

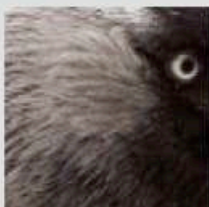
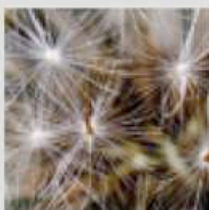
Frog Hall Farm Sheepy Magna, Leicestershire

Ecological Appraisal and Nocturnal Bat Survey Report

April 2024



baker*consultants*



Who we are:

Baker Consultants is an ecology and sustainability consultancy. We work in terrestrial, freshwater and marine environments, providing a range of services to industry, government, developers, public services and utilities.

Baker Consultants comprises a highly experienced team of professional ecologists. We do wildlife surveys - but they are only the first steps in the process for most projects. We are also involved in ecological assessment, environmental law, biodiversity management and design planning.

We don't just work with wildlife, because we know that communication with clients, design teams and conservation bodies is the key to project success. Explaining the implications of survey data, and interpreting legislation, policy and best practice is one of our strengths. We help decisions to be made and actions taken, allowing constraints to be kept to a minimum and project risks to be managed.

Our approach is scientific, pragmatic and creative. Alongside tried and tested methods, we seek to innovate, introduce clients to new ways of thinking and always deliver sound commercial awareness. You will find us honest and approachable, but we're not afraid to be robust and challenging - or to ask difficult questions.

We do believe in nature conservation. But we also believe in good development, well delivered. We know that, with our input, projects and plans can provide benefits for both nature and people.

That's not the whole story.

For more information, look at our web site www.bakerconsultants.co.uk, subscribe to our blog, or call us on 01629 593958.

Client	Helen Fisher
Project	Frog Hall Farm, Sheep Magna, Leicestershire
Report title	Ecological Appraisal and Bat Survey Report
File reference	1486_REP_DG_JW_GW.docx
Team leader	Carlos Abrahams
Contact details	c.abrahams@bakerconsultants.co.uk

	Name	Position	Date
Author	David Goddard MCIEEM	Senior Invertebrate Ecologist	5 th August 2021
Reviewed	Carlos Abrahams MCIEEM	Technical Director	19 th August 2021
Revised	Jed Weaver	Senior Ecologist	7 th September 2022
Reviewed	Gavin Ward CEnv MCIEEM	Consultancy Director	20 th September 2022
Revised	Jed Weaver	Senior Ecologist	8 th April 2024

Baker Consultants Ltd
Cromford Station
Cromford Bridge
Matlock
Derbyshire DE4 5JJ
info@bakerconsultants.co.uk
www.bakerconsultants.co.uk
01629 593958

Company No. 6702156

© Baker Consultants



Disclosure and Limitation:

Baker Consultants has prepared this document for the sole use of the commissioning client in accordance with the agreed scope of works and Terms and Conditions under which our services were performed. The evidence and opinion provided is true and has been prepared in accordance with the guidance of our professional institution's Code of Professional Conduct. No other warranty is made as to the professional advice included in this document or any other services provided by us. This document may not be relied upon by any third party without the prior and express written agreement of Baker Consultants.

Unless otherwise stated in this document, the assessments made assume that the study site referred to will continue to be used for its current purpose without significant change. The assessment, recommendations and conclusions contained in this document may be based upon information provided by third parties and upon the assumption that the information is relevant, correct and complete. There has been no independent verification of information obtained from third parties, unless otherwise stated in the report.

Where field investigations have been carried out, these have been restricted to the agreed scope of works and carried out to a level of detail required to achieve the stated objectives of the services. Natural habitats and species distributions may change over time and further data should be sought following any significant delay from the publication of this document.

Report Contents

1	Summary	1
2	Introduction	2
3	Methods	4
4	Results	8
5	Assessment	27
6	Recommendations	36
	Appendix 1: Desk Study	40
	Appendix 2: Habitat Plan	41
	Appendix 3: Target Notes	42
	Appendix 4: Surveyor Locations	43

1 Summary

1.1 The Proposed Development

- 1.1.1 This document provides an ecological appraisal of the site at Frog Hall Farm, Sheepy Magna, related to proposals to redevelop the farm buildings and access track. Also included are a suite of results from nocturnal bat surveys carried out at the site during 2022, and associated assessment and recommendations. The proposals seek to demolish all existing buildings and construct a single residential unit.
- 1.1.2 This report describes and assesses features of ecological value found to be present at the site. It also provides advice to help minimise any adverse ecological impacts, thereby enabling the development to comply with current nature conservation policy and legislation.

1.2 Ecological Receptors

- 1.2.1 The ecological assessment, set out in detail below, has found a moderate level of nature conservation interest on the site with the main house supporting a common pipistrelle *Pipistrellus pipistrelle* day roost which is used occasionally, as well the wider site providing suitable habitat for breeding birds, including barn owl *Tyto alba*. The hedgerows, trees and pasture field also have potential to support farmland breeding birds.
- 1.2.2 There are no internationally or nationally designated sites within 1 km of the site. There are 12 county designated sites present nearby - six potential Local Wildlife Sites (LWS), two candidate LWS and four potentially historic LWS. These range in distance from 205 m to 762 m from the Site.

1.3 Recommended Actions

- 1.3.1 Ecological impacts on features of interest will need to be avoided, or appropriate mitigation put in place to reduce the effects of development.
- 1.3.2 Bats and their roosts are legally protected. Due to the presence of roosting bats in the farm house (Building 6), demolition works will have adverse impacts on them and therefore mitigation will need to be put in place to avoid committing an offence under the legislation (set out in Section 5 of this report). Given that roosts are to be destroyed, a Mitigation Licence from Natural England will be required prior to this work commencing. It is considered that the adoption of an appropriate mitigation strategy on site will allow the populations to be maintained in a Favourable Conservation Status.

2 Introduction

2.1 Site Description

2.1.1 Frog Hall Farm, Sheepy Magna, Leicestershire, CV9 3QX is centred on OSNGR SK 30643 00918.

2.1.2 The surveyed area consists of the farm buildings with associated hard standing, an area of modified grassland with trees to the east of the farm buildings and a pasture field to the south of the farm buildings. The access track runs along the eastern and northern boundaries of this field, and a hedgerow runs along the western boundary.

2.1.3 The wider landscape is agricultural land – largely arable.

Figure 1. Site Location



2.2 Study Scope

2.2.1 Baker Consultants was commissioned by the client to undertake the following works in relation to the Site:

- Desk-based study with local records centres and online databases to identify designated sites of nature conservation importance, areas of priority habitats and records of protected and/or notable species;

- Phase 1/ UK Habitat Classification survey to record the nature and extent of vegetation and habitats within and adjacent to the Site;
- Appraisals for protected and/or notable flora and fauna; and
- Nocturnal bat surveys of the buildings on site.

2.2.2 This report takes into account standard guidance from a variety of sources including the Chartered Institute of Ecology and Environmental Management ^{1 2 3}, British Standards Institution ⁴, and www.gov.uk ⁵.

2.2.3 The report considers, in particular, potential effects on the following biodiversity features:

- Designated Sites (international, national and local)
- European Protected Species
- National Protected Species
- Habitats and Species of Principal Importance for Conservation
- Habitats and species of local interest

¹ CIEEM (2018). Guidelines for Ecological Impact Assessment In The UK And Ireland: Terrestrial, Freshwater, Coastal and Marine. Chartered Institute of Ecology and Environmental Management, Winchester.

² CIEEM (2015). Guidelines on Ecological Report Writing. Chartered Institute of Ecology and Environmental Management, Winchester.

³ CIEEM (2017). Guidelines for Preliminary Ecological Appraisal. Chartered Institute of Ecology and Environmental Management, Winchester.

⁴ BSI (2013). BS42020:2013 Biodiversity – Code of Practice for Planning and Development

⁵ <https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications>

3 Methods

3.1 Surveyor Qualifications and Experience

- 3.1.1 Senior Invertebrate Ecologist David Goddard BSc (Hons) MCIEEM undertook the original habitat survey on the 29th June 2021. The habitat survey was updated on 21st September 2023 by Associate Director Kelly Clark BSc MCIEEM.
- 3.1.2 Each of the bat surveys was resourced using a number of experienced surveyors – with up to eight people, plus night-vision / thermal cameras present on every survey event. Each survey was also led by a Natural England Bat Licence Holder – see Table 3 for details.
- 3.1.3 Wherever appropriate during surveys, Natural England’s Standing Advice on Protected Species ⁶ was taken into account, along with a wide range of other best practice guidance on survey methods. These are referenced in the text below. However, the professional judgement of the surveyors was also applied in relation to the site conditions and target species/habitats being considered. This may have required changes to the published guidance.

3.2 Desk Study

- 3.2.1 A data search was undertaken for designated sites of nature conservation interest, priority habitats and records of protected and priority species. Data for these was gained through the sources listed in Table 1 below:

Table 1. Desk Study Data Sources

Organisation/source	Data sought	Search area
Multi-Agency Geographic Information for the Countryside (MAGIC)	Statutory designated sites, Habitats of Principal Importance and Ancient Woodland, European Protected Species Licences	2 km
Local Biological Records Centre	Non-statutory designated sites of nature conservation and records of protected / notable species.	1 km

- 3.2.2 Natural England’s online Impact Risk Zone tool was utilised ⁷. This identifies whether developments are likely to have an impact on Sites of Special Scientific Interest (SSSIs), based upon their type and location, and whether Natural England should be consulted as part of proposals.

3.3 Habitat Survey

- 3.3.1 A Phase 1 Habitat Survey ⁸ was carried out by David Goddard on the 29th June 2021, which was updated on the 21st September 2023 by Kelly Clark using the UKHab methodology⁹. The vegetation types and habitats present were described and mapped during a walkover of the site, using the standard published guidelines for Phase 1

⁶ <https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications>
⁷ Available at: <http://www.magic.gov.uk>
⁸ Joint Nature Conservation Committee (2010). Handbook for Phase I Habitat Survey: A Technique for Environmental Audit. JNCC, Peterborough.
⁹ UKHab Ltd (2023). UK Habitat Classification Version 2 (at <https://ukhab.org/>)

Habitat/UK Habitat Classification survey. Features of particular interest were recorded as Target Notes (TNs).

- 3.3.2 In addition, the habitats within the site and surrounding land were appraised for their suitability to support protected or notable species, or assemblages that could be sensitive to the development proposals, in accordance with 'Guidelines for Preliminary Ecological Appraisal' ¹⁰.
- 3.3.3 During the survey, consideration was given to features such as potential breeding bird habitat, bat roosting locations, badger sett locations, reptile habitat and the suitability of water features for amphibians and riparian mammals.
- 3.3.4 Invasive species, such as Japanese knotweed *Reynoutria japonica* and giant hogweed *Heracleum mantegazzianum*, were noted by the surveyor if present. These species can have implications for development activity and human health respectively.
- 3.3.5 Weather conditions during the habitat survey were overcast with moderate rain for the initial part of the survey before stopping and brightening.
- 3.3.6 The survey approach taken is designed to identify broad habitat types at a site and the potential of these habitats to support notable/protected species, and to assist in providing an overview of the ecological interest at a site. It is the most widely used and professionally recognised method for initial ecological site appraisal.

3.4 Bat Survey

Tree and Building Assessments

- 3.4.1 The habitats within the survey area were assessed for their potential to support roosting bats in accordance with current guidelines ¹¹. This involved inspection of features such as mature trees and buildings for evidence indicating the presence of roosting bats or for features with the potential to provide bat roost habitats. Evidence indicating the presence of bats would normally include droppings, characteristic staining, scratch marks or the presence of live or dead bats.
- 3.4.2 Trees were inspected for the presence of rot holes, scar crevices, loose bark and covering of dense ivy *Hedera helix*.
- 3.4.3 The roost inspection systematically assessed trees and buildings from all sides, where possible. A high-powered torch and close-focusing binoculars were used, where necessary, to inspect cavities and features in shaded areas and/or at height.
- 3.4.4 The preliminary roost inspection was undertaken by David Goddard on 29th June 2021. Weather conditions during the survey were mostly dry with scattered light showers, mild (14°C) with 90% cloud cover and light winds (BF2).

¹⁰ CIEEM (2017). Guidelines for Preliminary Ecological Appraisal. Chartered Institute of Ecology and Environmental Management, Winchester.

¹¹ Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.

- 3.4.5 Any buildings or features deemed suitable to support roosting bats were also examined prior to each nocturnal survey, using a high-powered torch, ladders, thermal imaging cameras and an endoscope, where appropriate.
- 3.4.6 Following the preliminary roost/habitat inspection, potential roost features and bat habitats were categorised according to the criteria in Table 2.

Table 2. Bat Roost/Habitat Assessment Categories

Category	Roosting sites	Commuting and foraging habitats
Confirmed Roost	Evidence of a bat roost recorded.	-
High	A structure or tree with one or more potential roost sites that are suitable for use by large numbers of bats on a regular basis and for long periods of time due to the size, shelter, protection, conditions and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting and foraging bats (e.g. river valleys, streams, grazed parkland, hedgerows, broadleaved woodland, lines of trees and woodland edge). Site is close to and connected to known roosts.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to the size, shelter, protection, conditions and surrounding habitat - but unlikely to support a roost type of high conservation status (i.e. maternity or hibernation).	Continuous habitat connected to the wider landscape that could be used by bats for commuting and foraging (e.g. lines of trees, scrub, grassland, water or linked back gardens).
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. Insufficient space, shelter, protection, conditions and/or surrounding habitat to be used on a regular basis or by large numbers of bats A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential.	Suitable, but isolated habitat that could be used by small numbers of commuting and foraging bats (e.g. a gappy hedgerow, unvegetated stream, or a patch of scrub).
Negligible	Negligible habitat features likely to be used by roosting bats.	Negligible habitat features likely to be used by commuting or foraging bats.

Bat Emergence Surveys

- 3.4.7 To record bat activity within the survey area, the surveys listed in Table 3 below were carried out. These were all undertaken in accordance with standard survey guidance ¹². The fourth survey was undertaken in order to characterise the roosts identified on the third survey, and identify the species.
- 3.4.8 The surveyors used Wildlife Acoustics Echo Meter Touch bat detectors to record bat calls. These have in-built recogniser software to aid the identification of species, and will record geo-tagged call data for more detailed computer analysis.
- 3.4.9 Surveyors were supported by the use of a Flir E76 Thermal Camera, Pulsar Helion XP38 Thermal Scope, and Canon XA10 and Canon XA40 infra-red (IR) cameras. Surveyors were positioned in various vantage points around the study areas to focus on points of interest for emerging bats, which are shown in Appendix 4.

¹² Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.

Table 3. Bat Survey Conditions

Date	Surveyors	Weather	Sunset/sunrise times	Survey start/finish times
12/05/2022	CH , DG, IC, IS , JW, KC , PR, Pulsar, XA10, FLIR.	13 – 11 °C with approx. 90% cloud cover, BF2 winds.	20:52	20:40 – 22:20
23/06/2022	CH , DG, IC, IS , JW, RS, XA40, XA10, Pulsar.	18 – 15°C with approx. 40% cloud cover and still (BF0).	21:31	21:15 – 23:15
20/07/2022	DG, GW, HF, IC, IS , JW, ML , RD, XA40, XA10, Pulsar.	21 – 18°C with approx. 70% cloud cover, BF2-3 winds.	21:19	21:05 – 22:45
24/08/2022	JL , IS , XA40, FLIR	19 – 17°C, with 70% cloud cover and a gentle breeze (BF1).	20:00	20:00 – 21:40

CH = Courtenay Holden, DG = Dave Goddard, IC = Isabel Commerford, **IS** = Ian Stephens, RS = Rae Smith, HF = Hollie Finch, GW = Gavin Ward, **JL** = James Longely, JW = Jed Weaver, **ML** = Martin Ledger, **KC** = Kelly Clark, RD = Robin Denton [The **Bold** initials denote the NE bat licence holders]. License holders Initials / NE Bat License No. CH / 2019-43417-CLS-CLS, KC / 2015-11706-CLS-CLS, ML / 2018-37607-CLS-CLS, JL = 2019-39079-CLS-CLS, IS = 2019-39318-CLS-CLS.

Bat Call Analysis

- 3.4.10 Bat call data was analysed using Wildlife Acoustics Kaleidoscope software, which separated the recording into segments of up to 15 seconds, to be identified to species/group and counted. The identification of bat calls was based on the experience of the analysts and reviewers (including bat survey licence holders). This experience was backed up by the use of an identification spreadsheet and published guidance on recognised call parameters ^{13 14 15 16}.

Thermal & IR Camera Footage

- 3.4.11 This footage was manually reviewed after each survey, to provide additional information regarding any suspected bat emergences from each feature of interest. Additionally, it also allowed any evidence of unseen/unheard bat emergences/returns to be captured, particularly in incidences where they were not observed by the surveyors and/or recorded by their hand-held detectors.

¹³ Russ, J. (1999). The Bats of Britain and Ireland: Echolocation calls, sound analysis and species identification. Alana Books.

¹⁴ Vaughan, N., Jones, G. & Harris, S. (1997). Identification of British Bat Species by Multivariate Analysis of Echolocation Call Parameters. The International Journal of Animal Sound and its Recording 7: 189-207.

¹⁵ Middleton, N., Froud, A. & French, K. (2014). Social Calls of the Bats of Britain and Ireland. Pelagic Publishing, Exeter.

¹⁶ Russ, J. (2012). British Bat Calls: A Guide to Species Identification. Pelagic Publishing, Exeter.

4 Results

4.1 Study Limitations

- 4.1.1 It is important to note that, even where data is returned for a desk study, a lack of records for a defined geographical area does not necessarily mean that there is a lack of ecological interest since the area may simply be under-recorded. Equally, due to the level of recording, some species should be considered more frequent than indicated by the records provided within a desk study.
- 4.1.2 Whilst every effort was made in the field survey to provide a comprehensive description of the site, no investigation can ensure the complete characterisation and prediction of the natural environment. Also, natural and semi-natural habitats are subject to change, species may colonise the site after surveys have taken place and results included in this report may become less reliable over time.
- 4.1.3 Survey data is generally only considered valid if it is from the current or previous active season. In some cases, surveys up to 3 years old may be considered acceptable by consultees if the habitats have not significantly changed in the intervening period.
- 4.1.4 Access was restricted to the redline boundary shown in Figure 1, except for the pond to the north-east of the site, therefore the existence and / or absence of protected and/or notable species e.g. badger, could not be determined outside of the survey area. This is however not considered to be a limitation, as the proposed development is for the redevelopment of the farm buildings and access track, all well within the boundary.
- 4.1.5 On the second nocturnal survey, the deployed XA10 infrared imaging camera experienced a fault and footage could not be reviewed from this survey occasion. This is not deemed a significant limitation, as the building it was covering (Building 7, eastern extent) was covered on two further survey dates.

4.2 Designated Sites

- 4.2.1 The desk study provided information on the designated sites listed below in Table 4 (see Appendix 1).

Table 4. Designated Sites

Name	Status	Location/distance Interest
Crow Lane hedgerow	pLWS	East of the site/ 415m, hedgerow
Atherstone Road hedgerow, west	pLWS	South-south-east of the site/ 762m, hedgerow
Parish hedgerow, Pinwall	pLWS	South of the site/ 570m, hedgerow
Benn Hills pond	cLWS	North-north-east of the site/ 648m, standing water
B5000 hedgerows, tree & verge	cLWS	South of the site/ 542m, hedgerow, mature tree
Frog Hall Oak	pLWS	South of the site/ 205m, mature tree
Crow Lane/Sheepy Road hedgerow	pLWS	East-south-east of the site/ 422m, hedgerow
Atherstone Road hedgerow, east	pLWS	South-south-east of the site / 756m, hedgerow
Sheepy Magna, Crow Lane, old sand pit	phLWS	North-east of the site/ 586m, no data given
Sheepy, pond	phLWS	East of the site/ 474m, pond
Sheepy, Highfield farm pond	phLWS	West of the site/ 516m, pond
Sheepy, pond	phLWS	East of the site/ 377m, pond

Key: pLWS potential Local Wildlife Site, cLWS candidate Local Wildlife Site, phLWS potentially historic Local Wildlife Site

4.2.2 Natural England's online MAGIC tool identified that no SSSIs are present within 2 km of the site.

4.2.3 The proposed redevelopment falls within the 'Impact Risk Zone' for Birches Barn Meadows SSSI, situated approximately 2.5 km northwest of the site. However, it is considered that the proposed redevelopment does not fall within any of the development categories that would affect Birches Barn Meadows SSSI.

4.3 Habitats

4.3.1 Scientific names are provided with the first occurrence of the species, then with common names only used. Standard nomenclature ¹⁷ is used for vascular plant species.

Habitats Overview

4.3.2 The habitat types recorded on site during the initial Phase 1 Habitat survey, as well as the updated UK Habitat Classification Survey are described in turn below. Particular features of interest, recorded during the survey, are listed as Target Notes in Appendix 3, with their locations shown in the Appendix 2 Habitat plan. The only notable change between the two survey visits was that a small parcel of immature woodland (TN4 for approximate location) is no longer present on-site. The parcel was small, immature and fairly disconnected, consisting of leyland cypress *Cupressus x leylandii*, poplar *Populus* sp. and ash *Fraxinus excelsior*.

Hedgerows and Boundaries

4.3.3 A species-poor hedgerow, circa 2m high and 3m wide with trees, forms the western boundary of the modified grassland area to the south of the farm buildings. The hedgerow contains elm *Ulmus* sp., hawthorn, blackthorn *Prunus spinosa*, elder *Sambucus nigra*, and field maple *Acer campestre*, with oak *Quercus* sp. and ash trees. Climbers included dog-rose, bramble *Rubus fruticosus* agg., common ivy *Hedera helix* and bittersweet *Solanum dulcamara*. The field layer contains cleavers *Galium aparine*, cow parsley *Anthriscus sylvestris*, common nettle *Urtica dioica*, false oat-grass *Arrhenatherum elatius* and hedge woundwort *Stachys sylvatica* (TN3, see Figures 2 and 3).

¹⁷ Stace, C. (2012). New Flora of the British Isles. Third Edition. Cambridge University Press, Cambridge.

Figure 2. Hedgerow with trees



Figure 3. Hedgerow with trees



Grassland

- 4.3.4 A field of modified grassland is located within the southern half of the site, it includes cock's-foot *Dactylis glomerata*, perennial rye-grass *Lolium perenne*, buttercup *Ranunculus* sp., shepherd's-purse *Capsella bursa-pastoris*, cow parsley, crane's-bill *Geranium* sp., sow-thistle *Sonchus* sp., dock *Rumex* sp., dandelion *Taraxacum* agg. (TN1, see Figures 4 and 5).
- 4.3.5 There is also an area of modified grassland located to the east of the farm buildings, with scattered trees and introduced shrubs planted within it (see Figures 6 and 7).

Figure 4. Modified grassland field



Figure 5. Modified grassland field



Figure 6. Modified grassland



Figure 7. Modified grassland



Broad-leaved Scattered Trees

- 4.3.6 There are two areas of broad-leaved scattered trees, the first being within the modified grassland, and containing species such as ash, apple *Malus* sp. cherry *Prunus* sp., field maple, sycamore *Acer pseudoplatanus*, horse-chestnut *Aesculus hippocastanum* and pear *Pyrus* sp. (TN2, see Figures 8 and 9).
- 4.3.7 The second area is a line along the eastern edge of the modified grassland field. The trees here had been recently planted as they were all staked and most had their plant labels attached. The species included sweet chestnut *Castanea sativa*, copper beech *Fagus sylvatica* f. *purpurea*, maple *Acer* sp., and field maple (Figures 10 & 11).

Figure 8. Broad-leaved Scattered Trees



Figure 9. Broad-leaved Scattered Trees



Figure 10. Broad-leaved Scattered Trees



Figure 11. Broad-leaved Scattered Trees



Introduced Shrub

- 4.3.8 There are two areas of introduced shrubs on the site, including fuchsia *Fuchsia* sp., rose *Rosa* sp., verbascum *Verbascum* sp., wall cotoneaster *Cotoneaster horizontalis*, rose of sharon *Hypericum calycinum*, and foxglove *Digitalis purpurea*. Both stands are largely associated with the modified grassland lawn (TN5, see Figures 12 to 15).

Figure 12. Introduced Shrubs



Figure 13. Introduced Shrubs



Figure 14. Introduced Shrubs



Figure 15. Introduced Shrubs



Hard Standing

4.3.9 Areas of hard standing on the site include the access track and areas around the farm buildings (see Figures 16 to 19).

Figure 16. Access Track



Figure 17. Hard Standing around Farm Buildings



Figure 18. Hard Standing around Farm Buildings



Figure 19. Hard Standing around Farm Buildings



Open Water

- 4.3.10 A recently created pond is present approximately 80m to the north-east of the site. This has a depth of approximately 1 m, and supports marginal vegetation, including soft rush *Juncus effusus* and yellow iris *Iris pseudacorus*. There is no submerged vegetation present and only a few water-lily *Nymphaeaceae* sp. providing any floating vegetation within the pond (TN6, see Figures 20 and 21). This pond is outside of the site's redline boundary.

Figure 20. Pond



Figure 21. Pond



Buildings

- 4.3.11 There are a total of eight buildings on site. These have been numbered Buildings B1 to B8.
- 4.3.12 Building B1 is an open fronted barn, having a metal girder structure, with the lower part of the walls constructed from breeze blocks, and with wooden slats to the roof line. The roof is constructed from corrugated asbestos sheeting and corrugated plastic sheeting in a double pitched roof, see Figures 22 and 23.

Figure 22. Building B1



Figure 23. Building B1



- 4.3.13 Building B2 is an open fronted barn having a metal girder structure with the lower part of the walls constructed from breeze blocks or wood, and with corrugated asbestos sheeting forming the upper walls to the roof line. The pitched roof is constructed from corrugated asbestos sheeting and corrugated plastic sheeting (see Figures 24 and 25).

Figure 24. Building B2



Figure 25. Building B2



- 4.3.14 Building B3 is a series of connected barns, having a metal girder structure with the lower part of the walls constructed from breeze blocks and corrugated metal sheeting to the roof line. The pitched roof is constructed from corrugated asbestos sheeting and corrugated plastic sheeting (see Figures 26 to 29).

Figure 26. Building B3



Figure 27. Building B3



Figure 28. Building B3



Figure 29. Building B3



- 4.3.15 Building B4 is an open fronted barn having a metal girder and wooden pole structure,

with the walls constructed of corrugated metal sheeting to the roof line. The sloping roof is constructed from corrugated metal sheeting (see Figures 30 and 31).

Figure 30. Building B4



Figure 31. Building B4



4.3.16 Building B5 is a brick-built single-storey building with gable ends and a pitched tile roof, (see Figures 32 and 33).

Figure 32. Building B5



Figure 33. Building B5



4.3.17 Building B6 is the farm house, which is a brick-built two-storey building, with gable ends and a pitched tile roof. The doors and windows are constructed of wood (see Figures 34 to 41).

Figure 34. Building B6



Figure 35. Building B6



Figure 36. Building B6



Figure 37. Building B6



Figure 38. Building B6



Figure 39. Building B6



Figure 40. Building B6



Figure 41. Building B6



4.3.18 Building B7 is a series of smaller buildings connected together to form one larger complex, all of which are a single-storey brick construction, with gable ends and pitched tile roofs (see Figures 42 to 47).

Figure 42. Building B7



Figure 43. Building B7



Figure 44. Building B7



Figure 45. Building B7



Figure 46. Building B7



Figure 47. Building B7



4.3.19 Building B8 is a wooden structure which is in a poor state of repair, surrounded by trees and shrubs (see Figures 48-51).

Figure 48. Building B8



Figure 49. Building B8



Figure 50. Building B8



Figure 51. Building B8



4.4 Species Overview

4.4.1 The notable species recorded on or near the site by desk study or field survey are

summarised in the following sections. Further details of the desk study results are also provided in Appendix 1.

4.5 Bats

4.5.1 The desk study returned no records for bats within 1 km of the site and MAGIC reported no EPSL bat licenses within 2 km of the site., see Appendix 1

Bat Roost/Habitat Survey

4.5.2 None of the trees on site were considered to have features which could support roosting bats.

4.5.3 The buildings, as well as commuting and foraging habitats on the site can be assessed for their potential using the factors listed in Tables 5 and 6 below. The buildings on site were assessed from the outside only during the survey.

Table 5. Bat Roost/Habitat Assessment Categories

Category	Roosting sites	Commuting and foraging habitats
Confirmed Roost	Evidence of a bat roost recorded.	-
High	A structure or tree with one or more potential roost sites that are suitable for use by large numbers of bats on a regular basis and for long periods of time due to the size, shelter, protection, conditions and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting and foraging bats (e.g. river valleys, streams, grazed parkland, hedgerows, broadleaved woodland, lines of trees and woodland edge). Site is close to and connected to known roosts.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to the size, shelter, protection, conditions and surrounding habitat - but unlikely to support a roost type of high conservation status (i.e. maternity or hibernation).	Continuous habitat connected to the wider landscape that could be used by bats for commuting and foraging (e.g. lines of trees, scrub, grassland, water or linked back gardens).
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. Insufficient space, shelter, protection, conditions and /or surrounding habitat to be used on a regular basis or by large numbers of bats.	Suitable, but isolated habitat that could be used by small numbers of commuting and foraging bats (e.g. a gappy hedgerow, unvegetated stream, or a patch of scrub).
Negligible	A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential. Negligible habitat features likely to be used by roosting bats.	Negligible habitat features likely to be used by commuting or foraging bats.

Table 6. Bat Roost Building Assessment

Positive indicators for roosting bats	Negative indicators for roosting bats
Cluster of old buildings with varied structure	Modern, active industrial premises, built after the 1970s
Not affected by artificial light levels	Potential roost sites with high levels of artificial light
In rural location, close to woodland or water	In a heavily urbanised area with few green spaces
Immediately connected to commuting habitats	Isolated from commuting habitat
In sheltered lowland location	Exposed site at high altitude
Has numerous cracks or crevices present	Intact and tightly sealed structure
Pitched roof with an uneven clay tile /slate covering	Flat roof with sheet material construction
Large internal roof space, with clear flying spaces	Small or cluttered roof space
Large rough roof timbers with cracks, joints and holes	Modern smooth timber roof trusses

Positive indicators for roosting bats	Negative indicators for roosting bats
Hanging tiles or wood cladding, esp. on south-facing walls	Walls prefabricated with steel and sheet materials

- 4.5.4 Building B1 has been assessed as having **negligible** bat roost potential.
- 4.5.5 Building B2 has been assessed as having **negligible** bat roost potential.
- 4.5.6 Building B3 has been assessed as having **negligible** bat roost potential.
- 4.5.7 Building B4 has been assessed as having **negligible** bat roost potential.
- 4.5.8 Building B5 has been assessed as having **moderate** bat roost potential, as there are missing tiles and gaps around doors / windows as well as having an opening at one end of the building.
- 4.5.9 Building B6 has been assessed as having **high** bat roost potential due to missing and/or slipped tiles on the roof, missing mortar on the ridge tiles, pipework emerging from the roof, missing brick work around cables/pipes, missing mortar between bricks on the gable end and ivy covering a significant proportion of the building's frontage.
- 4.5.10 The buildings comprising the B7 complex have been assessed as having **high** bat roost potential due to missing and/or slipped tiles on the roof, missing mortar on the ridge tiles, and open fronts or doors. Internally, the wooden beams and roof trusses have gaps around joints, and there is ivy covering a proportion of the buildings.
- 4.5.11 The building B8 has numerous openings which would allow bats entry into the building. However, part of the roof is open to the elements which reduces its potential to support roosting bats, and this building have been assessed as having **low** bat roost potential.
- 4.5.12 The habitats on site have been assessed as being of **moderate** suitability for commuting and foraging bats.

Bat Emergence Surveys

12th May 2022

- 4.5.13 During the first dusk survey, surveyors and cameras were focused on buildings 5, 6 and 7. The first bat was recorded by most surveyors at 21:14, a noctule bat *Nyctalus noctula* commuting over the survey area. The next recorded bat not including noctule bats was a common pipistrelle bat recorded by IS, making two passes between Buildings 2 and 3, originating from off site.
- 4.5.14 No surveyors recorded any confirmed emergences, however subsequent camera footage analysis of the XA10 infrared imaging camera caught a potential emergence of an unidentified species from the eastern section of Building 7, from within the open barn. This could not be accurately discerned, and may have flown from over the building, travelling south.
- 4.5.15 Throughout the survey, there was low to moderate amounts of foraging and commuting behaviour noted by surveyors across the site. Foraging activity was notably higher in the areas of garden to the east of Building 6, as well as along the track and south of Building 3, with species including common pipistrelle and soprano pipistrelle *Pipistrellus pygmaeus*.

at both locations.

23rd June 2022

- 4.5.16 During the second dusk survey, surveyors and cameras focused on buildings 5, 6, 7 and 8. The first bat was recorded by JW at 21:59, a common pipistrelle bat originating from offsite to the east and foraging at the gardens to the east of Building 6.
- 4.5.17 Surveyors JW and IC noted potential emergences from the northern aspect of the roof of Building 6, but these were discounted upon review of camera footage, which did not capture any emergences from Building 6. CH noted a potential emergence from the eastern section of Building 7, similar to that observed on the XA10 infrared camera on the first nocturnal survey. This could not be confirmed, as the XA10 infrared camera experienced a fault, and the footage could not be reviewed. No further emergences were noted by surveyors or deployed cameras.
- 4.5.18 Consistent with the previous survey, there were low to moderate amounts of foraging and commuting behaviour noted by surveyors across the site, with species consistent with those observed on the first survey.

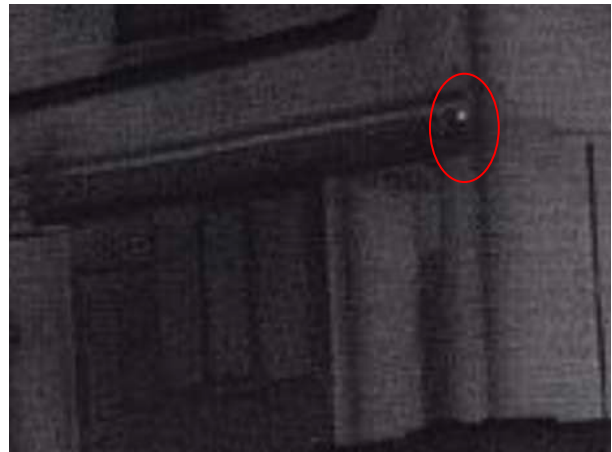
20th July 2022

- 4.5.19 During the third dusk survey, surveyors and cameras focused on buildings 6 and 7. The first bat was recorded by IC at 21:41, a soprano pipistrelle originating from offsite to the north east. Shortly after, DG noted a common pipistrelle commuting onto site from the west beyond Buildings 2 and 3, which then foraged over the gardens to the east of Building 6.
- 4.5.20 No emergences were noted by surveyors; however, the deployed Pulsar thermal imaging camera captured the emergence of an unidentified bat at 22:03 on the north-western end of Building 6 from between the end of a wooden lintel over a doorway and associated brickwork. (Figures 52 and 53). The species identification was confirmed as common pipistrelle by bat dropping analysis, as collected on the 24th of August 2022 (see section 4.5.25 below).

Figure 52. Roost Feature



Figure 53. 22:03 Emergence



- 4.5.21 Consistent with previous surveys, there were low to moderate amounts of foraging and commuting behaviour noted by surveyors across the site, with species consistent with those observed on previous surveys.

24th August 2022

- 4.5.22 During the fourth dusk survey, which was undertaken to characterise the roost found on the previous survey, and to identify the species, surveyors and cameras focused on buildings 6 and 7. The first bat was recorded by JL at 20:39, a common pipistrelle originating from off site to the east and commuting through site.
- 4.5.23 No emergences were noted by surveyors or deployed cameras. Species identification of the roost identified on the previous survey was confirmed by bat dropping analysis (Section 4.5.25).
- 4.5.24 Consistent with previous surveys, there were low amounts of foraging and commuting behaviour noted by surveyors across the site, with species consistent with those observed on previous surveys. In addition to previous observations, common pipistrelle was seen to be utilising Building 7 for foraging.

Bat Dropping Analysis

- 4.5.25 Bat droppings were recovered from the north western aspect of Building 6 and subsequently sent for laboratory analysis. These droppings were returned as common pipistrelle. These droppings were used to confirm roosting locations, and to identify the species using these features for roosting.

Bat Survey Evaluation

- 4.5.26 The overall results of the combined survey effort for bats are summarised herein. In total, one common pipistrelle day roost which is occasionally used has been found. Natural England's definition of the different types of bat roosts are shown in Table 7, and the roost location on site is shown on Figure 54 below.

Table 7. Bat Roost Types

Roost type	Natural England Definition
Day roost	A place where individual bats, or small groups of males, rest or shelter in the day but are rarely found by night in the summer.
Night roost	A place where bats rest or shelter in the night but are rarely found in the day. May be used by a single individual on occasion or it could be used regularly by the whole colony.
Feeding roost	A place where individual bats or a few individuals rest or feed during the night but are rarely present by day.
Transitional/occasional roost	Used by a few individuals or occasionally small groups for generally short periods of time on waking from hibernation or in the period prior to hibernation.
Swarming site	Where large numbers of males and females gather during late summer to autumn. Appear to be important mating sites.
Mating sites	Where mating takes place from late summer and can continue through winter.
Maternity roost	Where female bats give birth and raise their young to independence.
Hibernation roost	Where bats may be found individually or together during winter. They have a constant cool temperature and high humidity.
Satellite roost	An alternative roost found in close proximity to the main nursery colony used by a few individual breeding females to small groups of breeding females throughout the breeding season.

Figure 54. Confirmed Roost Location (also see Figure 54)



4.6 Badger

4.6.1 The desk study returned no records for badgers within 1 km of the site.

4.6.2 No evidence of badgers was recorded during the survey.

4.7 Amphibians

- 4.7.1 The desk study returned no records for amphibians within 1 km of the site and the MAGIC desk study indicated no EPSL licenses for great crested newts within 2 km of the site.

Habitat Appraisal

- 4.7.2 The habitats present on site, especially the hedgerow and introduced shrubs offer potential habitat capable of supporting amphibians.
- 4.7.3 A Habitat Suitability Index (HSI) survey was undertaken to determine suitability of the pond for supporting great crested newt populations (Table 8). The pond just north of the site was found to be of 'Average' suitability (HSI = 0.61).

Table 8. Habitat Suitability Index Assessment

Feature	Category	Pond HSI score
SI1 - Location	Zone A - Optimal	1.00
SI2 - Pond area	275m ²	0.50
SI3 - Pond drying	Never	1.00
SI4 - Water quality	Moderate	0.33
SI4 - Shade	Up to 60%	1.00
SI6 - Fowl	Minor	0.67
SI7 - Fish	Possible	0.67
SI8 - Ponds	3 per 1 km	0.95
SI9 - Terrestrial habitat	Poor	0.33
SI10 - Macrophytes	0%	0.30
Habitat Suitability Index		0.61

- 4.7.4 Given that there are no records for great crested newts or EPSL within 1 km of the site and the HSI score for the newly created pond is 'average' it is considered that it is unlikely for great crested newts to be present at the site.

4.8 Reptiles

- 4.8.1 The desk study returned no records for reptiles within 1 km of the site.
- 4.8.2 The hedgerow and introduced shrubs offer limited potential habitat capable of supporting common reptiles.

4.9 Birds

- 4.9.1 The desk study returned one record of red kite *Milvus milvus* within 1 km of the site.
- 4.9.2 A total of 11 species of birds were recorded during the site survey, of which 8 species were probably breeding. Of these, three are Birds of Conservation Concern (BoCC) red-listed: house sparrow *Passer domesticus*, song thrush *Turdus philomelos* and yellowhammer *Emberiza citrinella*.

4.10 Invertebrates

- 4.10.1 The desk study returned one record of harlequin ladybird *Harmonia axyridis* within 1 km of the site.

- 4.10.2 The habitats present on site are common and widespread within the surrounding area and not considered to be likely to support protected and/or notable invertebrates, or a significant assemblage of invertebrates.

4.11 Plants

- 4.11.1 The desk study returned three records for plants, one for buck's-horn plantain *Plantago coronopus* and two records for fennel *Foeniculum vulgare* all within 1 km of the site.
- 4.11.2 No protected and/or notable plants were recorded during the survey.

4.12 Invasive Species

- 4.12.1 The desk study returned no records of invasive species within 1 km of the site, and no invasive species were recorded during the survey.

5 Assessment

5.1 National Policy

5.1.1 The National Planning Policy Framework (NPPF 2023) sets out the Government's planning policies for England and how these should be applied. It states that the purpose of the planning system is to contribute to the achievement of sustainable development, combining economic, social and environmental objectives, and 'protecting and enhancing our natural --- environment; including ---helping to improve biodiversity'. Within this framework, the requirements in relation to biodiversity are included within several policies. The two most relevant to individual planning decisions are Paragraphs 180 and 183, shown below:

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

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures; etc...*

183. When determining planning applications, local planning authorities should apply the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*

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

- 5.1.2 Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 places a duty on every public authority to have regard to conserving biodiversity. Section 41 of the same Act requires that the Secretary of State must publish a list of the living organisms and types of habitats that are of 'Principal Importance' for the purpose of conserving biodiversity. The Secretary of State must take steps, as appear reasonably practicable, to further the conservation of those living organisms and habitats in any list published under this section. The list of species and habitats of principal importance currently includes 943 species and 56 habitats.

5.2 Local Policy

- 5.2.1 The Local Plan is made up of several planning documents built around a Core Strategy. The Local Plan along with the NPPF sets out how to manage sustainable development in the area.
- 5.2.2 The Hinckley & Bosworth Borough Council¹⁸ within their Green Infrastructure Strategy 2020 has Theme 2: Biodiversity, which has the following Biodiversity key issues and opportunities which are relevant:
- BD2: Intensive agricultural management and the role of agri-environment schemes.
 - BD3: Habitat connectivity.

5.3 Legislation

- 5.3.1 The Wildlife and Countryside Act 1981 (as amended) provides for the notification and confirmation of Sites of Special Scientific Interest (SSSIs). These sites are identified for their flora, fauna, geological or physiographical features by Natural England. The Act also contains measures for the management of SSSIs and protection against damaging operations. Impact Risk Zones (IRZs) define zones around each site which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts ¹⁹.
- 5.3.2 The Wildlife and Countryside Act 1981 (as amended) is the primary legislation which protects native animals, plants and habitats in the UK. The Act makes it an offence to intentionally kill, injure or take any wild animal listed on Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturbing animals occupying such places. The Act also makes it an offence to intentionally pick, uproot or destroy any wild plant listed in Schedule 8, or any seed or spore attached to any such wild plant.

¹⁸ Available at: file:///Users/dave/Downloads/HBBC_GI_Strategy_reduced_size__Web_version.pdf

¹⁹ Available at: <http://www.magic.gov.uk>

- 5.3.3 European Protected Species (EPS), such as bats and great crested newts, are protected under both the Wildlife and Countryside Act 1981 (as amended) and under the Conservation of Habitats and Species Regulations 2017 (as amended). Taken together, these make it an offence to:
- a) Deliberately capture, injure or kill a EPS;
 - b) Deliberately disturb any EPS, in particular any disturbance which is likely to (i) impair their ability to survive, breed, reproduce or to rear or nurture their young; or in the case of hibernating or migratory species, to hibernate or migrate; or (ii) to affect significantly the local distribution or abundance of the species to which they belong.
 - c) To be in possession or control of any live or dead EPS or any part of, or anything derived from a EPS;
 - d) Damage or destroy a breeding site or resting place of a EPS;
 - e) Intentionally or recklessly obstruct access to any place that a EPS uses for shelter or protection;
 - f) Intentionally or recklessly disturb a EPS while it is occupying a structure or place that it uses for shelter or protection.

5.4 Impacts on Designated Sites

- 5.4.1 The section below provides an evaluation, description of potential impacts and assessment of ecological effects for designated sites relevant to the study area. This information is summarised in Table 9.

Table 9. Designated Sites Potential Impacts Summary

Is the development within 10 km of a Special Area of Conservation (SAC), Special Protection Area (SPA) or Ramsar Site?	Yes
Is the development within the Impact Risk Zone of a Site of Special Scientific Interest (SSSI)?	Yes
Is the development within 250 m of a Local Wildlife Site?	Yes
5.4.2	The closest internationally designated site to the study area is the River Mease SAC, which is approximately 9.5 km north-north-east. The site is an inland waterway designated because it supports both spined loach <i>Cobitis taenia</i> and bullhead <i>Cottus gobio</i> .
5.4.3	It is considered that there will be no impacts upon the River Mease SAC due to the distance from the site and that there is no obvious hydrological link from the site to the River Mease SAC.
5.4.4	There are no SSSI's within 2 km of the site and it is considered that the proposed redevelopment does not fall within any of the development categories for the Impact Risk Zones that would affect Birches Barn Meadows SSSI which is approximately 2.5 km northwest of the site.
5.4.5	There is a total of 12 pLWS, phLWS or cLWS, seven of which are designated hedgerows which are unlikely to be affected by the proposed development. There are further four site

which are designated for standing water which are unlikely to be affected by the proposed development as there are no hydrological links from the site to these sites. The final site is an old sand pit being 586 m north-east of the site and is also unlikely to be affected by the development.

5.5 Impacts on Habitats

Habitats Overview

- 5.5.1 The sections below provide an evaluation, description of potential impacts and assessment of ecological effects for each habitat type relevant to the study area.
- 5.5.2 56 Habitats of Principal Importance are included on the Section 41 list under the NERC Act. These are all the habitats in England that are regarded as conservation priorities in the UK Post-2010 Biodiversity Framework ²⁰.
- 5.5.3 The only Habitats of Principal Importance on site are the hedgerows.

Hedgerows and Boundaries

- 5.5.4 Unlike most other habitat types, hedgerows have specific legislation affording them protection. The Hedgerows Regulations 1997 are intended to protect 'important' countryside hedgerows from destruction or damage. A hedgerow is considered important if (a) has existed for 30 years or more; and (b) satisfies at least one of the criteria listed in Part II of Schedule 1 of the Regulations. Under the Regulations, it is against the law to remove or destroy certain hedgerows without permission from the local planning authority.
- 5.5.5 There are no expected impacts upon the hedgerow from the proposed redevelopment of the farm buildings.

Grassland

- 5.5.6 The modified grassland will be affected by the construction of a new access road to the farm. It is considered that there will be a relatively small proportion of the grassland lost due to the construction of the new access road. However, this habitat is of low value and there is similar habitat in the surrounding area. The loss of a small area of modified grassland is therefore not considered to be significant.

Broad-leaved Scattered Trees

- 5.5.7 A few 'poor' ecological condition trees are to be lost as a result of the proposed development. Given these trees are not important ecologically, and additional tree planting is provisioned across the site, it is not currently expected that there will be any significant impact on this habitat type.

Introduced Shrubs

- 5.5.8 The introduced shrubs and ivy growing immediately adjacent to and on the main farm house are highly likely to be removed to allow the redevelopment to take place. However,

²⁰ Maddock, A. (2010) UK Biodiversity Action Plan Habitat Descriptions. BRIG.

the introduced shrubs are considered to be of low ecological value.

Hard Standing

- 5.5.9 The hard standing is considered to be of low ecological value and any loss would not have any ecological impact.

Buildings

- 5.5.10 The buildings in and of themselves are of low ecological value, however they have been assessed for their potential to support roosting bats and birds.

5.6 Species Overview

- 5.6.1 The sections below provide an evaluation, description of potential impacts and assessment of ecological effects for European and nationally protected species / group, or priority species / group, relevant to the study area. The important and protected species recorded on site are summarised in Table 10.

Table 10. Protected/Priority Species Recorded on Site

European Protected Species		Notes
Bats	Yes	A day roost that is occasionally used by common pipistrelle is confirmed on site within Building 6. Habitats across the site are known to offer commuting and foraging opportunities.
Priority Species		
Birds	Yes	House Sparrow, song thrush and yellowhammer all BoCC red listed species recorded on site.

- 5.6.2 There are 943 Species of Principal Importance included on the Section 41 list under the NERC Act. These are the species found in England which are regarded as conservation priorities under the UK Post-2010 Biodiversity Framework.

5.7 Bats

- 5.7.1 Bats and their habitats are protected under the Wildlife and Countryside Act 1981 (as amended), and by the Conservation of Habitats and Species Regulations 2017 (as amended). Seven bat species are also listed as Species of Principal Importance under the provisions of the NERC Act 2006.
- 5.7.2 A bat roost may be any structure a bat uses for breeding, resting, shelter or protection. It is important to note that since bats tend to re-use the same roost sites, current legal opinion is that a bat roost is protected whether or not the bats are present at the time.
- 5.7.3 Without mitigation, the proposed works will destroy bat roosts that are present within the buildings on site, which includes a common pipistrelle day roost that is used occasionally located at Building 6.
- 5.7.4 During development, bats can be disturbed in the short-term by increased human presence at the site, increased noise or changes to the area's layout, temperature or humidity (these can affect commuting routes). In addition, changes to bat roosts can have long-term effects such as reduced roosting space or loss of roosts altogether, changed ventilation, increased human activity and / or external lighting near flight paths and commuting routes.

- 5.7.5 Disturbance to bats could result through other refurbishment works and other construction activities, such as scaffolding and re-roofing works. These impacts without mitigation, will lead to an offence under the legislation set out above.
- 5.7.6 In undertaking an evaluation of the bat interest at the site ²¹ ²², the following factors can be taken into account: the value of roost types, commuting routes and foraging habitats; the rarity of the species involved; the approximate number of bats using them; the proximity to known roosts; and the nature and complexity of landscape features. The criteria used to describe and evaluate features and habitats for bats are given in Table 11 below.

Table 11. Evaluation Criteria for Features and Habitats Utilised by Bats

Geographic Frame of Reference	Criteria
County	• Roost sites meeting Local Wildlife Site guidelines • Maternity roost of rare species • Significant hibernation roost for rare species or a species assemblage • A strategic flyway for the movement of the rarest species of bat. The habitat/ landscape feature is important for seasonal movement or is an essential flight route between roosts and/or to foraging areas. • The flight line is likely to be used by a significant proportion of a colony of a nationally rare bat species and therefore is considered integral to the maintenance of the favourable conservation status of the species in the county. • A key foraging area for some of the rarest species of bat in the county.
District	• Maternity roost of common species • Hibernation roost for small numbers of common/rare species • A feature that supports all, or most bat species recorded within the assessment site, including nationally rare species on a frequent basis. • A flight line or habitat that is close to a significant roost of a species that is widespread, but considered rarer (but not the rarest) in the county. The habitat/ feature is therefore integral to the distribution of the local bat population. • A foraging habitat frequently used by a rarer or scarce species in the county, or consistently used by low levels of a nationally rare species.
Local	• Non-maternity roost of small numbers of bats • Feeding perch of horseshoe, barbastelle or Bechstein's bats (Annex II species) • An important corridor for movement regularly used by common species of bat and/ or occasionally by nationally scarce species of bat. • Features with good habitat structure that are strategically important for movement between foraging areas of local to county importance. • Habitats and features that are important for the maintenance of local populations of species that are common and widespread. The habitat is integral for the favourable conservation status of common species in the local area.

²¹ Wray, S., Wells, D., Long, E., Mitchell-Jones, T. (2010). Valuing Bats in Ecological Impact Assessment, IEEM In-Practice pp23-25.

²² Mitchell-Jones, A. (2004). Bat Mitigation Guidelines. English Nature.

- Site**
- Individual roosting bats of common species
 - Feeding perch of common species
 - Foraging habitats that support a low diversity of common and widespread species.
 - Commuting routes regularly used by species that more readily fly in the open and are therefore not heavily dependent on linear landscape features for sheltered flight lines. The feature is therefore not considered to provide a strategic link/ route for the local bat population, but may be a navigational feature within the site.
 - Linear features that are very occasionally used by a nationally rare species, but do not constitute a regular commuting route for individual bats.
 - A linear feature that links habitats and features of District and County importance.
- 5.7.7 Given the presence of a common pipistrelle day roost, which is only occasionally used and likely only supports the one bat, the site is assessed as being of 'Site' level importance. The site is also utilised by small numbers of common bats species for commuting and foraging, including common pipistrelle, soprano pipistrelle and noctule bats.
- 5.7.8 Table 12 sets out the likely scale of impacts on the bat assemblage at the site, without the benefit of any mitigation. Some bat species accept changes to their roosts better than others – the assessment in the Table does not take into account species differences. Medium impacts in particular will depend on how carefully mitigation is designed and carried out and could range between high and low.

Table 12. Bat Impacts by Roost Type (Prior to Mitigation)

Impact type	Maternity/ major hibernation	Minor hibernation	Mating	Swarming	Night, day or feeding	Transitional	Satellite
Destruction	High	High	Medium	High	Medium	Low	Medium
Fragmentation and isolation	High	High	Medium	High	Medium	Low	Medium
Post-development interference	High	Medium	Low	Low	Low	Low	Low
Partial destruction or modification	Medium	Medium	Medium	Medium	Low	Low	Medium
Modified management, e.g. changes to light, temperature or noise which will affect bats	Medium	Medium	Medium	Medium	Low	-	-
Temporary disturbance	Low (if work avoids hibernation)	Low (if work avoids hibernation)	Low	Low	Low	-	-
Temporary destruction followed by reinstatement	-	-	Low	Low	Low	Low	Low

- 5.7.9 Ultimately, there will be an impact to bats through the destruction of a day roost located at Building 6. Mitigation will be required to ensure that roosting bats on site remain in Favourable Conservation Status.

5.8 Badger

- 5.8.1 Badgers are protected under the Badgers Act 1992. This makes it an offence to willfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it. Removal of significant areas of badger foraging habitat may also

contravene the Act, as it could be regarded as cruelty.

- 5.8.2 No badger setts or evidence of badgers were found on site, therefore, the proposed redevelopment is considered unlikely to affect badgers.

5.9 Amphibians

- 5.9.1 Great crested newts and their habitats in water and on land are protected under the Wildlife and Countryside Act 1981 (as amended), and under the Conservation of Habitats and Species Regulations 2017 (as amended). In addition, great crested newt is listed as a Species of Principal Importance under the provisions of the NERC Act 2006.
- 5.9.2 The newly created pond to the north of the Site is considered unlikely to support great crested newts and there are no records from the data search or EPSL licences, therefore great crested newts are considered unlikely to be affected by the proposed redevelopment of the farm buildings.

5.10 Reptiles

- 5.10.1 All British reptiles are protected under the Wildlife and Countryside Act 1981 (as amended). Grass snake, slow worm, common lizard and adder are protected against intentional killing or injury and against sale. In addition, all British reptiles are listed as Species of Principal Importance under the provisions of the NERC Act 2006.
- 5.10.2 The data search returned no records of reptiles within 1 km of the site but the habitats on site are considered to offer limited potential to support the commoner reptiles. Thus, the proposed redevelopment of the farm buildings is considered to have a potential to impact reptiles.

5.11 Birds

- 5.11.1 All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs. In addition to this, for some rarer species (listed on Schedule 1 of the Act), it is an offence to intentionally or recklessly disturb them while they are nest building or at or near a nest with eggs or young, or to disturb the dependent young of such a bird.
- 5.11.2 The Birds of Conservation Concern initiative ²³ publishes lists of Red and Amber species. Birds on the Red list are of high conservation concern within the UK, while those on the Amber list are of medium conservation concern. In addition, a number of bird species are also included as Species of Principal Importance under the provisions of the NERC Act 2006.
- 5.11.3 The redevelopment of the farm buildings has the potential to disturb nesting birds within

²³ Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D. and Win, I. (2021) The status of our bird populations: the fifth Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. *British Birds* 114:723-747.

or on them e.g. there is potential for barn owls to roost and/or breed within the buildings.

- 5.11.4 Site clearance or construction works, if undertaken during the bird breeding season, could potentially damage active nests and result in an offence under the legislation. Impacts to consider include damaging or removing breeding sites, disturbing birds and their young, removing vegetation or changing habitats. These impacts could result in the nest being disturbed and thus abandoned, causing any eggs and/or young to die.
- 5.11.5 It is recommended that any site clearance works are undertaken outside of the bird breeding season, which is considered to be between March and September inclusive. If this cannot be done, then a nesting bird check should be undertaken by a suitably experienced ecologist prior to the development. Any active nest must remain in situ with a suitable buffer in which no works can be done, until all the young have fledged and ceased to return to the nest

5.12 Invertebrates

- 5.12.1 It is considered that the small size of the site, along with the limited range of plant species present, is unlikely to support any protected and/or notable invertebrates. The proposed development is unlikely to have any adverse impacts upon invertebrates.

5.13 Plants

- 5.13.1 It is considered that the proposed development is unlikely to have any impact upon protected and/or notable plants.

5.14 Invasive Species

- 5.14.1 No invasive species were recorded during the survey.

6 Recommendations

6.1 Introduction

- 6.1.1 The recommendations below for further survey and mitigation are based on the results and assessment set out above, taking into account standard published guidance from a number of sources (as referenced through the report), including the GOV.UK information on Planning and Development ²⁴ ²⁵.
- 6.1.2 Individual Local Planning Authorities have their own requirements for ecological information to support the validation and assessment of planning applications. These requirements often vary widely between Authorities and sometimes do not accord with national guidance- including that issued by the statutory nature conservation organisations. As a result we have applied the more consistent national guidance to our survey and mitigation recommendations set out below.

6.2 Further Survey

- 6.2.1 This habitat survey, bat roost appraisal and associated nocturnal surveys have provided a baseline of ecological information to describe the main characteristics of the proposed development site. To fully assess the potential ecological impacts of the proposed development, further survey has been recommended for habitats and species.
- 6.2.2 The methods entailed in surveying these habitats and species are outlined below.
- 6.2.3 In relation to bats, the survey work to date has allowed an appropriate impact assessment to be made, and any further survey for bats is not considered necessary at this stage.
- 6.2.4 If works are to be delayed for a significant period of time, further survey may be required to update survey information for an EPS license application if the data is in excess of two years old.

Habitat Surveys

- 6.2.5 If the redevelopment plans change such that any hedgerow is affected then it is recommended that a hedgerow survey²⁶ is undertaken.

Badgers

- 6.2.6 If the redevelopment plans change such that areas outside of the farm buildings be included within the development, then an update badger survey should be undertaken in accordance with published guidance²⁷, at the site and on accessible areas up to 50m beyond, in order to check for nearby badger setts or other evidence.

²⁴ <https://www.gov.uk/topic/planning-development/protected-sites-species>

²⁵ <https://www.gov.uk/guidance/natural-environment#biodiversity-and-ecosystems>

²⁶ Bickmore CJ (2007). Hedgerow Survey Handbook: A standard procedure for local surveys in the UK, 2nd edition. Defra, London.

²⁷ Harris, S, Cresswell, P & Jeffries, D. (1989). Surveying Badgers. An occasional publication of the Mammal Society – No 9. Mammal Society, London.

Birds

- 6.2.7 No barn owls have been recorded during the nocturnal bat surveys and therefore it is not expected that barn owls are using the buildings for roosting and/or nesting and no further surveys are required.

6.3 Mitigation Measures

Bats

- 6.3.1 One common pipistrelle day roost that is occasionally used has been identified on the site, that will likely be adversely impacted by works, with the scale of impact dependent on the proposed works. As such, a comprehensive mitigation strategy will be required to maintain the Favourable Conservation Status of this bat species.
- 6.3.2 Following completion of the bat surveys within the site, it has been confirmed that a Natural England European Protected Species (EPS) Bat Licence will be required prior to legally disturb and modify these roosts during any proposed works.
- 6.3.3 To avoid an impact, a mitigation strategy will be put in place to facilitate the work. The mitigation strategy will need to adhere to the English Nature (now Natural England) Bat Mitigation Guidelines²⁸. It is therefore likely to require the following core components:
- Appropriately timing any work that may impact upon a bat roost to avoid the most sensitive period for the status of the roost;
 - Any invasive redevelopment work in the area of the roost should only proceed if attended by a suitably qualified ecologist;
 - Alternative bat roost habitat should be provided before and during works for any bats unexpectedly encountered during licensed redevelopment.
- 6.3.4 Where bat roosts may be damaged or destroyed, the mitigation required depends on the value of the roost being affected, as indicated in Table 13 below.

Table 13. Roost Status and Mitigation Requirements

Roost status	Mitigation/compensation requirement
Low	Flexibility over provision of bat- boxes, access to new buildings etc. No conditions about timing or monitoring. Provision of new roost facilities where possible. Need not be exactly like-for-like, but should be suitable, based on species' requirements. Minimal timing constraints or monitoring requirements.
	Timing constraints. Like-for-like replacement as a minimum. No destruction of former roost until replacement completed and usage demonstrated. Monitoring for at least 2 years.
High	Avoid interference with existing roosts or seek improved roost provision. Timing constraints. No destruction of former roost until replacement completed and significant usage demonstrated. Monitoring for as long as possible.

- 6.3.5 Due to the bat roost status of the roosts being considered to be low, there is flexibility for mitigation/ compensation. Common pipistrelle bats are generally crevice dwelling species and so if there are proposed building modifications that will affect their roosts, this

²⁸ Mitchell-Jones, A. (2004). Bat Mitigation Guidelines. English Nature.

species can be mitigated for with a number of suitable options.

- 6.3.6 For the maintenance of roosts within a development, it is preferable to incorporate existing roosts into refurbished buildings, rather than using bat boxes, which have a limited lifespan and are less attractive to roosting bats. For this mitigation method, the roost should be kept at the appropriate size and type for the species of bat, with roost entrances kept in their original positions wherever possible. If the development proposals make this form of mitigation option impossible (i.e. due to demolition of the building), other methods will need to be used, such as the exclusion of known roosts followed by the creation of alternative roosting opportunities.
- 6.3.7 Other mitigation and compensation methods for impacts on bats may include the following:
- Changing work methods or timing to avoid bats. For example, work carried out in winter months will remove the risk of disturbing bats through the re-roofing works and scaffolding potentially blocking entrances.
 - Creating, restoring or improving roosts.
 - Monitoring the roost status after the development.
 - Managing and maintaining habitats in the long-term.
- 6.3.8 If any new lighting is provisioned, then the lighting scheme will need to be considered to avoid an adverse impact on roosting and foraging bats. This should include low levels or no additional lighting to be included. Low-level downward-directional lighting should be considered to avoid light spill, especially at the west and east of the site where it borders the gardens, grasslands and hedgerows where foraging activity has been observed. Other measures could include lighting to only be turned on when required.

Reptiles

- 6.3.9 It is recommended that any vegetation clearance works required around the farm buildings are undertaken during the active period for reptiles which is May to September this should allow any reptiles that may be present a chance to escape into the surround habitats.
- 6.3.10 It is recommended that vegetation clearance works are undertaken in two stages, firstly to approximately 500 mm above ground level with all material being moved off site followed by the final removal of the remaining vegetation. This will be undertaken under the supervision of a suitably experienced ecologist.

Birds

- 6.3.11 It is recommended that any building works are undertaken outside of the bird breeding season, which is considered to be between March and September inclusive. Redevelopment of buildings should also be undertaken outside of the bird breeding season where possible and if this cannot be done then a nesting bird check should be undertaken by a suitably experienced ecologist prior to the development. Any active nest must remain in situ with a suitable buffer in which no works can be done until all the

young have fledged and cease to return to the nest.

6.4 Recommendations Summary

- 6.4.1 In summary, it is recommended that the actions set out in Table 14 below are undertaken in order to ensure that ecological impacts are fully assessed and that appropriate mitigation is put in place. These actions will help to ensure that the proposed development will comply with planning policy and environmental legislation.

Table 14. Recommendations Checklist

Feature/ receptor	Task	Timing	✓
Hedgerows	Any removal outside the bird breeding season	October - February	
Buildings	Any removal outside the bird breeding season	October - February	
Birds	Barn owl building assessment	August to October	
Bats	Secure EPS mitigation license	Anytime	

Appendix 1: Desk Study

Common Name	Scientific Name	Conservation Status	Latest Record
Red kite	<i>Milvus milvus</i>	WCA1	2018
Buck's-horn Plantain	<i>Plantago coronopus</i>	LRPR	2019
Fennel	<i>Foeniculum vulgare</i>	LRPR	2020

Key	
WCA1	Listed in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended)
LRPR	Leicestershire and Rutland Priority Species

Appendix 2: Habitat Plan



Legend

 Site Boundary

HABITATS

 Buildings

 Developed land; sealed surface

 Modified grassland

HEDGEROWS

 Line of trees

 Native hedgerow with trees

INDIVIDUAL TREES

 Existing Large Urban Tree

 Existing Medium Urban Tree

 Existing Small Urban Tree

A	26/02/2024	JW	Baseline conditions as reflected in September 2023
Rev	Date	Drawn by	Notes

Project Name: Frog Hall Farm
Project Number: 1486.03
Project Location: Crow Lane, Sheepy Magna

Plan Title: UK Habitat Classification Baseline Habitat Plan

Client: Helen Fisher

Map scale: 1 : 1,400 @A4

Drawn by: JW

26/02/2024

bakerconsultants
ECOLOGYDEVELOPMENTINNOVATION

Appendix 3: Target Notes

No.	Description
1	Modified grassland
2	Broadleaved scattered trees
3	Species-poor hedgerow with trees
4	Plantation scattered mixed immature woodland that is no longer present in 2023, containing leyland cypress <i>Cupressus x leylandii</i> , poplar <i>Populus</i> sp., ash <i>Fraxinus excelsior</i> with a shrub layer containing hawthorn <i>Crataegus monogyna</i> and dog-rose <i>Rosa canina</i>
5	Introduced shrubs
6	Pond (newly created off site)

Appendix 4: Surveyor Locations



Legend

Site Boundary

Buildings

Surveyor positions

12/05/2022

Camera locations

12/05/2022

Plan name: Frog Hall Farm, 12/05/2022 Bat Survey Methodology Plan

Project name & number: Frog Hall Farm, 1486.01

Drawn by: JW

Date: 06/09/2022

bakerconsultants
ECOLOGY DESIGN INNOVATION



Legend

Site Boundary

Buildings

Surveyor positions

● 23/06/2022

Camera locations

■ 23/06/2022

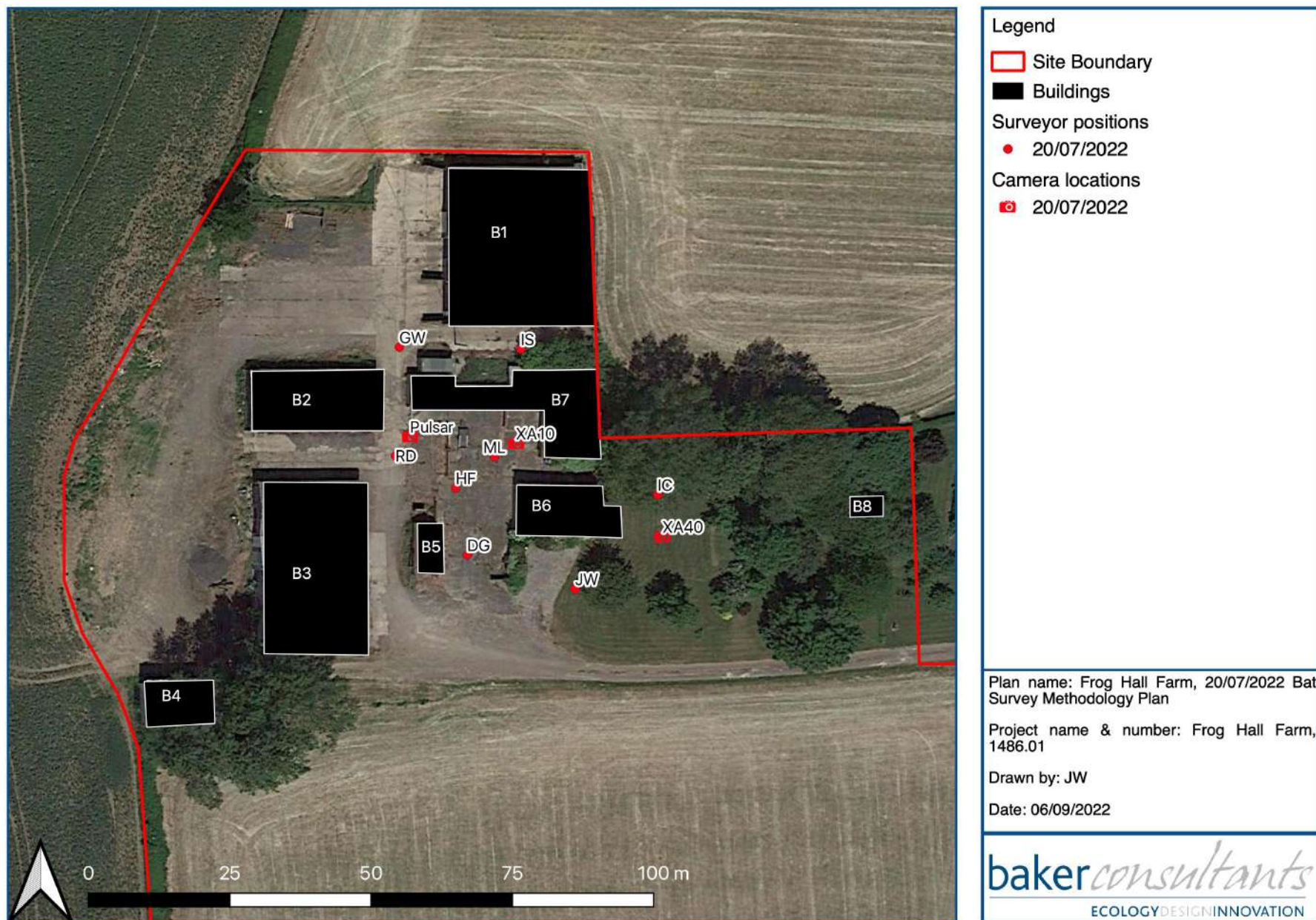
Plan name: Frog Hall Farm, 23/06/2022 Bat Survey Methodology Plan

Project name & number: Frog Hall Farm, 1486.01

Drawn by: JW

Date: 06/09/2022

bakerconsultants
ECOLOGY DESIGN INNOVATION





Legend

Site Boundary

Buildings

Surveyor positions

● 24/08/2022

Camera locations

📷 24/08/2022

Plan name: Frog Hall Farm, 24/08/2022 Bat Survey Methodology Plan

Project name & number: Frog Hall Farm, 1486.01

Drawn by: JW

Date: 06/09/2022

bakerconsultants
ECOLOGY DESIGN INNOVATION



baker*consultants*