



**Studley Grange Biffa Site,
Hay Lane,
Wroughton,
SN4 9QT**

Preliminary Ecological Appraisal

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1.0 Summary

Peach Ecology was commissioned to undertake a Preliminary Ecological Assessment (PEA) at land south of the M4 near Blagrove, Swindon, known as Studley Grange ex-landfill site to inform a planning application for a ground-mounted solar photovoltaic (PV) array. The site initially outlined the wider grazing area and comprised of sheep-grazed improved grassland, hedgerows, woodland strips, and derelict farm buildings. The application will be for the array on one specific field. An extended Phase 1 habitat survey was conducted alongside a desk study of designated sites and protected species records within the local area.

Habitats on and surrounding the site include modified grassland, hedgerows, woodland strips, ponds and buildings with moderate to high ecological value. Key features noted include a veteran oak tree, a confirmed bat maternity roost and three ponds of variable suitability for Great Crested Newts.

Records indicate potential for protected species including bats, breeding birds, amphibians, reptiles, [REDACTED] and brown hare. The site contains suitable habitat for foraging and commuting bats, including structures with confirmed bat roosts. Suitable nesting and foraging habitats for bird species of conservation concern are present nearby. Although some ponds were dry at the time of survey, the surrounding landscape support habitats suitable for amphibians and reptiles. There are records for Dormice within 2km to the north and east and the site is connected to these habitats with hedges, trees and the train track corridor, the site is also connected into the M4 Motorway corridor which is known to have a population of Dormice.

Further surveys were required to determine the presence and distribution of bats, breeding birds, reptiles, and Great Crested Newts for the wider site. No further surveys are required for Dormice as long as there are no impacts to the hedgerows, scrub and woodland on site.

Recommendations at this stage include the retention and buffering of key habitats, the implementation of a sensitive lighting strategy, the timing of vegetation clearance to avoid the bird nesting season and new landscaping and management to enhance the site for wildlife.

The proposed development will need to implement appropriate mitigation and enhancement measures to ensure compliance with wildlife legislation and planning policy, and to deliver measurable biodiversity net gain. These detailed measures will be based on the further surveys taking place.

2.0 Introduction

Background

- 2.1 Peach Ecology was commissioned in April 2025 to carry out an Ecological Assessment of the proposed development at Studley Grange Biffa Site, near Blagrove, Swindon (central Grid Reference: SU 10193 82023), laid out as shown in Appendix B, this is known as the 'wider site'. This report will be submitted to Wiltshire Council for permission to install a ground-mounted solar photovoltaic (PV) array across a series of sheep-grazed fields, as shown in Appendix C, the site.
- 2.2 This report describes the existing ecology on-site based on the findings of an initial site visit, updated walkover surveys, protected species and habitats data searches, a local records data search from Wiltshire and Swindon Biological Records Centre and a review of local and national policies.

Description of site and surrounding area

- 2.3 The wider site is currently composed of modified grassland, young plantation woodland, patches of scrub, and native hedgerow, with key features including a number of mature hedgerows, scattered trees (including a notable veteran oak), ponds, a canal and derelict agricultural buildings. The site, the area where the solar panels are proposed is just Modified Grassland.
- 2.4 The surrounding area is characterised by a mixture of arable farmland and permanent pasture to the south, west and east, industrial and commercial development to the northeast, and the M4 motorway forming a significant linear boundary to the north, beyond this is the town of Swindon. To the south the site is bordered by the Wilts & Berks Canal with a poplar plantation on the far bank and the northern border is a train track. Both these features allow movement of wildlife east/west.
- 2.5 The site itself plays a role in the wider landscape by providing a mixture of open and wooded habitats that function as foraging grounds and wildlife corridors, linking to off-site woodland and hedgerow networks. A drainage ditch and potentially seasonally wet areas within the grassland contribute to local hydrology and may offer additional ecological value.

Brief

- 2.6 The main objectives of the PEA are:
- To identify and describe the habitats present on-site.
 - To assess the potential for protected and notable species.
 - To evaluate any ecological constraints associated with the proposed development.
 - To provide recommendations for mitigation and enhancement measures.

3.0 Methodology

Desk Study

- 3.1 This involved gathering ecological data relating to statutory nature conservation sites from within 2km as shown in Appendix D. Multi-Agency Geographic Information for the Countryside (MAGIC) a DEFRA run website was used along with Ordnance Survey maps and aerial images to check for relevant data on notable habitats and species nearby, including European Protected Species license data and wildlife corridors where the site connects into the surrounding area. Planning applications for nearby sites were also reviewed to look at the impacts of other proposals and schemes nearby, this included two nearby Solar Sites (Planning Applications: 14/02508/FUL and 13/02191/FUL). Wiltshire and Swindon Biological Records Centre were contacted for a 2km data search, extended to 4km for bats.

Site Assessment

- 3.2 The initial site survey was undertaken on the 7th of April 2025 although later follow up walkover surveys were undertaken to confirm the habitats in May, June and July. The survey employed techniques based on standard Phase I Habitat Survey methodology (CIEEM, 2016). Habitat types on and adjacent to the site were identified according to standard habitat definitions (UKHabs). The collection of botanical information focused on the dominant and key indicator species for each habitat type. The site survey included an assessment of the habitats immediately adjacent to the site, where possible, to look at its value within the local landscape. Indicative methodologies for the most likely protected and notable species that could occur on site or adjacent to the site and be impacted by the proposals are set out below.

Bats

- 3.3 A preliminary bat roost assessment was undertaken following BCT Bat Surveys for Professional Ecologists (2023). The assessment included an external and internal inspection of buildings for potential roosting features, such as gaps in roofing materials, lifted lead flashing, and cracks in brickwork. Trees within the site were also assessed from ground level for features such as rot holes, lifted bark, and ivy cover. The assessment followed standard methodologies to determine the site's suitability for bat roosting and to identify any requirements for further survey work. The site was assessed for its potential to be used by bats for foraging, commuting and breeding.

Badgers & Hedgehogs

- 3.4 During the field survey, the site and a surrounding buffer (typically 100m) [REDACTED]
[REDACTED]
[REDACTED] Surveys are best conducted in spring or autumn when vegetation is less dense, [REDACTED] Findings are mapped and evaluated to determine any requirements for further survey methods such as camera traps or sand traps used where necessary to confirm presence.

Birds

- 3.5 Any habitat features, for example, scrub, trees, hedgerows and buildings which could potentially be used by nesting birds, were surveyed and any nesting activity was noted. Any bird records were also noted down during the survey in relation to the habitats.

Dormice

- 3.6 The wider site was assessed to ascertain habitat suitability and identify any signs of Dormouse presence. Key features such as species-rich hedgerows, woodland edges, scrub, and areas with a diverse shrub layer (including hazel, honeysuckle, and bramble) are noted as potential nesting or foraging sites. The survey includes a search for indirect evidence such as gnawed hazelnuts, which have a characteristic smooth, bevelled edge. Findings are mapped, and the presence of suitable habitat may indicate the need for further presence/absence surveys using nest tubes or nest boxes.

Reptiles

- 3.7 The habitats on site and within the wider site were assessed for their suitability for reptile species. Key features such as rough grassland, hedgerows, woodland edges, scrub, and open ground with refugia (e.g., log piles, stone heaps, and compost heaps) are noted as potential basking, foraging, or hibernation sites. The survey is undertaken in suitable weather conditions, ideally between 10–20°C when reptiles are more likely to be basking. Observers record any direct sightings of reptiles or indirect evidence such as shed skins. Findings are mapped to determine whether further presence/absence surveys are required.

Great Crested Newts

- 3.8 Any ponds on the wider site and within the vicinity of the site were checked for features such as aquatic vegetation, shading, and water quality these were used to assess their potential as breeding sites. Terrestrial habitats, including grassland, scrub, hedgerows, and woodland, are evaluated for their suitability for foraging, sheltering, and hibernation. The survey also involved searching for indirect evidence, such as egg-laying vegetation or aquatic invertebrates indicative of newt presence. Findings are mapped, and the presence of suitable habitats may trigger further targeted surveys, such as eDNA testing or presence/absence surveys.

Stag Beetles

- 3.9 Habitat for stag beetle larvae was searched for including wood piles or rotting tree stumps.

4.0 Results and Analysis

Desk study

Statutory Designated Sites

- 4.1 The following Statutory sites are located within 2 km of the proposed development site:
- **Bincknoll Dip Woods** SSSI (5.54 ha) – Ancient semi-natural woodland of biological interest.
 - **Goldborough Farm Meadows** SSSI (10.26 ha) – Notified for species-rich grassland.
 - **Wootton Bassett Mud Spring** SSSI (0.78 ha) – A rare geological feature supporting unique biological communities.
- 4.2 There is several non-statutory wildlife sites located within 2km:
- **Monks Rest Wood** Woodland Trust Reserve (39.6 ha) - The wood part of the Great Western Forest was planted with a mixture of native broadleaves including oak ash field maple birch and lime along with woody shrubs such as hazel and guelder rose.
 - **Morningside Farm** Local Wildlife Site (25.87 ha) - A complex of species rich meadows either side of the Wilts and Berks canal
 - **Hagbourne Copse** Local Wildlife Site (2.09 ha) - A small urban woodland reserve managed as high forest and coppice with standards. Supports an abundant Bluebell population.
- 4.3 Due to the relatively small scale and extent of the proposals it is unlikely that the development will impact upon any site of importance for nature conservation. It is important however that the proposals follow appropriate pollution prevention and drainage guidelines. The habitats and flora associated with waterways and ground water are sensitive to changes cumulatively from different impacts locally so every development should consider and mitigate for their own impact with regards drainage and pollution.
- 4.4 The boundaries, habitats, features and wildlife corridors on site all need to be protected from light spillage associated with any external lighting on buildings or elsewhere as there are several known bat roosts located nearby and other light sensitive are present locally including Dormice – a light plan will need to be agreed as a condition of planning if external lighting is proposed. Any external lighting will need to be in line with current bats and lighting guidelines.

European Protected Species Licences

- 4.5 Four European Protected Species Mitigation Licences have been granted within 2km, these are shown in Table 1:

Licence Reference	Species	Start Date	End Date	Breeding Site Affected	Resting Place Affected
2017-32701-EPS-MIT-1	Great Crested Newt	11/06/2019	31/12/2022	No	Yes
EPSM2011-3261	Great Crested Newt	15/08/2013	31/12/2021	Not stated	Yes
EPSM2010-1951	Great Crested Newt	27/07/2010	26/07/2012	Not stated	Yes
EPSM2010-1977	Great Crested Newt	16/07/2010	15/07/2012	Not stated	Yes

Table 1: Summary of the EPSMLs granted within 2km

- 4.6 Multiple Great Crested Newt (GCN) survey and licence return records were found within 2 km. These include:
- GCN Pond Surveys (2017–2019): Two ponds surveyed within 2km returned positive eDNA or presence data. Ponds at SU0838781741 & SU1052580136, recorded presence and average and below average Habitat Suitability Index (HSI) scores respectively.
 - GCN Class Survey Licence Returns: 38 entries between 2014–2017 confirm GCN presence at locations within 2km of the site.

Local Record Centre

- 4.7 The Local Records Centre provided data on protected and notable species within a 2-4km radius. The most relevant and recent records (1975 – present) are summarised below in Table 2:

Group	Species	Number of records	First Record	Last Record	Protections
Bird	Barn Owl	17	2005	2021	WCA1i
Bird	Cuckoo	11	2000	2021	BRed, RLGB.VU, Sect.41, UKBAP
Bird	Curlew	6	1988	2024	BRed, RLGB.EN, RLGLB.NT, Sect.41, UKBAP
Bird	House Martin	27	2005	2021	BRed, RLGB.VU
Bird	House Sparrow	229	2000	2024	BRed, Sect.41, UKBAP
Bird	Lapwing	23	2000	2024	BRed, RLGB.EN, RLGB.VU, Sect.41, UKBAP
Bird	Red Kite	71	2006	2023	BD1, RLGLB.NT, WCA1i
Bird	Skylark	25	1975	2021	BRed, Sect.41
Bird	Swift	50	2005	2021	BRed, RLGB.EN
Bird	Yellow Wagtail	6	2005	2021	BRed, RLGB.Lr(NT)
Amphibian	Common Toad	10	1999	2011	Sect.41, UKBAP
Amphibian	Great Crested Newt	146	1999	2022	HabRegs2, HSD2p, HSD4, Sect.41, UKBAP, WCA5/9.4b, WCA5/9.4c

Reptile	Grass Snake	23	1998	2017	Sect.41, UKBAP, WCA5/9.1k/I
Reptile	Slow-worm	9	2005	2022	Sect.41, UKBAP, WCA5/9.1k/I
Mammal	Badger	51	1975	2024	PBA
Mammal	Brown Hare	19	1975	2014	Sect.41, UKBAP
Mammal	Hazel Dormouse	3	2013	2022	HabRegs2, HSD4, RLGB.VU, Sect.41, UKBAP, WCA5/9.4b, WCA5/9.4c
Mammal	Otter	6	2009	2021	HabRegs2, HSD2p, HSD4, Sect.41, UKBAP, WCA5/9.4b, WCA5/9.4c
Mammal	Water Vole	20	1999	2024	RLGB.EN, Sect.41, UKBAP, WCA5/9.4.a, WCA5/9.4b, WCA5/9.4c
Insect	Cinnabar	9	1984	2022	Sect.41, UKBAP
Insect	Lackey	3	2018	2022	Sect.41, UKBAP
Insect	Marsh Fritillary	2	2022	2024	HSD2p, RLGB.VU, Sect.41, UKBAP, WCA5/9.1k/I, WCA5/9.1t, WCA5/9.2, WCA5/9.4.a, WCA5/9.4b, WCA5/9.4c
Insect	Small Heath	14	1975	2022	RLGB.Lr(NT), Sect.41, UKBAP

Table 2: Summary of notable records within 4km

- 4.8 Bat records within 4km of the site drawn from the local biological records centre, provide an overview of the species previously recorded in the area. The following table (Table 3) summarises the bat species recorded within the search radius.

Species	Number of Records	First Record	Last Record
Barbastelle	2	2022	2024
Bechstein's Bat	2	2024	2024
Brown Long-eared Bat	44	1985	2022
Common Pipistrelle	70	2001	2024
Daubenton's Bat	17	1999	2024
Leisler's Bat	1	2024	2024
Lesser Horseshoe Bat	7	1990	2024
Myotis Bat species	21	2000	2022
Nathusius's Pipistrelle	1	2023	2023
Natterer's Bat	5	1990	2024
Noctule	43	1987	2024
Serotine	15	1990	2024
Soprano Pipistrelle	66	2004	2024
Whiskered Bat	1	1993	1993
Whiskered/Brandt's Bat	1	2024	2024

Table 3: Summary of bat records from the LRC

Interpretation

- 4.9 The desk study records suggest that the site might support a range of species with legal protections and are of conservation concern:
- **Birds** of farmland and woodland edges, including several of conservation concern, have been noted in the records provided. The heavily grazed modified grassland offers limited structural diversity but in the damper areas may provide open foraging and nesting areas for species such as skylark and meadow pipit. Hedgerows and scrub along field boundaries potentially offer nesting and foraging

resources for species like yellowhammer and house sparrow. The presence of old farm buildings provides potential nesting sites for house martins, swifts, and barn owls.

- **Amphibian** records of common toad and GCN along with the presence of a canal along the southern boundary, ponds on site and nearby and the surrounding terrestrial habitat, particularly areas of undisturbed vegetation along field margins and hedgerows, may provide valuable foraging and hibernation opportunities.
- **Reptile** records for slow worm and grass snake within the local area suggest that the site may support these species. On-site, the intensively grazed modified grassland offers limited refuge or basking habitat, reducing its suitability. However, the hedgerows, damp field edges, and canal margins may offer structurally diverse microhabitats with cover, thermal opportunities, and prey availability. These areas, particularly if unmanaged or lightly vegetated, may support low to moderate numbers of reptiles, and their potential presence should be considered in areas of suitable edge habitat or where grazing pressure is reduced. Only the grassland will be impacted by the proposals.
- **Mammal** [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Brown hare is also recorded locally, and the open Modified Grassland may offer appropriate foraging and shelter opportunities for this UK Priority Species. Records of otter and water vole in the vicinity indicate that the canal corridor may support these species, with water vole potentially utilising vegetated banks for burrowing and foraging, and otters using the watercourse for movement and feeding. Dormice have been noted within 2km and there is habitat on the wider site and connectivity to the site for this species.
- **Bat** records within 4 km of the site include a diverse range of species, notably lesser horseshoe bat, noctule, serotine, and myotis species. The wider site itself contains several features of ecological value for bats, including the canal along the southern boundary, a network of intact hedgerows, and old farm buildings offer potential roosting and foraging opportunities. The grassland area where the panels are proposed has less value.

Data Limitations

- 4.10 The desk study provides an indication of species and habitats within the local area but does not confirm their presence on-site. Data may be historical or spatially imprecise. Field survey was therefore undertaken to verify presence, habitat suitability, and potential constraints related to protected species.

Site Assessment

Modified Grassland

- 4.11 The developments impacts are largely isolated to a single field in the south of the site. The field comprises of agriculturally modified pasture (Modified Grassland) dominated by a short, uniform sward of broadleaf grasses resulting from consistent grazing pressure (Photo 1 & 2). The field exhibits signs of severe trampling and poaching, particularly around the entrance and in localised patches. In these areas occasional forbs such as ribwort plantain (*Plantago lanceolata*), Dandelion (*Taraxicum officinale*)

agg.) and white clover (*Trifolium repens*) further demonstrate the sites nutrient enrichment.



Photo 1: A view southwest across the field



Photo 2: A view west across the field

- 4.12 Through the centre of the field is a fenced off strip of land running north to south, recently planted with young trees (Photo 3). Around the base of the trees, the flora is dominated by early successional vegetation with species such as ox-tongue (*Helminthotheca echioides*), broadleaved dock (*Rumex obtusifolius*), and common ragwort (*Jacobea vulgaris*) likely due to the recent disturbance.



Photo 3: looking east, the recently planted trees can be seen on the left and right.

- 4.13 Moving to the southern end of the field, beyond the site boundary, there is a steep slope down to the canal (Photo 4). The grassland transitions into an assemblage more typical of wet pasture. The sward is closely cropped and comprises of Yorkshire fog (*Holcus lanatus*), tufted hair-grass (*Deschampia cespitosa*), Cocksfoot (*Dactylus glomerata*), soft rush (*Juncus effusus*), hard rush (*Juncus inflexus*), and Teasel (*Dipsacus fullonum*) with scattered areas of scrub beginning to develop (Photo 5) with blackthorn (*Prunus spinosa*), bramble (*Rubus fruticosus* agg.), common nettle (*Urtica dioica*), creeping thistle (*Cirsium arvense*) and common sorrel (*Rumex acetosa*).



Photo 4: Looking west along the southern boundary of the proposed solar array.



Photo 5: Further down the slope and looking east. The canal on the right with a small blackthorn tree in the centre.

- 4.14 Although structurally homogenous and species-poor overall, the field retains some ecological value due to its marginal features and wetter microhabitats especially along the southern boundary towards the canal. It may support low-density foraging by invertebrates, birds, and potentially small mammals.

Eastern Hedgerow (Native Hedgerow)

- 4.15 The eastern hedgerow is a species-diverse but structurally inconsistent Native Hedgerow, running broadly in a north–south direction. The hedgerow has multiple gappy sections and variation in height and density along its length (Photo 6). In places it is densely tangled and overgrown, while in others it is sparse, with large canopy gaps. The hedge is off-site.



Photo 6: Looking north along the western boundary

- 4.16 Woody species present within the hedgerow include blackthorn, hawthorn (*Crataegus monogyna*), field maple (*Acer campestre*), dogwood (*Cornus sanguinea*) and willow (*Salix spp.*). The diversity of native species contributes positively to the hedgerow's ecological value, although its current structure limits its continuous function as a wildlife corridor.
- 4.17 The understorey and associated ground flora are dominated by bramble and common nettle, with frequent cleavers and spear thistle (*Cirsium vulgare*).
- 4.18 Immediately adjacent to the hedgerow, a shallow unmanaged ditch runs along much of the boundary (Photo 7). The ditch appears constantly wet, contributing additional habitat structure. While heavily overgrown in places, the ditch may offer habitat for amphibians, invertebrates, and small mammals.



Photo 7: Shows the remaining water at the bottom of the ditch

- 4.19 The presence of a diverse mix of woody species enhances the botanical and habitat value of the hedgerow, although its fragmented condition and lack of dense base structure in parts limit its function as a fully continuous ecological corridor. Nevertheless, it provides moderate ecological value overall, acting as a linkage feature across the southern edge of the site and offering suitable foraging, nesting, and cover opportunities for generalist bird species and small mammals. The taller tree species may also contribute to structural connectivity for commuting bats, particularly when considered in the context of the broader field boundary network. The habitat will be retained and will be unimpacted by the proposals.

Western Boundary (West Field)

- 4.20 The western boundary of the site is defined by a post and wire fence. (Photo 8). Adjacent to this is more pasture. Due to the topography, the fields to the west are significantly wetter which has led to reduced grazing pressure and more tussocky grassland. The grassland is dominated by wavy hair grass and sedges with occasional forbs such as cuckoo flower (*Cardamine pratensis*), creeping buttercup (*Rununculus repens*) and lesser celandine (*Ficaria verna*).



Photo 8: A view north along the eastern boundary

- 4.21 Ecologically, this boundary is of limited value, however, the tussocky grassland of the adjacent fields offers opportunities to ground nesting birds, amphibians and reptiles.

Farm Buildings (Developed Land Sealed Surface)

- 4.22 To the north of the proposals, is a cluster of derelict and semi-derelict farm buildings including a traditional stone farmhouse, a series of agricultural sheds (Photo 9), and storage units. The buildings are located toward the northern edge of the wider site and are surrounded by scrub, ruderal vegetation, and bare ground with scattered debris and stored materials (e.g. irrigation piping).



Photo 9: One of the large farm buildings onsite

- 4.23 The buildings vary in condition. The farmhouse is disused, with boarded windows, a tiled roof, and vegetation encroaching on all elevations (Photo 10). Corrugated metal sheds and blockwork barns are also present, with some being partially open. Many show signs of disrepair, including missing roofing panels and overgrown walls.



Photo 10: A view of the old farmhouse

- 4.24 Bramble and ivy are colonising building exteriors, especially on the southern faces. These species provide cover and forage opportunities for invertebrates and birds. Piles of debris and pipes may offer refugia for small mammals and reptiles.
- 4.25 Of notable importance, the farmhouse contains a confirmed maternity roost of Brown long-eared bats (*Plecotus auritus*) observed tucked behind timber beams inside the loft void and a confirmed day roost of lesser horseshoe bat (*Rhinolophus hipposideros*) seen hanging on the second floor.
- 4.26 These buildings, while degraded, provide habitat for roosting bats and nesting birds such as swallows and pigeons. The buildings will not be impacted by the proposals. The site supports a mosaic of hardstanding, ruderal vegetation, and scrub, offering habitat heterogeneity. The confirmed bat roost elevates the ecological sensitivity of this area, and any future works must consider appropriate mitigation and licensing where there are impacts to bats, their roosts or their commuting and foraging habitat.

Sparsely Vegetated Land

- 4.27 An area of sparsely vegetated urban land was identified in association with the disused farmyard and surrounding hardstanding areas (Photo 11), consistent with the UKHab classification u1f. The ground in these locations comprises compacted bare substrates, including concrete, gravel and disturbed soil, with only limited vegetation cover. Vegetation is largely ruderal or pioneer in character and includes scattered individuals or small patches of mosses, grasses and opportunistic species such as dandelion, groundsel (*Senecio vulgaris*) and annual meadow-grass (*Poa annua*), along with bramble colonising the bases of buildings and fences.



Photo 11: Track leading away from farm buildings

- 4.28 In some locations, the hardstanding is breaking up or has become partially overgrown due to neglect and lack of recent disturbance. Rubble piles, old materials, and discarded piping were also noted, which provide refugia for invertebrates and potentially reptiles or small mammals, albeit of low overall ecological value. These features may also offer bat roosting potential in association with adjacent buildings and retained vegetation.
- 4.29 Overall, the ecological value of this habitat is considered to be low due to the paucity of native flora and limited habitat structure. However, its proximity to more ecologically valuable habitats such as hedgerows, scrub, and grassland may support some limited use by more mobile species including birds and foraging bats.

Ponds

- 4.30 Three ponds were identified across the wider farmland during the initial visit. Figure 1 shows the location of the ponds, none of these are on site within the area where the panels are proposed.

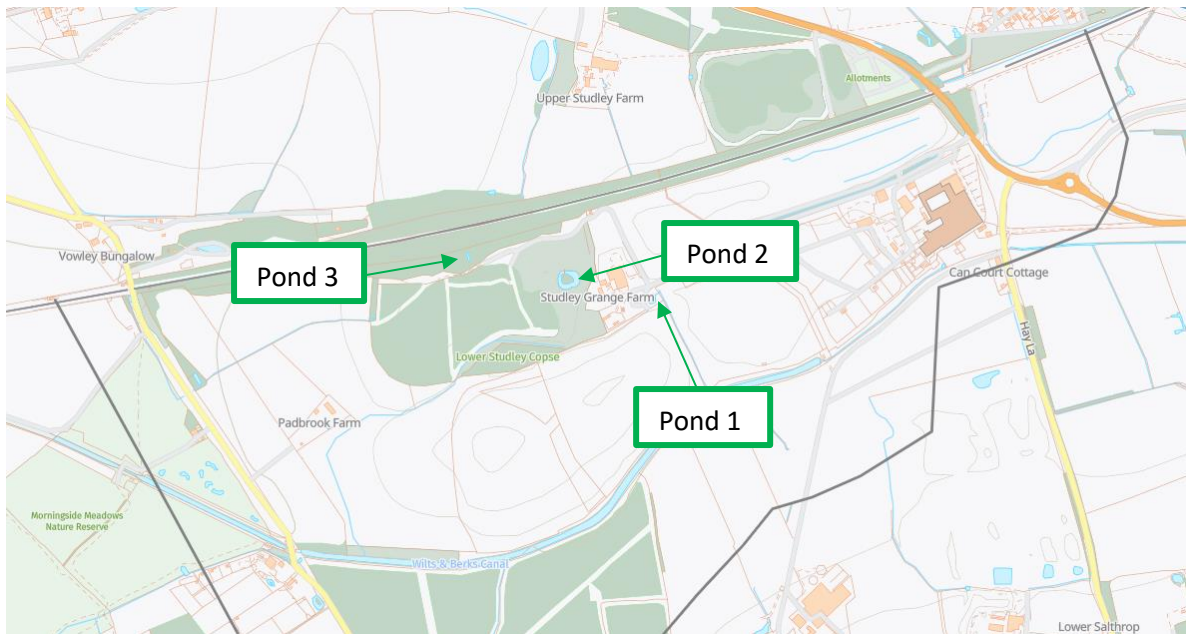


Figure 1: Location of Ponds on site

- 4.31 Pond 1 lies along the track towards the farmhouse and was dry at the time of the survey (Photo 12). The pond holds dense stands of dead emergent vegetation, predominantly common reed (*Phragmites australis*) or reedmace (*Typha* spp.), suggesting seasonal water retention and drying. The margins support tussocky grassland and scattered bramble, with some rubble and debris present along the edge. There is some potential for amphibian use during wetter months, though current grazing pressure may limit suitability.



Photo 12: Pond 1

- 4.32 Pond 2 is located just to the west of the old farmhouse, within a densely shaded woodland area, surrounded by mature trees and dense understory vegetation, including hawthorn and blackthorn (Photo 13 & 14). The pond retains water and appears to be partially shaded, with a layer of leaf litter and woody debris visible both in the water and along the banks. The water is still and dark, with some duckweed, suggesting low disturbance. The banks are gently sloped and vegetated with ground flora such as nettle and grasses, transitioning into wooded margins. The pond offers potential habitat for amphibians, and its shaded, secluded setting may support breeding activity.



Photo 13: Pond 2



Photo 14: Pond 2

- 4.33 Pond 3 is located in the northern part of the wider site, within the strip of woodland bordering the railway line. During the survey, it was dry, with compacted, poached ground and a sparse fringe of rushes and ruderal vegetation (Photo 15). No aquatic or emergent plant species were recorded, and the pond lacked structural or vegetative diversity.



Photo 15: Pond 3

Protected Species

- 4.34 Although no European Protected Species Mitigation Licences (EPSMLs) for bats have been granted within 2 km of the site, the desk study returned records of 13 bat species within 4 km of the site. The wider site includes mature trees, and a derelict structure that may provide features suitable for roosting bats, as well as hedgerows, woodland and pasture that could function as commuting or foraging corridors. Bat roosts were also recorded in the farm buildings for brown long-ear (maternity roost) and lesser horseshoe (day roost). The habitat assessment suggests high potential for bats. As such, any works affecting these features should be informed by further survey effort, and a sensitive lighting strategy should be implemented to maintain habitat suitability.
- 4.35 The desk study returned records of 10 bird species of note within 2 km of the site, including barn owl (Schedule 1 of the Wildlife and Countryside Act), house sparrow (UKBAP), and lapwing (UKBAP). The wider site comprises open fields, rough grassland, hedgerows, and woodland, offering suitable habitat for a range of bird species. The fields may support ground-nesting birds, and there is potential for barn owls to use the site for nesting and foraging. The proposed development would lead to the loss of part of this foraging habitat. To assess the site's value for breeding birds more fully, nesting bird surveys are planned.
- 4.36 The desk study identified 146 records of great crested newt (*Triturus cristatus*) within 2 km of the site, with several positive survey results and EPSMLs granted in the surrounding area. The wider site includes two ponds which were dry during the field survey, and a ditch network, as well as areas of seasonally wet grassland and rough marginal habitat, which may support foraging or dispersing amphibians. The third pond on the wider site held water and was suitable for GCN. Although current grazing pressure and poaching reduce habitat suitability in grassland areas, if management

changes or vegetation becomes more tussocky, these features could support amphibians. As such, further surveys—including eDNA analysis of the on-site ponds—are planned to determine presence or absence of GCN and inform appropriate mitigation if required.

- 4.37 The desk study returned records for slow-worm (*Anguis fragilis*) and grass snake (*Natrix helvetica*). The wider site supports habitats with moderate potential for reptiles, including tall grassland, rough pasture, field margins, and rubble piles that offer basking and refuge opportunities. Although these habitats are currently subject to grazing and poaching, which may reduce their suitability, areas of low disturbance and dense vegetation remain. The site where the panels are proposed is short grassland and is unsuitable for reptiles as it provides no cover.
- 4.38 The desk study did return three records of hazel dormouse (*Muscardinus avellanarius*) within 2 km of the site. The hedgerows and tree lines within the site were assessed during the field visit and found to be, fragmented with connectivity to larger woodland blocks or extensive networks of suitable habitat limited. There is some connectivity however and if hedgerow or woodland habitats are impacted by the proposals then further survey work will be needed.

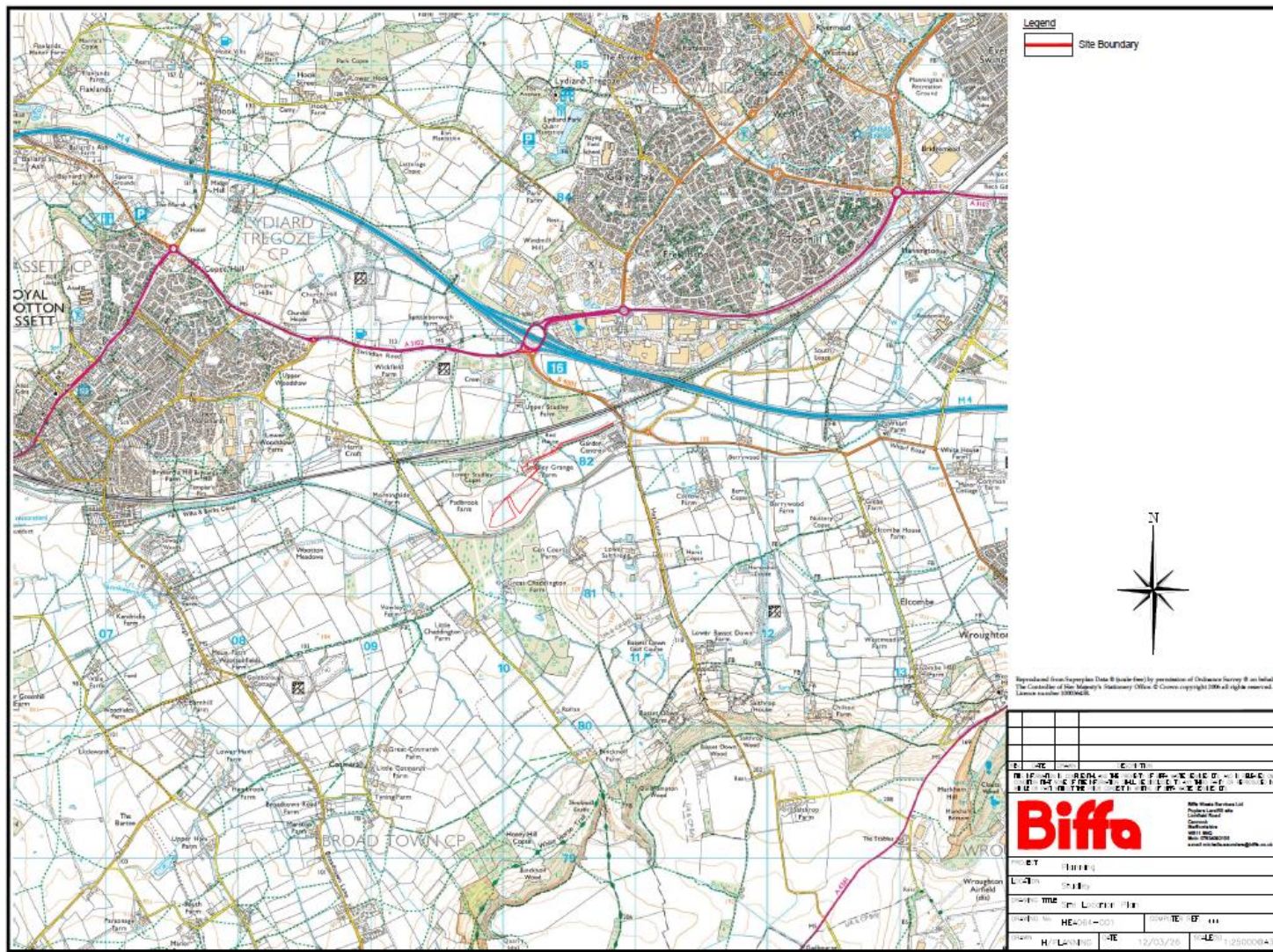
5.0 Requirements and Recommendations

- 5.1 To ensure compliance with relevant ecological legislation and planning policy, and to deliver biodiversity benefits, the following mitigation and enhancement measures will be implemented as part of the proposed development:
- 5.2 For the initial scope of the proposals, further Surveys are required for:
- Breeding bird surveys
 - Bat activity surveys
 - GCN eDNA onsite and ecologically connected ponds
- 5.3 If the scope is expanded to include the woodland, hedgerows, or buildings are impacted then surveys are required for:
- Reptile surveys
 - Dormice surveys
 - Bat emergence surveys

Mitigation and Enhancement Measures

- 5.4 Outline measures at this stage include:
- **Timing of Vegetation Clearance:** All vegetation clearance will take place outside the bird nesting season (March to August inclusive). If clearance is required during this period, it will be carried out under the supervision of a suitably qualified ecologist following a nesting bird check.
 - Continuation of grazing on site to prevent longer grassland and scrub encroachment. Small area of scrub and longer grassland can be cleared under a two-stage cut and watching brief by an ecologist
 - The proposals do not include any increase in external lighting. If external lighting is required a Lighting Plan that adheres to BCT guidelines will be required, most importantly to not impact on the woodland to the west of the house. A lighting plan will be produced in accordance with the Bat Conservation Trust Guidance Note 08/23: Bats and Artificial Lighting at Night. External lighting will be strictly directed away from the boundary vegetation and will be kept to below 1 lux within at least 5-10m from the mature trees, hedgerows and existing buildings.
 - A Construction Environment Management Plan (CEMP) will be provided to the site contractors along with this report to show the areas of ecological value on site and working practices to prevent harm to ecological receptors. This will have details on storage of equipment and timing of works.
 - It is important that the proposals follow appropriate pollution prevention guidelines (PPG 6) and drainage guidelines (Defra guidelines for Sustainable Urban Drainage) to protect habitats connected hydrologically (Ponds and Canal).
 - A range of wildlife boxes for bats, birds and invertebrates will be installed over the site in suitable locations.

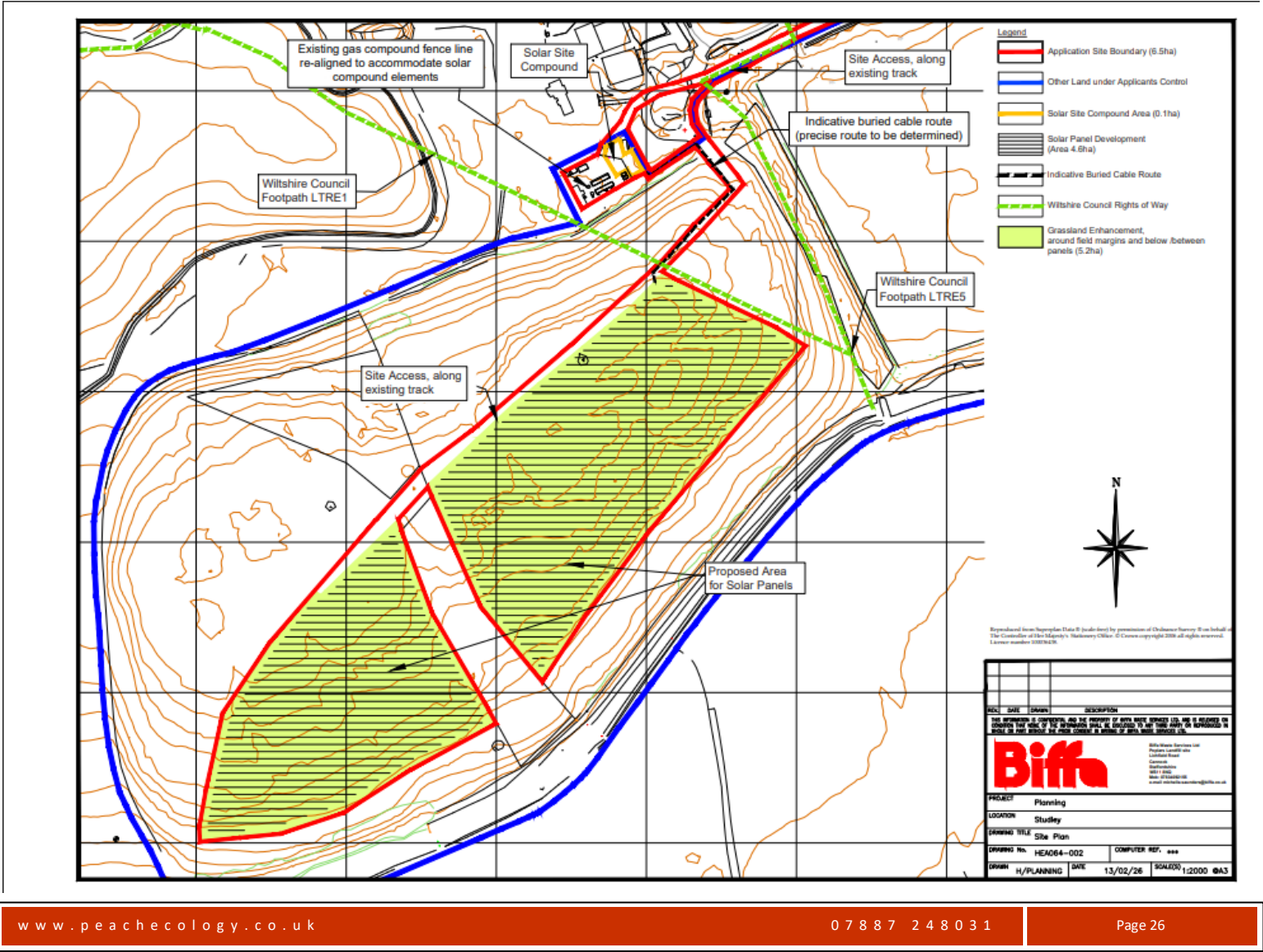
Appendix A: Site location



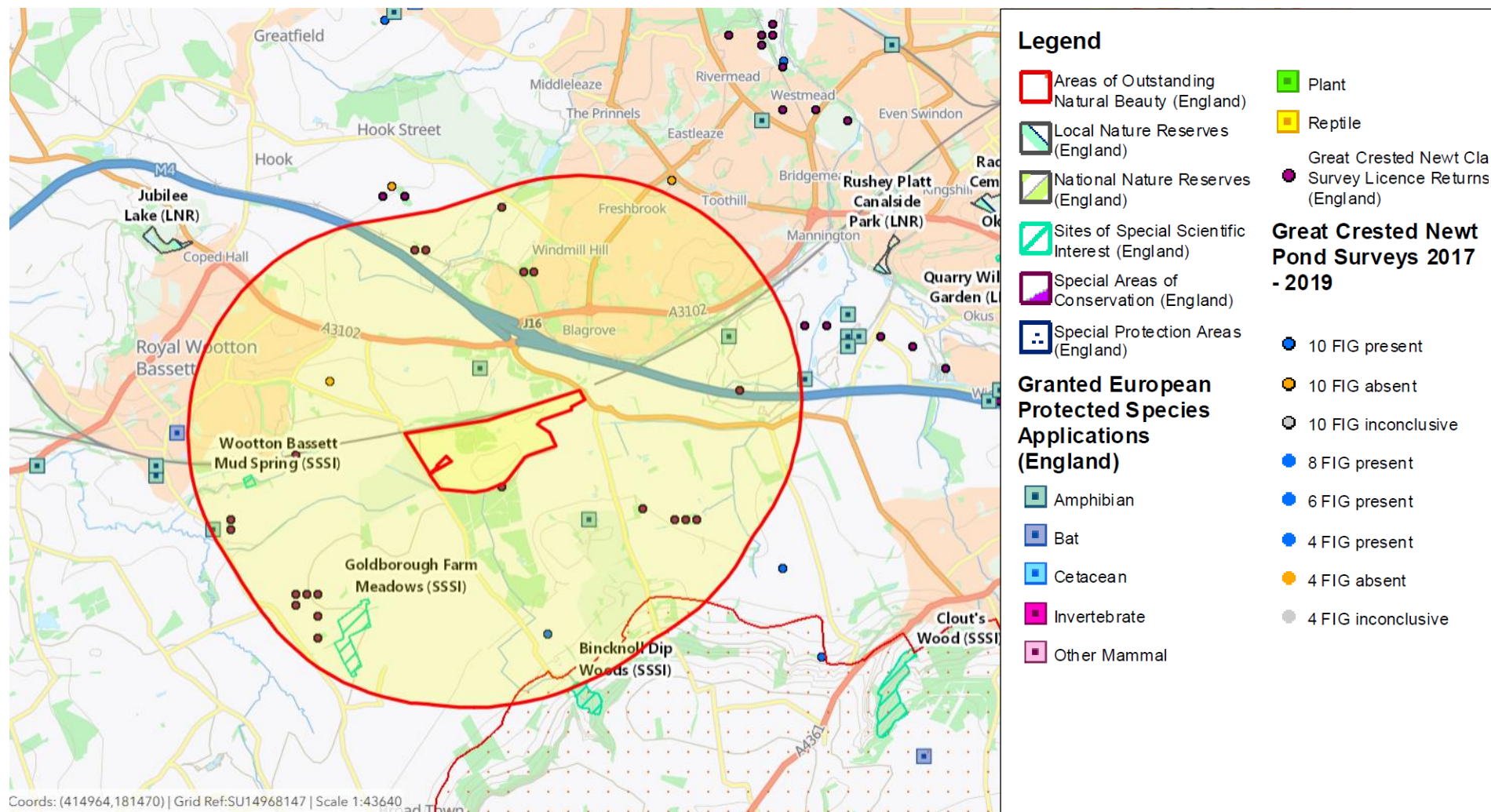
Appendix B: Existing aerial

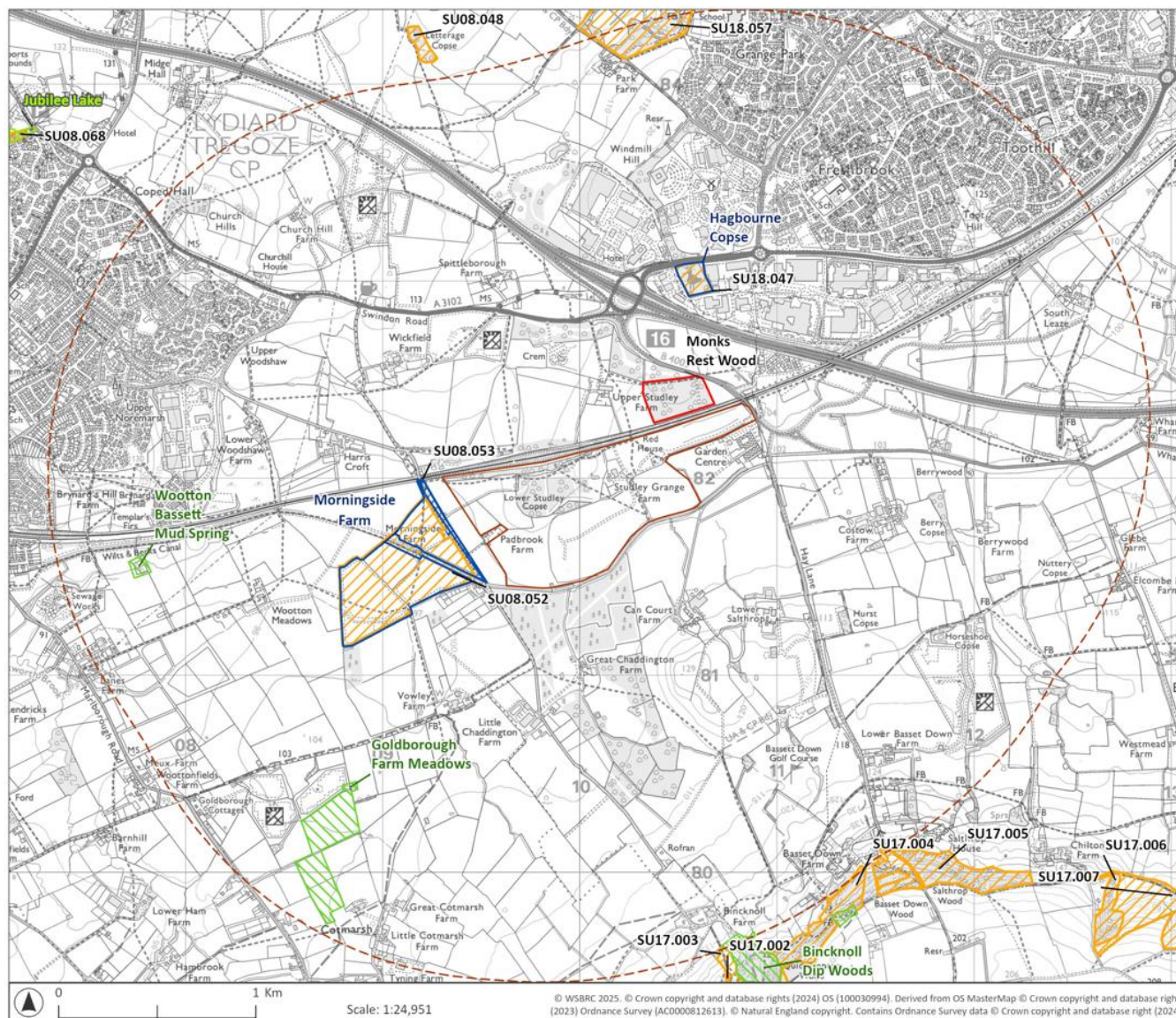


Appendix C: Proposals and UkHabs Plan



Appendix D: Protected sites, habitats and species data from MAGiC database and Wiltshire and Swindon Biological Records Centre within 2km





Notified Sites Within
2000 metres of
Studley Grange Landfill Site:
SU1009281946

Exported: 09/05/2025



Appendix E: Protected species legislation

Amphibians

Natterjack toad, pool frog and great crested newt are protected under the Conservation of Habitats and Species Regulations 2017 (as amended). They are also afforded additional protection under the Wildlife and Countryside Act 1981 (as amended).

Natterjack toad, common toad, great crested newt and northern pool frog are also Species of Principal Importance (SPIs).

Reptiles

Smooth snake and sand lizard are protected under the Conservation of Habitats and Species Regulations 2017 (as amended). They are afforded additional protection under the Wildlife and Countryside Act 1981 (as amended).

Adder, grass snake, common lizard and slow-worm are all protected from killing and injury under the Wildlife and Countryside Act 1981 (as amended). All UK reptile species are SPIs.

Birds

All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended). This includes damage and destruction of their nests whilst in use, or construction. Species listed under Schedule 1 of the Act, such as barn owl, are afforded protection from disturbance during the nesting season.

The following 50 bird species are SPIs: lesser redpoll, aquatic warbler, marsh warbler, skylark, white-fronted goose, tree pipit, scaup, bittern, dark-bellied brent goose, stone-curlew, nightjar, hen harrier, northern harrier, hawfinch, corncrake, cuckoo, Bewick's swan, lesser spotted woodpecker, corn bunting, ciril bunting, yellowhammer, reed bunting, red grouse, herring gull, black-tailed godwit, linnet, twite, Savi's warbler, grasshopper warbler, woodlark, common scoter, yellow wagtail, spotted flycatcher, curlew, house sparrow, tree sparrow, grey partridge, wood warbler, willow tit, marsh tit, dunnoek, Balearic shearwater, bullfinch, roseate tern, turtle dove, starling, black grouse, song thrush, ring ouzel and lapwing.

Birds are also categorised according to their level of conservation concern indicated by their population status and stability. These are known as the Birds of Conservation Concern (BoCC4), Red, Amber and Green lists (Eaton et al, 2015). Where red and amber species are present, their conservation status should be considered in determining the likely impacts of proposed projects and plans.

The conservation status of birds recorded during the survey was assessed against the following criteria:

- EC Birds Directive 2009 Annex 1,
- Wildlife and Countryside Act 1981 (As Amended) Schedule 1, (Table 1, WCA1)
- Natural Environment and rural communities (NERC) Act 2006 – Section 41
- Red and Amber lists of Birds of Conservation Concern in England (BoCC4)

Badger

Badger is protected under the Protection of Badgers Act 1992. Under this legislation it is an offence to kill or injure a badger; to damage, destroy or block access to a badger sett; or to disturb badger in its sett. The Act also states the conditions for the Protection of Badgers licence requirements.

Bats

All bat species are protected under the Conservation of Habitats and Species Regulations 2017 (as amended), as detailed above. Bats are further protected under the Wildlife and Countryside Act 1981 (as amended), making it an offence to:

- Deliberately or recklessly damage or destroy any structure or place which bat(s) use for shelter or protection.
- Disturb bat(s) while occupying a structure or place which it uses for shelter or protection.
- Obstruct access to any structure or place which they use for shelter or protection.

Furthermore, seven bat species are SPIs, covered under Section 41 of the NERC Act 2006. These include western barbastelle, Bechstein's, noctule, soprano pipistrelle, brown long-eared, lesser horseshoe and greater horseshoe.

Hazel dormouse

Hazel dormouse is protected under the Conservation of Habitats and Species Regulations 2017 (as amended). It is afforded additional protection under the Wildlife and Countryside Act 1981 (as amended), including obstruction to a place of shelter or rest.

Hazel dormouse is also a SPI.

Hedgerow

Under the Hedgerows Regulations 1997 it is against the law to remove or destroy certain hedgerows without permission from the LPA, which are also the enforcement body for offences created by the Regulations. LPA permission is normally required before removing hedges that are at least 20 m in length, more than 30 years old and contain certain plant species. The authority will assess the importance of the hedgerow using criteria set out in the regulations. The regulations do not apply to hedgerows within the curtilage of, or marking a boundary of the curtilage of, a dwelling house.

Hedgerow is a Habitat of Principal Importance (HPI).

Other mammals

West European hedgehog, brown hare, mountain hare, pine marten, harvest mouse, polecat and red squirrel are all SPIs.

The following mammals are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended): wildcat, brown hare (Schedule 5A), mountain hare (Schedule 5A), pine marten and red squirrel.

Non-native invasive plant species

Schedule 9 of the Wildlife and Countryside Act 1981 (as amended) is a list of non-native plant species for which Section 14 of the Act applies. It is an offence to plant, or otherwise cause to grow in the wild species listed under Schedule 9 of the act. These include, but are not limited to:

- Himalayan balsam
- Cotoneaster sp.
- Japanese knotweed
- Giant hogweed

Habitats of Principal Importance

Section 41 of the NERC Act 2006 details 56 HPIs, of which the following could be present in south-east England: Lowland calcareous grassland, Lowland dry acid grassland, Lowland meadows, Lowland Heathland, Open Mosaic Habitats on Previously Developed Land, Lowland fens, Lowland raised bog, Reedbeds, Lowland beech and yew woodland, Lowland mixed deciduous woodland and Wet woodland.

Impacts to HPI are of material planning consideration.

Ancient woodland and veteran trees

The NPPF 2021 states that 'Planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss'. In addition, Natural England's standing advice for ancient woodland indicates that a 15 m buffer is retained between ancient woodland and any works or development. Ancient woodlands, and ancient and veteran trees, may also be protected by Tree Preservation Orders.

National Planning Policy Framework (2021)

Details the Government's planning policies for England and how these should be applied, particularly to contribute to the Government's commitment to halt the decline of biodiversity. When assessing planning applications, LPAs should have regard to conserving and enhancing biodiversity by applying a number of principles, including:

- Avoiding impacts to biodiversity through appropriate site selection.
- Mitigating residual impacts.
- Encouraging the preservation and enhancement of biodiversity.
- Preventing the development of protected sites, such as SSSIs.
- Refusing permission where habitats that cannot be recreated, such as ancient woodland, would be lost.
- Encouraging good design that limits light pollution.
- Relevant paragraphs in the NPPF (2021) are detailed below.

Paragraph Number	Detail
174	"Planning policies and decisions should contribute to and enhance the natural and local environment by...minimising impact on and providing net gains for biodiversity" Protection of sites of biological values Preventing new and existing development from adverse impacts to soil, air, water or noise Development should help improve local conditions
175	Maintenance and enhancement of networks of habitats and green infrastructure; plan for the enhancement of natural capital at a catchment or landscape scale
179	"To protect and enhance biodiversity and geodiversity, plans should: a) 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 b) 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."
180	"When determining planning applications, local planning authorities should apply the following principles: a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused; b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest; c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate."
181	The following should be given the same protection as habitats sites: a) potential Special Protection Areas and possible Special Areas of Conservation; b) listed or proposed Ramsar sites⁶⁴; and c) 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.
185	"Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should: ... c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation."

Environment Act (2021)

The Environment Act (2021) achieved Royal Assent in November 2021.

The Environment Act (2021) makes a provision for biodiversity net gain to be a condition of planning permission in England, however, it is not anticipated that a 10% biodiversity net gain will be mandatory until 2023. When it does become mandatory, planning applications will need to demonstrate a 10% biodiversity net gain can be met. A biodiversity net gain plan must be submitted and must include:

- a) information about the steps taken or to be taken to minimise the adverse effect of the development on the biodiversity of the onsite habitat and any other habitat
- b) the pre-development biodiversity value of the onsite habitat,
- c) the post-development biodiversity value of the onsite habitat,
- d) any registered offsite biodiversity gain allocated to the development and the biodiversity value of that gain in relation to the development,
- e) any biodiversity credits purchased for the development.

It should be noted however, that the NPPF (2021) as set out below does require a project to provide a measurable net gain for biodiversity.

Countryside and Right of Way Act 2000

Amends and strengthens the Wildlife and Countryside Act 1981 (as amended). It also details habitats and species for which conservation measures should be promoted.

Natural Environment and Rural Communities Act 2006

Section 40 of the Act places a duty on local planning authorities to conserve and enhance biodiversity in England whilst carrying out their normal functions. Section 41 comprises a list of Habitats of Principal Importance (HPIs) and Species of Principal Importance (SPIs) which should be considered.

The LPA will need to have particular regard to any relevant local nature recovery strategies, and any relevant species conservation strategy or protected site strategy prepared by Natural England.

Hedgerows Regulations 1997

Under these regulations it is an offence to intentionally or recklessly remove, or cause or permits another person to remove, a hedgerow. Important hedgerows are defined in Section 4 of the Regulations. This includes hedgerows that have existed for over 30 years or satisfies at least one criteria listed in Part II of Schedule 1.

Wild Mammals (Protection) Act 1996

Under this act wild mammals are protected from the intentional unnecessary suffering by crushing and asphyxiation.

ODPM Circular 06/05: Biodiversity and Geological Conservation – Statutory Obligations and Their Impact within the Planning System (2005)

The Government's Office of the Deputy Prime Minister (ODPM) Circular 06/05 (ODPM 2005) presents the legal requirement for planning authorities with regard to statutory designated sites. Planning approval should not be granted where impacts to statutory designated sites that are not connected to the site maintenance for nature conservation, or will have a significant effect on the site's conservation objectives and/or affect the site's integrity. Permission may be granted if the proposed development overrides public interest. The presence of a protected species is a material planning consideration. The Circular clearly outlines 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 planning permission is granted. Otherwise, all relevant considerations may not have been addressed in making the decision.