

Preliminary Ecological Appraisal

Survey site:

Land at Kithurst Lane, Storrington, Pulborough RH20 4LP

Client:

Philip Orpwood

Survey date:

21st October 2024

Project:

This report is prepared to inform a planning application with the Horsham District Council. The proposal is described as: "The construction of eight dwellings"

PEA survey methodology and legislation can be found in the Arbtech Supplement: [PEA 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

Results, Impacts and Recommendations

Table 1. Survey weather conditions

The site survey was undertaken by Consultant Ecologist Chantae Wells (Accredited Agent for Class 1 techniques under Natural England Bat Licence Number: 2018-33540-CLS-CLS).					
Date of survey	Temperature (°C)	Humidity (%)	Cloud Cover (%)	Wind (mph)	Rain
21/10/2024	14	87	100	9	Moderate

Table 2. Survey results, impacts and recommendations

Ecological Survey Factor	Detailed using desk study and site survey (carried out under optimal weather conditions). 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.
Conclusion, Impact or Recommendations	
Habitats and Plants	
Summary of Survey Findings	Site Location The site is located on the southern edge of the town of Storrington, centred on National Grid Reference TQ 08209 13982 with an area of approximately 0.3 hectares. The site is comprised of modified grassland habitat with hedgerow and scattered trees. It is surrounded by residential properties to the north and west, and a mix of woodland and farmland to the south and east. A cemetery lies immediately adjacent to the east, surrounded by hedgerow. The site is well connected to residential properties, woodland habitat, farmland and other habitats by an extensive network of hedgerows. Priority Habitats There is one large area of Lowland Calcareous grassland, ~1.1km southeast, and one small section ~1.4km east. One large section of Lowland Heathland lies ~1.2km northeast of the site. Sections of deciduous woodland are frequently scattered across the landscape, with the closest patch only 90m south of the site boundary. Several of these patches include areas of ancient woodland. The large section of deciduous woodland lies approximately ~940m south, which

	comprised of a large percentage of ancient woodland. Three small patches of Traditional Orchard lie within 2km of the site: ~480m east, ~1.6km northeast, and ~1.7km southeast. Woodpasture and Parkland BAP can be found in three large sections: ~940m north, ~1.2km east, and ~1.4km west. On-site habitat <u>Modified grassland (g4)</u> The majority of the site consists of modified grassland, dominated by perennial rye grass with frequent white clover and daisies. The grass is uniform in sward length, with less than 5% bare ground, no invasive species and no bracken. <u>Scattered trees (secondary code 32)</u> There are several scattered small trees (non-native, fruit trees such as prunus) within the site. These are small, moderate condition trees. There are three medium hazel trees at the north-east of site 2, good condition. <u>Hedgerow (h2)</u> Bordering the north and west side of site 1 there is a hedgerow dominated by hawthorn and bramble. The hedgerow is >1.5 height and width, no invasive species, no excessive damage and has undisturbed ground beneath it. <u>Line of trees (secondary code 33)</u> There is a line of mature oak trees on the site border and a line of small prunus trees running near parallel to the border. <u>Introduced shrubs (primary code g4, secondary code 847)</u> Within site 1, there is a patch dedicated to growing plants, with bare earth and introduced shrubs. <u>Artificial, unvegetated, unsealed surface (u1d)</u> There is a small area of loose stone gravel driveway.
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<i>Foreseen Impacts</i>	The proposed development will cause the loss of modified grassland. No hedgerows will be impacted. All trees will remain on site, although a small number may have to be carefully dug up (including roots) and re positioned so they do not get damaged by the development.
<i>Recommendations</i>	Retained trees and hedgerows 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 for the prevention of pollution must be followed. The development will be required to demonstrate a minimum 10% biodiversity net gain through use of the latest Defra Biodiversity Metric as to comply with legislation (Environmental Act 2021). Over 25m² of habitat will be impacted, so it is noted that the development is not exempt from demonstrating a complaint biodiversity net gain, as per current Natural England Guidance: https://www.gov.uk/guidance/biodiversity-net-gain-exempt-developments
Locality and Designated Sites	
<i>Summary of Survey Findings</i>	Statutory Designated Sites A review of the MAGIC database revealed the site is not located within a statutory site, however there are five statutory designated sites within 2km of the site boundary: The site lies just outside of the South Downs National Park, ~70m north of the boundary. South Downs National Park is designated for its chalk grassland, with lowland heath, patches of wooded valleys and hills, river valleys and chalk cliffs which support a range of organisms including the rare Adonis Blue butterfly. There are four Sites of Special Scientific Interest (SSSIs) within 2km of the site boundary. Sullington Warren SSSI, ~1.2km northeast, supports a range of heathland habitats including both wet and dry heath, grassland, scrub and woodland. The woodland carries a rich community of breeding birds. Chantry Mill SSSI, ~1km east, provides the best available exposure of the unusual 'iron-grit' horizon which is rare in south-east England. Amberley Mount to Sullington Hill SSSI is split into multiple sections with two areas falling within 2km of the site boundary, ~1km south and ~1.4km southwest. This site contains some of the richest chalk grassland in Sussex on the scarp slope of the South Downs and

	in two south-west facing coombes. It also includes the rare juniper scrub habitat and is the locality of several nationally restricted invertebrates: lepidoptera (butterflies and moths) and mollusca (snails). Parham Park SSSI, ~1.4km west, has one of the richest epiphytic lichen floras in southeast England. In the northeast there is a relict lowland raised bog with adjacent alder carr. The site also contains several artificial ponds and ditches with marginal plant communities which add to its interest. This site is a locality for two rare beetles and contains one of the largest heronries in Sussex.											
	Non-Statutory Designated Sites The presence of non-statutory designated sites cannot be determined without biological records data.											
Foreseen Impacts	No direct impacts are anticipated on the SSSIs due to the distance of the development site to the SSSIs. Indirect impacts, such as pollution, may occur to the nearby South Downs National Park.											
Recommendations	Best practice measures to minimise the possibility of pollution must be implemented during construction.											
Invasive / Non-native species												
Summary of Survey Findings	No problematic invasive and non-native species recorded on site.											
Foreseen Impacts	None anticipated											
Recommendations	No further surveys but remain vigilant.											
Invertebrates												
Summary of Survey Findings	No habitat for protected or notable assemblages of invertebrates was found on site.											
Foreseen Impacts	None foreseen.											
Recommendations	No further surveys.											
Bats												
Summary of Survey Findings	EPSLs and designated sites The following European Protected Species Licenses (EPSLs) for bats are present within 2km of the site: <table><tr><th>EPSL reference(s)</th><th>Distance from site</th><th>Species affected</th><th>Impact allowed</th></tr><tr><td>2015-15064-EPS-MIT</td><td>~300m west</td><td>Brown Long-eared, Common Pipistrelle, Serotine</td><td>Destruction of a resting place</td></tr></table>				EPSL reference(s)	Distance from site	Species affected	Impact allowed	2015-15064-EPS-MIT	~300m west	Brown Long-eared, Common Pipistrelle, Serotine	Destruction of a resting place
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	EPSM2013-5529	~1.8km southeast	Brown Long-eared, Common Pipistrelle, Whiskered Bat, Barbastelle, Brandt's Bat	Impact on and destruction of a breeding site Destruction of a resting place
	2015-15992-EPS-MIT	~1.8km southeast	Brown Long-eared, Common Pipistrelle, Whiskered Bat, Barbastelle, Brandt's Bat	Impact on, damage to, and destruction of a breeding site Damage to and destruction of a resting place
Within 10km of the site boundary there is one Special Area of Conservation (SAC) that includes a bat species: The Mens Designated Special Area of Conservation (SAC) includes Annex II species Barbastelle <i>Barbastella barbastellus</i> as a qualifying feature and is located ~9.8km northwest of the development site. Bat Foraging and Commuting Value The scattered trees, hedgerows and grassland within the site offer suitable foraging and commuting habitat to bats.				
<i>Foreseen Impacts</i>	No impacts are anticipated on the Mens SAC or the species it supports, due to the distance of the site away from the SAC and the small scale of the works. No suitable roosting habitat will be impacted by the proposed development. No hedgerows or trees will be removed. The proposed development is likely to increase the current light levels, which may cause disturbance to foraging and commuting bats.			

<i>Recommendations</i>	A low impact lighting strategy will be adopted for the site during and post-development, which will include the following measures: • Light spill on to hedgerows should be avoided. • Use narrow spectrum light sources to lower the range of species affected by lighting. • Use light sources that emit minimal ultra-violet light. • Avoid white and blue wavelengths of the light spectrum to reduce insect attraction and where white light sources are required in order to manage the blue shortwave length content they should be of a warm / neutral colour temperature <4,200 kelvin. • Not use bare bulbs and any light pointing upwards. The spread of light will be kept in line with or below the horizontal. • Light spill will be reduced via the use of low-level lighting used in conjunction with hoods, cowls, louvers and shields. Lights will also be directional to ensure that light is directed to the intended areas only. • External lighting will be on PIR sensors that are sensitive to large objects only (so that they are not triggered by passing bats) and will be set to the shortest time duration to reduce the amount of time the lights are on. • Wall lights and security lights will be 'dimmable' and set to the lowest light intensity settings. There are several products on the market that allow the control of the light intensity and the duration that the lights are on. All lighting on the developed site will make use of the most up to date technology available.
Birds	
<i>Summary of Survey Findings</i>	Hedgerows, trees and the roof of the building provide suitable nesting opportunities for birds. These are likely to be common, widespread species.
<i>Foreseen Impacts</i>	No hedgerows or trees will be removed and there will be no impacts to the existing building. The proposed development could result in the disturbance of birds nests within the surrounding hedgerows and trees (if present).
<i>Recommendations</i>	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 3-5m buffer should be created between any machinery and active nests until the young have fledged.

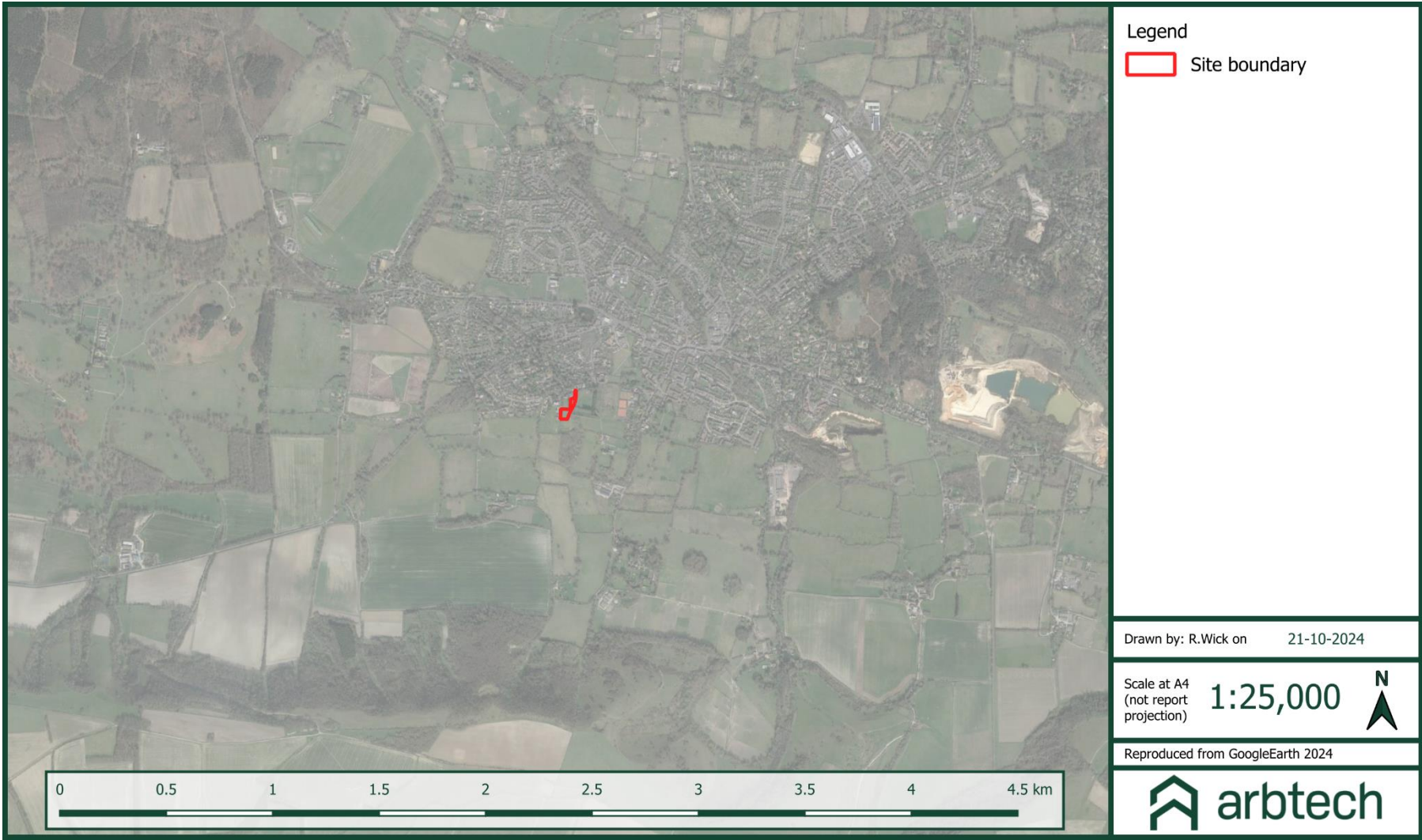
Reptiles	
<i>Summary of Survey Findings</i>	EPSLs There are no European Protected Species Licenses (EPSLs) for reptiles within 2km of the site. Suitable habitat The grassland within the site is frequently mown and as such, is sub-optimal for reptiles due to a lack of refuge from predators. The hedgerows offer suitable commuting habitat and longer sward-length grass and log piles in the wider vicinity (within the land ownership boundary) provide suitable commuting and sheltering habitat for reptiles. Furthermore, the pond to the south of the site provides suitable foraging habitat for grass snakes.
<i>Foreseen Impacts</i>	Although the site is sub-optimal for reptiles, there is suitable habitat for reptiles in the immediate vicinity. Therefore, the presence of transient reptiles within the site for short periods of time cannot be discounted.
<i>Recommendations</i>	Due to the site being sub-optimal for reptiles, reptile population surveys are considered to be disproportionate to the risks. Precautionary working methods must be followed to ensure the risks to reptiles are reduced to an acceptably low level: • Manage and maintain the grassland to a short sward height (<5cm) prior to and for the duration of the works • Erect temporary fencing around the site boundary, to prevent encroachment of machinery onto suitable habitats (hedgerow, line of trees). • If any reptiles are observed in the area, they should be encouraged to disperse of their own accord. If in immediate danger, they may be carefully picked up and placed in a vegetated area away from harm (do not handle adders without correct protective gloves) • Enhance the site for reptiles by the provision of one hibernacula

Great Crested Newts (GCN) & Other Amphibians	
<i>Summary of Survey Findings</i>	EPSLs There was one European Protected Species Licenses (EPSLs) for great crested newts (GCN) found within 2km of the site: Located ~470m west with case reference EPSM2012-4355, this licence allows for the destruction of a resting place. Suitable habitat The grassland within the site is frequently mown and as such, is sub-optimal for amphibians due to a lack of refuge from predators. The hedgerows offer suitable commuting habitat and longer sward-length grass and log piles in the wider vicinity (within the land ownership boundary) provide suitable commuting and sheltering habitat for amphibians. Furthermore, there is a pond (Pond 1) within the land ownership boundary, which offers suitable aquatic habitat for amphibians. Off-site habitat Great crested newts exist in metapopulations and are known to utilise 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). A review of aerial imagery found ten ponds and one stream within 500m of the site boundary. These are located ~55m south, ~160m north, ~200m west, ~330m northwest, ~330m north, ~370m southwest (the stream), ~380m west, ~410m east, ~410m south, ~430m southeast, ~490m southwest. A labelled pond map is provided in Appendix 3. Three of the ponds within 500m of the site (ponds 2, 4 and 5) are located within frequently mown gardens within a residential area, where roads and houses provide significant barriers of dispersal.
<i>Foreseen Impacts</i>	Modified grassland will be lost to facilitate the proposed development. 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 0.3ha of modified grassland. If great crested newts are present within the ponds within 500m of the site, this will constitute a loss of 0.3ha within 100m, 250m and over 250m from a potential

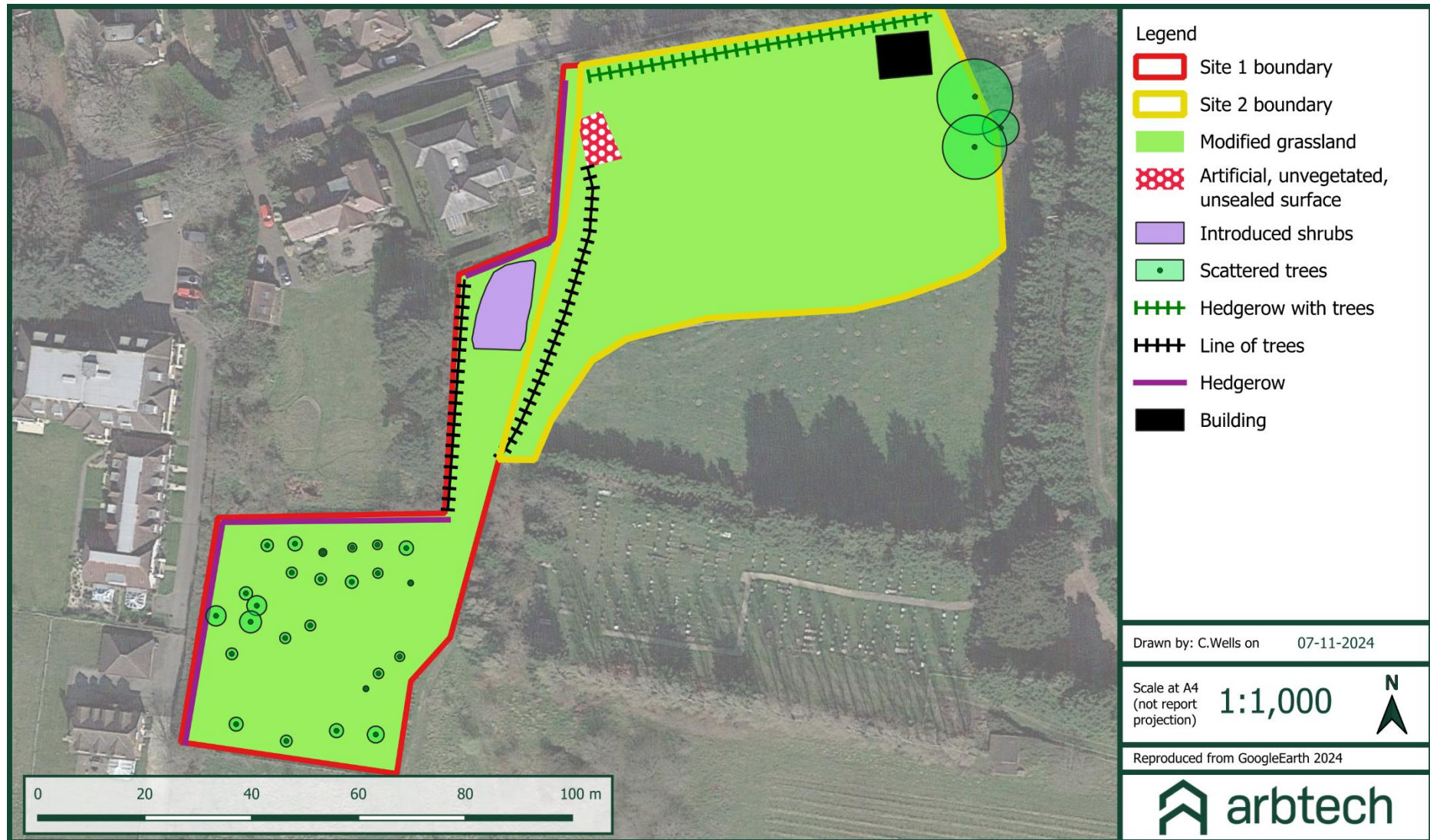
	breeding pond. When completing the rapid risk assessment published by Natural England (Natural England 2015), the proposed development produces an Amber risk score, which states: Offence Likely. <table><tr><th>Component</th><th>Likely effect (select one for each component; select the most harmful option if more than one is likely; lists are in order of harm, top to bottom)</th><th>Notional offence probability score</th></tr><tr><td>Great crested newt breeding pond(s)</td><td>No effect</td><td>0</td></tr><tr><td>Land within 100m of any breeding pond(s)</td><td>0.1 - 0.5 ha lost or damaged</td><td>0.5</td></tr><tr><td>Land 100-250m from any breeding pond(s)</td><td>0.1 - 0.5 ha lost or damaged</td><td>0.1</td></tr><tr><td>Land >250m from any breeding pond(s)</td><td>0.1 - 0.5 ha lost or damaged</td><td>0</td></tr><tr><td>Individual great crested newts</td><td>No effect</td><td>0</td></tr><tr><td colspan="2">Maximum:</td><td>0.5</td></tr><tr><td colspan="2">Rapid risk assessment result:</td><td>AMBER: OFFENCE LIKELY</td></tr></table> If the ponds within 100m of the site are not great crested newt breeding ponds, then the risk to great crested newts reduces to Green, Offence Highly Unlikely. <table><tr><th>Component</th><th>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)</th><th>Notional offence probability score</th></tr><tr><td>Great crested newt breeding pond(s)</td><td>No effect</td><td>0</td></tr><tr><td>Land within 100m of any breeding pond(s)</td><td>No effect</td><td>0</td></tr><tr><td>Land 100-250m from any breeding pond(s)</td><td>0.1 - 0.5 ha lost or damaged</td><td>0.1</td></tr><tr><td>Land >250m from any breeding pond(s)</td><td>0.1 - 0.5 ha lost or damaged</td><td>0</td></tr><tr><td>Individual great crested newts</td><td>No effect</td><td>0</td></tr><tr><td colspan="2">Maximum:</td><td>0.1</td></tr><tr><td colspan="2">Rapid risk assessment result:</td><td>GREEN: OFFENCE HIGHLY UNLIKELY</td></tr></table>	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)	0.1 - 0.5 ha lost or damaged	0.5	Land 100-250m from any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0.1	Land >250m from any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0	Individual great crested newts	No effect	0	Maximum:		0.5	Rapid risk assessment result:		AMBER: OFFENCE LIKELY	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)	No effect	0	Land 100-250m from any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0.1	Land >250m from any breeding pond(s)	0.1 - 0.5 ha lost or damaged	0	Individual great crested newts	No effect	0	Maximum:		0.1	Rapid risk assessment result:		GREEN: OFFENCE HIGHLY UNLIKELY
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Recommendations	Environmental DNA (eDNA) surveys will be required of the pond within 100m of the site (Pond 1) 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).																																																

Other Mammals	
<i>Summary of Survey Findings</i>	[REDACTED] [REDACTED] [REDACTED]
<i>Foreseen Impacts</i>	[REDACTED]
<i>Recommendations</i>	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]
Riparian animals	
<i>Summary of Survey Findings</i>	There are no watercourses on or connected to the site within an 100m radius. Therefore, the site is unsuitable for riparian mammals.
<i>Foreseen Impacts</i>	No impacts are anticipated on riparian animals as a result of the proposed development.
<i>Recommendations</i>	None.
Hazel dormouse	
<i>Summary of Survey Findings</i>	EPSLs There are no European Protected Species Licenses (EPSLs) for hazel dormice within 2km of the site. Suitable habitat There is no suitable habitat for hazel dormice within the site.
<i>Foreseen Impacts</i>	The risk to hazel dormice is acceptably low.
<i>Recommendations</i>	None.

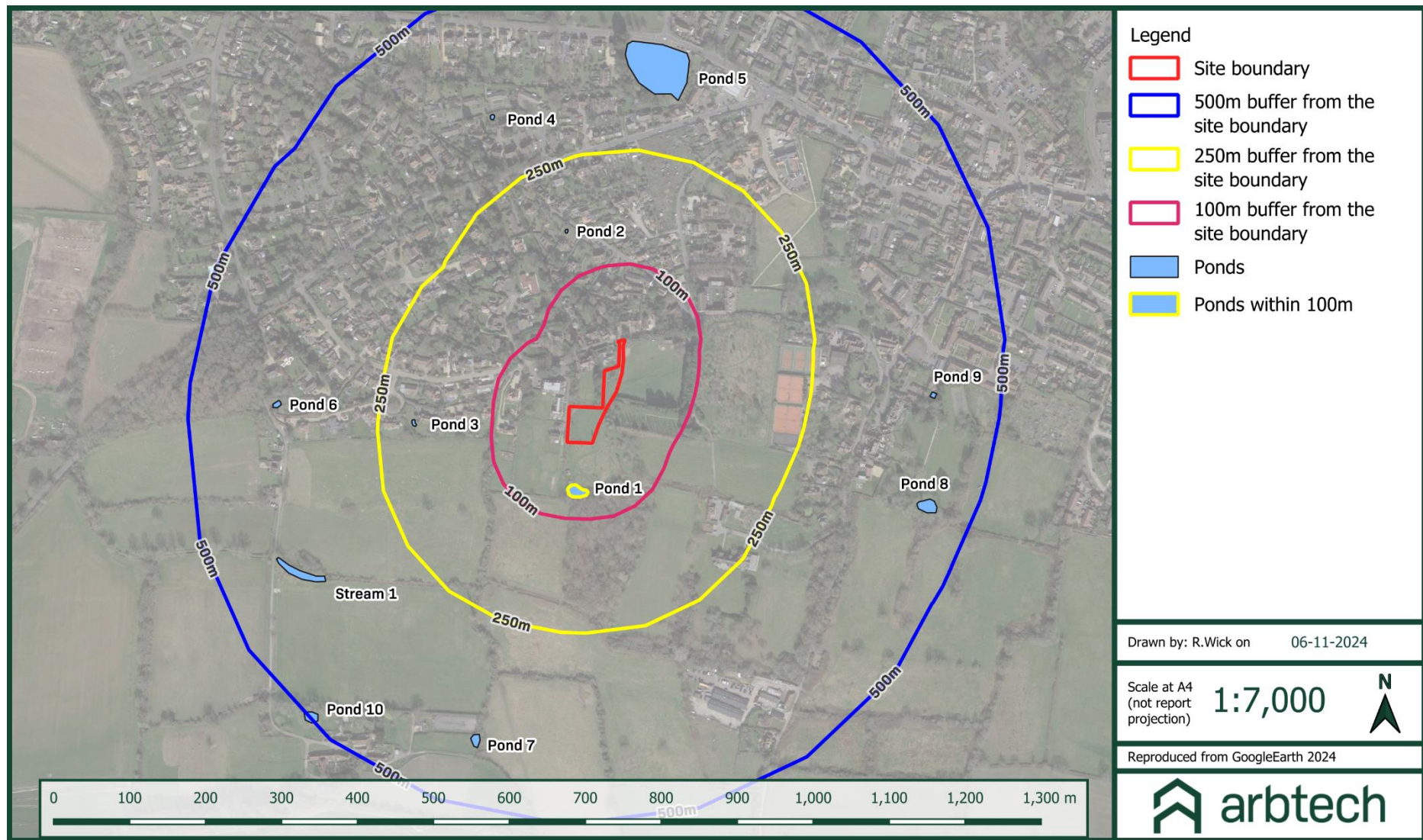
Appendix 1: Site Location



Appendix 2: Preliminary Ecological Appraisal Map



Appendix 3: Pond Map



Appendix 4: Proposed Plans

Not available at the time of writing.

Appendix 5: Photographs

Description	Photographs	
Grassland		
Scattered trees		

Line of trees	
Hedgerow	

Hedgerow with trees			
Introduced shrubs			

Building			
Artificial, unvegetated, unsealed surface			

Limitations

Whilst every effort has been made to describe the baseline conditions within the survey area, and evaluate these features, this report is a preliminary assessment and does not provide a complete characterisation of the site. Nor does it represent a full botanical assessment. It assessed the likelihood of protected, notable and important habitats and species being present, based in a site and landscape level habitat value-based risk assessment. This is based upon the ecology, biology and known distribution of species as currently understood.

Biological record data has not been used to inform this report. However, given the small scale of the works and the precautionary working methods described within this report, the addition of biological record data is not anticipated to significantly alter recommendations within this report.

The proposed development plans were not available at the time of writing. Therefore, impacts and recommendations will have to be updated once final plans are available.

Legal

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Version control			
Status	Issue	Name	Date
Draft	0.1	Chantae Bleakman-Wells BSc (Hons) MSc, Consultant Ecologist	31/10/2024
Final	1.0	Chantae Bleakman-Wells BSc (Hons) MSc, Consultant Ecologist	06/11/2024