



Land Southwest of Sutton Lane, Market Bosworth
Preliminary Ecological Appraisal Report

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1. Introduction

Background

- 1.1. Elton Ecology Ltd was commissioned by Mr Adam Tarver in 2022 to conduct a Preliminary Ecological Appraisal (PEA), Preliminary Bat Roost Assessment, and subsequent Nocturnal Bat Survey of the site known as Land Southwest of Sutton Lane, Market Bosworth.
- 1.2. Due to time elapsed since the original survey, Elton Ecology Ltd was subsequently commissioned by Mr Adam Tarver in 2024 to conduct an updated UKHab habitat survey, extended to include consideration of protected/ notable species. It is considered there were no significant changes on site relative to the 2022 baseline. The present report is amended to include the 2024 survey results and additional comment raised by the ecology consultee.

Relevant Documents

- 1.3. The present assessment has been informed by the following documents:
 - Breach House, Landscape Strategy – Planning – October 2023 (Studio 31 Ltd, 2023)
 - Breach House Presentation Design 01 | Master Plan (Studio 31 Ltd, 14/06/2023). Drawing Ref: S31 22199 D04. Rev 4.
 - A247 - Breach House - Proposed Block Plan. Drawing Number 0101. Rev A (Studio Bark, Sep 2023)
 - Sutton Lane Market Bosworth, Topographic Site Survey (SV Surveying Ltd, June 2022) (Drawing Number 22206-22-02)
 - Land South-west of Sutton Lane, Market Bosworth, Tree Survey (RJ Tree Services Ltd, July 2022) (Ref: TS-SuttonLne_MB/01/RevB)
 - Land South-west of Sutton Lane, Market Bosworth, Tree Survey & Constraints Plan 01/RevB (RJ Tree Services Ltd, July 2022)

Site description

- 1.4. The site is located to the southwest of Sutton Lane, Market Bosworth, Leicestershire, CV13 0LB (Figure 1: Site Location Plan) (central OS grid reference: SK 40695 01524). The site comprises two grassland field compartments bound by hedgerows, fences, woodland and a line of mature trees. A watercourse, Sutton Brook, is present at the southeast and southwest site boundary, with further watercourses at the west site boundary and associated with the hedgerow through the centre of the site. Sutton Lane lies adjacent to the northeast site boundary and served the access to the site. A barn is present in the north of the site.

Development Proposals

- 1.5. The development proposals include the creation of a new 'T-shaped' dwelling barn in the southwest of the field compartment, set back from Sutton Lane, including courtyards and vehicular parking curtilage. The dwelling will be served by an access lane from Sutton Lane off the north site boundary.
- 1.6. Extensive habitat creation is proposed in the landscape design to include garden space, native species hedgerow planting, woodland planting, meadow enhancement, and parkland trees.

Report Purpose and Scope

1.7. With reference to the Development Proposals, the purpose and scope of the present report is to:

- Identify key ecological constraints associated with the project.
- Identify avoidance, mitigation or compensation measures likely to be required in accordance with the mitigation hierarchy.
- Identify any additional surveys that may be required to inform the above.
- Identify likely opportunities to deliver ecological enhancement.

Planning Policy and Legislation

1.8. A summary of biodiversity planning policies and wildlife legislation relevant to the site is provided in Appendix 3: Planning Policy and Legislation Summary. The relevant planning policy and legislation includes:

- National Planning Policy Framework 2021.
- Government Circular ODPM 06/05 Biodiversity and Geological Conservation.
- The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.
- The Wildlife and Countryside Act 1981 (as amended).
- Natural Environment and Rural Communities (NERC) Act 2006 – Habitats and species of principal importance.
- The Hedgerow Regulations 1997;
- Protection of Badgers Act 1992; and
- The Wild Mammals (Protection) Act 1996 (as amended).

1.9. A summary of the key local planning policy and other relevant documents is provided in Table 1 below.

Table 1: Key Local Planning Policy and Relevant Documents

Document	Relevance
Hinckley & Bosworth Borough Council Local Development Framework Core Strategy Adopted December 2009	Sets a Natural Environment and Cultural Assets objective to maintain and enhance areas of biodiversity importance. Policy 19, 20, 21, 22.
Site Allocations and Development Management Policies DPD	DM6 – Enhancement of Biodiversity and Geological Interest <i>Proposals where the primary objective is to conserve or enhance biodiversity or geological interest will be permitted where they comply with other relevant policies in the plan.</i> <i>On site features should be retained, buffered and managed favourably to maintain their ecological value, connectivity and functionality in the long-term.</i>

	<i>The removal or damage of such features shall only be acceptable where it can be demonstrated the proposal will result in no net loss of biodiversity and where the integrity of local ecological networks can be secured.</i>
Leicester, Leicestershire & Rutland Biodiversity Action Plan	Sets priority habitat and species action plans for the area. Local BAP habitats include: • Broad-leaved & Wet Woodland • Lowland woodland pasture and parkland • Hedgerows • Mature Trees • Eutrophic Standing Water (including Field Ponds) • Floodplain wetland Local BAP Species include: • Barn owl • Bats • Otter, Water vole, White clawed-crayfish

2. Methodology

Personnel

- 2.1. The initial Extended UKHab Survey, Preliminary Bat Roost Assessment (PBRA) & Nesting Bird Survey, and Nocturnal Bat Survey were led by TE BSc (Hons), MCIEEM. TE has professional experience in ecological consultancy since 2013, including Protected Species Survey, Extended Phase 1 Habitat Survey and report writing. TE is trained in a wide variety of protected species survey, including holding Natural England class licences for bats (Level 2 Licence CL18), barn owl *Tyto alba*, great crested newt *Triturus cristatus* (level 1), and dormice *Muscardinus avellanarius* (level 1). TE is trained in botanical species identification.
- 2.2. The initial Extended UKHab Survey, Preliminary Bat Roost Assessment (PBRA) & Nesting Bird Survey was assisted by Consultant Ecologist PH BSc (Hons), MSc. PH holds a Natural England Level 1 Bat Licence (CL17) (reference number: 2021-54491-CLS-CLS) and a Natural England Level 1 Great Crested Newt Licence (CL08) (reference number: 2022-10461-CL08-GCN) and a botanical Field Identification Skills Certificate (FISC) Level 3. PH has attended formal training in UKHab survey, Biodiversity Net Gain, and botanical species identification. PH is a Qualifying member of CIEEM and is experienced in assisting and undertaking ecology surveys, GIS mapping, and report writing.
- 2.3. The Nocturnal Bat Survey was assisted by Assistant Ecologists CM BSc (Hons), MSc and EM BSc (Hons). CM and EM are experienced in assisting and undertaking nocturnal bat surveys.
- 2.4. The updated site walkover undertaken in 2024 was led by Consultant Ecologist PH BSc (Hons), MSc (see above for relevant training and competencies), and assisted by Assistant Ecologist ES BSc (Hons), MSc. ES is experienced in assisting and undertaking ecology surveys, GIS mapping and report writing.

Desk Study

- 2.5. The sources of information and study areas of the desk study data are provided in Table 2.

Table 2: Desk study sources and areas

Feature		Study Area	Data Source
Designated sites of nature conservation	International (e.g. Special Area of Conservation, Special Protection Area, and Ramsar)	5 km radius of the site boundary	UK Government MAGIC ¹ website
	National (e.g. Site of Special Scientific Interest (SSSI), SSSI Impact Risk Zones (SSSI IRZ)), Local Nature Reserves, National Nature Reserves	2 km radius of the site boundary	
Non-Statutory Designated Sites, Protected/ Notable Species & Invasive Non-Native Species		2 km radius of the centre of the site	Leicestershire and Rutland Environmental Records Centre (LRERC)
Granted Natural England Bat Mitigation Licences		2 km radius of the site boundary	UK Government MAGIC website

¹ Multi-agency Geographic Information for the Countryside: www.magic.gov.uk.

Feature	Study Area	Data Source
The site in the context of habitat connectivity to the surrounding landscape	2 km radius of the site boundary	Satellite and OS map data
Pond Search	500m	Satellite and OS map data

Field Survey - Habitats

Extended UKHab Habitat Survey

- 2.6. The UKHab Habitat survey was carried out on the 27th June 2022. The study area included both the red line and blue line boundaries (Figure 1: Site Location Plan) and a 30m radius for evidence of mobile protected species such as badger, access permitting. Weather conditions were appropriate for field survey with no rain and good visibility.
- 2.7. The site was walked over, and the habitats present classified based on key indicator botanical species present with reference to best practice guidelines from UKHab Ltd (Butcher et al, 2020).
- 2.8. The updated site walkover was carried out on the 5th January 2024.

Hedgerow Survey

- 2.9. During the UKHab Habitat Survey, the hedgerow(s) at the site were assessed for their importance under the Hedgerow Regulations 1997 and determined as either species poor (fewer than five woody species per 30m length) or species rich (greater than five woody species per 30m length). Notes were also made on other features of the hedgerow such as height and width, ground flora, standard trees, percentage gaps, structure, and connectivity.
- 2.10. A Hedgerow is defined as any boundary line of trees or shrubs over 20m long and less than 5m wide, and where any gaps between the trees or shrub species are less than 20m long. Any bank, wall, ditch, or tree within 2m of the centre of the Hedgerow is considered to be part of this habitat, as is the herbaceous vegetation within 2m of the centre.

Field Survey – Protected/ Notable Species

- 2.11. The UKHab Habitat Survey was extended to include an assessment for Natural Environment and Rural Communities Act (2006) Section 41 Habitats of Principal Importance (HPI) and of the sites potential to be used by protected or notable species as described in the sections below.

Amphibians (Including Great Crested Newt)

- 2.12. The habitats at the site were assessed for their suitability to support amphibians, including a search of the site for ponds and suitable terrestrial habitat. The desk study included a search of ponds within a 500m radius of the site.
- 2.13. The HSI was carried out with reference to Oldham *et al.*, (2000), and as refined by ARG UK, (2010). The HSI provides a numerical index between 0 and 1, whereby 0 indicates unsuitable habitat and 1 indicates optimal habitat. Ten habitat variables 'Suitability Indices (SI)' are assessed, which are known to affect the suitability of a pond for the species, as follows:
- Geographic Location (SI₁)
 - Pond area (SI₂)
 - Permanence (SI₃)
 - Water Quality (SI₄)

- Shade (SI₅)
- Waterfowl (SI₆)
- Fish (SI₇)
- Pond Count (SI₈)
- Terrestrial habitat (SI₉)
- Macrophytes (SI₁₀)

2.14. The habitat variables are each assigned a numerical score. The HSI score is then a geometric mean of the ten suitability indices: $HSI = (SI_1 \times SI_2 \times SI_3 \times SI_4 \times SI_5 \times SI_6 \times SI_7 \times SI_8 \times SI_9 \times SI_{10})^{1/10}$

2.15. The HSI score result (i.e. the numerical index between 0 and 1) is categorised according to the pond suitability scale presented in Table 3.

Table 3: Pond Suitability Scale for Habitat Suitability Index (HSI)

HSI Score	Pond Suitability
<0.5	Poor
0.5-0.59	Below Average
0.6-0.69	Average
0.7-0.79	Good
>0.8	Excellent

2.16. There is a general positive correlation between HSI scores and GCN presence. HSI scores are useful as a guide, however this relationship is not sufficiently strong to determine GCN presence/ likely absence.

Badger

2.17. The badger walkover survey included a search for evidence of badger at the site, such as sett entrances (normally 25 to 35cm wide and shaped like a 'D' on its flat edge), large spoil heaps outside sett entrances, bedding, footprints, mammal paths, latrines, hairs, scratching posts, and signs of digging for food or 'snuffle holes'. The survey included a search of the site and 30m radius (access permitting) for badger setts.

Bats – Ground Level Tree Assessment

2.18. The preliminary Ground Level Tree Assessment (GLTA) was carried out with reference to best practice industry guidelines (Collins, 2023). The study area included all trees within the site.

2.19. The survey included a surveyor assessing the tree(s) from ground level aided by binoculars, noting potential bat entry/exit points, potential roosting features (PRFs), and any evidence of bats. The trees were graded for their suitability to support roosting bats, which will inform the need for further survey effort, if required, such as a potential roost feature (PRF) inspection via rope and harness access and/or nocturnal survey.

2.20. The suitability of the trees for roosting bats was then categorised with reference to best practice industry guidelines (Collins, 2023) (Table 4) as either none, further assessment required (FAR), potential roosting features present for individual bats (PRF-I), or potential roosting features present for multiple bats (PRF-M), which informs the need for further survey effort to establish the presence/ likely absence of roosting bats.

Table 4: Guidelines for Assessing the Potential Bat Roosting Suitability of Trees (Adapted from Collins, (2023))

Suitability	Description of Trees
None	No features likely to be used by roosting bats or highly unlikely features are present. An absence of accessible voids, cracks and crevices.
FAR	Further assessment is required to determine if features likely to be used by roosting bats are present.
PRF-I	The PRF is suitable for individual or small numbers of bats due to lack of size or suitable surrounding landscape.
PRF-M	The PRF is suitable for multiple bats and may be used by a maternity colony.

Bats - Preliminary Bat Roost Assessment

- 2.21. The Preliminary Bat Roost Assessment (PBRA) was carried out on the 27th June 2022 with reference to best practice guidelines (Collins, 2016).
- 2.22. The survey involved a Natural England bat licenced surveyor making a detailed external and internal inspection of the building(s) on-site, compiling information on potential bat entry/exit points, roosting features, and any evidence of bats found (such as actual bat sightings, droppings, urine staining and fur-oil staining). The nomenclature used for bat species lists broadly follows that of Dietz and Kiefer, (2018).
- 2.23. The PBRA was aided as required by binoculars, a high-powered torch, and an endoscope to view features on the building and/ or search accessible cracks and crevices for the presence of bats where required.
- 2.24. The suitability of the building(s) for roosting bats was categorised with reference to best practice industry guidelines (Collins, 2016) (Table 5: Guidelines for Assessing the Potential Bat Roosting Suitability of Structures and habitats) as either negligible, low, moderate, or high. Suitability grading of buildings requires consideration of the potential roosting features on the building within the context of the suitability of the surrounding landscape to support commuting and foraging bats.

Table 5: Guidelines for Assessing the Potential Bat Roosting Suitability of Structures and habitats (Adapted from Collins, (2023))

Suitability	Description of Roosting Habitats	Commuting and Foraging Habitats
Negligible	Negligible features likely to be used by roosting bats. An absence of accessible voids, cracks and crevices.	Negligible features likely to be used by commuting or foraging bats. A lack of landscape habitat features.
Low	A structure or tree with a potential roost site which could be used by individual bats, which does not provide enough space, shelter, protection, or appropriate conditions (i.e. temperature, humidity, height above ground level, light levels, disturbance) or suitable surrounding habitat to be used on a regular basis by larger numbers of bats.	Habitat that could be used by small numbers of commuting bats such as a hedgerow with gaps or unvegetated stream, but isolated (i.e. not very well connected to the surrounding landscape by habitat). Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.

Suitability	Description of Roosting Habitats	Commuting and Foraging Habitats
Moderate	A structure or tree with a potential roost site that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but is unlikely to support a roost of high conservation status (such as a maternity colony).	Continuous habitat connected to the wider landscape that could be used by commuting bats such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions, and surrounding habitat.	Continuous high-quality habitat that is well connected to the wider landscape likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees, and woodland edge. Continuous high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Sites which are close to and connected to known roosts.

Bats - Nocturnal Bat Survey

- 2.25. The survey(s) were carried out with reference to best practice guidelines (Collins, 2016). The surveyors were positioned to view the potential bat exit/ entry points on the building, with an objective to identify any bats emerging from/ re-entering the building (Figure 5: Surveyor Location Plan).
- 2.26. Surveyors noted bats seen and/or echolocation heard recording the time, location, number of bats, behaviour, flight path, and species (where possible). Each surveyor was assisted with a Titley Scientific Anabat Walkabout Active Bat Detector, or a Wildlife Acoustics Echo Meter Touch 2 bat detector, recording bat echolocation calls which were later subject to desktop analysis via the Anabat Insight and Kaleidoscope analysis software. The nomenclature used for bat species lists broadly follows that of Dietz and Kiefer (2018).
- 2.27. Surveys were aided by a Canon XA11 and Canon XA40 Full HD professional video cameras in Infrared Mode (Figure 5: Surveyor Location Plan), supplemented by external Infra-Red lighting including Nightfox XB5 850nm infrared LED flashlights and Nightfox XB10 and/or XB5 850nm infrared LED flashlights as required. Video footage was recorded to an SD card, which was later subject to desktop analysis as required.
- 2.28. The nocturnal bat survey timings and weather conditions are presented in Tables 6 & 7.

Table 6: Nocturnal Bat Survey Occasions Summary

Date	Building	Dusk/ Dawn	Sunrise/ Sunset	Start Time	End Time
23/09/2022	B1a-B1c	Dusk	19:02	18:47	20:32

Table 7: Nocturnal Bat Survey Weather Conditions

Date	Building	Dusk/ Dawn	Air Temperature (°C) (Start/ End)	Cloud Cover (%) (Start/ End)	Wind (Beaufort) (Start/ End)	Rain (Start/ End)

23/09/2022	B1a-B1c	Dusk	14/12	75/50	1/ 1	0/ 0
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Bats – Commuting and Foraging

- 2.29. With reference to Table 5, an assessment of the habitats at the site to support commuting and foraging bats was made, within the context of habitat connectivity to features in the wider landscape. The site was assessed as either negligible, low, moderate, or high suitability for commuting and foraging bats.

Birds

- 2.30. An assessment of the suitability of the site to support breeding, migrating and wintering birds was made, and the site was searched where accessible and practical to do so for active or historical bird nests.

Hazel Dormouse

- 2.31. An assessment of the suitability of the habitats at the site to support hazel dormouse was made with reference to Bright et al., (2006), and any incidental sightings of dormouse evidence recorded where encountered.
- 2.32. Factors increasing suitability for dormouse include habitat features within the known range for the species such as woodland, coppice, and hedgerows with good landscape connectivity and including a diverse mix of trees and shrub species of value to dormouse such as hazel, oak, honeysuckle, and bramble.

Terrestrial Invertebrates

- 2.33. An assessment was made of the suitability of the habitats at the site to support notable assemblages of invertebrates, such as vegetation structure, vegetation species diversity, deadwood, and host plants/ animals.

Reptiles

- 2.34. An assessment was made of the suitability of the habitats at the site for reptiles. Optimal habitat for reptiles includes rough grassland, moorland, heathland, woodland and scrub, sub-urban areas such as railway embankments, golf courses and allotments, and sympathetically managed farmland. Favourable features for reptiles include sunny south facing banks for basking, ecotones such as the transition between grassland and scrub, and hibernacula such as stone, log, and brash piles.

Otter

- 2.35. An assessment of the habitats at the site to support otter was made, and a search for evidence of otter carried out with reference to Chanin P (2003a), Chanin P (2003b) and Chanin P (2005). The survey included a search for:
- Holts, including any large cavities (or tunnels) in the banks of the stream, cavities beneath the root-plates of large trees, cavities in boulders, and man-made structures such as disused drainage pipes.
 - Couches, typically an above-ground nest-like structure used as a resting place which can sometimes consist of no more than an area of flattened grass or earth.
 - Footprints in sand or soft mud comprising five toes with a pad. In soft ground claw marks and webs between toes may also be evident.
 - Mammal paths whereby otters habitually use the same routes within their territory to access aquatic habitat, so the paths are usually worn leading down the banks to the river and may have a 'slide' at the end of well-worn mud.

- Spraints, found in prominent locations adjacent or along a river such as on tree stumps, large rocks, and ledges under bridges. Spraints are typically made up of remnants of otter prey items such as fish bones and scales, small mammal fur, feathers, and insect fragments. Fresh spraint is usually black, tarry and sticky. It has a distinctive sweet-musky odour.
- Anal jelly, a secretion that smells strongly and can vary in colour from pale brown, greenish to amber.
- Other signs – for example, remains of prey items such as fish, crabs or skinned amphibians.

Water Vole

2.36. With reference to Dean, et al., (2016), Strachan et al. (2011), and Natural England (2008) an initial assessment of the habitats at site was carried out for the suitability to support water vole during the Extended UKHab Habitat Survey, including making observations on:

- Bank profile.
- Shore/bank substrate (suitability for burrowing).
- Water depth and likely frequency and height of water level changed.
- Habitat type including shading from trees/ shrubs.
- Bankside vegetation type and density.
- In – channel vegetation type and density.
- Land use, management, and disturbance level.

2.37. Evidence of water vole was sought during the initial habitat assessment including actual water vole sightings, burrows, runs in vegetation, latrines, runs, feeding stations, nests, and footprints.

Aquatic Invertebrates (including White-clawed Crayfish)

2.38. With reference to Peay, S. (2002), Peay, S. (2003), and Holdich, D. (2003) an initial assessment of the suitability of habitats present at the site to support white clawed crayfish *Austropotamobius pallipes* was undertaken during the Extended UKHab Habitat Survey and Desk Study, including making observations on favourable and unfavourable habitat conditions for white clawed crayfish (see Table 8).

2.39. Table 8: Favourable and unfavourable Habitat Features for White-Clawed Crayfish (adapted from Peay, S. (2002))

Favourable	Unfavourable
Water quality • High pH (preferably 6.8-8.6). • Base-rich/alkaline (usually >5ppm Ca). • Well aerated, dissolved oxygen >60% saturated (90 percentile), usually higher. • Unpolluted or largely so; may be slight nutrient enrichment from organic pollution (Grade A to C only).	Water quality • low pH <pH6.0, base-poor, low alkalinity. • subject to acid pulses from moorland runoff. • Dissolved oxygen <60% saturated (90 percentile). • Ochreous drainage from peatland drainage or mine water. • Brackish or saline conditions. • Pollution from sheep dips or other polluting discharges.
Flow • Slow-flowing glides (including canals). • Sheltered parts of riffles, • Slack margins, pools, on-stream ponds. • Still waterbodies (lakes, old mineral workings).	Flow • Falls and cascades. • Fast riffles. • Flumes (e.g. in culverts). • Other strong currents.
Habitat – substrate • suitable habitat for refuges, i.e; Submerged Stones, tree roots, wood debris, undercut banks big enough for the size of crayfish (strongly prefer	Habitat – substrate • Bare sand, gravel, pebble or un-fissured bedrock (unfavourable for refuges) • Uniform clay channels.

boulders >25cm, usually over 15 cm in size, rarely <64mm); stable (i.e. less likely to be moved in floods); free of siltation, aerated and in suitable condition • Boulders and large cobble, especially if relatively flat, with cavities beneath. • Cobble and boulder riffles in chalk or gravel streams. • Brick and other rubble in streams and still waterbodies. • Submerged, un-mortared stone which protects banks from erosion; facing walls or rip-rap stone reinforcement. • Small stone weirs/flow deflectors. • Crevices in old or damaged, submerged brickwork, stonework, cracked concrete, or old wooden structures. • Undercut earth banks or steep to vertical submerged banks.	• Pebble or cobble shingle regularly exposed by changing river levels. • Gabion baskets filled with pebble-sized stone (<6cm), for bank reinforcement. • Areas of armoured bed where the substrate is compacted by the flow. • Soft silt, especially loosely settled organic fines. • Steel sheet-piling or concrete walls for bank reinforcement. • Sloping banks without any vertical or undercut areas below water level. • a lot of small stone (small cobble and pebble). • Isolated refuges
Habitat – plant material • Submerged tree roots. • Overhanging trees or branches. • Debris dams. • Leaf packs. • Stands of submerged aquatic plants (if not too dense), e.g. aquatic mosses, water crowfoot. • Bank reinforcement by faggots (bundles of small woody material), or woven willow (like basket-weave, but may be growing).	Habitat – plant material • Dense, filamentous algae. • Regularly exposed marginal vegetation. • Dense, silted up stands of emergent vegetation leading to loss of open water.
Food supply • leaf litter from trees and other plants, after it has soaked for several days; • aquatic macrophytes, including filamentous algae; • any aquatic invertebrates slow enough to be caught; • other crayfish; • dead fish or other animal remains, and • small live fish (occasionally).	Barriers to dispersal such as: • a major weir, dam or waterfall; • a length of highly modified channel lacking in suitable habitat; • a fast-flowing flume or culvert; • a dried-up section of channel, or • poor water quality in a reach.
	Alien Crayfish • competition from alien crayfish. • disease carried by alien crayfish.

Other Mammals

- 2.40. An assessment of the site to support other mammals including brown hare, harvest mouse, and hedgehog was also made.

Invasive Species

- 2.41. Invasive plant species such as those listed on Schedule 9 of the Wildlife and Countryside Act 1981 (As Amended) were recorded where encountered during the UKHab Habitat survey.

Assessment

- 2.42. The present assessment has been carried out with reference to the *British Standard BS 42020:2013 Biodiversity — Code of Practice for Planning and Development*, and best practice

guidelines for Preliminary Ecological Appraisal provided by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2017).

Limitations

- 2.43. It must be noted that survey effort has been made to provide detailed descriptions of the site within the context of potential usage by protected species, however a fully comprehensive assessment and prediction of natural factors cannot be made. The protected species assessment provides a professional view of the likelihood of such species being present and cannot be taken as a definitive presence or absence of the same. Systematic presence/ likely absence surveys for such species, which typically require multiple survey visits, have not been undertaken and are outside of the scope of Preliminary Ecological Appraisal. Such surveys are recommended in the present report if considered proportionate to the potential ecological impacts of the development proposals.
- 2.44. A full search of crevices and cavities on buildings typically cannot be made without specialist access equipment and in most cases intrusive works, and therefore accessible areas only have been searched for evidence of protected species and a negative result of evidence does not conclusively equate to absence of such species which may occupy inaccessible crevices on the building. However, provided any recommended nocturnal emergence/ re-entry bat survey(s) are undertaken, this is not considered a significant limitation to assessing the presence/ likely absence of roosting bats at the site.
- 2.45. Third party desk study data is not exhaustive, and an absence or a negative result of a species does not indicate the absence of protected species from the site/ search area.
- 2.46. All dimensions, locations and distances provided are approximate.
- 2.47. Where possible, bat calls were identified to species level with reference to guidance texts and bat call libraries (Russ, 2012), (Barataud, 2015) however due to overlapping characteristics in echolocation between species, in some instances identification is possible to genus level only (e.g. *Myotis*, *Plecotus*, *Nyctalus*, *Pipistrellus*). Furthermore, in some cases, calls can only be placed into a group of two genus (*Nyctalus*/ *Eptesicus* species).
- 2.48. The updated site walkover was undertaken outside of the optimal survey period of April to October. However, species identification of plants present outside of the optimal period is typically still possible based on the vegetative characteristics. Where additional surveys during the optimal period are required to assess the habitat type present, these are recommended.

3. Results

Desk Study

Surrounding Landscape

- 3.1. The surrounding landscape is primarily rural (Figure 2: Surrounding Landscape Plan).
- 3.2. Immediately surrounding the site lies Sutton Brook at the southeast and southwest site boundaries, with associated wet woodland and tree lines characterised by predominantly crack willow. To the north site boundary is Sutton Lane with scattered veteran oak trees, beyond which lies the broadleaved woodland, parkland and lakes associated with Bow Pool Market Bosworth Country Park.
- 3.3. Habitat features and connectivity in the surrounding landscape includes a network of pasture grassland and arable field compartments bound by hedgerows and tree lines with occasional brooks/watercourses, ponds, lakes, and woodland blocks. The town of Market Bosworth is located approximately 1.1km north of the site boundary.

Statutory Designated Sites

- 3.4. No internationally or nationally designated sites were located within the relevant study areas.
- 3.5. The site lies within a Site of Special Scientific Interest Impact Risk Zone (SSSI IRZ), requiring the Local Planning Authority to consult with Natural England on any risks which may affect the SSSI sites as a result of certain development types. However, the current development type is not listed in the SSSI IRZ citation as requiring consultation.

Non-Statutory Designated Sites

- 3.6. A summary of locally designated sites identified via the desk study are presented in Table 9 below.

Table 9: Summary of Designated Sites

Site Name	Designation	Description/ Main Reasons for Designation	Distance & Direction from Site
Bosworth Road Verges & Hedgerows	LWS Candidate	Species-rich mesotrophic grassland roadside verges with combined total of 17 LWS indicators, and 2 species-rich hedgerows both with total 9 species recorded.	Adjacent to east corner of the site.
Old Park Spinney Lake	LWS – Potential/ Historic	Standing Water	1.7km N
Marsh/ Rough Grassland	LWS – Potential/ Historic	Swamp	1.5km NW
Dismantled Railway	LWS – Potential/ Historic	Grassland	1.5km W
Market Bosworth Roadside Verge	LWS – Potential/ Historic	Grassland	1.9km W

Site Name	Designation	Description/ Main Reasons for Designation	Distance & Direction from Site
Shenton, Woodland East of Railway	LWS – Potential/ Historic	Woodland	0.8km W
Stream	LWS – Potential/ Historic	Small River or Stream	0.4km SW
Sutton Cheney, Battlefield Railway Line	LWS – Potential/ Historic	Not Provided	1.2km SW
The Duckery and Other Woodlands	LWS – Potential/ Historic	Not Provided	0.2km E
Sutton Cheney, Grassland	LWS – Potential/ Historic	Grassland	1.3km E
Gorse Wood	LWS – Potential/ Historic	Woodland	1.1km NE
Pond	LWS – Potential/ Historic	Pond	1.5km NEE
Market Bosworth, Shenton Lane Hedge	LWS Potential	Species-rich hedge, meeting HRegs 'important' criteria, plus several near veteran oaks	0.8km NNW
Market Bosworth Hedge 1	LWS Potential	Hedgerow	1.1km NW
Market Bosworth Hedge 2	LWS Potential	Hedgerow	1.5km NW
Sedgemere, Market Bosworth	LWS Potential	Wet Grassland	1.7km NW
Ashby Canal, Market Bosworth	LWS Candidate	Canal	1.8km NW
Market Bosworth Country Park Grassland & Pond	LWS Candidate	Mesotrophic grassland with 10 indicator species, pond with <i>Potamogeton</i> sp.	1.4km NNE
Cadeby Lane Hedgerows & Trees	LWS Potential	5 species-rich hedgerows with 9-11 total species recorded and 7 mature trees.	1.8km NE
Stapleton Lane/ Sutton Lane Verges, Hedgerow & Ash	LWS Potential	Road verges with 14 LWS indicator species recorded, mature Ash standard with girth estimated >3m, species-rich hedgerow with total 10 species recorded.	1.5km E
Sutton Cheney Churchyard	LWS Potential	Mesotrophic grassland. Closely mown grassland with 7 LWS indicator species.	1.1km SE
Ambion Lane Verge	LWS Potential	Road verge with 7 LWS indicators recorded	0.8km S

Site Name	Designation	Description/ Main Reasons for Designation	Distance & Direction from Site
Ambion Lane Hedgerows & Oaks	LWS Potential	4 species-rich hedgerows with total species recorded 10, 9, 9, 10. 4 mature Oak standards, girths estimated approx 4m.	0.9km SW
Shenton Lane Verges & Hedgerows East	LWS Potential	Mesotrophic grassland. 2 species-rich hedgerows: total species recorded 10 and 13.	1.5km SW
Ashby Canal & Sutton Wharf Grassland	LWS Candidate	Canal with emergent vegetation, marshy/mesotrophic grassland with 8 LWS indicators and RDB species (<i>Anacamptis morio</i>), species-rich hedgerow with total of 12 species, and mature trees (1 Ash, 1 Willow).	1.5km SW
Ambion Wood	LWS Candidate	Woodland	1.6km SW
Shenton Lane Hedgerows & Mature Trees	LWS Potential	7 species-rich hedgerows, all with between 8-12 total species recorded. 4 mature trees - 1 Ash, 2 Oak.	1.8km SW

Field Survey

UKHab Habitat Survey

- 3.7. The habitats recorded at the site during the initial UKHab Habitat survey are presented in Table 10 and mapped on Figure 3: UKHab Habitat Plan.
- 3.8. The site was considered unchanged from 2022 following the updated site walkover undertaken in 2024.

Table 10: UKHab Habitat Survey Results

Habitat Code	Secondary Code	Habitat Type	Description	(NERC) Act 2006 HPI*	Photograph Ref No. (Appendix 2: Photographs)
g3c	161 = Tall or Tussocky Sward	Other neutral grassland	Grass species including abundant yorkshire-fog <i>Holcus lanatus</i> and abundant common bent <i>Agrostis capillaris</i> , Species included occasional cock's-foot <i>Dactylis glomerata</i> , crested dog's-tail <i>Cynosurus cristatus</i> , timothy <i>Phleum pratense</i> , meadow foxtail <i>Alopecurus pratensis</i> , perennial rye-grass <i>Lolium perenne</i> , and false oat-grass <i>Arrhenatherum elatius</i> . Forb species abundance was low relative to grasses and included those indicative of nutrient rich conditions such as creeping thistle <i>Cirsium arvense</i> , hogweed <i>Heracleum sphondylium</i> , broad-leaved dock <i>Rumex obtusifolius</i> , prickly sow-thistle <i>Sonchus asper</i> . Occasional meadow buttercup <i>Ranunculus acris</i> was also present. Occasional common sorrel <i>Rumex acetosa subsp. acetosa</i> was present towards the south of the west field compartment. The field to the east was ranker and more tussocky in sward type and height, with frequent false oat grass and cock's foot, and a higher abundance of tall herb species indicative of nutrient rich conditions.	No	1-3 & 6
g3c	64 = Mown	Other neutral grassland	Areas of mown neutral grassland were present in the site, creating an informal path around field boundaries and a managed area at the north west of the site.	No	4 - 6
g3c	16 = Tall Herb	Other neutral grassland	Areas of tall ruderal species were present at field boundaries, at the edges of features such as buildings, and in the ditches at the site. Species present included locally dominant stands of common nettle <i>Urtica dioica</i> and great willowherb <i>Epilobium hirsutum</i> . Frequent to occasional were broad-leaved dock <i>Rumex obtusifolius</i> , creeping thistle <i>Cirsium arvense</i> , cleavers <i>Galium aparine</i> , spear thistle <i>Cirsium vulgare</i> , and hogweed <i>Heracleum sphondylium</i> . Occasional grass species were present in areas of tall ruderal including perennial rye-grass <i>Lolium perenne</i> , cock's-foot <i>Dactylis glomerata</i> , false oat-grass <i>Arrhenatherum elatius</i> , and yorkshire-fog <i>Holcus lanatus</i> . Rarely present was hedgerow crane's-bill <i>Geranium pyrenaicum</i> and bramble <i>Rubus fruticosus agg.</i>	No	7 -9
w1d		Wet woodland	The wet woodland at the southwest of the site was dominated by crack-willow <i>Salix fragilis</i> with occasional oak <i>Quercus sp.</i> The understorey contained mostly hedgerow species including hawthorn <i>Crataegus monogyna</i> , plum <i>Prunus domestica subsp. domestica</i> , crab apple <i>Malus sylvestris</i> , and elder <i>Sambucus nigra</i> . Ground flora included abundant common nettle and cleavers, occasional bramble, herb-robert <i>Geranium robertianum</i> , and hogweed, with rarely present red campion <i>Silene dioica</i> .	Yes	10
u1b		Developed land. Sealed surface	Concrete hardstanding was present around the buildings in the worth west of the site.	No	11
u1b5		Buildings	A complex of single storey agricultural buildings was present in the northwest of the site. See Table 14 Preliminary Bat Roost Assessment for building descriptions.	No	
h2a		Hedgerow (priority habitat)	For hedgerow survey results, see Table 11 overleaf.	Yes	
r	191= Ditch	Wet ditch	Wet ditches were present at the east and west of the western field compartment, associated with the hedgerows.	No	12
r2b		Other rivers and streams	Sutton brook was present at the east and south site boundaries, running in an east to west direction.	No	13
w1g6		line of trees	A line of trees was present at the east and south site boundaries of the east field compartment. Species included crack willow, oak, hawthorn, blackthorn, elder, goat willow, alder <i>Alnus glutinosa</i> , ash, and hazel <i>Corylus avellana</i> .	No	14
		Fence	A mixture of close boarded and post and rail fencing was present at the site boundaries.	No	
		Scattered coniferous tree	A Scots pine <i>Pinus sylvestris</i> was present at the east field boundary of the west field compartment.	No	15
		Broadleaved scattered tree	Veteran oaks were present, predominantly at the north site boundaries. A single veteran oak was present in the northwest of the west field compartment. Other scattered broadleaved trees included oak and goat willow, as standard trees within hedgerows.	No	16

*Natural Environment and Rural Communities Act (2006) Section 41 Habitat of Principal Importance (HPI). As defined with reference to habitat descriptions provided in Maddock, A. (ed) (2011).

Hedgerow Survey

3.9. The results of the hedgerow survey are provided in Table 11.

Table 11: Hedgerow Survey Results

Hedgerow number*	Description	UKHab Code	NERC Act HPI*	Photo Number
H1	Species included abundant hawthorn <i>Crataegus monogyna</i> and blackthorn <i>Prunus spinosa</i> with frequent elder <i>Sambucus nigra</i>, crab apple <i>Malus sylvestris</i>, and occasional field maple <i>Acer campestre</i>, goat willow <i>Salix caprea</i>, oak <i>Quercus sp.</i>, ash <i>Fraxinus excelsior</i>, and crack-willow <i>Salix fragilis</i>. Ground flora and climbers included great willowherb <i>Epilobium hirsutum</i>, hedge bindweed <i>Calystegia sepium</i>, hogweed <i>Heracleum sphondylium</i>, bramble, hedge woundwort <i>Stachys sylvatica</i>, creeping thistle, bittersweet <i>Solanum dulcamara</i>, false oat-grass, meadowsweet <i>Filipendula ulmaria</i>, and red campion <i>Silene dioica</i>. A wet ditch was present as an associated feature along the length of the hedgerow. The hedgerow was approximately 2m - 3m in height and width, and 245m in length. Standard trees were goat willow, ash, and oak.	H2a (priority habitat)	Yes	17 & 18
H2	Woody canopy species included blackthorn, hawthorn, elder, wild privet <i>Ligustrum vulgare</i>, ash, crack willow, and scots pine. Ground flora, climbers, and other species included field rose <i>Rosa arvensis</i>, cleavers, hogweed, and red campion. A wet ditch was present as an associated feature along the length of the hedgerow. The hedgerow was approximately 2-3m in height, 3m+ in width, and 170m in length. Standard trees were one Scots pine and one ash tree.	H2a (priority habitat)	Yes	19
H3	Woody canopy species included abundant blackthorn and hawthorn with occasional elder, ash, oak, hazel, field maple Climbers included honey suckle. The hedgerow was approximately 2-3m in height, 3m+ in width, and 300m in length. Standard trees included frequent veteran oaks trees.	H2a (priority habitat)	Yes	20
H4	Hedgerow H4 was approximately 150m in length and was gappy at the northern end of the hedgerow. Woody species included oak species <i>Quercus sp.</i>, hawthorn, blackthorn, and crab apple. Field rose was also present. Standard trees included frequent veteran oaks trees.	H2a (priority habitat)	Yes	21 & 22

*See Figure 3: UKHab Habitat Plan for hedgerow reference numbers.

Protected/ Notable Species

- 3.10. The results of the protected/ notable species assessment undertaken during the Extended UKHab Habitat Survey is provided in Table 11 overleaf.
- 3.11. A summary of desk study results is provided. Additional species records were returned by the LERC within the search radius, which are considered unlikely to be impacted by the proposed development and are therefore not included. These include species for which there is no suitable habitat present on site or the surrounding area.

Table 12: Protected/ Notable Species Assessment

Species/ Species Group	Desk Study	Evidence Observed During Extended UKHab Habitat Survey	Suitability of Habitats Present
Amphibians (including great crested newt)	Twenty records of amphibians were returned within a 2km radius of the site, which included common frog, common toad, great crested newt, and smooth newt. The closest amphibian record was at a distance of 900m N of the site relating to a common frog recorded in 2019. A total of five records of great crested newt were returned within a 2km radius of the site, the closest of which was at a distance of 1.3km south of the site, recorded in 2004. No records of granted Natural England mitigation licences for GCN were identified within a 2km radius of the site.	None	No ponds were present on site. Three watercourses were present on site, as shown of Figure 4: Pond Plan. Sutton Brook (W1) was present at the southeast and southwest site boundaries, a second watercourse (W2) was present at the west site boundary, and a third watercourse (W3) was present through the centre of the site, associated with hedgerow H2 (Figure 5: Pond Plan, Appendix 2: Photographs, Photo 29-31). All three watercourses comprised flowing water and were therefore considered unsuitable for GCN. These flowing watercourses would also act as a barrier to migration of GCN within the landscape. Two ponds were present within 500m of the site (Figure 4: Pond Plan). The closest pond (P1) was at a distance of 35m northeast of the site boundary, which was a fishing lake considered unsuitable for GCN. The second pond (P2) was at a distance of 360m north of the site boundary (Figure 5: Pond Plan, Appendix 2: Photographs, Photo 32). Pond P2 was dry at the time of survey in January 2024 after prolonged periods of wet weather and is therefore considered unsuitable for GCN. Furthermore, no aquatic vegetation was present to indicate the area regularly holds water, with only common tall ruderal species present. The site offers suitable terrestrial habitat for amphibians including hedgerows, grassland, and woodland. The Brook at the southeast and southwest site boundaries would likely act as a barrier to dispersal of amphibians (including GCN).
Badger	Fifty-six records of badger <i>Meles Meles</i> were returned within a 2km radius of the site. The closest record was at a distance of 0.8km W, relating to an individual crossing a road recorded in 2004.	None	The grassland, hedgerows, and woodland at the site offer suitable habitat for foraging, commuting and sett creation.
Bats – ground level bat assessment of trees	A total of 327 bat records were returned within a 2km radius of the site. Species recorded were an unidentified bat species, brown long-eared bat <i>Plecotus auritus</i> , common pipistrelle <i>Pipistrellus pipistrellus</i> , Daubenton's bat <i>Myotis daubentonii</i> , lesser noctule <i>Nyctalus leisleri</i> , <i>Myotis sp.</i> , Nathusius' pipistrelle <i>Pipistrellus nathusii</i> , noctule bat <i>Nyctalus noctula</i> , an unidentified <i>pipistrellus</i> species, soprano pipistrelle <i>Pipistrellus pygmaeus</i> , western barbastelle <i>Barbastella barbastellus</i> , and whiskered bat <i>Myotis mystacinus</i> .	None	16 trees at the site, including several of the veteran oaks, offer potential bat roosting features. For full details of the GLTA, see Table 13.
Bats - roosting (structures)	The closest bat records were along Sutton Lane immediately adjacent to the northeast site boundary, which related to sonogram/ static bat detector (likely active bats, non-roosting) records of soprano pipistrelle, common pipistrelle, and an unidentified <i>pipistrellus</i> species.	None	For full details of the PBRA, see Table 14. For details of nocturnal bat survey results, see Table 15. Trees with bat roosting suitability are mapped on Figures 3a and 3b. With reference to best practice guidelines the buildings on site offer low bat roosting suitability.
Bats – commuting and foraging		None	With reference to best practice guidelines the wet woodland, trees line, and brook habitats at the southeast and southwest site boundaries offer a habitat corridor which is of high suitability for commuting and foraging bats. The remaining site comprising grassland and a hedgerow network offer moderate suitability for foraging and commuting bats.

	Three records of granted Natural England mitigation licences for bats were returned within a 2km radius of the site. The closest record was at a distance of 1km south of the site, allowing damage of a resting place for brown long-eared bat, dated 2018 – 2019.		
Birds	A range of bird species records were returned within a 2km radius of the site, including red and amber listed birds, as well as schedule 1 listed birds. Species included barn owl <i>Tyto alba</i> , brambling <i>Fringilla montifringilla</i> , crossbill <i>Loxia curvirostra</i> , fieldfare <i>Turdus pilaris</i> , kingfisher <i>Alcedo atthis</i> , red kite <i>Milvus milvus</i> , and redwing <i>Turdus iliacus</i> . The closest record related to a cuckoo <i>Cuculus canorus</i> at a distance of 144m west of the site dated 1997.	None	The grassland, hedgerows, and woodland at the site offer suitable habitat for foraging, breeding, and nesting birds.
Hazel dormouse	No records of hazel dormouse <i>Muscardinus avellanarius</i> were returned within the 2km search radius.	None	The site offers limited habitat connectivity for this species, which is geographically at the fringes of their known range within the UK.
Fish	No records of fish were returned within the 2km search radius.	None	The brook offers suitability for fish species.
Terrestrial invertebrates	Thirty-seven records of terrestrial invertebrates, including NERC Act (2006) Species of Principal Importance, were returned within a 2km radius of the site. Species included white-letter hairstreak <i>Satyrrium w-album</i> , cinnabar <i>Tyria jacobaeae</i> , ghost moth <i>Hepialus humuli</i> , grey dagger <i>Acronicta psi</i> , harlequin ladybird <i>Harmonia axyridis</i> , latticed heath <i>Chiasmia clathrata</i> , and mottled rustic <i>Caradrina morpheus</i> . The closest record was at a distance of 0.95km N relating to a harlequin ladybird.	Meadow Brown <i>Maniola jurtina</i> , a common and widespread species of butterfly were observed in the mown margins of the grassland field compartment during the Extended UKHab Habitat Survey.	The grassland, hedgerows, and wet woodland habitats at the site offer suitable habitat for invertebrate species.
Otter	One record of otter <i>Lutra lutra</i> was returned within a 2km radius of the site, at a distance of 1.8km northwest relating to Ashby Canal, dated 1960.	None	The brook and other watercourse habitats with associated wet woodland, hedgerows, and tree lines offer suitability for this species.
Reptiles	Six records of grass snake <i>Natrix helvetica</i> were returned within a 2km radius of the site. The closest record was at a distance of 1.3km north of the site, dated 2005.	None	The site offers suitable terrestrial habitat for amphibians including hedgerows, grassland, and woodland.
Water vole	A total of nine records of water vole <i>Arvicola amphibius</i> were returned within a 2km radius of the site. The closest record a was of a hole/burrow at a distance of 1.3km northwest of the site boundary, dated 2020. The remaining records related to Ashby Canal.	None	The brook and other watercourse habitats and associated banks offer suitable habitat for this species.
Aquatic Invertebrates (including White-clawed Crayfish)	One record of white-clawed crayfish <i>Austropotamobius pallipes</i> was returned within a 2km radius of the site at a distance of 1.3km southwest, dated 1997 and relating to Ashby Canal.	None	The brook habitat offers sub-optimal habitat for this species, which was generally shallow and with a moderate flow, siltation, and few potential refuges such as large cobbles and boulders. The wet ditches were shallow and dry in sections and heavily silted, and therefore unsuitable for this species.

Other Mammals (Including brown hare, harvest mouse, and hedgehog)	Twelve records of brown hare were returned within a 2km radius of the site. The closest record was at a distance of 200m southwest, dated 2021. Two records of hedgehog were returned within a 2km radius of the site, the closest of which was at a distance of 1km southeast.	None	The grassland, woodland, and hedgerows at the site offer suitability for mammals including hedgehog and brown hare.
Invasive species	No records of invasive species were returned for the site or within the immediately surrounding land. One record of American mink <i>Neovison vison</i> was returned, at a distance on 1.8km southwest of the site.	None	The brook offers suitability for American mink.

Table 13: Ground Level Tree Assessment Results (For tree locations (T#), see Figures 3a and 3b)

Tree Ref	Tree Description	PRF Grading
T1	T1 related to the mature oak within the north of the site. PRFs present comprised snapped branches forming wedge shaped crevices and shallow knot holes.	PRF-I
T2	T2 related to a mature oak within hedgerow H4. PRFs present comprised a snapped branch forming wedge shaped crevices.	PRF-I
T3	T3 related to a mature oak within hedgerow H4. PRFs present comprised a snapped branch forming wedge shaped crevices.	PRF-I
T4	T4 related to a mature oak within hedgerow H4. PRFs present comprised ivy cover with few overlapping stems present.	PRF-I
T5	T5 related to a mature oak within hedgerow H4. PRFs present comprised a snapped branch forming wedge shaped crevices and lifted bark.	PRF-I
T6	T6 related to a mature oak within hedgerow H4. PRFs present comprised a snapped branch forming wedge shaped crevices.	PRF-I
T7	T7 related to a mature oak within hedgerow H3. PRFs present comprised a snapped branch forming wedge shaped crevices.	PRF-I
T8	T8 related to a mature oak within hedgerow H3. PRFs present comprised a snapped branch forming wedge shaped crevices.	PRF-I
T9	T9 related to a mature oak within hedgerow H3. PRFs present comprised ivy cover with few overlapping stems present.	PRF-I
T10	T10 related to a mature willow within the treeline at the southeast site boundary. PRFs comprised a rot hole forming a large cavity up the main stem.	PRF-M
T11	T11 related to a mature willow within the treeline at the southeast site boundary. PRFs comprised a rot hole forming a large cavity up the main stem.	PRF-M
T12	T12 related to a mature willow within the woodland in the south of the site. PRFs comprised a rot hole forming a cavity up the main stem.	PRF-M
T13	T13 related to a fallen willow within the woodland in the south of the site. PRFs comprised many crevices formed by the snapped stem.	PRF-M
T14	T14 related to a fallen willow within the woodland in the south of the site. PRFs comprised many crevices formed by the snapped stem.	PRF-I
T15	T15 related to the Scots pine present within hedgerow H2. PRFs present comprised ivy cover with few overlapping stems present.	PRF-I
T16	T16 related to the ash tree present within hedgerow H2. PRFs present comprised ivy cover with few overlapping stems present.	PRF-I
T17	T17 related to a snapped willow within the woodland in the west of the site. PRFs comprised many crevices formed by the snapped stem.	PRF-M
T18	T18 related to a mature willow within the west woodland. PRFs present comprised a snapped branch forming wedge shaped crevices.	PRF-I
T19	T19 related to a mature willow within the woodland in the west of the site. PRFs comprised lifted bark on the northern aspect of the main stem.	PRF-I

Table 14: Preliminary Bat Roost Assessment Results

Building Ref	Building Description	Potential Bat Access Points & Potential Roosting Locations	Evidence of Bats Recorded	Suitability Grading	Photograph reference number
B1a	B1a related to the central north section of the agricultural building. The building was approximately 13m in length, 5m in width, and of single storey height to the roof pitch. The walls were brick-built, and a pitched roof of clay tiles was present. The southeast half of B1a was open at the southwest elevation. Internally, B1a was open to the roof pitch, with no loft void present. The internal roof structure comprised a timber ridge beam, with timber rafters and sarking, and no internal lining was present.	Potential bat access points included gaps between the wall plate and timber beam at the northeast elevation, under occasional lifted tiles at the northeast and southwest elevations, through the open southwest elevation, at the gap present at the northwest gable apex, and gaps under the barge boards of the northwest elevation. Potential bat roosting locations included within gaps in the brickwork internally, at the gaps above the wall plates, and at the gap at the ridge of the northwest internal apex, which was free of debris at the time of survey.	None	Low	Photos 23 - 25
B1b	B1b related to the barn section adjacent to the southeast elevation of B1a. The building was approximately 6m in length, 5m in width, and of single storey height to the roof pitch. It comprised single skin corrugated metal walls, with the brick wall of B1a at the northwest elevation, and a	Potential bat access points included through the open southwest elevation, and through broken and lifted sections of the corrugated metal roof.	None	Low	Photos 26 - 27

	pitched, corrugated metal roof. The southwest elevation of B1b was open. Internally, B1b was open to the roof pitch, with no loft void present. The internal roof structure was comprised of timber beams and no internal lining was present.	Potential bat roosting locations included at the roof beam convergence of the northwest internal elevation, and gaps in the brickwork at the northwest internal elevation.			
B1c	B1c related to the barn section adjacent to the southwest elevation of B1a. The building was approximately 9m in length, 5m in width, and of single storey height to the roof pitch. It comprised single skin corrugated metal walls, with the brick wall of B1a at the northeast elevation, and wooden panels at the southwest gable pitch, and a pitched, corrugated metal roof. The southeast elevation of B1c was open. Internally, B1c was open to the roof pitch, with no loft void present. The internal roof structure was comprised of timber beams and no internal lining was present.	Potential bat access points included through the open southeast elevation, through the gaps between wooden panels at the southwest gable pitch, and through broken and lifted sections of the corrugated metal roof. No potential bat roosting locations were observed.	None	Negligible	Photos 26, 28

Table 15: Nocturnal Bat Survey Results

Building Ref	Date	Dusk/ Dawn	Emerging/ Re-Entering Bats Recorded	Other Bat Activity Summary
23/09/2022	B1a-B1c	Dusk	No Emerging/ Re-Entering Bats Recorded	The first bat recorded was a common pipistrelle bat at 19:37 which was observed foraging occasionally at the tree line adjacent to the northeast site boundary, and along Sutton Lane. Common pipistrelle was heard occasionally for the remainder of the survey, including occasional social type calls at 20:06 and thereafter. A brown long-eared bat was recorded at 19:52 on the detector but not seen within the site, with occasional calls heard thereafter. A registration of soprano pipistrelle was heard at 20:01 and 20:04 but not seen within the site. A noctule was recorded at 20:45, also heard and not seen.

4. Ecological Constraints & Opportunities

- 4.1. The ecological constraints and opportunities, and recommendations for avoidance, mitigation or further survey (where required) are provided in Table 16 overleaf.

Table 16: Ecological Constraints & Opportunities

Ecological Constraint	Potential Ecological Impact & Level of Constraint	Potential Avoidance, Mitigation and/or Compensation Measures	Further Survey Required to Inform an Ecological Impact Assessment	Enhancement/ Biodiversity Gain Opportunities
Designated Site for Nature Conservation	The Candidate LWS Bosworth Road Verges & Hedgerows is located adjacent to the east corner of the site. The LWS does not form any part of the site boundaries and lies outside of applicant ownership, to the east. Of the two field compartments which make up the application site, development will be contained to the west field compartment and the east field compartment, of which the LWS lies adjacent, will be utilised for habitat creation and enhancement. Therefore, the Candidate Bosworth Road Verges & Hedgerows LWS is located over 330m away from the development footprint at the site, and is 455m away from the planned removal of a section of hedgerow to facilitate site access along the northeast site boundary. There will therefore be no direct impacts to the LWS via habitat loss or secondary impacts including via inappropriate management. Due to the distance between the development site and other designated sites for nature conservation identified during the desk study, and the small scale and type of development proposed, it is considered that impacts to the designated sites identified would not occur.	The Candidate LWS Bosworth Road Verges & Hedgerows will be incorporated into the CEMP as a 'biodiversity protection zone' and any direct or indirect impacts avoided.	N/A	The habitat enhancements at the site will strengthen the green infrastructure network within which the LWS candidate Bosworth Road Verges & Hedgerows is located, providing a strategic biodiversity enhancement post-development.
Biodiversity Net Gain/ No Net Loss in Biodiversity	Unmitigated, the development proposals would likely result in the loss of some habitats within the site (detailed below) at construction phase and the degradation of retained habitats through the operational phase of the development. This could result in a net loss in biodiversity units post-development. In local planning policy, the <i>Site Allocations and Development Management Policies DPD DM6 – Enhancement of Biodiversity and Geological Interest</i> states that: <i>Proposals where the primary objective is to conserve or enhance biodiversity or geological interest will be permitted where they comply with other relevant policies in the plan.</i> <i>On site features should be retained, buffered and managed favourably to maintain their ecological value, connectivity and functionality in the long-term. The removal or damage of such features shall only be acceptable where it can be demonstrated the proposal will result in no net loss of biodiversity and where the integrity of local ecological networks can be secured.</i> The National Planning Policy Framework (2021) states that “opportunities to improve biodiversity in and around developments should be integrated as	Where possible the habitats at the site should be retained. Impacts on the retained woodland, brook and hedgerow habitats at the site will be mitigated for via additional woodland and tree planting, which will serve to protect and strengthen the existing habitats at the site and create an enhanced wildlife corridor. The loss of grassland and section of hedgerow at the site could be compensated for within a scheme of diverse native woody species hedgerow planting, and a scheme of grassland enhancement within the wider site. The avoidance of impacts to habitats during the construction phase of the development should be secured via a Construction Environmental Management Plan to be implemented during works, with reference to <i>BS42020: 2013 Biodiversity: Code of Practice for Planning and Development</i>. Any potential impacts to the water quality of the Brook should be addressed via the CEMP. Retained trees should be protected via exclusion zones during works with reference to <i>British Standard (BS 5837:2012): Trees in Relation to Design, Demolition and Construction – Recommendations</i>.	To demonstrate a no net loss in biodiversity at the site, or a biodiversity net gain, would require a Biodiversity Impact Assessment Calculation exercise using the prevailing biodiversity metric at the time (currently the Biodiversity Metric 3.1). It is considered that a significant Biodiversity Net Gain at the site could be achieved, with reference to the scope of habitat creation outlined in the Landscape Strategy.	The grassland is low in flower abundance and diversity, with significant scope for enhancement. The proposed landscaping scheme outlined in the Landscape Strategy includes: • additional hedge planting using mixed native species to fill in gaps in the existing established hedgerow. • Additional woodland planting between the existing woodland and proposed development, which will serve to buffer and protect the retain habitats. • Consideration to re-instating the historic hedgerow and the north boundary of the proposed dwelling area. • Inter planting of new oak trees along Sutton Lane, which would complement the existing stock of veteran oak trees at this location. • Specimen park trees. • Additional woodland planting in the east site field compartment.

Ecological Constraint	Potential Ecological Impact & Level of Constraint	Potential Avoidance, Mitigation and/or Compensation Measures	Further Survey Required to Inform an Ecological Impact Assessment	Enhancement/ Biodiversity Gain Opportunities
	<i>part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.”</i> The Environment Act 2021 is projected to legally mandate a 10% Biodiversity Net Gain for planning projects from November 2023.			• Consideration of reinstating a historic pond in the north of the site. • Creation of wet meadow in the field compartment to the east of the development site. • A pond in the southwest corner of the field compartment to the east of the development site. • Buffer tree planting along the brook to the southeast and southwest of the site. The creation of the habitats would require the implementation of a management plan or similar with reference to BS42020 to ensure their successful long-term management. The scheme of habitat creation proposed would contribute to the Leicester, Leicestershire & Rutland Biodiversity Action Plan.
Priority Habitats	Priority habitats are NERC Act (2006) Section 41 Habitats of Principal Importance (HPI) for the purpose of conserving biodiversity, which are given additional and special consideration by public authorities in carrying out their functions with consideration for biodiversity conservation. The following priority habitats are present at the site: • Wet woodland • Hedgerows	<i>Wet Woodland</i> One area of wet woodland is present, a copse in the southwest corner of the site, which will be retained post-development. An appropriate buffer zone and root protection area has been incorporated into the scheme. With reference to the Arboricultural Impact Assessment & Method Statement (RJ Tree Services Ltd, 12 September 2023), Tree Survey & Constraints Plan 01/RevB (RJ Tree Services Ltd, 12 September 2023) and Proposed Block Plan (Studio Bark, 2023), there will be no built development within the Root Protection Areas of the wet woodland. It is generally accepted that an appropriate buffer zone for woodland is 15 meters. This buffer zone has been incorporated into the scheme, which as shown on the Masterplan (Studio 31 Ltd, 2023), will incorporate proposed tree planting and wildflower meadow to further buffer the retained wet woodland. The wet woodland will be included in the CEMP for the site as a Biodiversity Protection Zone. <i>Hedgerows</i> All hedgerows at the site will be retained post-development, with the exception of a single section of hedgerow H4 which requires the creation of a gap to facilitate a proposed vehicular access route. With reference to the Masterplan drawing <i>Presentation Design 02 – Driveway, Drawing Ref S31 22199 D04, Rav 4</i> (Studio 31 Ltd, 2023), the creation of an approximately 6m gap in hedgerow H4 will be required. The length of hedgerow at this location is currently gappy and defunct, with fencing present.	None required	Significant biodiversity enhancements are proposed at the site (see Biodiversity Net Gain Report, Elton Ecology Ltd, (2024)), which will result in a biodiversity net gain post-development, as well as strategically increasing the existing priority habitats at the site in terms of their net area and habitat connectivity.

Ecological Constraint	Potential Ecological Impact & Level of Constraint	Potential Avoidance, Mitigation and/or Compensation Measures	Further Survey Required to Inform an Ecological Impact Assessment	Enhancement/ Biodiversity Gain Opportunities
		Significant species rich native hedgerow planting and enhancement of retained hedgerows will take place, providing a net gain in biodiversity for hedgerow units post development (see Biodiversity Net Gain Report, Elton Ecology (2024)) An appropriate buffer zone and root protection area has been incorporated into the scheme for all retained hedgerows. With reference to the Arboricultural Impact Assessment & Method Statement (RJ Tree Services Ltd, 12 September 2023), Tree Survey & Constraints Plan 01/RevB (RJ Tree Services Ltd, 12 September 2023) and Proposed Block Plan (Studio Bark, 2023), there will be no built development within the Root Protection Areas of the retained hedgerows. The retained hedgerows at the site will be included in the CEMP as Biodiversity Protection Zones.		
Habitats (non-priority)	The scattered trees at the site, including veteran oaks, are of nature conservation value. With reference to the Tree Survey report (RJ Tree Services Ltd, 2022) there are a total of three veteran trees at the site (trees T1, T2, and T4), all of which are oak species. With reference to the All trees at the site will be retained post-development and no works are proposed within root protection areas (RPAs) at the site. The grassland at the site is of a common and widespread habitat, but cumulatively of low to moderate conservation value due to its extent. Approximately 0.4 - 0.5 ha of grassland would be lost to the proposed development. A section of hedgerow may also be removed at the north site boundary (H4) to facilitate a new site access, limited to the gappy portion of hedgerow at the northern extent.	A significant scheme of biodiversity enhancement will be delivered at the site, which has followed the mitigation hierarchy (see Biodiversity Net Gain Report, Elton Ecology (2024))	None required	A significant scheme of biodiversity enhancement will be delivered at the site (see Biodiversity Net Gain Report, Elton Ecology (2024)).
Amphibians (Great Crested Newt) and Reptiles	Great crested newts (GCN) are fully protected as a European Protected Species (EPS) under The Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended). The likely absence of GCN at the site is assumed due to lack of suitable ponds within a 500m radius of the site (See Table 12). Reptiles are partially protected under the Wildlife and Countryside Act 1981 (as amended), protecting them from killing or injury. The works at the site will require the removal of suitable terrestrial habitats for amphibians and reptiles including grassland and sections of hedgerow.	To prevent the killing and injury of terrestrial amphibians and reptiles during the development in the unlikely event that these species should be present, it is recommended that vegetation clearance at the site is carried out under a Precautionary Working Method Statement for amphibians and reptiles, to include staged and directional vegetation removal encouraging the safe displacement of reptiles into retained habitats on site. The Precautionary Working Method Statement can be included in the CEMP for the site. If amphibians or reptiles are encountered during works, works should stop immediately, and the advice of a suitably qualified ecologist sought.	Assessment has shown that the risk of an offence occurring in relation to GCN is highly unlikely and therefore no further surveys are required under the current development proposals.	The proposed pond creation at the site could offer site enhancements for amphibian species and grass snake. The creation of log pile or brash pile hibernacula utilising arisings resulting from the required tree or hedgerow removal at the site would also be of benefit to amphibian and reptile species.

Ecological Constraint	Potential Ecological Impact & Level of Constraint	Potential Avoidance, Mitigation and/or Compensation Measures	Further Survey Required to Inform an Ecological Impact Assessment	Enhancement/ Biodiversity Gain Opportunities
	Under the current development proposals, the land suitable for GCN due to be lost and damaged is approximately 0.56ha in size and is at a distance of 270m west of the closest pond (P1). The pond is noted as a fishing pond, is large in size, and therefore is highly unlikely to support great crested newt (GCN). However, utilising the Natural England Great Crested Newt Mitigation Licence Application Method Statement Rapid Risk Assessment tool on the worst-case scenario that the nearest pond is a GCN breeding pond, and entering the values of '0.5 – 1ha lost or damaged' within 'Land >250m from any breeding pond(s)' returned a risk result of <i>'Green: Offence Highly Unlikely'</i> It is therefore considered that the development at the site would be unlikely to result in impacts to great crested newt.			
Badger	Badgers are afforded legal protection under The Protection of Badgers Act 1992. Relevant offences under the Act may result from any action that intentionally or recklessly: - damages a badger sett or any part of it; - destroys a badger sett; - obstructs access to, or any entrance of, a badger sett; and - disturbs a badger when it is occupying a badger sett. The site offers suitable commuting and foraging habitat for badger. No badger setts were recorded on site. No evidence of badger was observed during the survey, however there remains a risk of impacting commuting and foraging habitats during works should these enter the construction site at night, given the mobile nature of the species.	Precautionary Working Methods for badger should be included in the CEMP for the site, and implemented during works to protect foraging and commuting badger. Foundation ditches and other ditches or trenches, which can be hazardous to badgers, should be closed overnight or fitted with sloping boards or steps to allow animals to escape should they become trapped. Concrete should not be left unset overnight, or suitable barriers erected to prevent animals accessing the concrete. Pipework with a diameter greater than 120mm should have the ends closed off overnight to prevent entrapment or occupation.	Prior to construction an updated badger walkover survey should be carried out to ensure that badger setts have not been excavated in the interim time period.	The proposed habitat creation would provide additional foraging and commuting habitat for badger.
Bats – tree roosting	Bats are protected as a European Protected Species under The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and are protected under domestic legislation via the Wildlife and Countryside Act 1981 (as amended). The term 'European Protected Species' (EPS) is used to describe species listed on Schedule 2 of The Conservation of Habitats and Species Regulations, which make guilty of an offence a person who: <i>"Deliberately captures, injures or kills any wild animal of a European protected species;</i> <i>Deliberately disturbs wild animals of any such species; or [...]</i>	All trees will be retained post-development and any trees with bat roosting suitability (Figures 3a and 3b) will be included within the CEMP for the site as Biodiversity Protection Zones. Where any tree works such as pruning is required to any trees as identified with bat roosting suitability, the client will seek .	None	Suitable site enhancements could include the incorporation of native species tree, shrub, or other vegetation planting with the scheme to encourage an increased invertebrate assemblage and therefore enhance the core sustenance zone for local bats. A possible method of site enhancement for roosting bats would include the installation of a bat box on any building, retained tree, or pole. These could be of a woodcrete box design. Bat boxes should be sited at a height of between 4m and 6m, on a southwest or southeast aspect, away from artificial light sources, and in proximity to suitable bat commuting habitat such as a hedgerow or retained trees.

Ecological Constraint	Potential Ecological Impact & Level of Constraint	Potential Avoidance, Mitigation and/or Compensation Measures	Further Survey Required to Inform an Ecological Impact Assessment	Enhancement/ Biodiversity Gain Opportunities
	<i>Damages or destroys a breeding site or resting place of such an animal [...]'</i> A person guilty of an offence under Regulation 43 is liable on summary conviction to imprisonment for a term not exceeding six months or to a fine, or to both. 19 trees were noted with PRFs present; however, it is understood that the trees on site are to be retained. Therefore, it is considered that the proposed development will not result in any adverse impacts to tree roosting bats.			
Bats – building roosting	Bats are protected as a European Protected Species under The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and are protected under domestic legislation via the Wildlife and Countryside Act 1981 (as amended). The buildings B1a-B1c on site were assessed as having low bat roosting suitability.	Due to the legislation and planning policy afforded to bats, and the results of the Preliminary Bat Roost Assessment having assessed buildings B1a-B1c as having low bat roosting suitability, with reference to best practice survey guidelines (Collins, 2016), one nocturnal emergence/ re-entry survey was carried out on the buildings, during which no emerging/re-entering bats were recorded. Therefore, with reference to best practice survey guidelines (Collins, 2016), the likely absence of roosting bats within these buildings can be assumed. In the unlikely event that a bat is encountered during works, works should cease immediately, and the advice of a suitably experienced ecologist sought. Due to the presence of bats in the wider area as highlighted by the nocturnal surveys, the impacts from external artificial lighting at the site on adjacent habitats should be avoided where possible or mitigated through the design of lighting observing the principles set out in guidelines from the Bat Conservation Trust (BCT) & Institution of Lighting Professionals (BCT & ILP, 2018). This should include any artificial lighting required during the construction phase of the development.	N/A	
Bats – commuting and foraging	With reference to best practice guidelines the site is assessed as of moderate suitability for commuting and foraging bats, comprising grassland field compartments, hedgerows with trees, and a woodland copse. There will be no significant direct impacts to bat commuting and foraging habitat via direct loss of habitats, with habitat losses at the site limited to a small area of grassland to facilitate the single dwelling, and an approximately 6m length of hedgerow removal. The scheme will retain all commuting routes within the site and wider	Retain trees and hedgerow features where possible. Due to the presence of bats in the wider area as highlighted by the desk study, the impacts from external artificial lighting at the site on adjacent habitats should be avoided or mitigated through the design of lighting observing the principles set out in guidelines from the Bat Conservation Trust (BCT) & Institution of Lighting Professionals (BCT & ILP, 2018). This should include any artificial lighting required during the construction phase of the development.	None. It is considered that the losses of commuting and foraging bat habitat at the site would be of minor significance to local bat populations, provided the mitigation measures outlined are followed. It is therefore considered that carrying out bat transect and static bat detector surveys would not be proportionate to the degree of risk posed by the development.	The scheme of habitat creation proposed at the site would result in a net benefit for commuting and foraging bats.

Ecological Constraint	Potential Ecological Impact & Level of Constraint	Potential Avoidance, Mitigation and/or Compensation Measures	Further Survey Required to Inform an Ecological Impact Assessment	Enhancement/ Biodiversity Gain Opportunities
	landscape, with no significant losses of hedgerows or linear features proposed. In the absence of mitigation, secondary impacts could occur via artificial lighting (see adjacent column).			
Birds	Nesting birds are afforded legal protection under the Wildlife and Countryside Act 1981 (as amended), whereby all wild nesting birds are protected under the Act, making it an offence to: - Intentionally kill, injure or take any wild bird; and - Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird. The building, vegetation features, and grassland at the site offer foraging and nesting opportunities for a range of bird species. The majority of suitable nesting bird habitat will be retained post-development, with small losses of grassland and hedgerow required. There remains a residual risk of damaging active bird nests during works (see adjacent column). It is considered that the losses of commuting and foraging bird habitat at the site would be of minor significance to local bird populations, given the post-development habitat creation proposed.	Works affecting nesting bird habitat at the site should where possible avoid the nesting bird season of March to August (inclusive), and September in mild years. This includes the grassland, which is suitable for ground nesting birds.	Where the timing of works outside of the nesting bird season is not possible, the building/ habitat to be subject to works should be surveyed for nesting birds immediately prior to removal by a suitably experienced ecologist. If nesting birds are recorded, a suitable buffer zone should be defined by the ecologist and implemented until the ecologist confirms the chicks have fledged. If species identification is possible, this can be used to inform the typical egg incubation and fledging period (Ferguson-Lees et al, 2011), giving an indication of an appropriate time for re-survey to confirm fledging.	The planting of trees and hedgerow would provide long term foraging and nesting resources for birds on site at maturity. As a short-term site enhancement for birds, nesting boxes could be erected on retained trees at the site.
Terrestrial invertebrates	Some terrestrial invertebrate species are listed as NERC Act (2006) Section 41 Species of Principal Importance (SPI). The removal of small areas of grassland and hedgerow at the site are not considered to be likely to result in significant negative impacts to invertebrate populations within the local context of the site.	N/A	N/A	The habitat enhancements proposed including grassland enhancement would be of benefit to terrestrial invertebrate species.
Fish, Otter, Water Vole, White- Clawed Crayfish.	Otter are protected as a European protected species (EPS) under The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Water vole and white-clawed crayfish are protected under the Wildlife and Countryside Act 1981. Otter, water vole, and white-clawed crayfish are all listed as NERC Act (2006) Section 41 Species of Principal Importance (HPI).	The current proposed site plan shows a buffer between the brook habitat and the development footprint of 20-30m. Within the buffer additional tree planting will be implemented, which will further mitigate residual impacts which may arise from increased disturbance during the operational phase of the development. The buffer zone should be Heras fenced and protected during works and included in the CEMP for the site.	An appropriate buffer zone has been implemented between the riparian habitats and the built development at the site. In addition to this, there are no works proposed to the existing watercourses including Sutton Brook and drainage ditches at the site. It is therefore concluded that no further surveys for these species are required.	The additional tree and woodland planting proposed would further strengthen the habitat corridor within which the Brook is located.

Ecological Constraint	Potential Ecological Impact & Level of Constraint	Potential Avoidance, Mitigation and/or Compensation Measures	Further Survey Required to Inform an Ecological Impact Assessment	Enhancement/ Biodiversity Gain Opportunities
	Some fish species are listed as NERC Act (2006) Section 41 Species of Principal Importance (SPI), on the Wildlife and Countryside Act 1981, and The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. The brook and associated habitat corridor at the southeast and south west site boundaries offer suitability for these species. There is an approximately 30m buffer between the brook and the built development. Works within this buffer zone will be limited to landscaping. It is therefore considered that the construction of the dwelling would not result in negative impacts to riparian species. There are no works proposed to the existing watercourses including Sutton Brook and drainage ditches at the site.	Night working during the construction phase of the development should be avoided. The implementation of the lighting advice set out for commuting and foraging bats would also prevent impacts to otter, should this species be present. All works should be carried out in line with best practice Pollution Prevention Guidance. Measures should be implemented during the construction and operation phases of the development to avoid changes is water quality from changes to water flow, increased siltation, decreased oxygenation or pollution incidents. The avoidance of impacts to the brook and brook bank habitats during the construction phase of the development should be secured via a Construction Environmental Management Plan to be implemented during works, with reference to <i>BS42020: 2013 Biodiversity: Code of Practice for Planning and Development</i>. Any potential impacts to the water quality of the Brook should also be addressed via the CEMP.		
Other Mammals (Including brown hare, harvest mouse, and hedgehog)	Hedgehog and brown hare are listed as NERC Act (2006) Section 41 Species of Principal Importance (SPI). The removal of small areas of grassland and hedgerow at the site are not considered to be likely to result in significant negative impacts to invertebrates within the local context of the site. However, there remains a residual risk of killing and injury of these species during works, see adjacent column.	A robust Precautionary Working Method Statement (i.e. <i>Reasonable Avoidance Measures Method Statement (RAMMS)</i>) will be included within the CEMP for the site and implemented during works, which will include pre-works searches for the presence of these species and practical measures to be adhered to during works to prevent their killing and injury.	N/A	N/A

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6. Figures

Figure 1: Site Location Plan (Overleaf)

Figure 2: Surrounding Landscape Plan (Overleaf)

Figure 3a: UKHab Habitat Plan (West) (Overleaf)

Figure 3b: UKHab Habitat Plan (East) (Overleaf)

Figure 4: Pond Plan (Overleaf)

Figure 5: Surveyor Location Plan (Overleaf)



Legend

 Site boundary

Project:
**Land Southwest of Sutton Lane, Market
Bosworth**

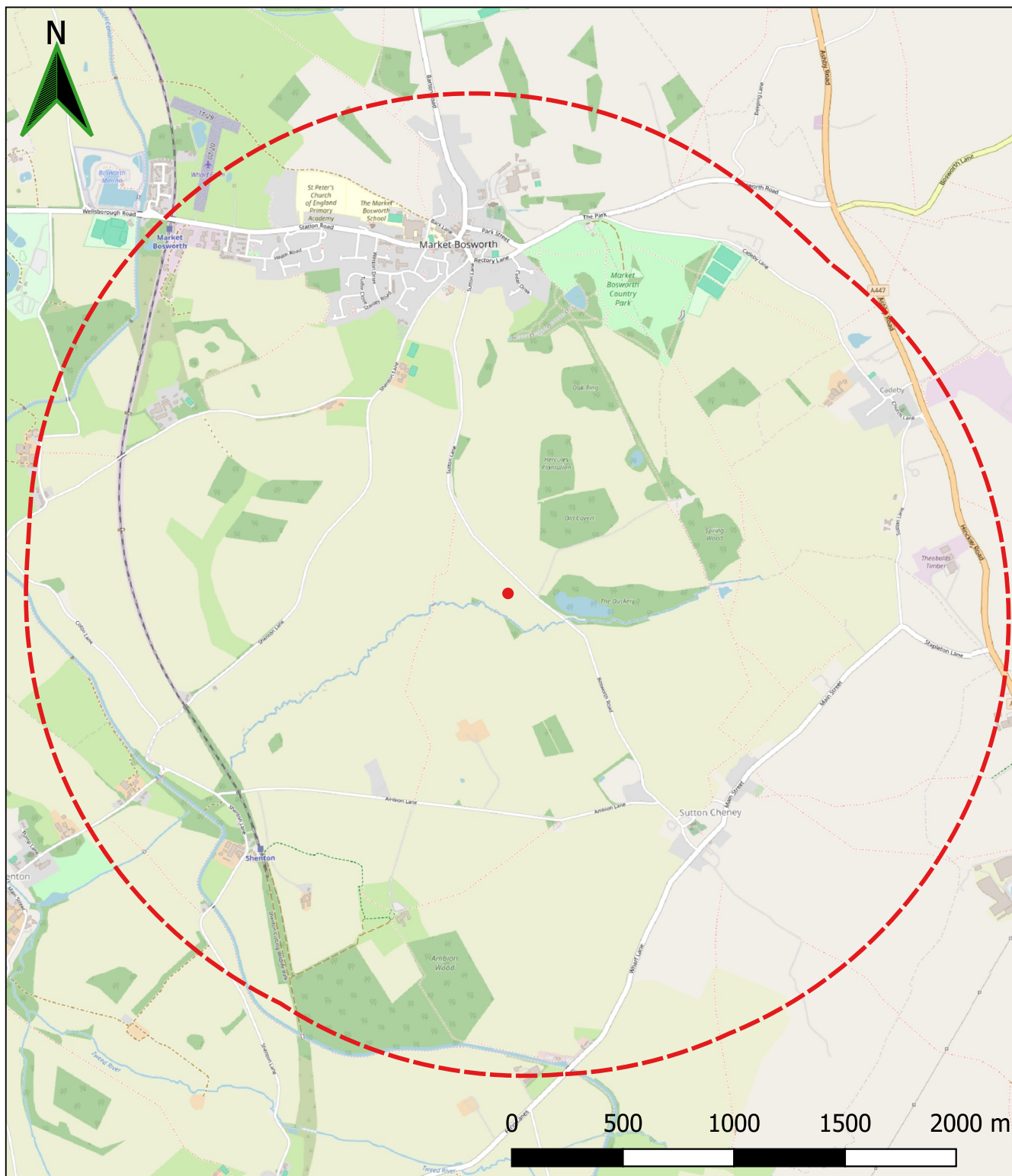
Drawing:
Figure 1: Site Location Plan

Date: 11-01-2024 Version: FINAL
Author: PH Job No: P2387



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Legend

- Site Location
- 2km Buffer

Project:
Land Southwest of Sutton Lane, Market Bosworth

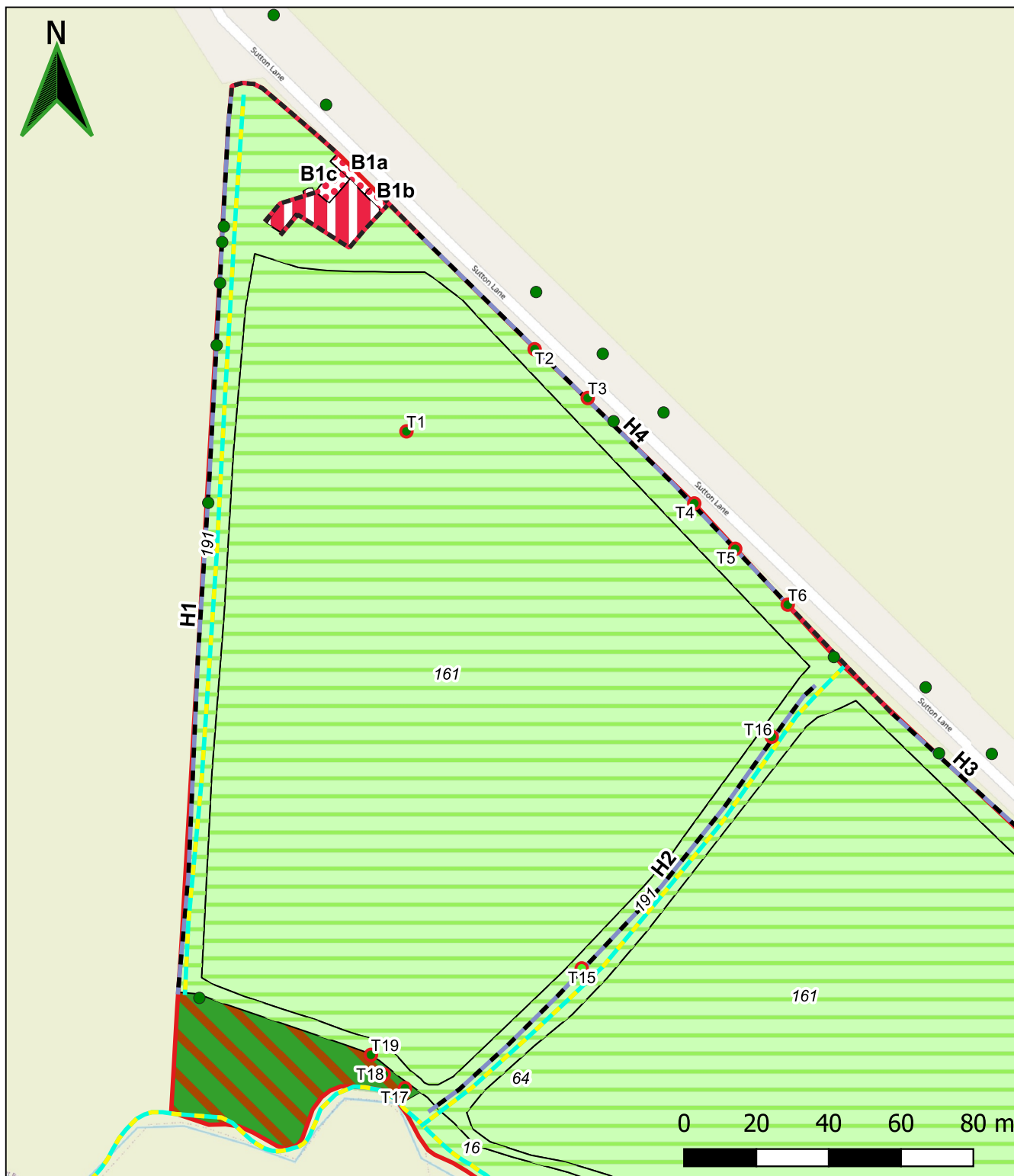
Drawing:
Figure 2: Surrounding Landscape Plan

Date: 11-01-2024 Version: FINAL
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Legend

- Site boundary
- g3c - other neutral grassland
- w1d - wet woodland
- u1b - developed land. sealed surface
- u1b5 - buildings with reference number
- u1e - built linear features (fences)
- h2a - priority hedgerow with reference number
- r - rivers and lakes
- Broadleaved scattered tree
- Broadleaved scattered tree with PRF
- Coniferous scattered tree with PRF

Secondary codes:

- 16 - tall herb
- 64 - mown
- 161 - tall or tussocky sward
- 191 - ditch

Project:

Land Southwest of Sutton Lane, Market Bosworth

Drawing:

Figure 3a: UKhab Habitat Plan (West)

Date: 11-01-2024

Version: FINAL

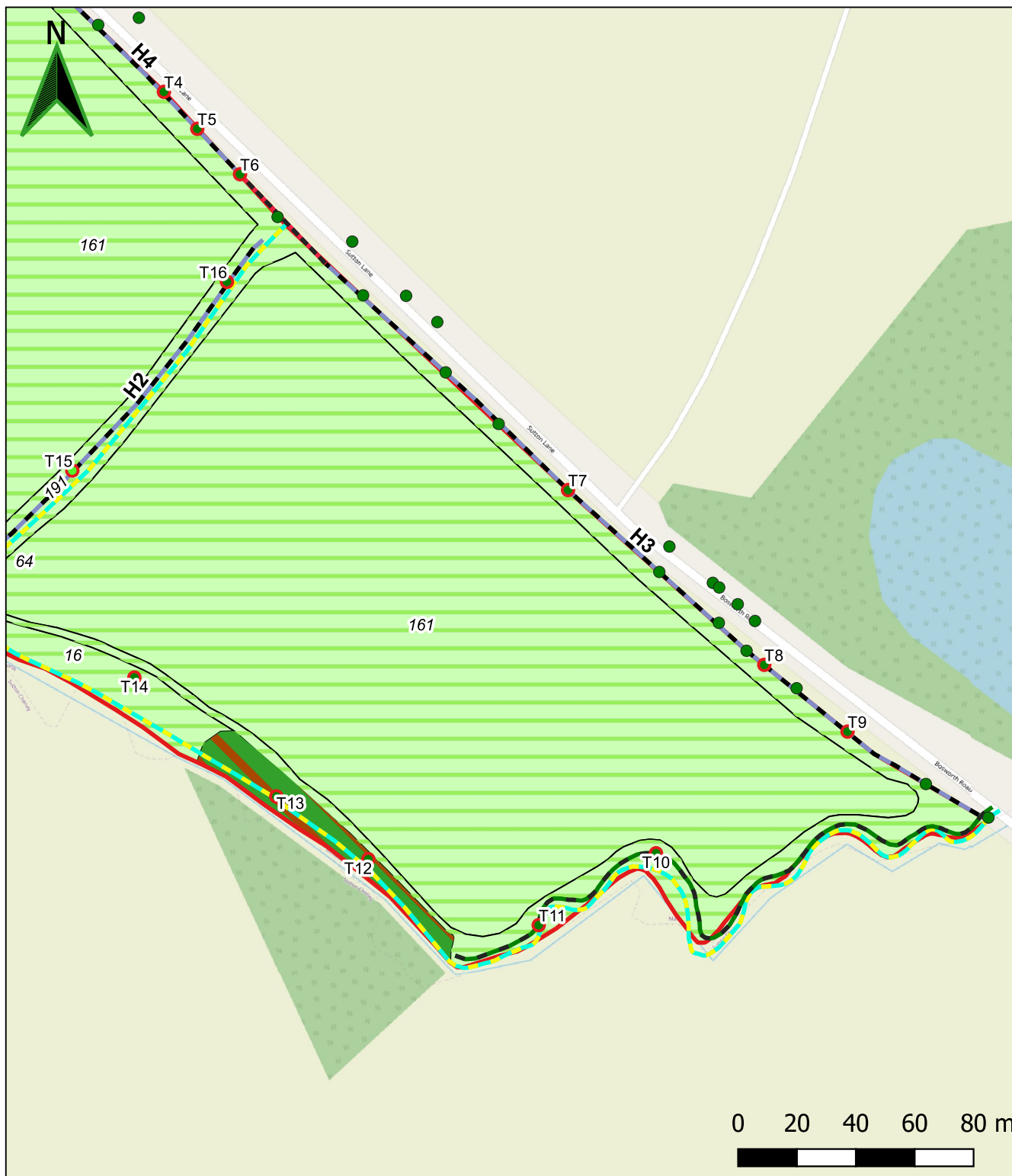
Author: PH

Job No: P2387



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Legend

- Site boundary
- g3c - other neutral grassland
- w1d - wet woodland
- u1e - built linear features (fences)
- w1g6 - line of trees
- h2a - priority hedgerow with reference number
- r - rivers and streams
- Broadleaved scattered tree
- Broadleaved scattered tree with PRF
- Coniferous scattered tree with PRF

Secondary codes:

- 16 - tall herb
- 64 - mown
- 161 - tall or tussocky sward
- 191 - ditch

Project:

Land Southwest of Sutton Lane, Market Bosworth

Drawing:

Figure 3b: UKHab Habitat Plan (East)

Date: 11-01-2024

Version: FINAL

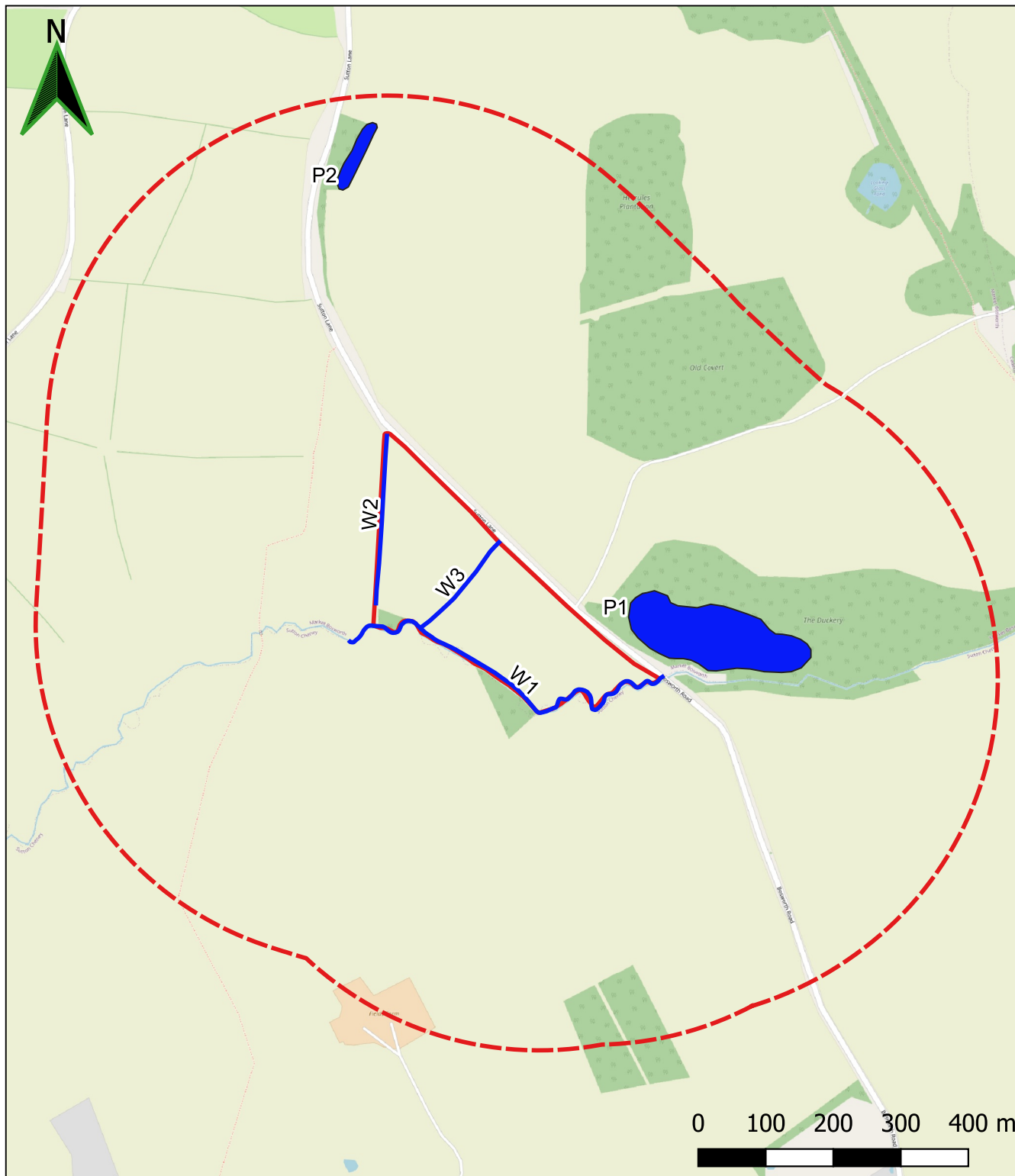
Author: PH

Job No: P2387



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Legend

-  Site boundary
-  500m pond buffer
-  Ponds with reference number
-  Watercourses with reference number

Project:

Land Southwest of Sutton Lane, Market Bosworth

Drawing:

Figure 4: Pond Plan

Date: 11-01-2024

Version: FINAL

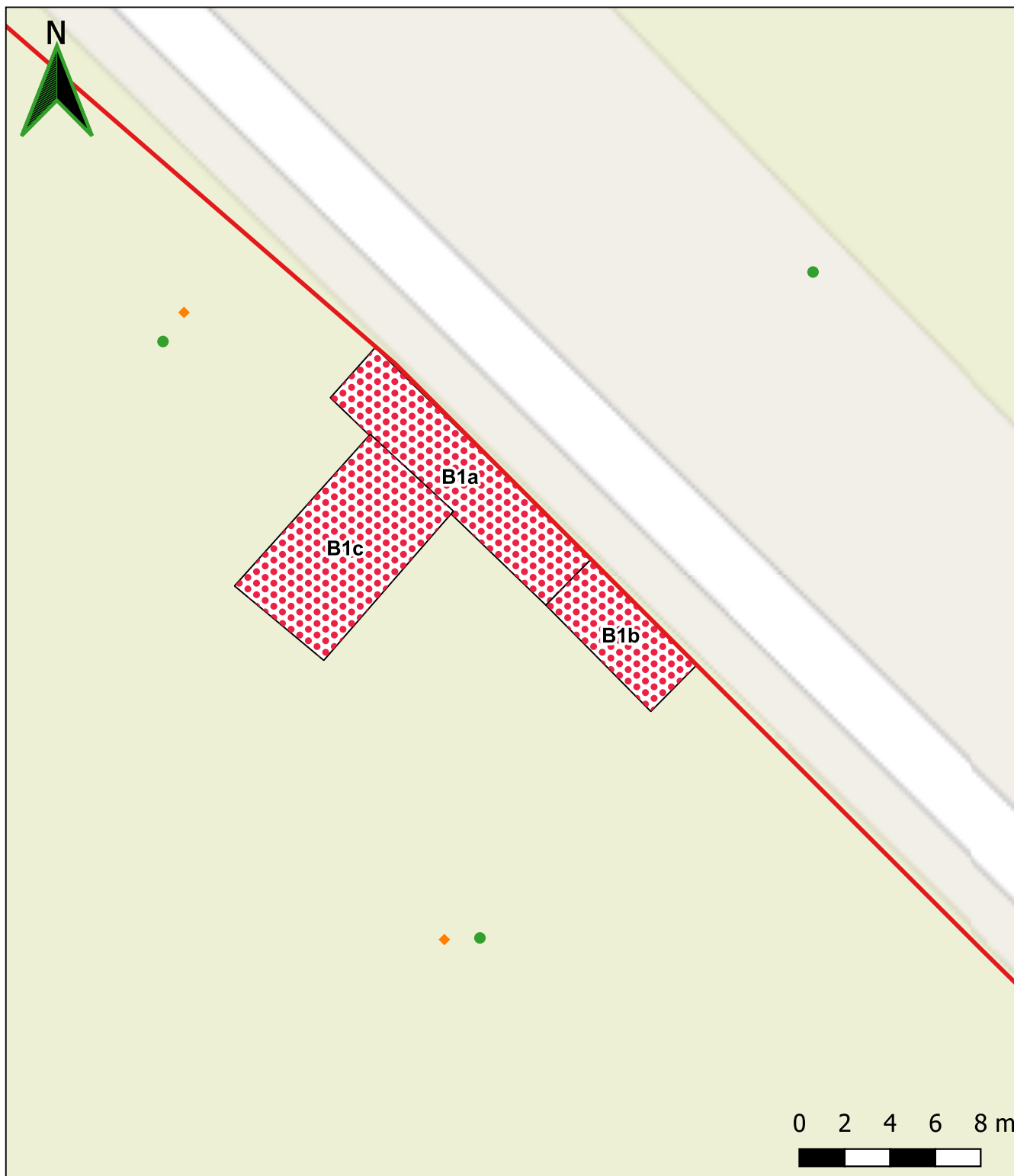
Author: PH

Job No: P2387



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Legend

-  Site boundary
-  Surveyor location
-  Camera location

Project:

**Land Southwest of Sutton Lane, Market
Bosworth**

Drawing:

Figure 5: Surveyor Location Plan

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Appendix 1: Planning Policy & Legislation Summary

This appendix serves as a summary of relevant policy and legislation. It is not intended to supersede the policy or legislation documents to which it refers, and the relevant full documents should always be consulted prior to decision making.

National Planning Policy Framework 2019

Biodiversity is a material consideration under the National Planning Policy Framework (2019). Relevant text to biodiversity from the NPPF is described below.

In Section 2 of the NPPF 'Achieving sustainable development', paragraph 8(c), the NPPF sets an environmental objective:

"To contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."

In Section 15 'Conserving and enhancing the natural environment', the NPPF states that:

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

- Protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- 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; [...]
- Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.
- Preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. [...]"

The NPPF, in paragraph 174. sets out that to protect and enhance biodiversity, plans should:

- "Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and
- promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity."

In determining planning applications, the NPPF sets guidance that local planning authorities should apply the following principles:

- 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;

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

Paragraph 176 states that the following sites should be given the same protection as habitats sites:

- “Potential Special Protection Areas and possible Special Areas of Conservation;
- listed or proposed Ramsar sites; and
- sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.”

Paragraph 177 states that “The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or projects will not adversely affect the integrity of the habitats site.”

Paragraph 180 states that planning policies and decisions should ensure new development is appropriate to its location and take into account likely effects of pollution on the natural environment, and in doing so:

- “Mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development; [...]
- limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.”

Government Circular ODPM 06/05 Biodiversity and Geological Conservation

The government circular provides administrative guidance on the application of statutory obligation and legislation relating to planning and nature conservation in England. It complements the National Planning Policy Framework. The document includes guidance on designated sites (international and national), habitats, and protected species.

Relating to protected species and the requirement for their consideration in planning applications, the government circular, in paragraph 98 details that:

“The presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Local authorities should consult English Nature [now Natural England] before granting planning permission. They should consider attaching appropriate planning conditions or entering into planning obligations under which the developer would take steps to secure the long-term protection of the species. They should also advise

developers that they must comply with any statutory species' protection provisions affecting the site concerned."

Paragraph 99, relating to the requirement and timing of protected species survey and mitigation, the government circular states that:

"It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision. The need to ensure ecological surveys are carried out should therefore only be left to coverage under planning conditions in exceptional circumstances, with the result that the surveys are carried out after planning permission has been granted. However, bearing in mind the delay and cost that may be involved, developers should not be required to undertake surveys for protected species unless there is a reasonable likelihood of the species being present and affected by the development. Where this is the case, the survey should be completed and any necessary measures to protect the species should be in place, through conditions and/or planning obligations, before the permission is granted. In appropriate circumstances the permission may also impose a condition preventing the development from proceeding without the prior acquisition of a [Natural England] licence."

The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

The term 'European Protected Species' (EPS) is used to describe species listed on Schedule 2 of the The Conservation of Habitats and Species Regulations 2017 (as amended). Regarding these species, Regulation 43 of the Regulations make guilty of an offence a person who:

- "Deliberately captures, injures or kills any wild animal of a European protected species;
- Deliberately disturbs wild animals of any such species;
- Deliberately takes or destroys the eggs of such an animal, or;
- Damages or destroys a breeding site or resting place of such an animal [...]"

Regulation 43 defines that the disturbance of animals includes any disturbance which is likely to:

- Impair their ability:
 - to survive, to breed or reproduce, or to rear or nurture their young; or
 - in the case of animals of a hibernating or migratory species, to hibernate or migrate; or
 - to affect significantly the local distribution or abundance of the species to which they belong.

A person guilty of an offence under Regulation 43 is liable on summary conviction to imprisonment for a term not exceeding six months or to a fine, or to both.

Wildlife and Countryside Act 1981 (As Amended)

The Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000) lists species on Schedule 5 for which the Act make it an offence to:

- Intentionally kill, injure or take;

- Recklessly or intentionally damage or destroy, or obstruct access to any structure or place which any wild animal included uses for shelter or protection;
- Recklessly or intentionally disturb any such animal while it is occupying a structure or place which it uses for shelter or protection.

Some species receive partial protection under the Act, which limits their protection under the Act to intentional killing or injury.

All wild nesting birds are protected under the Act, making it an offence to:

- Intentionally kill, injure or take any wild bird; and
- Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.

Some bird species are afforded special protection via their inclusion in Schedule 1 of the Act, which makes an offence to intentionally or recklessly disturb any schedule 1 bird building a nest or which is in, on or near a nest containing eggs or young; or to disturb dependent young of such a bird, or whilst such a bird 'leks' (i.e. congregates for community courtship behaviour).

Schedule 9 of the Act makes it an offence to cause any plant listed to grown in the wild, unless all reasonable steps were taken to prevent an offence and due diligence was exercised.

The Act sets out provisions to protect Sites of Special Scientific Interest (SSSI).

Natural Environment and Rural Communities Act 2006

Section 40 of the Act places a legal duty on public authorities (including planning authorities) to have regard to biodiversity conservation in their normal functions (including planning applications).

Under Section 41 of the Act, lists of Habitats of Principal Importance (HPI) and Species of Principal Importance (SPI), of principal importance for the purpose of conserving biodiversity, are produced which serve to guide public authorities in carrying out their functions with consideration for biodiversity conservation.

Wild Mammals (Protection) Act 1996 (as amended)

The Act protects wild mammals against certain cruel acts, including intentional crushing, downing or asphyxiation.

Appendix 2: Photographs



Photo 1: Other neutral grassland (west field compartment)



Photo 2: Other neutral grassland (west field compartment)



Photo 3: Other neutral grassland (east field compartment)



Photo 4: Mown other neutral grassland, northwest of the site



Photo 5: Mown other neutral grassland, northwest of the site



Photo 6: Mown other neutral grassland (foreground), southwest corner of the site. Other neutral grassland within the site (background)



Photo 7: Tall ruderal to the east



Photo 8: Tall ruderal to the east of hedgerow H1



Photo 9: Common nettle dominated tall ruderal at the south site boundary of the east field

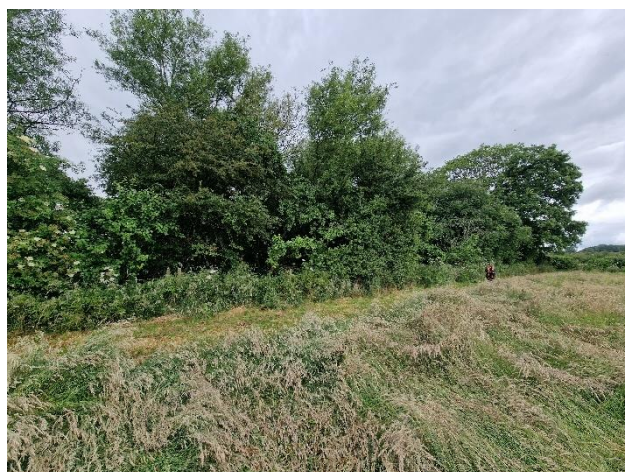


Photo 10: Wet woodland at the south of the west field compartment



Photo 11: Concrete hardstanding present around the buildings on site



Photo 12: Wet ditch at the north of hedgerow H2



Photo 13: Sutton Brook at the south site boundary



Photo 14: Line of trees at east site boundary

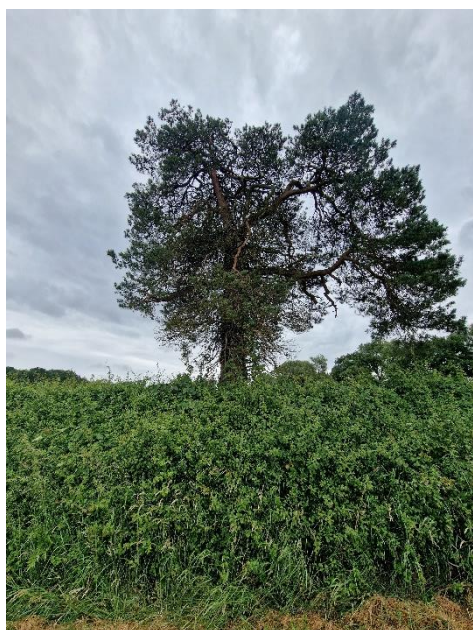


Photo 15: Scots pine



Photo 16: Oak trees at the north site boundary.



Photo 17: Hedgerow H1, north extent



Photo 18: Hedgerow H1 Standard tree and southern section



Photo 19: Hedgerow H2



Photo 20: Hedgerow H3



Photo 21: Hedgerow H4 (east extent)



Photo 22: Hedgerow H4 (west extent)



Photo 23: Building B1a, northeast elevation



Photo 24: B1a, southwest elevation

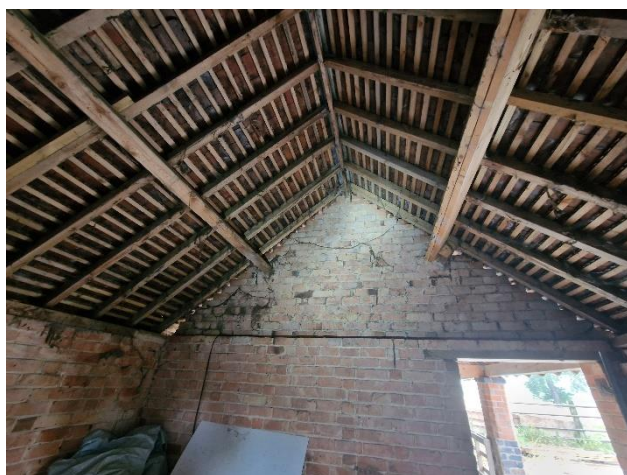


Photo 25: B1a internally



Photo 26: B1b (right) and B1c (left)



Photo 27: B1b internally



Photo 28: B1c, southeast and southwest elevations



Photo 29: Sutton Brook, W1



Photo 30: Watercourse at west boundary, W2



Photo 31: Watercourse through centre of site, W3



Photo 32: Dry pond, P2