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Preliminary Ecological Appraisal and Roost Assessment

Survey site:

Brunninghams Farm, Heath Ride, Finchampstead, Wokingham, RG40 3QJ

Client:

Brunninghams Farm

Survey date:

8th April 2025

Project:

This report is prepared to inform a planning application. The proposal is described as: "Proposed erection of 7 no. detached dwellings with associated access, parking and landscaping, following demolition of the existing buildings."

PEA survey methodology and legislation can be found in the Arbtech Supplement: **PEA Methodology and Legislation - 2024.**

PRA survey methodology and legislation can be found in the Arbtech Supplement: **PRA Methodology and Legislation - 2024.**

The survey results and recommendations contained within this report are valid for 18 months. An updated site visit may be required if the report is to be used any longer than 18 months after completion.

Site Location and Context

Overview

The survey site is centred on National Grid Reference SU80853 64430 and has an area of approximately 1.777ha. The site comprises one dwelling (B1), associated outbuildings (B2-B4), sealed surface, other neutral grassland* with scattered trees, wet woodland with ditch, bracken, and bramble scrub. The site is surrounded by rural housing with gardens, priority deciduous woodland, and lowland heathland in all directions. The wider landscape is predominantly comprised of rural housing with gardens, priority deciduous woodland, lowland heathland, arable farmland and grazing pasture, and ponds.

History

The habitats onsite have been unmanaged for approximately 10 years, with previous land use comprising of a pig farm. Historical maps dating back to the 1800s indicate that the site was previously covered by woodland.

Geology

The site resides above the Windlesham Formation. The Windlesham Formation is comprised of bioturbated dark green to brown, fine- to medium-grained sands with sand-sized glauconite grains, silts and white, yellow, or brown clay, overlain by organic dark grey clay with lenticles of fine sand, and then by glauconitic sand and sandy clayey silt. There are also occasional layers of flint gravel, and a prominent gravel bed occurs at the top.

Soil

The site is comprised of Soilscape 15 described as 'naturally wet, very acid sandy and loamy soils'. The soils drain to shallow groundwater, which explains the waterlogged conditions over much of the site. The site also slopes downwards from the southern boundary towards the northern boundary, as evident by the larger areas of waterlogged grassland in the northern sections.

Survey Details

The site survey was undertaken by Consultant Ecologist Oliver Bevilacqua, BSc (Hons), MSc – Accredited Agent on Natural England Class Level 2 Bat Licence Number: 2019-41480-CLS, Level 1 GCN Licence (2022-10923-CL08-GCN).

Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (km/h)	Rain
08/04/2025	10	69	10	6	None

Executive Summary

- Retained trees should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012).
- Best practice measures to minimise the possibility of pollution affecting the retained onsite and nearby priority deciduous woodland must be implemented during construction. A **Construction Environment Management Plan (CEMP)** may be required for this.
- A **Phase 2 botanical survey** in May-September will be required to determine if the grassland on the site is a habitat of principal importance.

- The planning application must be accompanied by a landscaping/habitat creation and enhancement strategy, **biodiversity net gain** calculations and a habitat management and monitoring plan to ensure the proposed development delivers a 10% net gain.

- **Rhododendron present onsite will be sensitively removed** prior to the commencement of works to prevent the spread of a non-native, invasive species listed on Schedule 9 of the WCA (see Appendix 1a).

- **An invertebrate scoping survey** will be required between April and September in line with current survey guidelines (Natural England, 2005).*

- **Two bat emergence/re-entry surveys are required on B1 and one on B2** during the active bat season (May – September) to confirm presence/likely-absence of bats roosting in or on the building.
- **Bat activity surveys**, comprising walked transects and static monitoring, will be required to determine the usage of the site by foraging and commuting bats as well as to identify the likely presence or absence or any bat roosts within the woodland, particularly those of high conservation value including maternity roosts. Due to the value of the habitats present on the site a total of seven visits, one per month between April and October, will be required to gather sufficient information to enable a full assessment to be made.
- A **Ground-Level Tree Assessment (GLTA)** is required to identify any potential roost features on any trees to be felled or cut back to facilitate the development.
- A low impact lighting strategy will be adopted for the site during post-development which outlines the areas of the site that will be retained as dark corridors.

- **Breeding bird surveys** will be required to establish the value of the site for breeding birds. This will comprise three visits between April and June to record breeding activity.

- **Reptile surveys** will be required to determine presence or likely absence of reptiles on the site. This will comprise the deployment and monitoring of artificial refugia over seven visits. Must be undertaken between April, May and September.

- **Environmental DNA (eDNA) survey** will be required on P1 which lies 35m north of the site, to determine the presence or absence of great crested newts. Must be undertaken between mid-April and June

- **Badger surveys** will be required to characterise the sett types present and the usage of the site by badgers. This will comprise the deployment of 5 wildlife cameras over a period of 4 weeks. Can be undertaken throughout the year.

- **Hazel dormouse surveys** will be required to determine presence or likely absence of dormice on the site. This will comprise the deployment and monitoring of nest tubes and boxes as well as nut searches artificial refugia over several months between April and November.

- A precautionary working method must be implemented for nesting birds, and other wildlife (e.g. hedgehogs, foxes, rabbits) during construction, as detailed in the associated sections.

Survey limitations

It should be noted that whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report does not provide a complete characterisation of the site. This assessment provides a preliminary view of the likelihood of protected species being present. This is based on suitability of the habitats on the site and in the wider landscape, the ecology and biology of species as currently understood, and the known distribution of species as recovered during the searches of historical biological records.

Due to the survey being conducted in early-April, it is possible that the species lists do not account for all species present. Due to the presence of priority and high distinctiveness habitats present in the wider landscape and onsite, a phase 2 botany survey will be required to account for any potential mis-identified habitat classifications. This is particularly relevant for the grassland.

Biological record data will need to be added to the report to provide additional evidence on risk to protected species present within the wider landscape.

Ecological Survey Factor **Conclusion, Impact or Recommendations**	**Detailed using desk study and site survey (carried out under good weather conditions). Any specific limitations noted within relevant section. This table may include further work you will need to commission (if any) to obtain planning permission or comply with legislation for other consent. All clients are expected to read and understand this section, or to contact the lead surveyor for advice.**
Habitats and plants (see habitat map in appendix 1, location plan in appendix 2, proposal plan in appendix 3 and photos in appendix 4). **Botanical species are described with reference to the DAFOR scale (D = Dominant; A = Abundant, F = Frequent, O = Occasional, R = Rare).**	
Summary of Survey Findings **(***UKHab codes used)*	The site contains wet woodland which is listed as a habitat of principal importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). The site also contains scattered trees, other neutral grassland*, and bramble scrub which could be of value to local wildlife populations (as detailed in subsequent sections of this table). Other habitats within the site are common and widespread and have lower ecological value. Further notable habitats are present within 2km. **On-site habitat descriptions** **u1b5** – Buildings There are four buildings present onsite, including the main barn (B1) and three outbuildings (B2-4). These buildings will be discussed in more detail within the bat section. **u1b** – Developed land/sealed surface There are small sealed concrete surface areas surrounding the buildings.

Figure 1: Sealed surface courtyard area.

g3c – Other neutral grassland*

There are grassland areas present surrounding the buildings to the north and adjacent to the bracken and woodland in the southeast. The grassland shows no signs of recent management which has greatly increased the rate of encroachment of bramble, gorse, tree saplings, and bracken from the adjacent habitats. This has also increased the proportion of grasses within the species mix and reducing the proportion of forbs. There are also extensive patches of waterlogged grassland across the site, but particularly towards the north boundary. There is also some evidence of nutrient enrichment within the grassland due to the presence of several nutrient-rich indicator species such as ribwort plantain, creeping buttercup, curly dock, cleavers, creeping thistle, and white clover. These indicators are more prevalent towards the buildings at the north boundary where previous agricultural practices were likely to be more intensive. Due to the time of year of the survey, it is possible that the species list does not cover every species present, with priority habitats present on and adjacent to the site, hence, it is possible that the grassland is of a higher distinctiveness. A species list and condition assessment are provided below in line with an other neutral grassland classification.

Table 1: Species list of grassland with abundance

Common name	Scientific name	DAFOR
Meadow foxtail	*Alopecurus pratensis*	A
Red fescue	*Festuca rubra*	A
Creeping bent	*Agrostis stolonifera*	A

Couch grass	*Elymus repens*	F
Cock's foot	*Dactylis glomerata*	F
Bracken	*Pteridium aquilinium*	F
Common nettle	*Urtica dioica*	F
Bramble	*Rubus fruticosa*	F
Fringed willowherb	*Epilobium ciliatum*	O
Common reed	*Juncus effesus*	O
Common gorse	*Ulex europaeus*	O
Cleavers	*Galium aparine*	O
Lords and ladies	*Arum maculatum*	O
Creeping buttercup	*Ranunculus repens*	O
Ribwort plantain	*Plantago lanceolata*	O
White clover	*Trifolium repens*	O
Common foxglove	*Digitalis purpurea*	R
Honeysuckle	*Lonicera periclymenum*	R
Ragwort	*Jacobaea vulgaris*	R
Curly dock	*Rumex acetosa*	R
Creeping thistle	*Cirsium arvense*	R

Condition Assessment (assessed using the 'Grasslands Medium/High/Very High Distinctiveness' habitat type condition assessment sheet):

A. The parcel represents a good example of its habitat type. *NB. this criterion is essential for achieving moderate or good condition.* **FAIL –** grassland does not align closely with any habitat classification.

B. Varied sward height, with at least 20% less than 7cm and 20% more than 7cm. **PASS.**

C. Cover of bare ground is between 1% and 5%. **PASS**

	D. Cover of bracken is less than 20% and cover of scrub is less than 5%. **FAIL** – large coverage of bracken and scrub. E. Combined cover of species indicative of sub-optimal condition and physical damage accounts for less than 5% of total area. If any Schedule 9 invasive species are present, this criterion is automatically failed. **FAIL –** creeping thistle, curly dock, and white clover >5%. F. There are 10 or more vascular plant species per m^2 present. *NB. this criterion is essential for achieving good condition.* **FAIL** – <10 species per m^2. Passes 2 of 6 criteria including essential criterion A, therefore achieves **POOR** condition.  Figure 2: south grassland section.

Figure 3: North grassland section.

w1d – Wet woodland

Wet woodland is present around most of the site boundaries as well as large sections in the centre of the site. The woodland shows no signs of management onsite, but some tree felling was identified beyond the site boundary within third-party land ownership. The woodland appears healthy, with a wide range of native trees and ground flora present. A ditch runs through both the west and east woodland boundaries and adjacent to north boundary with limited marginal aquatic and emergent vegetation. There are several large patches of common rhododendron present throughout the woodland, particularly in the southwest and east sections.

Table 2: Species list of woodland with abundance

Common name	Scientific name	DAFOR
Canopy		
Silver birch	*Betula pendula*	A
English oak	*Quercus robur*	F
Beech	*Fagus sylvatica*	F
Sweet chestnut	*Castanea sativa*	F
Hornbeam	*Carpinus betulus*	O

Grey willow	*Salix cinerea*	R
Scot's pine	*Pinus sylvestris*	R
Rowan	*Sorbus aucuparia*	R
Yew	*Taxus baccata*	R
Understory		
Holly	*Ilex aquifolium*	A
Bracken	*Pteridium aquilinium*	F
Meadow foxtail	*Alopecurus pratensis*	F
Common nettle	*Urtica dioica*	F
Bramble	*Rubus fruticosa*	F
Common rhododendron	*Rhododendron ponticum*	F
Creeping bent	*Agrostis stolonifera*	O
Cock's foot	*Dactylis glomerata*	O
Common reed	*Juncus effesus*	O
Drooping sedge	*Carex pendula*	O
Red fescue	*Festuca rubra*	O
Cleavers	*Galium aparine*	O
Lords and ladies	*Arum maculatum*	O
Woodland forget-me-not	*Myosotis sylvatica*	R
Remote sedge	*Carex remota*	R
Common gorse	*Ulex europaeus*	R

Condition Assessment (assessed using the 'Woodland' habitat type condition assessment sheet):

Indicator	Description	Good (3 points)	Moderate (2 points)	Poor (1 point)	Score	Notes
A	Age distribution of trees	Three age-classes[1] present.	Two age-classes[1] present.	One age-class[1] present.	3	All ages classes present across woodland.
B	Wild, domestic, and feral herbivore damage	No significant browsing damage evident in woodland[2].	Evidence of significant browsing pressure is present in less than 40% of whole woodland[2].	Evidence of significant browsing pressure is present in 40% or more of whole woodland[2].	3	No significant browsing identified.
C	Invasive plant species	No invasive species[3] present in woodland.	Rhododendron *Rhododendron ponticum* or cherry laurel *Prunus laurocerasus* not present, and other invasive species[3] <10% cover.	Rhododendron or cherry laurel present, or other invasive species[3] ≥10% cover.	1	Rhododendron at >10% cover across woodland.
D	Number of native tree species	Five or more native tree or shrub species[4] found across woodland parcel.	Three to four native tree or shrub species[4] found across woodland parcel.	Two or less native tree or shrub species[4] across woodland parcel.	3	>5 native tree and shrub species present.
E	Cover of native tree and shrub species	>80% of canopy trees and >80% of understory shrubs are native[5].	50 – 80% of canopy trees and 50 – 80% of understory shrubs are native[5].	<50% of canopy trees and <50% of understory shrubs are native[5].	2	Mostly native species present but with some rhododendron coverage.
F	Open space within woodland	10 – 20% of woodland has areas of temporary open space[6]. Unless woodland is <10ha, in which case 0 – 20% temporary	21 - 40% of woodland has areas of temporary open space[6].	<10% or >40% of woodland has areas of temporary open space[6]. But if woodland <10ha has <10% temporary open	2	Some temporary open space across woodland.

				open space is permitted[7].		space, please see Good category[7].			
		G	Woodland regeneration	All three classes present in woodland[8]; trees 4 - 7 cm Diameter at Breast Height (DBH), saplings and seedlings or advanced coppice regrowth.	One or two classes only present in woodland[8].	No classes or coppice regrowth present in woodland[8].	3	All regeneration classes present across woodland.	
		H	Tree health	Tree mortality 10% or less, no pests or diseases and no crown dieback[9].	11% to 25% tree mortality and or crown dieback or low-risk pest or disease present[9].	Greater than 25% tree mortality and or any high-risk pest or disease present[9].	3	<10% of trees show signs of pests, diseases, and dieback.	
		I	Vegetation and ground flora	Recognisable NVC plant community[10] at ground layer present, strongly characterised by ancient woodland flora specialists.	Recognisable woodland NVC plant community[10] at ground layer present.	No recognisable woodland NVC plant community[10] at ground layer present.	2	Recognisable ground layer but lacking ancient woodland specialists	
		J	Woodland vertical structure	Three or more storeys across all survey plots, or a complex woodland[11].	Two storeys across all survey plots[11].	One or less storey across all survey plots[11].	3	Mostly three storeys across woodland.	
		K	Veteran trees	Two or more veteran trees[12] per hectare.	One veteran tree[12] per hectare.	No veteran trees[12] present in woodland.	1	No veteran trees identified within woodland.	

		L	Amount of deadwood	50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, branch stubs and stumps, or an abundance of small cavities[13].	Between 25% and 50% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities[13].	Less than 25% of all survey plots within the woodland parcel have deadwood, such as standing and fallen deadwood, large dead branches and or stems, stubs and stumps, or an abundance of small cavities[13].	3	High abundance of fallen and standing deadwood across woodland.
		M	Woodland disturbance	No nutrient enrichment or damaged ground evident[14].	Less than 1 hectare in total of nutrient enrichment across woodland area, and or less than 20% of woodland area has damaged ground[14].	1 hectare or more of nutrient enrichment, and or 20% or more of woodland area has damaged ground[14].	2	Some signs of nutrient enrichment due to abundance of indicator species.
						Total Score (out of a possible 39)		
			Condition Assessment Result				Condition Assessment Score	
			Total score >32 (33 to 39)				Good (3)	
			Total score 26 to 32			**31**	**Moderate (2)**	
			Total score <26 (13 to 25)				Poor (1)	

Figure 4 – wet woodland in west section

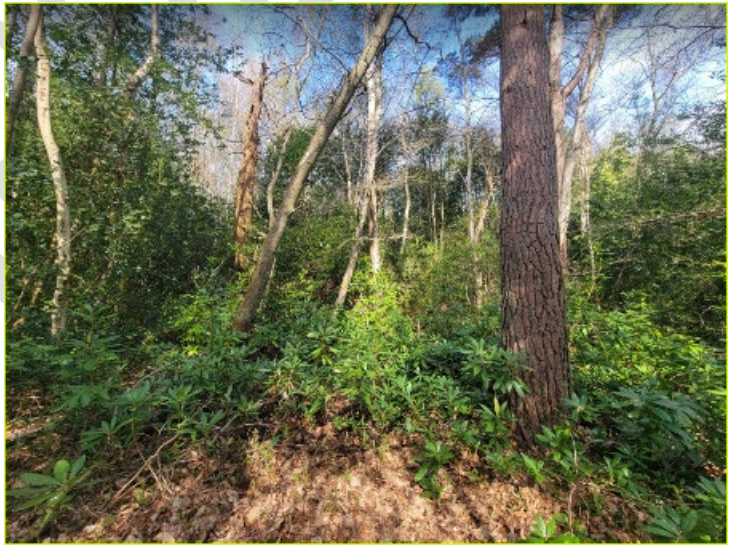


Figure 5 – wet woodland in southwest section.

h3d – Bramble scrub

There are three large areas of bramble scrub including surrounding the west elevation of the outbuildings, in the centre of the site, and leading south. The bramble is tall, dense, and is encroaching into adjacent habitats across the site.

Figure 6 – bramble scrub in centre of site.

g1c – bracken

While there is bracken present throughout much of the woodland and grassland, there are two areas dominated by a dense layer of bracken in the east and south sections of the site where the grassland species have been outcompeted.

Figure 7 – bracken in south section.

u1 32 - Scattered trees

There are several scattered trees present both adjacent to the buildings in the north and within the grass and bracken areas to the south. The table below provides a summary of each tree and their condition assessment score. For full tree descriptions and details please see the arb report.

Table 3 – scattered tree summary as per the arb report.

Tree (arb report no.)	DBH mm (Size, S/M/L)
T1 (18)	433 (M)
T2 (20)	170 (S)
T3 (66)	150 (S)
T4 (67)	220 (S)
T5 (68)	110 (S)
T6 (28)	170 (S)
T7 (29)	90 (S)
T8 (30)	90 (S)
T9 (31)	170 (S)
T10 (43)	180 (S)

T11 (44)	304 (M)
T12 (45)	264 (S)
G1 (G16)	4x small trees

Figure 8 – silver birch tree adjacent to B5.

Figure 9 – Scot's pine trees within south grassland area.

w1d 50 – ditch

There are ditches running through the west woodland, east woodland, and adjacent to north woodland. These ditches are shallow in depth and gradient, <5m wide, mostly dry, and with limited emergent and marginal aquatic vegetation.

Table 4 – ditch condition assessment

Condition Assessment Criteria		Criterion passed (Yes or No)	Notes (such as justification)
A	The ditch is of good water quality, with clear water (low turbidity) indicating no obvious signs of pollution.	N	Ditch is mostly dry, likely to receive runoff from adjacent road.
B	A range of emergent, submerged, and floating-leaved plants are present. As a guide >10 species of emergent, floating, or submerged plants present in a 20 m ditch length.	N	Limited vegetation present.

C	There is less than 10% cover of filamentous algae and or duckweed *Lemna* spp. (these are signs of eutrophication).	Y	Absent.
D	A fringe of aquatic marginal vegetation is present along more than 75% of the ditch.	N	<75% ditch length has aquatic marginal vegetation.
E	Physical damage is evident along less than 5% of the ditch, with examples of damage including: excessive poaching, damage from machinery use or storage, or any other damaging management activities.	Y	No physical damage evident.
F	Sufficient water levels are maintained - as a guide a minimum summer depth of approximately 50 cm in minor ditches and 1 m in main drains.	N	Dry along majority of length.
G	Less than 10% of the ditch is heavily shaded.	N	Majority of length is shaded by woodland.
H	There is an absence of non-native plant and animal species[1].	N	Common rhododendron is present adjacent to ditches.
	Number of criteria passed	2	

Condition Assessment Result (out of 8 criteria)	**Condition Assessment Score**	**Score Achieved ×/✓**
Passes 8 criteria	Good (3)	
Passes 6 or 7 criteria	Moderate (2)	
Passes 5 or fewer criteria	Poor (1)	X

	 Figure 10 – ditch running alongside north boundary. **Local notable habitats** Priority deciduous woodland is present onsite in the southwest section and in close proximity to the site including directly adjacent to the east boundary. Further priority habitats are present within 2km of the site, including lowland heathland (~135m southeast), ancient woodland (~520m northwest), traditional orchard (~660m northwest), costal and floodplain grazing marsh (~2km southwest).
Foreseen Impacts	**On-site habitats** The proposed development will result in the loss of significant areas of woodland, grassland, scrub, bracken, and scattered trees. This will result in a significant net loss in biodiversity at the site. **Notable habitats** Direct losses of priority deciduous woodland (wet woodland) onsite is anticipated.
Recommendations	**On-site habitats** Retained trees should be protected in line with the measures outlined in the British Standard "Trees in Relation to Design, Demolition and Construction to Construction - Recommendations" (BS 5837) (2012).

Notable habitats

Best practice measures to minimise the possibility of pollution affecting the retained areas of woodland on and adjacent to the site must be implemented during construction. A Construction Environment Management Plan (CEMP) may be required for this.

A Phase 2 botanical survey will also be required to determine if the grassland on the site is a habitat of principal importance. This survey must be undertaken between May and September in accordance with current survey guidelines. The survey is likely to be required before planning permission can be granted.

Biodiversity net gain

The Environment Act (2021) requires all developments (excluding exemptions) to deliver a 10% net gain in biodiversity. This is mandatory for larger developments and comes into force for smaller developments on 2nd April 2024. Therefore, the planning application must be accompanied by a landscaping/habitat creation and enhancement strategy, biodiversity net gain calculations and a habitat management and monitoring plan to ensure the proposed development delivers a 10% net gain.

Opportunities to reduce the area of habitat lost should first be explored.

Locality and Designated Sites

Summary of Survey Findings

On-site designations

The site is not subject to any designation.

Statutory designated sites (within 2km)

There are 2 statutory sites within 2km of the site, as detailed within Table 5 below:

Designated site	Distance from proposed development	Reason for designation
Heath Lake Local Nature Reserve (LNR) and Site of Special Scientific Interest (SSSI)	~1.82km northeast	"Heath Lake is an area of woodland and heathland. The shallow 7-acre lake is the only acid lake in Berkshire, and which supports several rare plants, including the water-milfoil and the 6 stemmed water crowfoot."

The site lies within the impact risk zone for SSSIs Heath Lake, Longmoor Bog, Broadmoor to Bagshot Woods and Heaths, and Wellington College.

Statutory designated sites (within 10km)

There is 1 national network sites (SAC, SPA, Ramsar) located within 10km, as detailed within Table 6 below:

	<table><tr><th>Designated site</th><th>Distance from proposed development</th><th>Reason for designation</th></tr><tr><td>Thames Basins Heaths Special Protection Area (SPA)</td><td>~3.3km southeast</td><td>“The Thames Basin Heath Special Protection Area is an internationally important habitat that is home to 3 rare species of ground nesting birds - the Dartford Warbler, Nightjar, and Woodlark.”</td></tr></table> **Non-statutory designated sites** The presence of non-statutory designated sites within 2km of the site cannot be established without data from Thames Valley Environmental Records Centre (TVERC).
Foreseen Impacts	**On-site designations** No impacts foreseen. **Statutory and non-statutory designated sites** No impacts to designated sites are anticipated due to the small scale and distance of the proposed development from such sites (where known) as well as the urban location of the site with surrounding physical barriers. The site lies within the impact risk zone for SSSIs Heath Lake, Longmoor Bog, Broadmoor to Bagshot Woods and Heaths, and Wellington College. The proposed development type is not listed as a possible high risk for this designation.
Recommendations	**On-site designations** None required. **Statutory and non-statutory designated sites** None required.
Invasive / Non-native species	
Summary of Survey Findings	Common rhododendron was identified on the site, which is listed as an invasive, non-native species under Schedule 9 of the Wildlife and Countryside Act 1981.
Foreseen Impacts	Construction could result in the spread of the rhododendron.

Recommendations	Rhododendron present across the site including within and close to the development area, and therefore likely to be impacted by construction, will be sensitively removed prior to the commencement of works to prevent the spread of a non-native, invasive species listed on Schedule 9 of the WCA (see Appendix 1a). The Rhododendron will be removed using hand tools only. The most effective method of removal is through hand pulling, which results in minimal soil disturbance. Hand-pulling young shrubs will typically result in the full removal of the shrub and associated root network, which will prevent the re-establishment. Mature shrubs are likely to have a deeper and more established root network unlikely to be removed in full by hand pulling alone. Where there are mature shrubs, removal should be aided using hand tools to expose the root network in full so the entire shrub and associated roots can be removed. Development works will not commence until the Rhododendron has been successfully removed from the site.
Invertebrates	
Summary of Survey Findings	The habitats present on-site, including other neutral grassland, bracken, scattered trees, and bramble scrub, likely provide common invertebrates with opportunities to forage and shelter. The wet woodland onsite is a multi-storey species-rich native woodland with abundant deadwood which may provide niches for specialised or protected invertebrates.
Foreseen Impacts	Wet woodland, other neutral grassland, bramble scrub, bracken, and scattered trees will be removed during construction. The loss of such habitats could result in a reduction in invertebrate habitat and could result in the fragmentation of the local landscape.
Recommendations	Biological record data will be required to provide an outline as to the abundance and distribution of protected and specialised invertebrates in the wider landscape. An invertebrate scoping survey may be required to establish the possible value of the site for invertebrates and to determine whether further invertebrate surveys will be required. This should be undertaken between April and September in line with current survey guidelines (Natural England, 2005). **Suggested biodiversity enhancements.** The site could be further enhanced via the provision of a species-rich native wildflower seed mix with additional nectar-rich species into the retained areas of grassland and species-rich native hedgerows, which would provide shelter, commuting, and foraging opportunities for invertebrates.
Bats	

Summary of Survey Findings

EPSL data

A search of the magic.gov.uk database for granted EPSLs within a 2km radius of the site has been completed. Displaced bats from licensed sites <2km away from the survey site will find alternative habitat either within the mitigation measures implemented as part of the licence or will relocate to other known roosts sites in close proximity to the licensed site. There are 28 EPSLs within a 2km radius of site, the closest 10 are detailed within Table 7 below:

EPSL reference	Bat species affected	Distance from site	Impacts allowed by licence
2014-4594-EPS-MIT	Brown long-eared bat, soprano pipistrelle	Adjacent to east boundary	Destruction of a resting place and breeding site.
2020-45340-EPS-MIT	Brown long-eared bat	~300m northeast	Destruction of a resting place.
EPSM2011-3144	Brown long-eared bat, common pipistrelle, soprano pipistrelle	~400m northeast	Destruction of a resting place.
EPSM2013-5917	Brown long-eared bat, soprano pipistrelle	~440m southeast	Destruction of a resting place and breeding site.
2019-44291-EPS-MIT	Common pipistrelle, soprano pipistrelle	~460m southwest	Damage of a resting place
2015-7982-EPS-MIT	Brown long-eared bat	~520m north	Destruction of a resting place
2018-33861-EPS-MIT	Brown long-eared bat	~695m northeast	Destruction of a resting place
2014-3612-EPS-MIT	Soprano pipistrelle	~830m north	Destruction of a resting place
2019-39174-EPS-MIT	Brown long-eared bat, common pipistrelle, soprano pipistrelle	~845mm southwest	Damage of a resting place and breeding site.
2017-31789-EPS-MIT	Soprano pipistrelle	~870m northeast	Destruction of a resting place

There are no Special Areas of Conservation designated for bats within 10km of the site.

Foraging and commuting habitat

	Habitats recorded on site are assessed to provide foraging and commuting opportunities for bats in the form of wet woodland, other neutral grassland, bramble scrub, bracken, and scattered trees. These habitats are likely to provide micro-climatic conditions that support a large population of invertebrates that will in turn provide ample foraging opportunities for a large bat population. Most notably, the woodland on site extends beyond the site adding to the continuity of vegetated features present in the wider landscape. While there are no prominent linear features present onsite, the site is surrounded by high-value habitats for bats such as priority deciduous woodland, ponds, lowland heathland, wood pasture and parkland, and ancient woodland in all directions. It is likely that bats will regularly commute through the site to reach further suitable habitats present in the wider landscape. **Roosting habitat** Buildings to be impacted by the proposed development are assessed for their suitability to support roosting bats below. There are a total of 4 buildings on site: the main barn (B1), and three outbuildings (B2-B4). All buildings were surveyed as all will be impacted by the proposed development. Trees to be impacted by the development will be assessed in a separate Ground-Level Tree Assessment report.

B1 Building description	***Photographs***
Summary B1 is a large barn which forms part of a wider barn complex. The roof is comprised of corrugated metal, and walls are comprised of both cement brick and corrugated metal. B1 will be demolished. Due to several gaps in the corrugated roofing walls, B1 has **moderate habitat value**.	

Feature	*Materials*	*Condition/description/suitability*	*Photograph(s)*
Walls	Corrugated metal sheeting/cement	**Condition/description** Numerous raised and gaps in corrugated sheeting at each elevation, particularly pronounced at west elevation. **Suitability/access/evidence of bats** Raised and ' gappy' sheeting provide roosting habitat for crevice dwelling bats.	 

Roof	Corrugated metal sheeting	**Condition/description** Raised sheeting present across roof. **Suitability/access/evidence of bats** Space under sheeting could accommodate crevice dwelling bats.	
Internal voids	N/A	N/A.	N/A.
B2 Building description			***Photographs***
Summary B2 is a storage shed comprised of corrugated metal roofing and walls. This shed is well sealed, with no areas of roosting habitat available for crevice dwellers. The internal area has no void, therefore no habitat value for void dwelling bats. B2 is **negligible** for roosting bats.			

B3 Building description			***Photographs***
Summary B3 is an outbuilding adjacent to the west woodland and bramble scrub. B3 is comprised of cement brick walls, and corrugated metal and timber roofing. B3 will be demolished. Due to some gaps in the brickwork, B3 has **low habitat value**.			
Feature	***Materials***	***Condition/description/suitability***	***Photograph(s)***
Walls	Corrugated metal sheeting/cement	**Condition/description** Numerous gaps in the brickwork, most pronounced at the south elevation surrounding the door. **Suitability/access/evidence of bats** Gaps in brickwork provides roosting habitat for crevice dwelling bats.	

			
Roof	Corrugated metal sheeting/timber	**Condition/description** Well-sealed roofing, with no gaps or cracks identified. **Suitability/access/evidence of bats** N/A.	
Internal voids	N/A	N/A.	N/A.

B4 Building description	***Photographs***
Summary B4 is a timber storage shed comprised of timber roofing and walls. This shed is well sealed, with no areas of roosting habitat available for crevice dwellers. The internal area has no void, therefore no habitat value for void dwelling bats. B4 is **negligible** for roosting bats.	

Foreseen Impacts	**Roosting habitat [Buildings]** The proposed development will result in the demolition of all buildings. This could result in the destruction of any bat roosts present and could cause disturbance, death, or injury to bats. **Roosting habitat [Trees]** Many trees will be felled to facilitate the development. This could result in destruction of any bat roosts present within any identified potential roosting features, and could cause disturbance, death, or injury to bats. **Foraging and commuting habitat** The proposed development will result in the loss of approximately 1ha of wet woodland, other neutral grassland, bramble scrub, bracken, and scattered trees. This could reduce the availability of foraging or commuting resources in the locality and could also disrupt dispersal corridors for bats leaving or returning to roosts in the wider area. **Artificial lighting** The proposed development may lead to an increase in the amount of current lighting of surrounding habitats or the retained building without mitigation. This may disturb commuting bats.
Recommendations	**Roosting habitat [Buildings]** Two bat emergence/re-entry surveys (BERS) are required on B1 and one BERS on B3 during the active bat season (May – September) to confirm presence/likely-absence of bats roosting in or on the building.

	These survey visits should be completed during the optimal survey period mid-May to August inclusive and should be at least three weeks apart as per the Bat Conservation Trust (BCT) guidelines. Surveys can still be carried out in the sub-optimal period of early May and September, but this would require greater justification for timing e.g., weather conditions, and known local bat activity. Four surveyors are required to provide full coverage of B1's elevations and three for B2's elevations to look for emerging/re-entering bats. An infrared camera will also be deployed alongside each surveyor as part of the survey to see where any specific roost locations are located. If any bat roosts are confirmed from this survey schedule, a bat licence would be required to demolish the buildings as it would involve the destruction of roosts. This is applied for with the help of a class 2 licensed bat ecologist after planning permission is granted, but before commencement of works. **Roosting habitat [Trees]** A Ground-Level Tree Assessment will be required on any trees that will be felled or cut back to identify any potential roosting features present and if there is a need for further surveys to determine roost presence. **Foraging and commuting habitat** Bat activity surveys, comprising walked transects and static monitoring, will be required to determine the usage of the site by foraging and commuting bats as well as to identify the likely presence or absence or any bat roosts in the vicinity, particularly those of high conservation value including maternity roosts. Due to the value of the habitats present on the site a total of seven visits, one per month between April and October, will be required to gather sufficient information to enable a full assessment to be made. Four static bat detectors will also be deployed around the site to record further activity for five days each month. **Artificial lighting** A low impact lighting strategy will be adopted for the site during post-development which outlines the areas of the site that will be retained as dark corridors. Parameters can be found on the Bat Conservation Trust website: https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/ **Suggested biodiversity enhancements** Enhancements are dependent on the outcome of further surveys.
Birds	
Summary of Survey Findings	**Buildings** No evidence of nesting birds was identified on or within the buildings, however B1 is considered suitable for nesting. **Trees and vegetation** No bird nests were identified within the trees and tall shrubs onsite; however, the majority of trees offer nesting opportunities and nest-building resources for birds.

	Barn owls The site does not appear to provide any suitable nesting sites for barn owls. **Overwintering/breeding birds** The wet woodland contains a large number of mature and healthy trees with high suitability for nesting birds. The multi-storey mixed-native heterogenous structure of the woodland and in combination with the grassland and scrub provides good opportunities for foraging and forms a suitable habitat for breeding birds.
Foreseen Impacts	**Buildings/trees** The proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests. **Barn owls** None foreseen. **Overwintering/breeding birds** Woodland, grassland, scrub, bracken, and scattered trees will be removed during construction. The loss of such habitats could result in a reduction in nesting, breeding, and foraging habitat. Furthermore, the proposed development could result in the destruction or the disturbance and subsequent abandonment of active bird nests.
Recommendations	**Buildings/trees** Any removal of trees and tall shrubs as well as removal of B1 should be undertaken outside the period 1st March to 31st August. If this period cannot be avoided, a close inspection of the vegetation should be undertaken immediately, by a qualified ecologist, prior to the commencement of work. All active nests will need to be retained until the young have fledged. Precautions should be taken with machinery and noise levels when working close to any retained nests so as not to disturb any nearby nesting birds during construction works. At least a 5m buffer should be created between any machinery and active nests until the young have fledged. **Barn owls** None required. **Overwintering/breeding birds** Breeding bird surveys will be required to establish the value of the site for breeding birds. This will comprise three visits between April and June to record breeding activity (Gilbert et al, 1998). **Suggested biodiversity enhancements** To be confirmed following results of breeding bird surveys.

Reptiles	
Summary of Survey Findings	**EPSL data** A review of the MAGIC database returned no granted EPSL records for protected reptiles within 2km of the site. **Habitat suitability** Habitats recorded on site are assessed to provide foraging, commuting, basking and refuge opportunities for reptiles. The woodland and scrub that dominate the site provide elevated value for reptiles as these habitats provide a suitable structure for refuge, whilst also providing foraging and commuting opportunities. The grassland has also maintained a varied sward throughout with open areas within the grassland as well as on sealed surfaces adjacent to the woodland/scrub without shading providing good opportunities to bask. The site has good connectivity to further suitable reptile habitat such as priority deciduous woodland similar to that onsite as well as lowland heathland and ponds in the wider landscape via woodland. Due to the heterogenous habitat structure on and adjacent to the site, the presence of reptiles on site cannot be discounted.
Foreseen Impacts	Wet woodland, other neutral grassland, bramble scrub, bracken, and scattered trees will be removed during construction. The loss of such habitats could result in a reduction in reptile habitat and could result in the fragmentation of the local landscape. Furthermore, site clearance could result in the death or injury of reptiles if present.
Recommendations	Reptile surveys will be required to determine presence or likely absence of reptiles on the site. This will comprise the deployment and monitoring of artificial refugia over seven visits and such surveys must be undertaken between April and September, in accordance with current survey guidelines (Gent & Gibson, 2003). The surveys are likely to be required before planning permission can be granted. **Suggested biodiversity enhancements** The site could be enhanced for reptiles post-development with the inclusion of log piles (created from felled materials) and planting of areas of native shrubs, to provide sheltering opportunities.
Amphibians	
Summary of Survey Findings	**EPSL and survey data** A review of the MAGIC database returned no granted EPSL records for great crested newts within 2km of the site. Further, no positive class survey licence return or DLL historic survey data (2017 – 2019) were present within 2km of the site. **Aquatic habitat suitability (including ponds within 500m)** Great crested newts (GCN) exist in metapopulations and are known to use ponds and their connecting terrestrial habitat during their life cycle; great crested newts are typically found within terrestrial habitats up to 500m from breeding ponds (Langton et al. 2001). There are no ponds on the site, but a review of aerial imagery (MAGIC and OS Maps) indicates the presence of five ponds within 500m as summarised in Table 8 below:

Pond	Distance from site	Connectivity to site
P1	~35m north	Good connectivity due to close proximity and using woodland corridor with minor road barrier.
P2	~270m southeast	Good connectivity using woodland corridor with minor road and housing barriers.
P3	~295m south	Good connectivity using woodland corridor with minor road and housing barriers.
P4	~320m northwest	Good connectivity using woodland corridor with minor road and housing barriers.
P5	~410m northeast	Good connectivity using woodland corridor with minor road and housing barriers.

A pond map showing approximate pond locations is provided in Appendix 5.

Terrestrial habitat suitability

The site provides ample suitable terrestrial habitat for amphibians given the heterogenous habitat structure with a range of vegetation types and heights presenting good opportunities for shelter, foraging, and commuting in and around the site. Further, there is also extensive suitable terrestrial habitat across the wider landscape including lowland heathland, large expanses of priority deciduous woodland, and ponds further afield, increasing the likelihood of amphibians being present on site and across the surrounding areas.

Foreseen Impacts

When georeferencing the proposed development plans over scaled mapping of the site, it is noted that the development area is likely to result in the loss or significant disturbance of >1 ha of woodland/scrub/grassland. If great crested newts are present within the P1 to the north of the site, when completing the rapid risk assessment published by Natural England (Natural England 2015), the proposed development produces a **Red risk score**, which states: **Offence Highly Likely** as shown in Table 9 below. If GCN were confirmed absent from P1, a Green risk score would be produced for the remaining ponds.

Component	**Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)**	**Notional offence probability score**
Great crested newt breeding pond(s)	No effect	0
Land within 100m of any breeding pond(s)	>1 ha lost or damaged	0.9
Land 100-250m from any breeding pond(s)	No effect	0
Land >250m from any breeding pond(s)	1 - 5 ha lost or damaged	0.04
Individual great crested newts	No effect	0
	Maximum:	0.9
Rapid risk assessment result:	**RED: OFFENCE HIGHLY LIKELY**	

Recommendations	Environmental DNA (eDNA) surveys will be required on P1 (if accessible) to determine the presence or absence of great crested newts. This will comprise collecting water samples and sending them off for laboratory analysis and such surveys must be undertaken between mid-April and June, in accordance with current survey guidelines (Biggs et al, 2014). The surveys are likely to be required before planning permission can be granted. **Suggested biodiversity enhancements** The site could be enhanced for amphibians post-development through creation of amphibian hibernacula using rubble and logs from site clearance. Information on how to construct a hibernaculum can be found here: https://www.wiltshirewildlife.org/hibernaculum
Badger	
Summary of Survey Findings	**Setts** [redacted] [redacted]

	[redacted]

	[redacted]

Foreseen Impacts	[redacted]
Recommendations	[redacted]
Riparian animals	
Summary of Survey Findings	A review of the MAGIC database returned no granted EPSL records for otters or water voles within 2km of the site. There are no water courses on or connected to the site. While there are ditches running along the west and east boundaries, neither ditch has suitability for otters or water voles, as they are dry for much of the year, shallow depth, and gradient, and with little to no emergent or marginal aquatic vegetation present. Watercourses present within the wider landscape are at least 100m from the site and are not considered major or priority rivers.
Foreseen Impacts	No impacts are anticipated on riparian animals as a result of the proposed development.
Recommendations	In the unlikely event that an otter holt or den is identified, works must cease and advise must be sought from a suitably qualified ecologist. In the unlikely event that water voles or evidence of water voles is identified, works must cease and advise must be sought from a suitably qualified ecologist.
Hazel dormouse	
Summary of Survey Findings	**EPSL data** A review of the MAGIC database returned no granted EPSL records for hazel dormice within 2km of the site. **Habitat suitability** Dormice typically use a three-dimensional habitat structure as to commute between feeding and breeding sites whilst avoiding predation. As such habitats on site are suitable to support hazel dormice with a multi-storey woodland, scrub, and grassland creating a heterogenous structure that presents good opportunities for foraging, commuting, and nest building for dormice. Species such as bramble present onsite are a desired food source for dormice, the large swathes of bramble scrub through the centre of the site are hence likely to attract some foraging dormice. The woodland onsite extends beyond the site and is well connected to separate woodland plots as well as other suitable habitats such as hedgerows and field margins present within the wider landscape.

Foreseen Impacts	Wet woodland, other neutral grassland, bramble scrub, and bracken will be removed during construction. The loss of such habitats could result in a reduction in dormouse habitat and could result in the fragmentation of the local landscape. Furthermore, site clearance could result in the death or injury of dormice if present.
Recommendations	Hazel dormouse surveys will be required to determine presence or likely absence of dormice on the site. This will comprise the deployment and monitoring of nest tubes and boxes as well as nut searches artificial refugia over several months between April and November, in accordance with current survey guidelines (Bright et al, 2006). The surveys are likely to be required before planning permission can be granted.
Other e.g. hedgehog, rabbit, fox	
Summary of Survey Findings	All habitats onsite provide many opportunities for other wildlife such as hedgehogs, rabbits, and foxes to shelter, forage, and commute. The wide variety of habitats and vegetation types present is likely to attract large and frequent populations.
Foreseen Impacts	Woodland, grassland, bramble scrub, bracken, and scattered trees will be removed during construction. The loss of such habitats is likely to result in a reduction in available habitats for hedgehogs, rabbits, and foxes, however, extensive suitable habitat is still available adjacent to site. Construction activities could also result in the death or injury of hedgehogs if present.
Recommendations	A precautionary working method will be implemented during construction, including the following measures: • Any excavations will be covered overnight, or a ramp will be installed to enable any trapped animals to escape. • The use of night-time lighting will be avoided, or sensitive lighting design will be implemented to avoid light spill on to retained habitats which hedgehogs could use. • Any chemicals or pollutants used or created by the development should be stored and disposed of correctly according to COSHH regulations. • If any hedgehogs are found in the working area these should be allowed to disperse of their own accord or, if at immediate risk, should be moved by hand to a sheltered, vegetated area away from disturbance. **Suggested biodiversity enhancements** The following habitat creation and enhancement opportunities could be incorporated into the proposed development which would be beneficial for hedgehogs: • Planting fruit bearing trees and species-rich grassland to increase foraging opportunities. • Plant native mixed scrub areas or species-rich native hedgerows. • Creation of brash/deadwood piles scattered around the site. • Installation of hedgehog houses in shady areas. • Installation of gaps under boundary fencing to enable wildlife to move freely through the site.

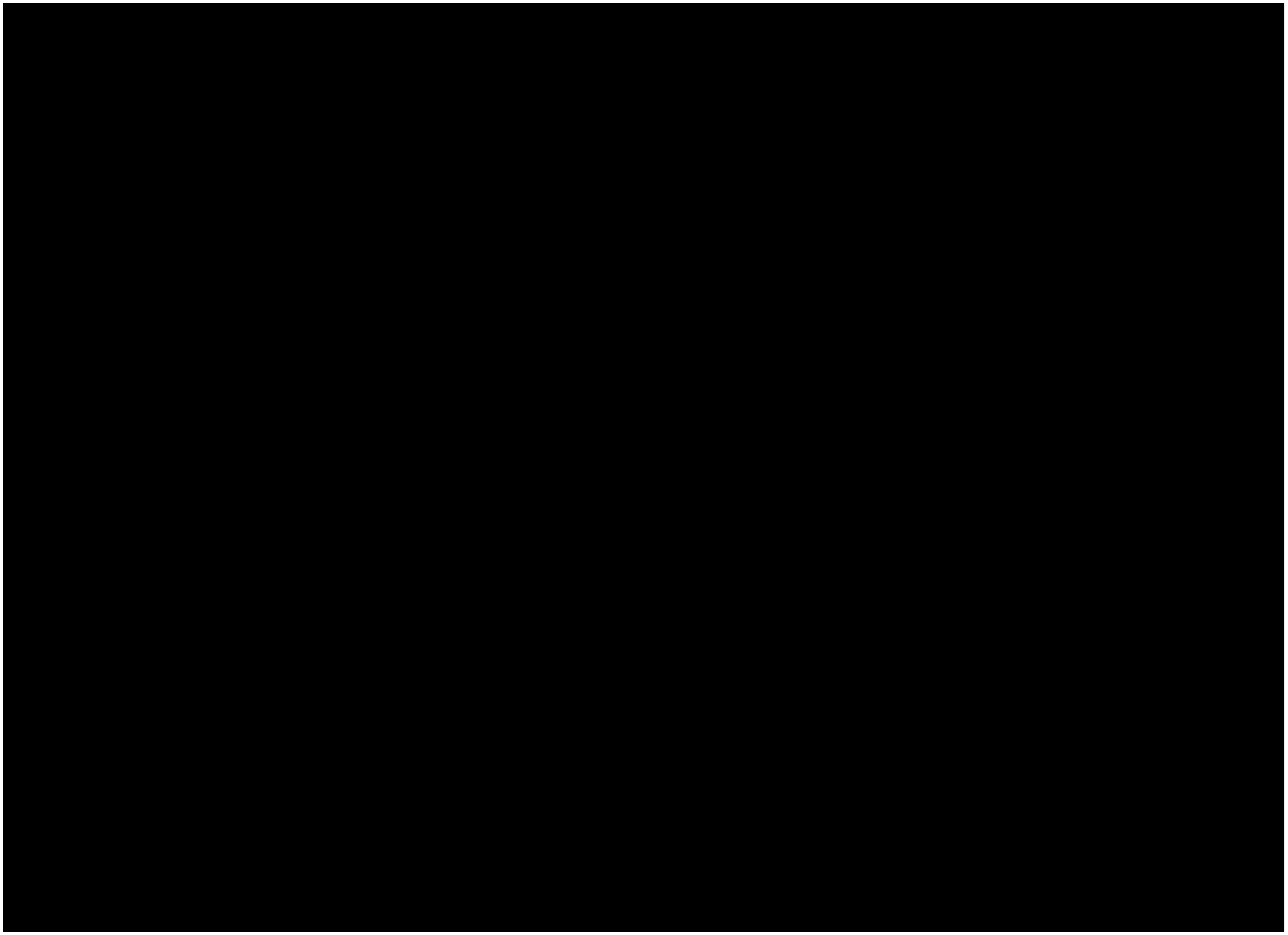
Appendix 1: Survey/Habitat map

Appendix 2: PRA map/BERS plan

Appendix 3: Location map

Appendix 4: Proposed plan

Appendix 5: Pond plan



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Version control			
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1st issue	1.0	OLIVER BEVILACQUA, CONSULTANT ECOLOGIST, MSc, BSc (HONS)	15/04/2025
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