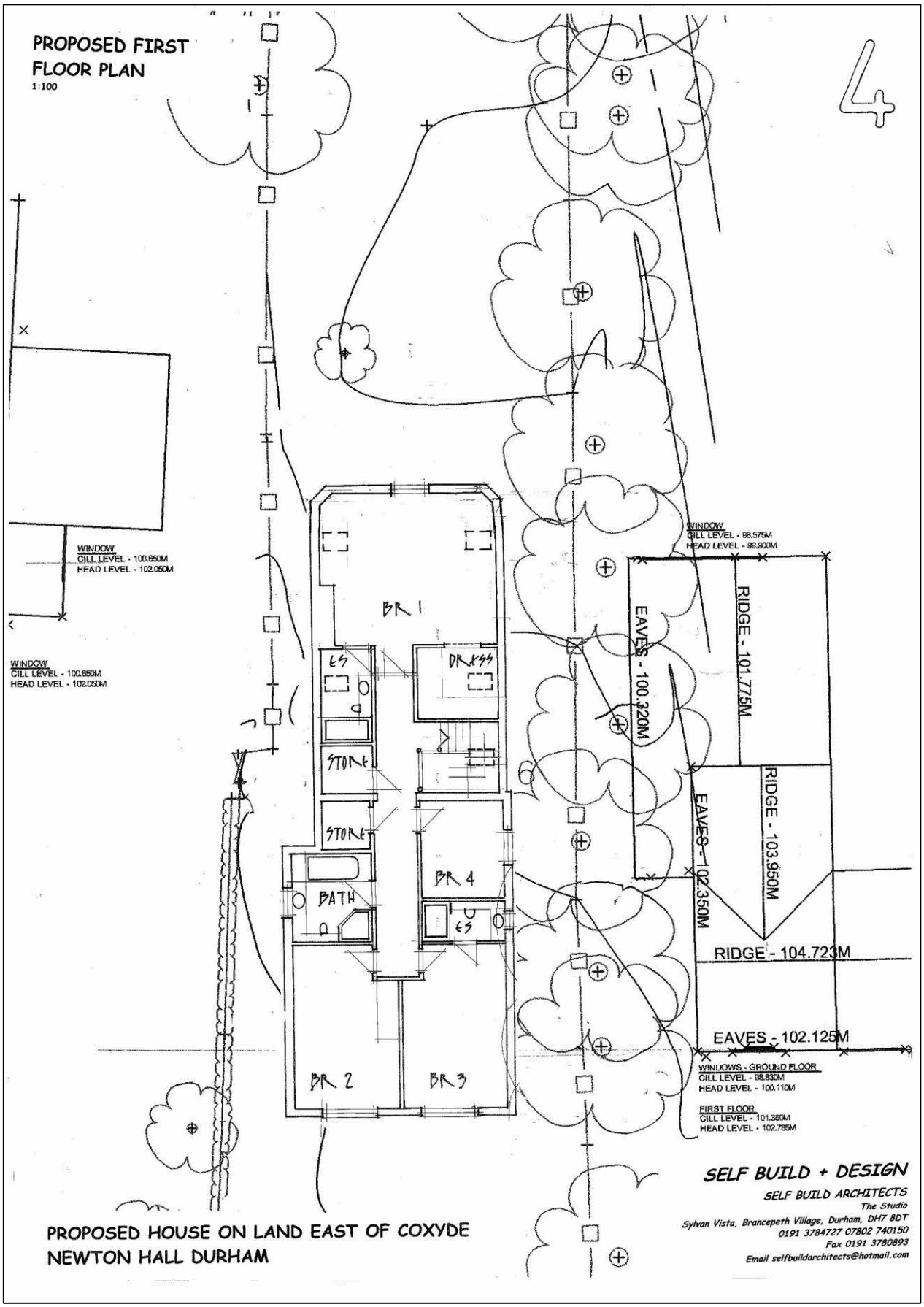

Figure 2. Proposed site plan.

2. Relevant legislation

The following principal protected species were considered in this report:

- Amphibians
- Bats
- Birds
- Badger
- Flora
- Non-native species
- Red squirrel
- Trees

The applicable legislation and policies with are:

- Conservation of Habitats and Species Regulations (2017).
- Countryside and Rights of Way Act (2000).
- Directive79/409/EEC on the Conservation of Wild Birds – 'The Birds Directive'.
- Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora – 'The Habitats Directive'.
- Environment Act (2021).
- National Planning Policy Framework (NPPF).
- Natura 2000.
- Natural Environment and Rural Communities Act (2006).
- Protection of Badgers Act (1992).
- The Environment Act (2021).
- Wildlife and Countryside Act (1981).

Further details can be found in **appendix 2**.

3. Methodology

3.1 Desktop survey

The area was surveyed using Ordnance Survey Explorer maps (1:25,000 scale) and Google Earth Pro with habitat features of value to bats such as watercourses, woodland and hedgerows noted.

Natural England's 'Magic on the Map' website was accessed for details of the citations for the designated sites and EPS licensing. The JNCC website[4] and Natural England websites provided further information on site designations.

No ecological records have been sought at this stage as it is felt that Precautionary Working Methods will be suitable. This decision was made based on guidance produced by CIEEM in 2016 *Guidelines to Accessing and Using Biodiversity Data*. This is quoted from below:

"*If a data search is not undertaken, a statement must be provided that clearly explains why it is not required. This statement should ideally be agreed with the LPA prior to preparing the survey report. It may be considered that the full search is not needed in the following situations:*

1. Pre-commencement consultation and agreement with the LERC and/or local authority ecologist.

2. Unreasonable delay in provision of information / data (i.e. more than 10 - 15 working days).

3. Low impact or small-scale development (e.g. by size, extent, duration of works, magnitude or locality) – more information provided below.

4. Single-species surveys, where a survey undertaken at the correct time of year and following an appropriate methodology confirms likely absence."

[4] http://jncc.defra.gov.uk

3.2 Daylight assessment

The daylight assessment, a 'Preliminary Ecological Appraisal' was carried out **15th August 2023**. This was conducted according to the Chartered Institute of Ecology and Environmental Management's Guidelines for Preliminary Ecological Appraisal (CIEEM, 2012).

The weather was 14ºC, still and dry.

The surveyor assessed the site and adjacent habitats for signs of a range of species including bats, amphibians, mammals and birds.

An area a minimum distance of 50 metres surrounding the site was checked for signs of any wildlife using the site, with the key indicators listed below:

Tracks, prints, live or dead animals, droppings, fur/hair, feeding remains (all mammals).
Setts or snuffle holes, clear tunnels under boundaries (badger).
Suitable bat roosting features such as gaps in stonework in buildings/walls, deadwood or limb holes in trees.
Signs and potential for protected species - bats, badger, water vole *etc.*
Nests or singing/displaying birds.
Rare flora species.
Areas of vegetation were noted and any features such as trees or hedgerows.
Any trees and scrub were assessed from ground level with binoculars to look for signs of nesting birds/potential roost features with regard to bats.

The surveyor used a headtorch, handheld torch, binoculars and inspection camera (endoscope) with photograph functionality.

3.3 Bat transect survey

The bat dusk transect activity survey started at sunset and ended 2 hours after. The survey was undertaken in optimal weather conditions and at a suitable time of year. The survey was conducted in accordance with the Bat Conservation Trust's '*Bat Surveys for Professional Ecologists, Good Practice Guidelines*' (3rd edition, 2016) except where indicated.

Two surveyors walked the site covering as much of it as possible. 'Monitoring Points' were chosen where surveyors stood for ~3 minutes to gauge bat activity levels.

On site, the time bats were first encountered, the species of bat where possible and information on direction of flight and behaviour are recorded. Where bats are seen entering or exiting the survey area the exact location is logged onto the site plan. The data is recorded by surveyors in the field on data sheets and plans of the site, or *via* voice recordings.

The aim is to build a picture of general bat activity across the wider site. Bat calls are recorded for later analysis using an Anabat SD2.

Sound analysis of bat calls was undertaken using Analook W.

3.4 Surveyors

The daylight site visit and report were compiled by Rachel Hepburn, an experienced ecologist and an associate member of the CIEEM since 2013 with over 16 years' experience in ecological surveying. She holds Natural England Licences for bat surveys (2015-12969-CLS-CLS) and great crested newt surveys (2016-19907-CLS-CLS).

Assistant surveyors on the bat survey had several years' experience of bat surveys.

4. Site description

The proposed area for development is located within a woodland band in the Newton Hall housing estate.

The woodland site connects to another woodland block to the north of Carr House Drive. The wider countryside, with green fields and further woodland blocks, lies approximately 320 metres east (Low Newton Junction Nature Reserve).

The River Wear flows approximately 1.23km east.

Figure 3. Approximately 2km surrounding the site[5].

[5] Reproduced with permission from Google Earth (2023).

5. Desktop survey

5.1 Designated Sites

Designated [wildlife] Sites were checked on 'MAGiC on the Map'[6]. There are 3 within 2km of the site boundaries:

Designated Site	Proximity
Low Newton Junction Local Nature Reserve (LNR)	~330 metres east
Brasside Pond Site of Special Scientific Interest (SSSI)	~830 metres east
Pity Me Carrs LNR	~1km north west

Low Newton Junction LNR was once an old sand quarry and railway junction with a variety of wildlife and wildlife. Within the marshland and ponds great crested newts are present.

Brasside Ponds SSSI are two large ponds in the north of the site occupy flooded clay workings and comprise one of the largest expanses of unpolluted open water in County Durham, other than in reservoirs. They are the most important breeding and overwintering site for wildfowl in Durham. South of the disused railway line small ponds and fen have developed in abandoned clay workings and are surrounded by acid grassland. The site has a varied invertebrate fauna. Seven species of dragonfly and damselfly Odonata breed at this site, including the brown aeshna (*Aeshna grandis*).

Pity Me Carrs LNR is a series of ponds and marshland area, with great crested newts present.

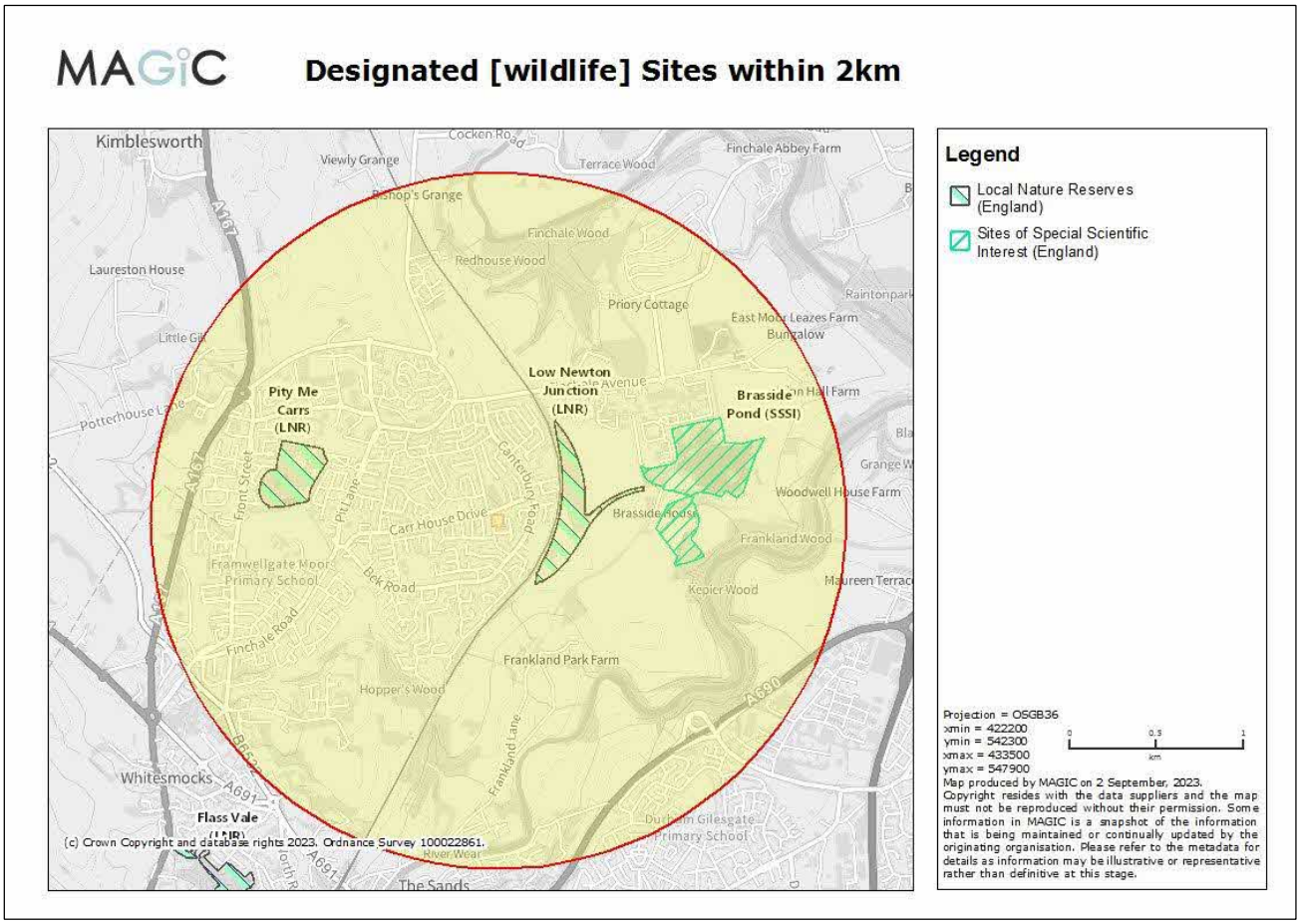

Figure 4. Designated Sites within 2km.

[6] magic.defra.gov.uk

The site falls within the Impact Risk Zones for Sites of Special Scientific Interest (SSSI). Potential impacts are discussed in the table below. No impacts are expected.

Category	Risk	Potential impact according to DEFRA's 'Magic on the Map'[7]
Infrastructure	N/A	Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.
Minerals, oil and gas	N/A	Planning applications for quarries.
Residential	N/A	Residential development of 100 units or more.
Rural residential	N/A	Any residential development of 50 or more houses outside existing settlements/urban areas.
Air pollution	N/A	Any industrial/agricultural development that could cause air pollution.
Combustion	N/A	General combustion processes >20MW energy input.
Waste	N/A	Landfill.
Composting	N/A	Any composting proposal with more than 500 tonnes maximum annual operational throughput.
Water supply	N/A	Large infrastructure such as warehousing / industry where net additional gross internal floorspace is >1,000m² or any development needing its own water supply.

[7] Natural England (2018) 'Magic on the Map'

5.2 Priority Habitats

'MAGiC on the Map' was checked for Priority Habitats (Habitats of Principal Importance). These are habitats listed under Section 41 of the Natural Environment and Rural Communities Act 2006. Priority Habitats are listed in the table below. Woodland impacts – such as lighting and habitat fragmentation should be addressed.

Habitat	Distance (nearest)
Deciduous woodland	~25 metres north
Open Mosaic Habitats on Previously Developed Land[8]	~320 metres east
Lowland heathland	~380 metres east
Ancient and semi-natural woodland	~570 metres south east (The Scroggs)
Lowland dry acid grassland	~900 metres east
Wood-pasture and parkland BAP	~1.6km south west

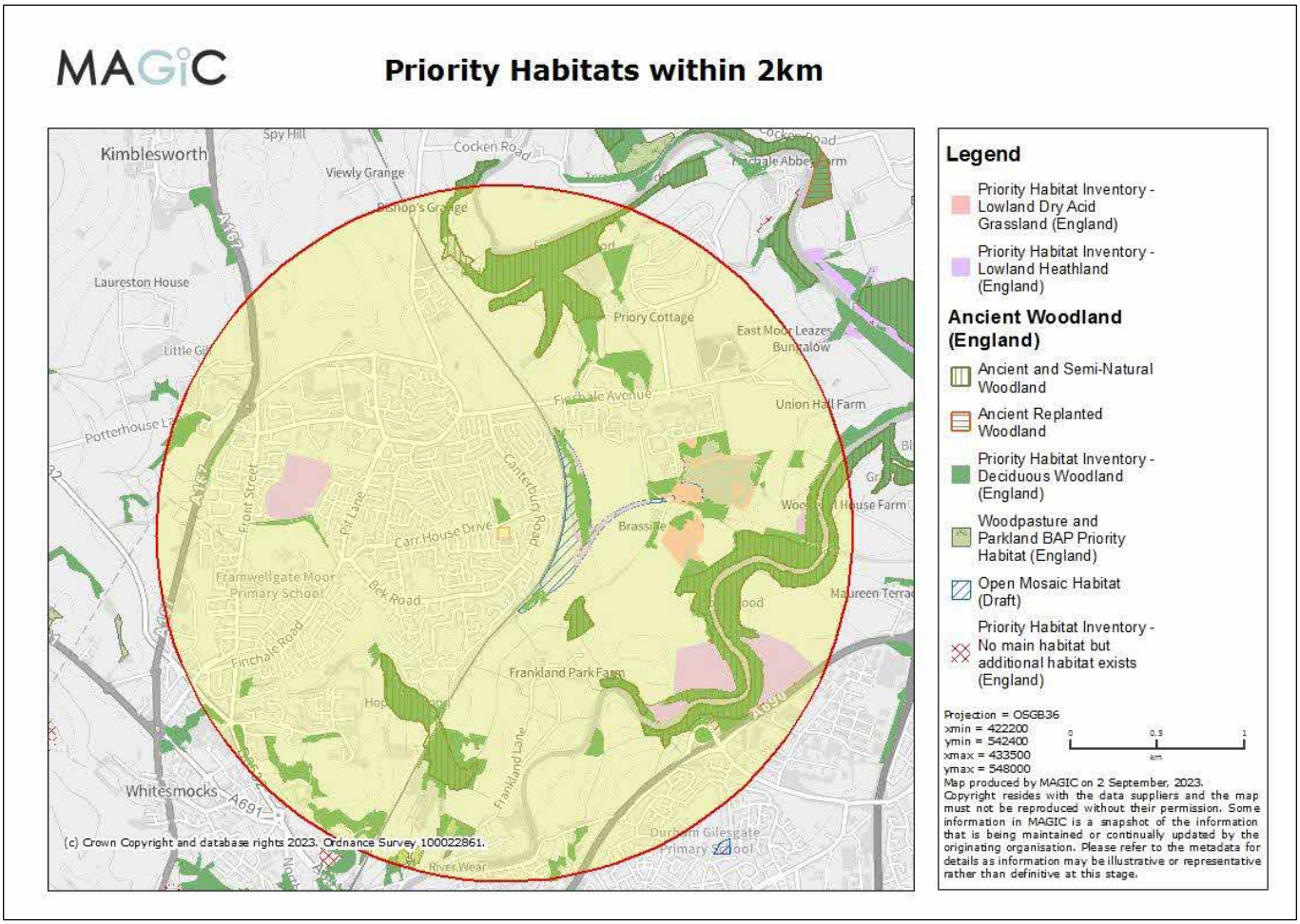

Figure 5. Priority Habitats.

[8] Draft mapping.

5.3 Species records

'MAGiC on the Map' was checked for Endangered Protected Species Licence records, which brought back 12 results:

Reference	Species	Licence dates	Impact(s)	Proximity
2014-5677-EPS-MIT	Great crested newt	14/03/2014 - 30/07/2016	Damage of a resting place. Destruction of a resting place.	~1km W
EPSM2009-503	Great crested newt	15/07/2009 - 31/01/2010	Impact on a breeding site. Destruction of a breeding site. Destruction of a resting place.	~1km NW
2018-37304-EPS-MIT-1	Common pipistrelle Soprano pipistrelle	13/12/2018 - 31/08/2029	Impact on a breeding site. Destruction of a breeding site. Destruction of a resting place.	~1.4km NW
2015-8953-EPS-MIT	Great crested newt	07/07/2015 - 30/09/2022	Damage of a resting place. Destruction of a resting place.	~1.56km SW
2015-8953-EPS-MIT-1		11/01/2016 - 30/09/2022		
2015-8953-EPS-MIT-2		15/02/2016 - 30/09/2022		
2015-8953-EPS-MIT-3		27/04/2017 - 30/09/2022		
2015-8785-EPS-MIT	Common pipistrelle Soprano pipistrelle	02/04/2015 - 30/06/2020	Destruction of a resting place.	
2015-8785-EPS-MIT-1		08/01/2016 - 30/06/2020		
2015-8785-EPS-MIT-2		22/03/2016 - 30/06/2020		
EPSM2012-4895	Great crested newt	25/04/2013 - 30/06/2015	Destruction of a resting place.	~1.57km SW
EPSM2011-3468	Common pipistrelle	01/09/2011 - 31/03/2012	Destruction of a resting place.	~1.65km SW

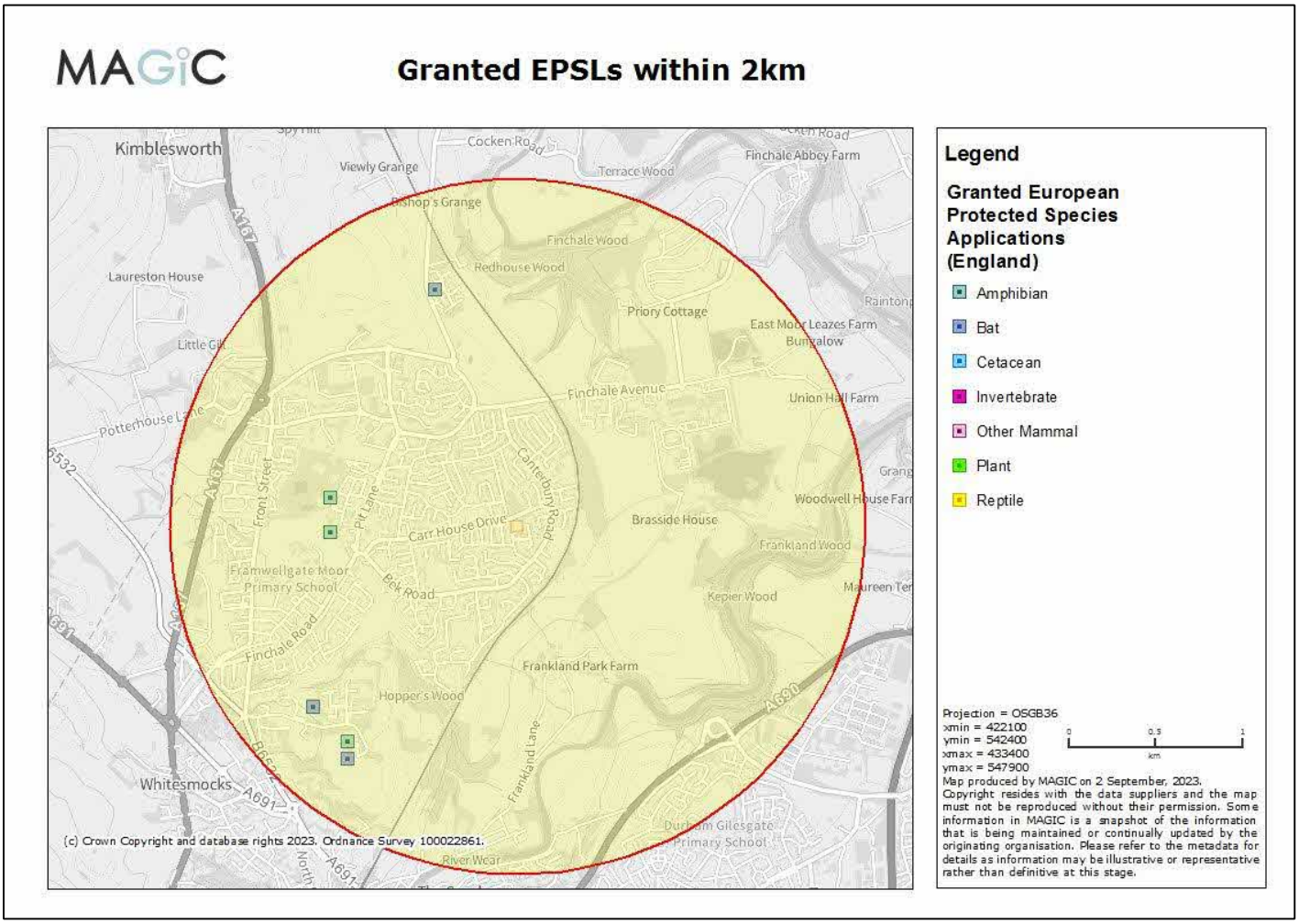

Figure 6. EPSL records.

No other ecological records have been sought at this stage as it is felt that Precautionary Working Methods will be suitable as the development is within a small land parcel.

5.4 Tree Preservation Order

Trees on site have a Woodland Group Tree Preservation Orders[9] on them. The group reference is PN1-302.

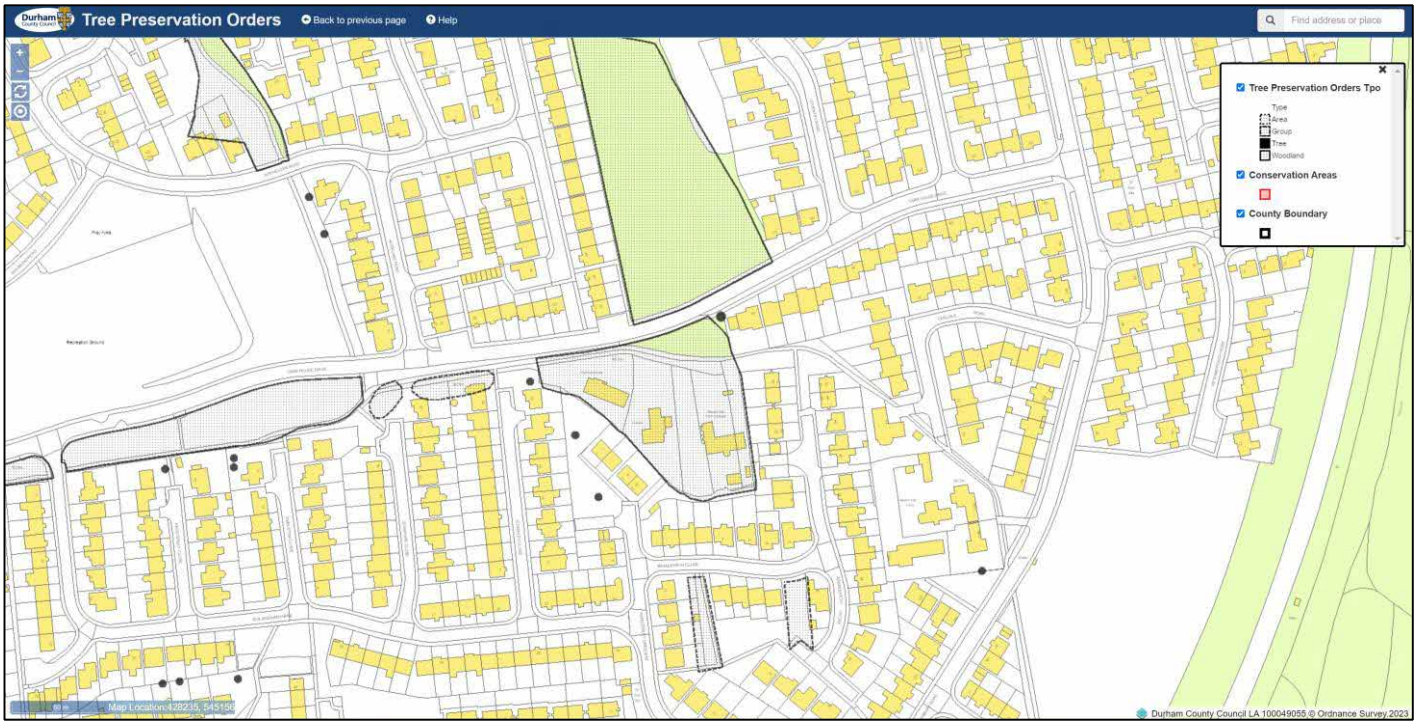

Figure 7. Tree Preservation Order map.

6. Flood risk

The site is located within flood zone 1, an area with a low probability of flooding[10]. Full details are provided in **appendix 3**.

[9] www.durham.gov.uk/article/3914/Protected-trees
[10] https://flood-map-for-planning.service.gov.uk/

7. Local Planning Portal

The site was previously granted planning consent for a detached residential dwelling in 2008.

The site has the following previous planning history:

2011 - Cutting of the roots of trees T1, T2, T8, T9, T12, T13, T14, T15, T16, T17 and T18 (reference 4/11/00466/TPO, application refused).
2011 - Discharge of planning conditions 2, 3, 4, 5, 6, 7, 9, 10, 15 and 17 pursuant to 4/08/00295/FPA (reference 4/11/00177/DRC, application approved).
2008 - Erection of detached two-storey residential dwelling (reference 4/08/00295/FPA, application approved).
2007 - Erection of detached dwellinghouse (reference 4/07/01088/FPA, application withdrawn).
2006 - Renewal of outline planning permission 4/03/647/OUT for the erection of 1 dwellinghouse including details of means of access (reference 4/06/00750/OUT, application approved).
2003 - Outline application for one dwelling (reference 4/03/00647/OUT, application approved).

There appears to be no previous ecological assessments for the site, with the exception of tree reports available in the Public Domain.

The local planning portal was checked (September 2023) for nearby (within 200 metres) planning applications that have reference to ecology. References to individual trees away from the development site have been omitted.

There was nothing to note.

8. Daylight visit

8.1 Description

The development site is best described as a block of woodland. It connects up to another block of woodland located to the north of Carr House Drive (Deciduous Woodland Priority Habitat, see **section 5.2** above).

The understorey is dense with several undesirable species – thistles, docks and nettles noted. Several of the trees (see tree report[11]) have ivy covered the trunks (**figures 13 and 14**)and these may be hiding Potential Roost Features (PRFs) for bats. Looking upwards the tree canopy is dense (**figure 15**) and this restricts viewing at ground level of the upper sections of the trees.

Tree species present include:

- Apple (*Malus* sp.)
- Ash (*Fraxinus excelsior*).
- Beech (*Fagus sylvatica*).
- Birch (*Betula pendula*).
- Cherry (*Prunus* sp.).
- Conifer
- Hawthorn (*Crataegus monogyna*).
- Holly (*Ilex aquifolium*).
- Lime (*Tilia* x *europaea*).
- Norway spruce (*Picea abies*).
- Privet (*Ligustrum ovalifolium*).
- Spruce (*Pica abies*).
- Sycamore (*Acer pseudoplatanus*).
- Yew (*Taxus baccata*).

Understorey species include:

- Bramble (*Rubus fruticosus* agg.).
- Broadleaved dock (*Rumex obtusifolius*).
- Broadleaved plantain (*Plantago major*).
- Common hogweed (*Heracleum sphondylium*).
- Common nettle (*Urtica dioica*).
- Cow parsley (*Anthriscus sylvestris*).
- Creeping thistle (*Cirsium arvense*).
- Dandelion (*Taraxacum officinale* agg.).
- Deadnettle (*Lamium* sp.).
- Feverfew (*Tanacetum parthenium*).
- Ivy (*Hedera helix*).
- Lords-and-ladies (*Arum maculatum*).
- Male fern (*Dryopteris filix-mas*).
- Perennial pea (*Lathyrus latifolius*)
- Ragged robin (*Silene flos-cuculi*).
- Rosebay willowherb (*Chamaenerion angustifolium*).

[11] Adams, D. (2023)

Tutsan (*Hypericum androsaemum*).
Variegated archangel (*Lamium galeobdolon*).
Vetch (*Vicia* sp.).
Willowherb (*Epilobium* sp.)
Wood avens (*Geum urbanum*).

A wasps' nest was present in the undergrowth.

No signs of protected or Non-Native Invasive Species was noted.

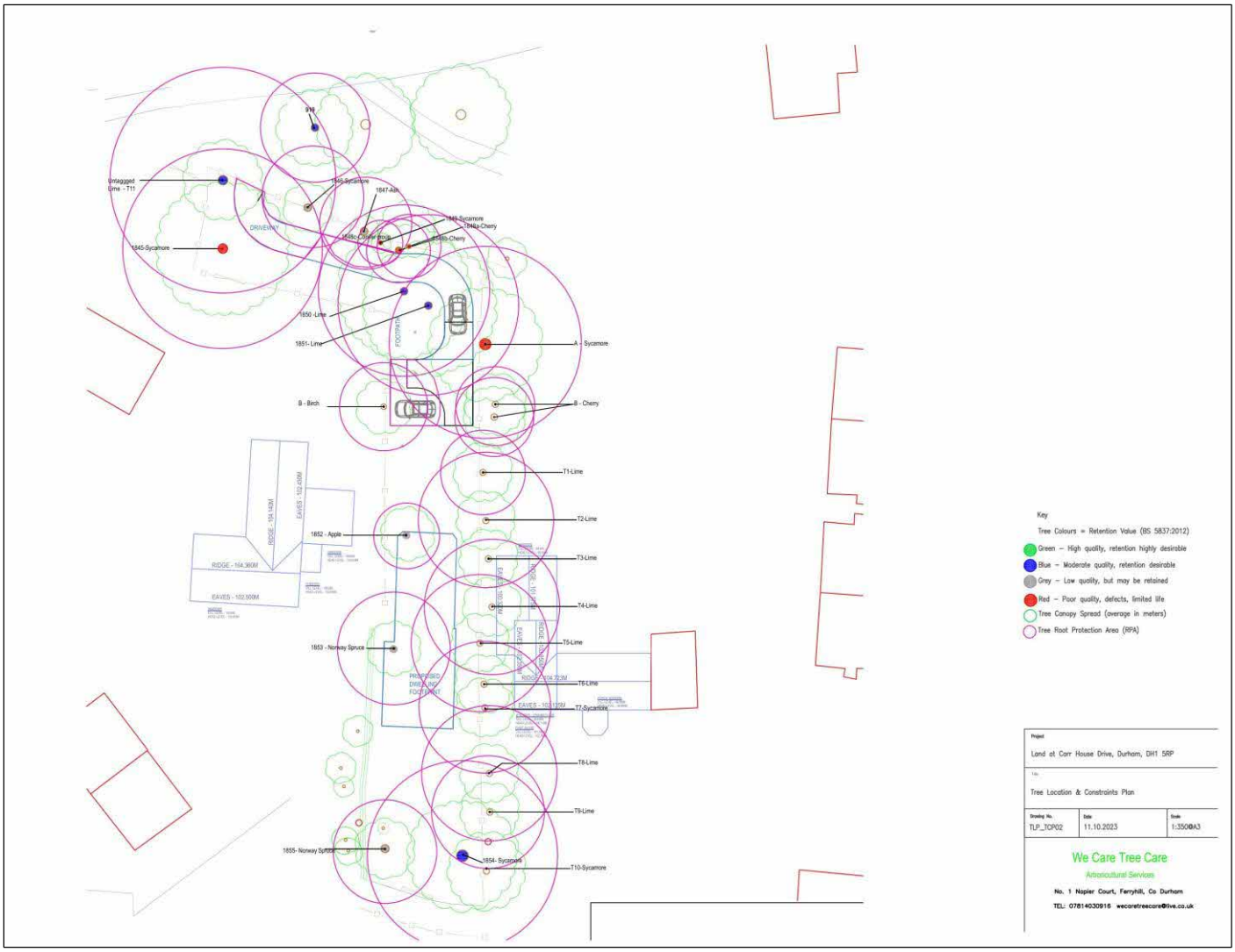

Figure 8. Annotated map of trees (Adams, D., 2023).

8.2 Photos

Figure 9. Northern boundary.

Figure 10. Young tree saplings within woodland.

Figure 11. Woodland internally.

Figure 12. Woodland internally.

Figure 13. Medium ivy-covered trees.

Figure 14. Ivy-covered trees.

Figure 15. Example of dense canopy.

Figure 16. Site entrance from Carr House Drive.

9. Bat transect survey

The bat dusk transect activity survey started at sunset and ended 2 hours after. Two surveyor walked the site covering as much of it as possible. 'Monitoring Points' were chosen where surveyors stood for ~3 minutes to gauge bat activity levels.

Survey type	Dusk transect survey
Date	24th August 2023
Sunset	20:18
Survey times	20:18 - 22:18
Weather	15ºC, slight breeze, dry, no cloud cover.

The footprint of the woodland is small, being approximately 0.16ha and there were viewing restrictions due to a dense thick tree canopy therefore the surveyors chose 3 Monitoring Points – at the south eastern corner, the centre of the site and the northern tip.

In total the surveyors saw 2 bats (2 common pipistrelle bats between 20:34-20:57 and 1 common pipistrelle bat between 20:47-20:51) circling/foraging above the trees. These bats were foraging in the central area of the site. And additional 15 bat passes were noted and were 'heard but not seen' – primarily common pipistrelle bats with the occasional soprano pipistrelle and noctule bats.

No comment can be made on roosts/potential roosts due to the dense tree canopy and ivy-covered trees.

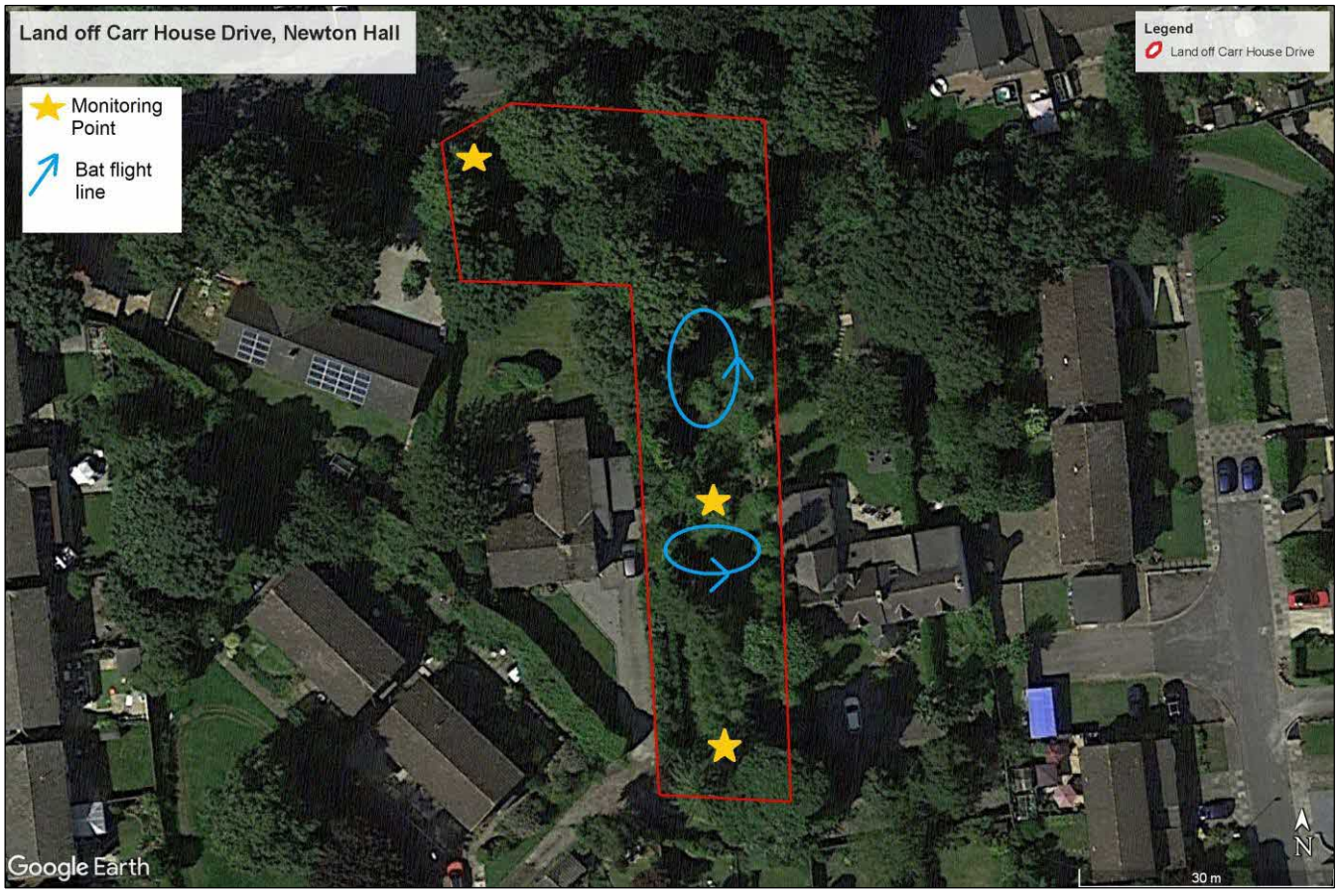

Figure 17. Bat activity map from transect survey[12].

[12] Reproduced with permission from Google Earth (2023).

The Anabat bat detector recorded 167 bat passes.

Time	Species	Surveyor recorded	Anabat call	Notes
20:34	Common pipistrelle	Yes		Circling in opening of trees.
20:36	Common pipistrelle		8	
20:37	Common pipistrelle		11	
20:37	Soprano pipistrelle		1	
20:37	Common pipistrelle		2	
20:38	Common pipistrelle		2	
20:38	Soprano pipistrelle		1	
20:39	Common pipistrelle		6	
20:40	Common pipistrelle		5	
20:41-20:42	Common pipistrelle	Yes		Two passes. Heard not seen.
20:43	Common pipistrelle		1	
20:44	Common pipistrelle		3	
20:44	Common pipistrelle		11	
20:45	Common pipistrelle		9	
20:45	Common pipistrelle		9	
20:46	Common pipistrelle		11	
20:46	Common pipistrelle		5	
20:47	Common pipistrelle	Yes		Heard not seen.
20:47	Common pipistrelle		3	
20:48	Common pipistrelle	Yes		Heard not seen.
20:48	Common pipistrelle		12	
20:48	Common pipistrelle		3	
20:49	Common pipistrelle		11	
20:50	Common pipistrelle		3	
20:51	Common pipistrelle	Yes		Heard not seen.
20:51	Common pipistrelle		2	
20:51	Soprano pipistrelle		1	
20:51	Common pipistrelle		2	
20:52	Common pipistrelle		2	
20:53	Common pipistrelle	Yes		Two passes. Heard not seen.
20:53	Common pipistrelle		5	
20:54	Common pipistrelle		1	
20:55	Common pipistrelle		4	
20:57	Common pipistrelle		1	
20:58	Common pipistrelle		1	
20:59	Common pipistrelle		3	
21:00	Common pipistrelle		1	
21:00	Common pipistrelle		4	
21:01	Common pipistrelle		3	

Time	Species	Surveyor recorded	Anabat call	Notes
21:02	Common pipistrelle	Yes		Heard not seen.
21:02	Common pipistrelle		2	
21:03	Common pipistrelle		3	
21:04	Common pipistrelle		2	
21:09	Common pipistrelle		1	
21:24	Common pipistrelle	Yes		Heard not seen.
21:24	Common pipistrelle	Yes		Heard not seen.
21:26	Common pipistrelle	Yes		Heard not seen.
21:28	Common pipistrelle		2	
21:35	Common pipistrelle		2	
21:36	Common pipistrelle		1	
21:43	Noctule	Yes		Heard not seen.
21:43	Common pipistrelle	Yes		Heard not seen.
21:43	Bat		1	
21:45	Common pipistrelle	Yes		Heard not seen.
21:47	Common pipistrelle		3	
21:52	Common pipistrelle	Yes		Heard not seen.
21:53	Noctule	Yes		Heard not seen.
22:03	Common pipistrelle		1	
22:07	Common pipistrelle		1	
22:07	Pipistrelle		1	Social call.

10. Impact assessment and proposed mitigation

10.1 Summary

The biggest impact of the development is loss of trees on site and potential fragmentation, disturbance and increased lighting to a woodland band / wildlife corridor.

No tree work should occur without an aerial tree assessment for bats. This may require some tree work alongside to aid the inspection.

A separate arboricultural report (Adams, D., 2023) has been produced and should be referred to alongside this report.

The development site consists of urban deciduous woodland. No signs of protected species were noted on/adjacent to the site. Trees on site have a Woodland Group Tree Preservation Orders[13] on them.

Some of the trees may have Potential Roost Features (PRFs) for bats present, however this could not be ascertained due to dense ivy growth on the higher-risk trees and thick foliage. Vantage point bat surveys were considered and discussed with the council ecologist, however it was felt such surveys would not be able to differentiate between bats flying through the trees and emerging from a crevice in the tree. **As a result a check of the trees when the foliage has fallen for the winter with ecological supervision is recommended regarding the ivy removal to ascertain if there are any crevices suitable for bats.**

Some of the trees with the potential for bat PRFs have had work recommended on them. Several of the recommendations mention partially removing epicormic growth/crown reduction *etc*. and then be re-inspected. This should be done with an ecologist present to check for the presence of bat PRFs. Work should be done slowly and with regular checks for PRFs. Should any PRFs be noted then works should immediately stop on that tree until a further assessment for bats can be carried out.

A single bat transect activity survey was undertaken in August 2023 to ascertain the level of bat activity around the site and what species are present. The dusk transect survey recorded a low level of bat activity with 3 common pipistrelle bats seen foraging above the woodland. Several bats, common pipistrelle and the occasional soprano pipistrelle and noctule were recorded as 'heard not seen'. No comment can be made on roosts/potential roosts due to the dense tree canopy and ivy-covered trees.

A pollution prevention plan should be put in place both during the construction phase and during operational use of the site.

The root systems of retained trees are likely to be present in areas where foundations or underground utilities are provided. Development of the site cannot take place without encroachment into tree Root Protection Areas (RPAs), therefore works will need to comply with a detailed Arboricultural Method Statement (AMS). Details are provided in the arboricultural report.

[13] www.durham.gov.uk/article/3914/Protected-trees

Site lighting, including the position of internal lighting within the properties should be carefully considered to keep the trees in darkness. Guidance is provided for this in the ILP/BCT (2023) 'Bats and Lighting' document[14].

Birds are likely to nest within the woodland and any site clearance should avoid the bird nesting season (March-August inclusive). Although site checks by an ecologist is often recommended with regard to breeding birds due to dense tree cover this is likely to miss nests so clearance should be avoiding during the nesting period. With regard to other building works involving noise or small clearance, works should be undertaken outside the bird breeding season (March-August inclusive) unless the site is checked by a suitably experienced ecologist within 48 hours prior to works commencing. Any nests present should be allowed to remain undisturbed until the young have fledged.

The nearest Designated [wildlife] Sites is Low Newton Junction LNR, located ~330 metres east.

The site falls within the Impact Risk Zones for Sites of Special Scientific Interest (SSSI), although no impacts are expected.

There are no Priority Habitats on/adjacent to the development site. Deciduous Woodland Priority Habitat lies to the north of the site, beyond Carr House Drive. Woodland impacts – such as lighting and habitat fragmentation should be addressed.

No signs of any badger, red squirrel or other protected species were noted on site. Hedgehog may be present on site.

No other ecological records have been sought at this stage as it is felt that Precautionary Working Methods will be suitable as the development is within a small land parcel.

Aside from trees and possibly bats, any potential impacts can be suitably dealt with *via* a Precautionary Working Method Statement (**appendix 1**) without the need for further survey work. These should be conditioned as part of a planning application.

Factors supporting the recommendations are discussed in the sections below:

[14] https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/

10.2 Limitations

Trees were assessed from ground level only and much of the crowns could not be seen.

A tree inspection looking for Potential Roost Features for bats was limited by ivy-clad stems on several of the trees which may hide such features.

During the bat survey the dense nature of the woodland meant most bats were 'heard but not seen'.

10.3 Bats, birds and trees

A separate arboricultural report (Adams, D., 2023) has been produced and should be referred to alongside this report.

Some of the trees may have Potential Roost Features (PRFs) for bats present, however this could not be ascertained due to dense ivy growth on the higher-risk trees and thick foliage. Vantage point bat surveys were considered and discussed with the council ecologist, however it was felt such surveys would not be able to differentiate between bats flying through the trees and emerging from a crevice in the tree. **As a result either a check of the trees when the foliage has fallen for the winter or ecological supervision is recommended regarding the ivy removal to ascertain if there are any crevices suitable for bats.**

A single bat transect activity survey was undertaken in August 2023 to ascertain the level of bat activity around the site and what species are present. The dusk transect survey recorded a low level of bat activity with 3 common pipistrelle bats seen foraging above the woodland. Several bats, common pipistrelle and the occasional soprano pipistrelle and noctule were recorded as 'heard not seen'. No comment can be made on roosts/potential roosts due to the dense tree canopy and ivy-covered trees.

Trees on site have a Woodland Group Tree Preservation Orders[15] on them.

Some of the trees with the potential for bat PRFs have had work recommended on them. Several of the recommendations mention partially removing epicormic growth/crown reduction *etc.* and then be re-inspected. This should be done with an ecologist present to check for the presence of bat Potential Roost Features (PRFs). Work should be done slowly and with regular checks for PRFs. Should any PRFs be noted then works should immediately stop on that tree until a further assessment for bats can be carried out.

Trees on site have a Woodland Group Tree Preservation Order on them. The root systems of retained trees are likely to be present in areas where foundations or underground utilities are provided. Development of the site cannot take place without encroachment into tree Root Protection Areas (RPAs), therefore works will need to comply with a detailed Arboricultural Method Statement (AMS). Details are provided in the arboricultural report.

Birds may nest in the woodland, no sign of owl were noted.

[15] www.durham.gov.uk/article/3914/Protected-trees

Potential impacts

Disturbance to breeding birds.
Destruction of active nests, causing death or injury to fledging birds during the construction phase.
Loss of potential bird nesting areas.
Disturbance to foraging bats.
Increased lighting levels may affect foraging and commuting routes for nocturnal animals.
Loss of habitat connectivity/disruption of flight lines.
Increased lighting levels may affect foraging and commuting routes for nocturnal animals.
Loss of trees.
Disturbance/damage to a trees near to the development area.
Damage to tree root systems.
Fragmentation of woodland.
Loss of bat roosting areas.

Actions and mitigation

No tree work should occur without an aerial tree assessment for bats. This may require some tree work alongside to aid the inspection.

A check of the trees when the foliage has fallen for the winter or ecological supervision is recommended regarding the ivy removal to ascertain if there are any crevices suitable for bats.
An ecologist should be present to oversee the removal of ivy from the trees to ascertain if there are any crevices suitable for bats.
Some of the trees with the potential for bat Potential Roost Features have had work recommended on them. Several of the recommendations mention partially removing epicormic growth/crown reduction *etc.* and then be re-inspected. This should be done with an ecologist present to check for the presence of bat PRFs. Work should be done slowly and with regular checks for PRFs. Should any PRFs be noted then works should immediately stop on that tree until a further assessment for bats can be carried out.
All contractors working on site should be made aware of the law surrounding bats. If bats are discovered all work in the area will immediately cease, and a licensed ecologist should be called to the site. Any bats must be left *in situ* if this is safe until the ecologist arrives.
Additional external lighting should be avoided where possible. Any external lighting should be low level, PIR, directional and follow the ILP/BCT 2023 guidance[16]. This should include the positioning of internal lighting within the property to minimise light spill as well as carefully considered external lighting.
Any external paint used should be checked to ensure it will not cause harm to bats or birds.
Bat and bird boxes should be added to the site.

[16] ILP (2023). Advice note 08/23 - *Bats and artificial lighting in the UK - Bats and the Built Environment series*. BCT

Birds are likely to nest within the woodland and any site clearance should avoid the bird nesting season (March-August inclusive). Although site checks by an ecologist is often recommended with regard to breeding birds due to dense tree cover this is likely to miss nests so clearance should be avoiding during the nesting period. With regard to other building works involving noise or small clearance, works should be undertaken outside the bird breeding season (March-August inclusive) unless the site is checked by a suitably experienced ecologist within 48 hours prior to works commencing. Any nests present should be allowed to remain undisturbed until the young have fledged.

Any trees lost should be replaced either onsite or offsite. Those that fail to thrive within the first 10 years should be replaced.

Root Protection Areas (RPAs) should be marked up around nearby trees. Refer to '*British Standard 5837:2012 Trees in relation to design, demolition and construction*' and '*British Standard 3988:2010 Tree work - recommendations*. The Root Protection Plan should also include measures to protect any exposed roots during the construction phase.

No storage of materials or parking of machinery should occur within the RPAs. All materials, fuel and equipment, if left on site, to be stored securely in a position away from the site boundaries and at least 5 metres from any tree canopies.

10.4 Designated Sites and Priority Habitats

The nearest Designated [wildlife] Sites is Low Newton Junction LNR, located ~330 metres east. The site falls within the Impact Risk Zones for Sites of Special Scientific Interest (SSSI), although no impacts are expected.

There are no Priority Habitats on/adjacent to the development site. Deciduous Woodland Priority Habitat lies to the north of the site, beyond Carr House Drive. Woodland impacts – such as lighting and habitat fragmentation should be addressed.

10.5 Other species and habitats

No other ecological records have been sought at this stage as it is felt that Precautionary Working Methods will be suitable as the development is within a small land parcel.

Hedgehog may be present on site.

No other protected species such as badger or red squirrel were noted within 50 metres of the development site.

The site is in located within flood zone 1, an area with a low probability of flooding[17].

Potential impacts

Disturbance and/or injury to wildlife during the construction phase.
Activities such as mixing cement, refuelling or storage of materials/equipment may cause significant damage to those features such as compaction or contamination.
Disturbance/harm/loss of habitat to small mammals.
Increased site traffic/site use causing pollution run-off.
Indirect impacts – temporary habitat loss/disturbance.
Loss of refugia areas within tree brash and shrubs.

Actions and mitigation

The Precautionary Working Method Statement (**appendix 1**) is deemed sufficient to deal with any passing species.
A pollution prevention plan should be put in place during the construction phase.
Any storage of materials on site is likely to create suitable refugia for several species and therefore should only be moved by hand. Any mounds of materials, substrate or spoil may be used by badgers for exploratory digging. Mounds should be carefully protected.
Any pits or holes dug during construction phase must be covered up overnight or fitted with exit ramps (scaffolding planks) for mammals to be placed at an angle of 30^{o} from base to top.
All materials, fuel and equipment, if left on site, to be stored securely in a position away from the tree canopies.
A toolbox talk should be given to site contractors on the law surrounding protected species prior to works commencing.
No fires should be lit on site.
A hibernaculum pile should be created to provide refugia for amphibians and small mammals.

[17] https://flood-map-for-planning.service.gov.uk/

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APPENDIX 1. Precautionary Working Method Statement

METHOD STATEMENT FOR CONTRACTORS
Land off Carr House Drive, Newton Hall, Durham

The following precautions are necessary to prevent a legal offence being committed. All species of bats, great crested newts and breeding birds are protected by law. Deliberate or reckless disturbance of these animals is a legal offence, punishable by fines and/or imprisonment. They are intended to reduce the impact of this development to protected species. These recommendations must be followed by all of those working on the site.

Should any protected species be found, work should immediately stop, and the project ecologist contacted.

Birds - all species of breeding birds, their nests (whilst being built and when in use), eggs and chicks are also protected by law.

Bats commonly roost in cavity walls and roofs. They may be present under roof tiles, ridge tiles and at wall tops or within crevices. All species of bats are strictly protected by law. Damage or destruction of a bat roost is an absolute offence with a maximum penalty of a £5,000 fine per offence, up to 6 months imprisonment, and confiscation of equipment.

No tree work should occur without an aerial tree assessment for bats with an ecologist present. This may require some tree work alongside to aid the inspection.

A check of the trees when the foliage has fallen for the winter or ecological supervision is recommended regarding the ivy removal to ascertain if there are any crevices suitable for bats.

An ecologist should be present to oversee the removal of ivy from the trees to ascertain if there are any crevices suitable for bats.

Some of the trees with the potential for bat PRFs have had work recommended on them. Several of the recommendations mention partially removing epicormic growth/crown reduction *etc*. and then be re-inspected. This should be done with an ecologist present to check for the presence of bat Potential Roost Features (PRFs). Work should be done slowly and with regular checks for PRFs. Should any PRFs be noted then works should immediately stop on that tree until a further assessment for bats can be carried out.

A toolbox talk should be given to site contractors on the law surrounding protected species prior to works commencing.

All contractors working on site should be made aware of the law surrounding bats. If bats are discovered all work in the area will immediately cease, and a licensed ecologist should be called to the site. Any bats must be left *in situ* if this is safe until the ecologist arrives.

Additional external lighting should be avoided where possible. Any external lighting should be low level, PIR, directional and follow the ILP/BCT 2023 guidance[18]. This should include

[18] ILP (2023). Advice note 08/23 - *Bats and artificial lighting in the UK - Bats and the Built Environment series*. BCT

the positioning of internal lighting within the property to minimise light spill as well as carefully considered external lighting.

Birds are likely to nest within the woodland and any site clearance should avoid the bird nesting season (March-August inclusive). Although site checks by an ecologist often recommended with regard to breeding birds due to dense tree cover this is likely to miss nests so clearance should be avoiding during the nesting period. With regard to other building works involving noise or small clearance, works should be undertaken outside the bird breeding season (March-August inclusive) unless the site is checked by a suitably experienced ecologist within 48 hours prior to works commencing. Any nests present should be allowed to remain undisturbed until the young have fledged.

Any external paint used should be checked to ensure it will not cause harm to bats or birds.

Bat and bird boxes should be added to the site.

Root Protection Areas (RPAs) should be marked up around nearby retained trees. Refer to '*British Standard 5837:2012 Trees in relation to design, demolition and construction*' and '*British Standard 3988:2010 Tree work - recommendations*. The Root Protection Plan should also include measures to protect any exposed roots during the construction phase. No storage of materials or parking of machinery should occur within the RPAs.

All materials, fuel and equipment, if left on site, to be stored securely in a position away from the site boundaries and at least 5 metres from any tree canopies.

A pollution prevention plan should be put in place during the construction phase. Guidance can be found in the Pollution Prevention Guideline 6 (see **references**).

Contractors should check any areas of ground thoroughly before starting work and before they leave.

Any rocks, bricks, rubble, timber or rubbish to be moved by hand carefully checking for wildlife.

Any storage of materials on site is likely to create suitable refugia for several species and therefore should only be moved by hand. Any mounds of materials, substrate or spoil may be used by badgers for exploratory digging. Mounds should be carefully protected.

Any pits or holes dug during construction phase must be covered up overnight or fitted with exit ramps (scaffolding planks) for mammals to be placed at an angle of 30^{o} from base to top.

No fires should be lit on site.

A hibernacula pile should be created along the site boundaries to provide refugia for amphibians and small mammals.

Any trees lost should be replaced either onsite or offsite. Those that fail to thrive within the first 10 years should be replaced.

Signed by Owners

Names ……

Date……

Signed by Contractors

Name	Job Title	Date	Signature

APPENDIX 2. Relevant wildlife legislation

Under Section 25 (1) of the **Wildlife & Countryside Act (1981)** local authorities have a duty to take such steps as they consider expedient to bring to the attention of the public the provisions of Part I of the Wildlife & Countryside Act, which includes measures to conserve protected species.

The **Natural Environment and Rural Communities Act (2006)** places a Statutory Biodiversity Duty on public authorities to take such measures as they consider expedient for the purposes of conserving biodiversity, including restoring or enhancing a population or habitat.

Paragraph 109 of the **National Planning Policy Framework (NPPF)** requires that the planning system minimizes impacts on biodiversity and provides net gains where possible.

The **Environment Act (2021)** has two main functions:

To give a legal framework for environmental governance in the UK.

To bring in measures for improvement of the environment in relation to waste, resource efficiency, air quality, water, nature and biodiversity, and conservation.

Bats

In Britain all bat species and their roosts are legally protected, principally under the Conservation of Habitats and Species Regulations (2010), with additional protection under the Wildlife and Countryside Act (1981) (as amended), including under Schedule 12 of the Countryside and Rights of Way Act, 2000, which created a new offence of reckless disturbance.

The combined effect of these is that a person is guilty of an offence if they:

Deliberately capture, injure or kill a bat.

Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats

In particular where this may:

i. Impair their ability to survive, to breed or reproduce, or rear or nurture their young.

ii. Affect significantly the local distribution or abundance of the species.

Damage or destroy a bat roosting place (even if bats are not occupying the roost at the time).

Intentionally or recklessly obstruct access to a bat roost.

Badger

The Protection of Badgers Act 1992 protects badgers and their setts, and makes it illegal to:

Wilfully capture, injure or kill a wild badger (or attempt to do so).

Be in possession of a live or dead badger.

Intentionally or recklessly damage or destroy a badger sett or obstruct access to it.

Disturb a badger when it is occupying a sett.

Cruelly ill-treat a badger.

Dig for a badger.

Cause a dog to enter a badger sett.

Sett interference includes damaging or destroying a sett, obstructing access to a sett, and disturbing a badger whilst it is occupying a sett. It is not illegal, and therefore a licence is not required, to carry out disturbing activities in the vicinity of a sett if no badger is disturbed and the sett is not damaged or obstructed.

Birds

All birds, their nests and eggs are protected by law and it is an offence, with certain exceptions, to:

Intentionally kill, injure or take any wild bird.
Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built.
Intentionally take or destroy the egg of any wild bird.
Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building or is in, on or near a nest with eggs or young; or disturb the dependent young of such a bird. Barn Owls are named in Schedule 1 of this Act.

The UK is bound by the terms of the EC Birds and Habitats Directives and the Ramsar Convention. These are implemented in the UK through the Conservation of Habitats and Species Regulations, 2017 which provide for the protection of areas of European importance for wildlife (European Sites) in the form of Special Areas of Conservation (SACs), designated under the Habitats Directive, and Special Protection Areas (SPAs), designated under the Birds Directive.

Red squirrel

The red squirrel is a protected species in the UK and is included in Schedules 5 and 6 of the Wildlife and Countryside Act 1981 (amended by the Countryside & Rights of Way Act 2000). It is an offence to intentionally kill or injure a red squirrel or intentionally or recklessly damage or destroy any structure or place a red squirrel uses for shelter or protection, or disturb a red squirrel while it occupies such a place.

Designated Sites and Habitats

A central component of the Habitats Directive is the creation of an overall network of European sites Natura 2000. The aim is to maintain, protect and enhance a coherent network of sites, reflecting the trans-boundary nature of many species, particularly migratory species. Although Ramsar sites are not European sites as a matter of law, the Government has chosen as a matter of policy to protect and manage them by applying the same procedures to them. Consequently, Ramsar sites are treated as European sites in practice.

Sites of Special Scientific Interest (SSSIs) are nationally important sites protected under laws including The Wildlife and Countryside Act 1981, Countryside and Rights of Way Act 2000. LPAs must consult Natural England on planning applications that might affect SSSIs. Operations that could damage special interests require consent by Natural England.

Section 41 of The Natural Environment and Rural Communities (NERC) Act (2006) requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under section 40 of the Natural Environment and Rural Communities Act 2006, to have regard to the conservation of biodiversity in England, when carrying out their normal functions. This includes planning decisions.

APPENDIX 3. Flood risk map for planning

Environment Agency

Flood map for planning

Your reference	Location (easting/northing)	Created
Carr House Dr	**427977/545028**	**2 Sep 2023 16:14**

Your selected location is in flood zone 1, an area with a low probability of flooding.

You will need to do a flood risk assessment if your site is **any of the following:**

- bigger that 1 hectare (ha)
- In an area with critical drainage problems as notified by the Environment Agency
- identified as being at increased flood risk in future by the local authority's strategic flood risk assessment
- at risk from other sources of flooding (such as surface water or reservoirs) and its development would increase the vulnerability of its use (such as constructing an office on an undeveloped site or converting a shop to a dwelling)

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

Flood risk data is covered by the Open Government Licence **which** sets out the terms and conditions for using government data. https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/

Use of the address and mapping data is subject to Ordnance Survey public viewing terms under Crown copyright and database rights 2022 OS 100024198. https://flood-map-for-planning.service.gov.uk/os-terms

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