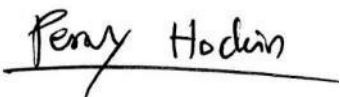


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Declaration: The information which I have prepared and provided for this report is true and has been prepared and provided in accordance with the CIEEM's Code of Professional Conduct; I confirm that the opinions expressed are my true and professional bona fide opinions.			
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No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information. Thus, we cannot guarantee that the investigations completely defined the degree or extent of species abundances or habitat management efficacy described in the report.

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This report and all survey work have been prepared to British Standard 42020 and rely on information and methodology from the Joint Nature Conservation Committee and the Chartered Institute of Ecological and Environmental Management.

Additionally, this report relies on information from other third parties, some of which may include, but not be limited to; DEFRA's MAGIC database, local record centres, local wildlife spotter groups such as badger groups, and the NBN atlas.

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EXECUTIVE SUMMARY

0.1 Arborweald Environmental Planning Consultancy (AEPC) were commissioned by Horam Parish Council for Land adjoining Discovery Way, Discovery Way, Horam, East Sussex, TN21 0JE, TQ 57592 17086 to undertake:

- Preliminary Ecological Appraisal (PEA)

0.2 The habitats present within the site boundary comprise other neutral grassland, mixed scrub, lowland deciduous woodland, a waterbody, and native hedgerow with trees.

0.3 Plans on site comprise creation of a community greenspace for the benefit of biodiversity and the local community through:

- formalisation of a desire path through the site,
- provision of amenity areas including seating, and
- enhancement of the habitats on site

0.4 The primary findings of this report were:

- The site supports an assemblage of fauna and flora typical of the wider undeveloped landscape of the Low Weald.
- Habitats on site are representative of much of the wider undeveloped landscape of the Low Weald; however, they are suffering from edge effect from the surrounding developed landscape as the site is an island of green habitat in the centre of a highly developed settlement.
- The site represents an excellent opportunity to retain and enhance an area of natural and semi-natural greenspace, creating a biodiversity uplift combined with provision of a managed area for local people. This would be an ideal opportunity to address the local deficit in greenspace area.

0.5 The primary recommendations of this report are:

- Biodiversity enhancements should be incorporated into any greenspace design, and Section 6 of this report provides details of proposed enhancements to include:
 - Planting of nectar and fruit bearing trees in public facing areas
 - Enhancement of existing retained habitats
 - Protection of retained sensitive features including the woodland and waterbody from pollution, trampling and damage
 - Securing the site for the purposes of safety for both people and wildlife
- Long term monitoring of the site is recommended to provide a tangible figure for biodiversity enhancement.

0.6 The current site situation is shown in Figures B1 and B3 below – all site photographs are found in the Figures Appendix at the end of this report.



Figure B1 – Existing waterbody within woodland



Figure B3 – Woodland and scrub viewed from centre of site showing shorter grassland in foreground with taller scrub behind.

1 INTRODUCTION

- 1.1 Arborweald Environmental Planning Consultancy (AEPC) were commissioned by Horam Parish Council for Land adjoining Discovery Way, Discovery Way, Horam, East Sussex, TN21 0JE, TQ 57592 17086 to undertake:
 - Preliminary Ecological Appraisal (PEA)
- 1.2 The objectives of the PEA were to assess the potential of the site to support protected species and/or species of conservation importance by identifying potential habitat for protected species and/or species of conservation concern and by evaluating the opportunities available for enhancement of the site with respect to these species.
- 1.3 The objective of the Phase 1 habitat survey was to assess what habitats are found on site, and their respective condition using the BMA condition scoring matrix.
- 1.4 This document has been written with reference to the following documents:
 - Wealden Open Space Report – 26th May 2022
 - Wealden draft local plan – March 2024 (draft)
 - Horam Neighbourhood Plan

Surveyors and author competency

- 1.5 Surveys were undertaken on the 3rd March 2026 by Principal Ecologist Perry Hockin BSc (Hons.), FDSoc, ACIEEM.
- 1.6 Report writing was undertaken by Principal Ecologist Perry Hockin BSc (Hons.), FDSoc, ACIEEM.

Perry Hockin – Principal Ecologist

Perry Hockin is a qualified and experienced ecologist and the primary ecological contact at Arborweald. With both a BSc in Ecology from the University of Brighton and a FDSoc in Countryside Management from Plumpton Agricultural College, Perry has worked in the countryside sector since 2013 in the fields of tree surgery, landscaping, countryside management and ecological consultancy where his qualifications have provided him with a balance of both practical and desk-based experience of complex multi-faceted projects.

His experience is focussed primarily on botany, habitat management, biodiversity net gain, and data management, and his holistic approach to projects has earned him high praise from local planning authorities and conservation bodies alike across the south-east.

Site Description

- 1.7 The site is located in Horam, East Sussex (Ordnance Survey Grid Reference for the centre of the site: TQ 57592 17086). The site is approximately 0.40 ha in area and comprises other neutral grassland, mixed scrub, lowland deciduous woodland, a waterbody, and native hedgerow with trees.

- 1.8 The location of the site is shown in Figure 1.1 and the extent of the site boundary is shown in Figure 1.2.
- 1.9 The habitats in the immediate wider landscape comprise the urban habitats of Horam with the wider rural landscape containing similar habitats to the site such as grassland, arable and woodland with other scattered urban residential areas, becoming more dense towards the larger town of Heathfield to the north.

Survey Constraints

General constraints

- 1.10 Due to seasonal behaviour of animals and the seasonal growth patterns of plants, ecological surveys may be limited by the time of year in which they are undertaken.
- 1.11 The information gathered for this ecological survey has facilitated an evaluation of the habitats on site and the likely use of the site by legally protected and notable species. This survey has also given appropriate baseline data for the determination of the requirement for further surveys and/or mitigation and enhancement works.
- 1.12 The UKHab habitat map has been reproduced from detailed field notes and informed by aerial imagery, OS mapping and site maps provided by the client. The accuracy of this figure is therefore ultimately guided by the accuracy of these sources and can only be relied upon to a certain degree of resolution.

Site specific constraints

- 1.13 There are no site-specific constraints.

2 METHODS

Desk Study

- 2.1 The Multi Agency Geographic Information for the Countryside (MAGIC) website provided by the Department for Environment, Food and Rural Affairs (DEFRA) was consulted for information with regard to protected habitats and species within 2 km of the proposed (red line) boundary.
- 2.2 Aerial photos of the site (Google, 2020) were examined to determine habitats surrounding the site and hence species likely to be present in order to make appropriate recommendations in the wider landscape context.
- 2.3 Following guidance contained within sections 5.5 and 6.2.1 of BS 42020:2013, records from the local biodiversity record centre may be deemed necessary, in which case the results are screened for relevance. This involves an analysis (in conjunction with DEFRA's MAGIC map software) of connectivity between recorded instances and the site boundary. Records are also screened for age; records are prioritised from the last 10 years, with records from the past 20 and 40 years deemed as less accurate, but still included where possible.

Report lifespan

- 2.4 The lifespan of this appraisal and the ecological survey information contained herein has been determined based on CIEEM's Advice Note: On the Lifespan of Ecological Reports and Surveys (CIEEM, 2019), an assessment of the likelihood of presence of important ecological features on Site and consideration of how the ecological status of these features on Site may change over time.
- 2.5 If the commencement of site works is delayed beyond 18 months from the date of issue of this report, an update site walkover should be undertaken by a suitably experienced ecologist.
- 2.6 Following the update walkover, the ecologist will need to determine whether there have been any material changes to the ecological baseline, the potential impacts of the proposed development and/or the ecology-related legal risks associated with the proposed development.
- 2.7 If there have been any material changes in baseline ecological conditions, the potential ecological impacts of the proposed development and/or associated legal risks, or any material changes to relevant ecology-related legislation, standing advice, best practice and/or guidance, an updated report should be produced by a suitably experienced ecologist.

Field Survey

Phase 1 habitat survey

- 2.8 The survey was conducted in accordance with The Handbook for Phase 1 Habitat Survey (JNCC, 2016), and included searches for signs of protected species, as described in the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017).
- 2.9 A Phase 1 survey of the site was carried out in order to evaluate any habitat on the site, and to gather data to inform the Biodiversity Metric Assessment.
- 2.10 Consideration was also given to habitats outside the site boundary, in order to evaluate the ecological context of the site within the wider landscape. Adjacent habitats were also considered with respect to their own ecological value and their potential to enhance the ecological value of habitats within the site.
- 2.11 Searches were made for invasive non-native plant species focussing on those species currently listed in the revised Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). Species were listed split into non-natives and invasive non-natives with different advice for each.
- 2.12 The plant species nomenclature follows that of Stace (2019). Plant species observed within each habitat type were recorded using the DAFOR system which stands for Dominant, Abundant, Frequent, Occasional or Rare.

All references to relevant literature required to maintain industry best practice and compliance with legislation is listed in the References section of this report

Preliminary Ecological Appraisal (PEA)

- 2.13 The survey was conducted in accordance with The Handbook for Phase 1 Habitat Survey (JNCC, 2016), and included searches for signs of protected species, as described in the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017).
- 2.14 A Preliminary Ecological Appraisal survey of the site was carried out in order to evaluate any habitat on the site with the potential to support protected species and/or other species of conservation concern that could be relevant in respect of planning policies.
- 2.15 In addition, the habitats within the survey area were assessed for their potential to support legally protected or otherwise notable flora and fauna. Where suitable habitat was identified on site, a search was conducted for signs indicating the presence of protected species such as droppings, burrows, tracks and evidence of feeding. Where species are not specifically evaluated, this indicates that no habitat of potential value for these species was identified during the survey.
- 2.16 Consideration was also given to habitats outside the site boundary, in order to evaluate the ecological context of the site within the wider landscape. Adjacent habitats were also considered with respect to their own ecological value and their potential to enhance the ecological value of habitats within the site.
- 2.17 Searches were made for invasive non-native plant species focussing on those species currently listed in the revised Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). Species were listed split into non-natives and invasive non-natives with different advice for each.

- 2.18 The plant species nomenclature follows that of Stace (2019). Plant species observed within each habitat type were recorded using the DAFOR system which stands for Dominant, Abundant, Frequent, Occasional or Rare.
- 2.19 All references to relevant literature required to maintain industry best practice and compliance with legislation is listed in the References section of this report.

Ground Level Tree Assessment (GLTA)

- 2.20 The methods used in the Ground Level Tree Assessment were based on those recommended in English Nature's Bat Mitigation Guidelines (Mitchell-Jones 2004), the Joint Nature Conservation Committee's Bat Worker's Manual (Mitchell-Jones and McLeish 2004), the Bat Conservation Trust's Bat Surveys for Professional Ecologists: Good Practice Guidelines (Collins, 2016), and CIEEM's methodology for breeding bird surveys. The works were undertaken to the standards set out in BS:42020.
- 2.21 The assessment was purely visual from the ground and did not utilise any climbing or aerial equipment.
- 2.22 Holes, gaps, wounds, tear-outs and loose bark were noted on trees, along with patches of dense ivy and other veteran features suitable to support roosting bats. Age and location was also noted, along with tree health and species as some species are more likely to develop attributes suitable to support roosting bats.
- 2.23 Signs of likely bat presence as listed above were noted and investigated further where possible to do so in full compliance with legislation. Trees were given a category in the same way as buildings from 'negligible' to 'high' suitability to support roosting bats. Trees given categories of 'Moderate' or 'High' suitability were recommended for further presence / absence dusk bat emergence surveys.
- 2.24 Assessment for suitability to support birds involved a visual assessment of bird activity in and around the tree over a period of 30 minutes in the morning when birds are most active. Signs of nesting activity, including active / defunct nests, bird courting, and nest material gathering were noted and commented upon

3 RESULTS

Desk Study

- 3.1 Records of designated sites and European sites within 2 km of the site boundary were obtained from Multi Agency Geographic Information for the Countryside (MAGIC) website provided by the Department for Environment, Food and Rural Affairs (Defra).

Designated sites

- 3.2 There are no international/European designated sites within 2km of the proposed site.
- 3.3 There are no statutory designated sites located within 2km of the proposed site.
- 3.4 The site is set within the High Weald National Character Area (NCA).
- 3.5 Horam village sits on the border between the designated High Weald National Landscape (formerly the AONB) and the undesignated Low Weald.
- 3.6 The site is not designated for its specific nature conservation interest.

Designated habitats

- 3.7 The habitats in the wider landscape comprise immediately adjacent areas of urban development. The broad wider landscape includes other areas of grassland and woodland with some scattered urban residential settlements making up the small villages around Horam. The landscape is semi-rural being on the outskirts of Horam, which in turn is a smaller satellite of Heathfield to the North.
- 3.8 Further to this, the wider landscape contains two Habitats of Principal Importance (HPIs) covered under Section 41 of the Natural Environment and Rural Communities Act, consisting of deciduous woodland including ancient woodland, and lowland meadows.

Waterbodies

- 3.9 There are 16 waterbodies within 500m of the site. The 500m buffer is shown in Figure 3.1.
- 3.10 Waterbody 1 is on site and comprises a naturally formed pond in the centre of the woodland block. It collects runoff from the wider landscape including the rest of the site, and naturally spills over into a SUDS immediately to the west installed as a part of the adjacent Merrydown development.
- 3.11 The other waterbodies comprise a mixture of natural and artificial ponds on both sides of the A267 Hailsham Road, which is the only major obstacle affecting connectivity with the site.

Biological Records

- 3.12 Following guidance contained within sections 5.5 and 6.2.1 of BS 42020:2013, it was deemed not necessary to obtain biological records from the local Biological Records Centre for the following reasons as no development is proposed at this stage, and the client has indicated that it is key to reduce costs.
- 3.13 Local records may be required at a later stage to further inform protected species presence in the wider landscape.

Field Study

Phase 1 Habitat Survey

- 3.14 The habitats present on site are shown in Figure 3.2 and are described in detail below.
- 3.15 The site at Discovery Way comprises an area of scrubby wet grassland with a small pocket of woodland and pond immediately adjacent to the A267 Eastbourne Road. Historically the site comprised blackthorn scrub which was cleared in 2024 by the landowner. It has since remained relatively short with grasses and other forbs taking over, with scrubby remnants a maximum 20cm high.
- 3.16 Habitats comprise: Other neutral grassland, Mixed scrub, Lowland mixed deciduous woodland, Ponds and Lakes, and Hedgerow.

Other neutral grassland

- 3.17 In its current form the site comprises primarily other neutral grassland typical of much of the wider Low Weald and High Weald landscape with Horam sitting on the border of the two. There is remnant scrub throughout from the previous overgrowth which having been cut has made way for a mixture of typical regenerative grasses as well as specialist woodland and grassland species.
- 3.18 **Abundant:** early meadow-grass *Poa infirma*, soft-rush *Juncus effusus*, blackthorn *Prunus spinosa*, annual meadow-grass *Poa annua*, common fleabane *Pulica dysinterica*, rosebay willowherb *Chamerion angustifolium*; **Frequent:** bramble *Rubus fruticosus*, ivy *Hedera helix*, dog rose *Rosa canina*, common knapweed *Centaurea nigra*; **Occasional:** greater celandine *Chelidonium majus*, common sorrel *Rumex acetosa* ssp *acetosa*, creeping buttercup *Ranunculus repens*; **Rare:** primrose *Primula* sp., stinking iris *Iris foetidissima*, groundsel *Senecio vulgaris*.

Mixed scrub

- 3.19 Originally the site was almost entirely made up of mixed scrub dominated by blackthorn. There are remnants of this scrub throughout the grassland, and around the retained woodland in the north-west of the site.
- 3.20 **Dominant:** blackthorn *Prunus spinosa*; **Frequent:** hawthorn *Crataegus monogyna*, creeping cinquefoil *Potentilla reptans*, ground-ivy *Glechoma hederacea*, gorse *Ulex europaeus*, bramble *Rubus fruticosus*, wych elm *Ulmus glabra*; **Occasional:** dog rose *Rosa canina*; **Rare:** ash *Fraxinus excelsior*, elder *Sambucus nigra*, English oak *Quercus robur*, hornbeam *Carpinus betulus*, teasel *Dipsacus fullonum*.

Lowland mixed deciduous woodland

- 3.21 There is a small woodland copse in the north-east corner of the site around a pond of around 400m². It comprises mature and early mature examples of typical woody species with some understorey similar to the adjacent scrub. There is good ground flora cover but not distinguishable as an NVC community, although indicator species are present

- 3.22 **Dominant:** English oak *Quercus robur*; **Abundant:** hornbeam *Carpinus betulus*; **Frequent:** bramble *Rubus fruticosus*, winter heliotrope *Petasites fragrans*, greater celandine *Chelidonium majus*, common nettle *Urtica dioica*, primrose *Primula sp.*, ivy *Hedera helix*; **Occasional:** crack willow *Salix fragilis*, creeping buttercup *Ranunculus repens*, wood dock *Rumex sanguineus*; **Rare:** bay *Laurus nobilis*, cherry laurel *Prunus laurocerasus*, sycamore *Acer pseudoplatanus*, wild cherry *Prunus avium*, grey willow *Salix cinerea ssp cinerea*, beech *Fagus sylvatica*.

Ponds and lakes

- 3.23 There is a pond in the centre of the woodland covering an area of approximately 400m². It is broadly unvegetated with some minor duckweed. Turbidity is average and somewhat typical for its situation being heavily shaded by the surrounding trees, and water quality is likely affected as a result, however large quantities of frogspawn was recorded.

- 3.24 **Occasional:** common duckweed *Lemna minor*

Hedgerow

- 3.25 There are two hedgerows on site; on the northern boundary there is a mature outgrown Leyland cypress *Cupressus leylandii* hedge averaging 8m tall. Along the eastern (roadside) and southern boundaries is a mature native hedgerow averaging around 4m tall but up to 7m in places
- 3.26 **Abundant:** English oak *Quercus robur*, hawthorn *Crataegus monogyna*, ash *Fraxinus excelsior*, ivy *Hedera helix*; **Occasional:** hornbeam *Carpinus betulus*

Other items

- 3.27 The invasive non-native species cherry laurel was recorded on site.
- 3.28 Habitat condition scoring was undertaken using the BM Technical Annex 1 condition score sheet. The results of which are outlined in Table 3.1.
- 3.29 For the purposes of condition scoring, core criteria that dictate automatic condition scores are marked in bold as either **green** for pass, or **red** for fail.

Table 3.1 – Existing baseline habitat conditions:

Habitat type	Sheet	Condition	Justification
Grassland – Other neutral	6A	Poor	<p>Scored 3 out of a possible 6 points.</p> <p>Gained points for:</p> <ul style="list-style-type: none"> + Varied sward height throughout + Cover of bare ground is between 1% and 5% + Species indicative of suboptimal condition cover less than 5% <p>Lost points due to:</p> <ul style="list-style-type: none"> - Poor example of the habitat type - Less than 20% bracken and less than 5% scrub coverage - Fewer than 10 vascular plant species per m²
Heathland and shrub – Mixed scrub	20A	Poor	<p>Scored 2 out of a possible 5 points.</p> <p>Gained points for:</p> <ul style="list-style-type: none"> + Good example of the habitat type + Absence of invasive non-native species <p>Lost points due to:</p> <ul style="list-style-type: none"> - Homogenous age structure - Lack of clearings, glades and rides - Lack of well developed edge
Woodland and forest – Mixed woodland	24A	Moderate	<p>Scored 27 out of a possible 39 points.</p> <p>Maximum 3 points for</p> <ul style="list-style-type: none"> + Lack of herbivore damage + 5 or more native species + Cover of native species + Open space (automatic pass) <p>2 points for:</p> <ul style="list-style-type: none"> = 2 age classes present = One or two age regeneration classes present = 11-25% crown mortality = Two storeys across survey plots = Some dead-wood <p>1 point for:</p> <ul style="list-style-type: none"> - >20% nutrient enrichment - No veteran trees - No recognisable NVC community - Rhododendron and cherry laurel present
Lakes – Pond (non-priority)	18A	Poor	<p>Scored 4 out of a possible 7 points.</p> <p>Gained points for:</p> <ul style="list-style-type: none"> + Not artificially connected to other waterbodies + Water levels can fluctuate naturally + Absence of invasive non-natives + Not artificially stocked with fish <p>Lost points due to:</p> <ul style="list-style-type: none"> - Low turbidity and good water quality - Surrounded by semi-natural habitat for 10m - Less than 10% duckweed or algae coverage

Habitat type	Sheet	Condition	Justification
Hedgerows – Ecologically valuable line of trees	16A	Moderate	<p style="text-align: center;">Scored 7 out of a possible 10 points.</p> <p>Gained points for:</p> <ul style="list-style-type: none"> + > 1.5m high + > 1.5m wide + > 1m strip of vegetated ground adjacent + Minimal nutrient enrichment + Lack of invasive non-natives + Minimal damage caused by human activities + More than 1 age class of trees <p>Lost points due to:</p> <ul style="list-style-type: none"> - < 95% of hedgerow trees are healthy - Gap frequency over 10% of length - Size of gaps - > 0.5m tall at base, and over 0.5m wide contributing to gappiness of over 10%

Protected Species

- 3.30 The habitats present on site provide suitable potential to support a range of protected species including badgers, bats, breeding birds, dormice, great crested newts and reptiles. These species are considered in greater detail below, along with protected species for which the habitats on site are suboptimal or unsuitable.

Bats

Roosting

Trees

- 3.31 Standardly, a Ground Level Tree Assessment (GLTA) for bats is undertaken on all trees on site of an age or condition that they are likely to hold features suitable to support roosting bats.
- 3.32 These features are most typical on larger trees or those that have been wounded or veteranized, and their prevalence is also affected by the species of tree as some are more likely to survive the aging or veteranizing process than others.
- 3.33 Features searched for include lifted bark, lesions and cracks, holes, dead wood, cavities, and missing limbs.
- 3.34 None of the trees on site were considered suitable to support roosting bats on account of their lack of features due to their young age, species or good vitality and lack of injury. Further investigation may be required should the site be developed.

Buildings

- 3.35 There are no buildings on site.

Commuting and foraging

- 3.36 The habitats within the site boundary provide ample foraging and commuting opportunities for bats with a wide range of unmanaged habitats including grassland, woodland, scattered trees and hedgerows.

Opportunities in the wider landscape

- 3.37 The wider landscape is predominantly rural, and as such bat roosting opportunities are likely to be present within the wider landscape in older buildings.

Evidence

- 3.38 No evidence of bats was recorded during the surveys

Breeding birds

Evidence

- 3.39 An abundance of songbirds was recorded during the survey, with species being both heard and seen. Species recorded included blackbird *Turdus merula*, blue tit *Cyanistes*

caeruleus, great tit *Parus major*, wren *Troglodytes troglodytes*, jackdaw *Corvus monedula*, house sparrow *Passer domestica*, and starling *Sturnus vulgaris*.

Nesting / roosting

- 3.40 No intact or defunct nests were discovered during the survey.
- 3.41 All of the habitats on site provide nesting opportunities for breeding birds, with further opportunities found within the wider landscape.

Foraging

- 3.42 Berries on trees within the site boundary provide ample foraging opportunities for larger birds. Furthermore seeding plants including teasel provide opportunities for smaller seed eaters.

Badgers

Commuting and access

- 3.43 Access for badgers is considered to be good as whilst the site is set within an urban area, it is open to all aspects to the rural habitats in the wider landscape, except the east where the A267 presents a considerable obstacle.

Foraging

- 3.44 The site provides good habitat for badgers, as there are foraging opportunities within the grassland and woodland with a ready supply of food plants and small mammals.

Sett building

- 3.45 Sett building opportunities are limited by the small size of the site but the level of cover available in the woodland and scrub makes sett building possible.

Opportunities in the wider landscape

- 3.46 Badger populations, whilst widespread, are likely scattered, however Sussex does retain large populations of badgers due to its rural character and heavy wooded coverage.

Evidence

- 3.47 No evidence of badgers was recorded during the survey.

Dormice

Evidence

- 3.48 No signs of dormice were recorded during the survey.

Key features for survival

- 3.49 The site provides limited habitat suitable to support dormice with few features key for their survival. These features include:
- Hazel coppice with dense canopy for arboreal activity, and of a mature enough stock to produce nuts;
 - Good connectivity with areas of higher quality habitat

The site provides limited native fruit bearing species; however, the centre of the site lacks an appropriate level of cover for dormice since its clearance in 2024.

The woodland is small and straggly with minimal understorey, no coppice cover, and limited food plants. This is mirrored in the hedgerows on site, all of which have become outgrown lacking the density that dormice need for nesting and foraging.

Connectivity

- 3.50 Connectivity within the site is poor, and the site is broadly open in the centre. The site is also an island of habitat in the centre of an otherwise highly developed area. There is no connectivity with the wider landscape.

Great crested newts

Evidence

- 3.51 No signs of great crested newts were recorded during the survey.

Breeding habitat

- 3.52 There is a single waterbody on site which scored 0.68 in a Habitat Suitability Index (HSI) assessment. This assessment determines whether newts are likely to utilise a waterbody. A score of 0.68 is marked as 'average' but is at the higher end (0.7 is 'good'). As such, newt presence is likely.
- 3.53 Furthermore, the waterbody on site had a healthy amount of frogspawn at the time of survey.
- 3.54 There are 16 waterbodies within 500m of the site boundary, 10 of which have no significant obstacles to connectivity. The other 6 are disconnected by the A267 Hailsham Road.

Terrestrial habitat

- 3.55 Terrestrial habitat on site is limited to the most densely vegetated habitats such as the edges of the grassland, scrub and woodland. The sward height of the grassland is taller than a typical lawn, but still relatively short such that newts would be vulnerable to predation, and as such newts would broadly be limited to the edges away from the cleared part of the site.

Hibernation habitat

- 3.56 There is some hibernation habitat on site in the nooks and crannies within tree and hedge roots, as well as in piles of rubble and debris scattered throughout the site.

Connectivity, wider landscape, and access

- 3.57 Access to the site for newts is good, as whilst the A267 to the easts presents a significant barrier in that direction, access is otherwise reasonably unimpeded from the other directions, although it is limited by the sparseness of adjacent habitats.

Hedgehog

Evidence

3.58 No signs of hedgehog were recorded during the survey.

Key features for survival

3.59 Some features that hedgehogs require for survival include:

- Areas of tall grass or vegetation, or leaf litter offering a supply of invertebrates such as slugs and snails
- Gaps in fences, walls or hedgerows that allow movement between areas of higher quality habitat.
- Suitable hibernation sites, such as log piles, unlit bonfires, compost heaps, or other natural debris accumulations
- Dense undergrowth and scrub providing cover from predators and shelter for nesting
- Freshwater sources such as ponds, ditches, or damp areas that support invertebrates and provide drinking water

3.60 The site does provide a relatively large area of grassland and other dense vegetation, including areas with leaf litter within the woodland and scrub habitats. There are some limited hibernation opportunities within debris piles, although these are of suboptimal quality. Areas of shelter are restricted to the perimeter of the site and the woodland section. The waterbody provides fresh drinking water.

Connectivity

3.61 Access is practically unlimited for hedgehogs due to a lack of maintained fences or walls.

3.62 Connectivity within the site is unrestricted, as the site is broadly open, however there are few sheltered corridors protecting hedgehog movement into the centre of the site.

Opportunities in the wider landscape

3.63 Habitats in the wider landscape are broadly urban and as such lack the dense and varied habitat that hedgehogs need to survive. However, there are some denser areas of woodland and scrub present that could provide fragmented habitat, as well as residential gardens.

3.64 Hedgerows within the wider landscape broadly comprise short sections and lack continuity with the wider landscape due to the presence of numerous highways and gaps with little significant canopy connectivity.

Reptiles

Evidence

3.65 No signs of reptiles were recorded during the survey

Basking, commuting and foraging habitat

3.66 The site offers basking, commuting and foraging opportunities for reptiles, however utilization of these opportunities is limited, similarly to great crested newts, by the varying sward heights and levels of vegetation coverage; reptiles are more flexible to these variations however, and as such the site is suitable.

3.67 Areas of short sward and cut scrub provide basking opportunities, with the grassland and areas of scrub and woodland providing opportunities to dash for cover to avoid predation. Foraging habitat is found throughout the site, but particularly around the perimeter where vegetation is at its densest and least disturbed.

Hibernation habitat

3.68 There is some hibernation habitat on site in the nooks and crannies within tree and hedge roots, as well as sub-optimal opportunities within piles of debris and rubble.

Connectivity, wider landscape, and access

3.69 Connectivity with areas of higher quality habitat in the immediate wider landscape is average with the site being an island of habitat within an otherwise urban area. Opportunities are found within 500m however.

Other species

3.70 There are no other species of note present on site.

4 EVALUATION

Habitats

- 4.1 The habitats present on site are of average ecological quality and comprise locally abundant species typical of the wider landscape.

Protected species legislation

- 4.2 Protected species legislation, its importance, and the penalties that would be incurred if an offence were committed are summarised in Appendix A of this report.

Species – Constraints vs. suitability

This section discusses two separate issues;

- **Habitat suitability** and **species constraints**
- **Future potential** to support protected species

Activities that present species-specific risks are outlined for each species in the tables below. The following risk assessment criteria are considered:

Likelihood of presence

Whether, given the site suitability, the species is likely to be present on site. This is decided by assessing the following elements:

- Direct evidence of that species, such as anecdotal or direct sightings
- Surrounding habitat – Where is the site positioned? Is it a suitable area such that a source population would utilise the site?
- Regardless of its suitability, can the species access the site, and if so, how easily?
- Does the site provide enough foraging opportunities to independently support the species, or would it only form part of a wider foraging territory?
- If on site, is the species likely to be predated upon, or is there significant cover?
- Are the right breeding or hibernation opportunities available on site or in the Zone of Influence (ZOI)?

The following categories are used:

- **High** – the species has a good local population, can access the site / feature, and would thrive on site. Potential direct evidence.
- **Moderate** – the species is present in the wider landscape and would utilise the site, possibly as a part of a wider territory. Access may be restricted, or habitats may be sub-optimal in some way. No direct evidence.

- **Low** – the species is unlikely to be on site due to a lack of suitable habitat, poor access, or likely absence from the wider landscape – either demonstrable, or likely absent due to surrounding habitat unsuitability. Incidental or ‘vagrant’ occurrence cannot be ruled out, however.
- **Discounted** – the species is known to be absent from the wider landscape, or access would be impossible due to multiple barriers such as inappropriate habitat. Incidental occurrence can be ruled out.

Future potential

Whether prudent habitat management can be targeted towards a species to improve the ability of that species to survive or encourage it into the site.

If a site fails enough of the suitability criteria, and this is unlikely to change - or is likely to get worse or be insurmountable (such as access) - then the site may not hold future potential to support that species.

Bats

- 4.3 All species of bat present in the UK receive full protection under The Conservation of Habitats and Species Regulations 2017, and the Wildlife and Countryside Act 1981 (as amended).

Suitability of habitats

Roosting

Buildings

- 4.4 There are no buildings on site. Bat roosting within older buildings in the wider landscape is highly likely, and these individuals may utilise the site for foraging (see below).

Trees

- 4.5 A survey of the trees on site revealed that none of them were over-mature or veteranized individuals with typically age-related features that provide roosting opportunities for bats.

Commuting and foraging

- 4.6 All of the habitats on site provide foraging opportunities for bats, with the site presenting unique and concentrated feeding opportunities when compared with the wider landscape. The waterbody will support insects which in turn support bats, and the grassland and hedgerows will provide further opportunities.

Likelihood of bat presence	Roosting	LOW
	Foraging / commuting	HIGH

Future potential and compensation

- 4.7 The site has potential to support bats in future, as compensation and enhancement features will increase the ability of local populations to survive. Section 6 provides further details on enhancements.

Breeding birds

- 4.8 Breeding birds are protected by the Wildlife and Countryside Act 1981 (as amended). Under this legislation it is an offence to intentionally kill, injure or take birds or their eggs, or to intentionally destroy or disturb a nest, when it is in use or being built.
- 4.9 Failure to observe mitigation measures leading to birds being disturbed whilst nesting would constitute a criminal offence.

Current usage

- 4.10 All of the habitats on site provide foraging and nesting opportunities for breeding birds, particularly within the woodland, scrub, and hedgerows but also in unmown areas of the grassland.

Likelihood of bird presence	Nesting	HIGH
	Foraging / commuting	HIGH

Future potential and compensation

- 4.11 The site has potential to support birds in future, as compensation and enhancement features will increase the ability of local populations to survive. Section 6 provides further details on enhancements.

Badgers

4.12 Badgers receive full protection under the Protection of Badgers Act 1992.

Current usage

4.13 No badger activity was recorded on site during the survey; badgers could utilise the site for foraging as a part of a larger existing territory, and there are sett building opportunities available such that badgers could take up residence should they encounter the site whilst commuting.

Connectivity, foraging and sett building

4.14 Connectivity with areas of higher quality habitat is good for badgers as the site is set within a rural landscape, however the level of disturbance is such that badger activity would be confined to nighttime.

Likelihood of badger presence	Sett building	LOW
	Foraging / commuting	MODERATE

Future potential and compensation

4.15 The site has limited potential to support badgers in future, as whilst compensation and enhancement features will increase the ability of local populations to survive, the small size of the site is such that it is not able to support a population of badgers on its own. Section 6 provides further details on enhancements.

Dormice

4.16 Hazel dormice are protected by the Wildlife and Countryside Act 1981 (as amended). Under this legislation it is a criminal offence to intentionally or accidentally harm, capture, or destroy dormice, or to disturb a breeding area.

Current usage

4.17 No signs of dormice were recorded during the survey.

Foraging, connectivity and hibernation

4.18 Dormice generally require large areas of connected ancient woodland with healthy, stratified vegetative layers providing a heterogeneous habitat (Bright et al., 2006). They also utilise hedgerows to a lesser extent, particularly for foraging and commuting and less so for nesting. This heterogeneous habitat is not provided by the site.

4.19 There are hedgerows on site, however they are all defunct having been left unmanaged for a number of years. Their form is such that fruit production is limited, and they do not provide a reliable nesting or commuting resource.

4.20 The majority of the site is unsuitable for dormice on account of it comprising short sward grassland and low-density scrub. As such, the only habitats with even a remote chance of supporting dormice are the woodland and denser scrub in the west of the site, of which there are comparatively small areas.

4.21 Given the lack of high-quality habitat within the site area, dormouse presence within the site can be effectively ruled out.

4.22 Dormouse presence in the wider landscape is considered to be possible in the areas of ancient woodland present.

Likelihood of dormouse presence	DISCOUNTED
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Future potential and compensation

4.23 The site has no potential to support dormice in future, and as such no specific enhancements are recommended. This is on account of the lack of suitable habitat within and connectivity with the wider landscape.

Great crested newts

4.24 Great crested newts are protected by the Wildlife and Countryside Act 1981 (as amended). Under this legislation it is a criminal offence to intentionally or accidentally harm, injure or destroy great crested newts or their eggs.

Current usage

4.25 No signs of great crested newts were recorded during the survey.

4.26 The likelihood of a meta-population being present within the wider landscape is considered to be high as there are 16 waterbodies within 500m of the site boundary.

4.27 Frogspawn was noted within the waterbody during the survey, and as such it is clearly suitable to support amphibians.

Foraging, connectivity, breeding and hibernation

4.28 Foraging habitat is limited to the taller sward sections of grassland on site. Unlike reptiles, amphibians are more vulnerable to predation in areas of high exposure such as the majority of the grassland, as they cannot flee as easily. This limits them to short ventures into short sward, crossing shorter gaps, or remaining within taller sward vegetation. As such, newts would terrestrially be limited to the scrub, woodland, and grassland at the edges of the site where protection would be provided by hedgerows.

4.29 Newts could commute around the perimeter of the site via hedgerows and lines of trees, and there is some hibernation habitat found in the roots of trees and hedgerows, although these are suboptimal in the context of an easily accessible wider landscape with better opportunities.

4.30 Breeding is possible on site as the waterbody scored a high 'average' score of 0.68.

Likelihood of great crested newt presence	MODERATE
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Future potential and compensation

4.31 The site has potential to support amphibians in future, as compensation and enhancement features will increase the ability of local populations to survive. Section 6 provides further details on enhancements.

Hedgehogs

4.32 Hedgehogs are a species of principal importance under the NERC Act 2006.

4.33 Hedgehogs are also protected from capture or killing by certain methods by the Wildlife and Countryside Act 1981 (as amended).

Current usage

4.34 No signs of Hedgehogs were recorded during the survey.

Foraging, connectivity and hibernation

4.35 Hedgehogs generally require a mosaic of interconnected habitats, including woodland edges, hedgerows, grasslands, and gardens, which provide shelter, foraging opportunities, and nesting sites (Morris, 2006). They rely on dense undergrowth, leaf litter, and log piles for nesting and hibernation, as well as varied vegetation supporting a rich supply of invertebrates. While hedgerows can serve as important corridors for movement and foraging, they are less commonly used for nesting.

4.36 This diverse habitat structure is currently provided by the site but is of sub-optimal quality due to the clearance that has occurred. Being a nocturnal species however, the site could be of use to hedgehogs although they would be vulnerable to predation in daylight.

4.37 There are hibernation opportunities within the piles of brash, logs and leaf litter on site.

4.38 Hedgehog presence in the wider landscape is considered to be possible due to the areas of woodland present.

Likelihood of hedgehog presence	MODERATE
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Future potential and compensation

4.39 The site has potential to support hedgehogs in future, as compensation and enhancement features will increase the ability of local populations to survive. Section 6 provides further details on enhancements.

Reptiles

4.40 All species of reptile are protected by the Wildlife and Countryside Act 1981 (as amended). Under this legislation it is a criminal offence to intentionally or accidentally harm, injure or destroy reptile species or their eggs.

Current usage

4.41 No signs of reptiles were recorded during the survey.

Foraging, connectivity, basking and hibernation

4.42 The habitats on site are complex, providing a variety of sward heights supporting reptiles in their variety of daily activities. Whilst large swathes of the grassland are too short a sward to protect reptiles from protection, there are many areas of taller sward scrub, grassland and woodland that could provide shelter.

4.43 Hibernation habitat is limited to the roots of trees and hedgerows, with suboptimal opportunities provided by piles of rubble and spoil dotted throughout the boundary.

4.44 Connectivity with areas of higher quality reptile habitat is good, and it is likely that reptile presence in the wider landscape is relatively widespread. Reptile presence is therefore highly likely.

Likelihood of reptile presence	HIGH
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Future potential and compensation

4.45 The site has potential to support reptiles in future, as compensation and enhancement features will increase the ability of local populations to survive. Section 6 provides further details on enhancements.

Other Items

- 4.46 The invasive non-native species cherry laurel was recorded throughout the site. It should be removed and eradicated. It is located adjacent to the waterbody and as such chemical treatment should be avoided wherever possible.

5 CONCLUSION

Site summary

- 5.1 The site is currently considered to have high ecological value within a local context as it comprises habitats that are locally common within the context of the Low Weald but are immediately scarce. These habitats are likely to support locally abundant but scarce species typical of the wider landscape.
- 5.2 The biodiversity value of the total site area is largely attributed to the following factors:
- The historic clearance of the site in 2024 reducing structural diversity.
 - The average diversity of species and sward heights when compared with similar areas in the rural landscape.
 - The value of the site as an 'island' of habitat within an otherwise developed landscape; and,
 - The ease with which biodiversity enhancement measures can be implemented within the overall site boundary without compromising amenity value.

Site proposals

- 5.3 The client, Horam Parish Council wishes to maintain the site on agreement with the landowner as a greenspace for the benefit of both local people and biodiversity.
- 5.4 Horam has been identified as being in deficit of natural and semi-natural green space by around 40,000m², and in deficit of public amenity space by around 11,900m². The site in question represents an opportunity to provide around 8% of this deficit in public green space whilst also delivering a significant biodiversity uplift both in terms of BNG units and direct on-the-ground species enhancements.
- 5.5 The author believes that the site presents an excellent opportunity for biodiversity enhancement despite its small size, on account of:
- The variety of habitats on site.
 - Their existing suboptimal condition and potential for their enhancement; and,
 - The diversity of flora and fauna on site, the latter of which are utilising the site as an island of habitat within an otherwise developed and less desirable landscape.

6 RECOMMENDATIONS

- 6.1 In terms of proposed site usage, the proposed scheme must achieve a balance between biodiversity enhancement and community green space usage. The latter will present challenges regarding enhancements such as:
- Resilience of measures due to climate change
 - Proposed management regime and contracting
 - Potential for theft, damage, arson, or compaction
- 6.2 As such biodiversity enhancements must be designed for minimal maintenance and maximum longevity whilst providing as much uplift as possible.
- 6.3 Measures will therefore focus on the following:
- Planting of nectar and fruit bearing trees in public facing areas
 - Enhancement of existing retained habitats as per the condition assessment matrix
 - Protection of retained sensitive features including the woodland and waterbody from pollution, trampling and damage
 - Securing the site for the purposes of safety for both people and wildlife

General recommendations

- 6.4 It is recommended that a full Biodiversity Metric Assessment (BMA) calculation is completed pursuant to the production of a Landscape Ecological Enhancement Plan (LEEP). The LEEP will comprise:
- A landscape plan map showing proposed enhancement measures
 - An accompanying document outlining enhancements, including:
 - Specifications for species of local provenance,
 - recommended suppliers,
 - methods for enhancement,
 - contingencies, and
 - goals, as well as a metric for measuring success

Target species

- 6.5 It is recommended that as the site is limited in its size and connectivity, the proposed enhancements take the 'path of least resistance' and focus on species for which the site is already highly suitable, namely bats, birds, amphibians and reptiles.

Biodiversity enhancement

Hedgehog highways should be a part of the works, with any and all new fencing and walls having a minimum 13cm x 13cm hole integrated into their design to allow access and egress from the site. Hedgehogs are a species of principal importance under Section 41 of the NERC Act 2006, and their conservation is of paramount importance due to severe declines in their populations and range.

Bird and bat boxes

Bird boxes

Bird boxes should be hung on the eastern aspects of trees at a height of 4.5m to reduce the risk of predation, theft and damage.

It is recommended that bird boxes are constructed of woodcrete / woodstone similar to such boxes as the Schwegler 1SP nest box, which is suitable for hung installations.

Bat boxes

As bats prefer more sheltered and less disturbed areas to roost, it is recommended that bat boxes are placed at a height of 4 metres on the southern side mature retained trees. This will ensure that bats remain undisturbed by usage of the site.

It is recommended that hanging boxes are utilised such as the Schwegler 1FF or 2F flat hanging box on mature retained trees.

Care should be taken when erecting bat boxes to ensure they remain sheltered, but accessible with clear flight paths and without damaging surrounding trees during erection. Tertiary branches that block the flight path to the box should be trimmed, with the whole area remaining unlit.

Arborweald receive no commission for recommendation of brands of wildlife boxes, and other brands are available.

New trees; the scheme should include new trees to ensure an appropriate level of cover for bats and to provide a micro-climate between trees to support insect species. Fruit trees also work well within linear boundaries such as hedgerows.

These should be scattered throughout the site boundary, and comprise robust native woody species such as hornbeam, field maple, or lime *Tilia cordata*, or fruiting species such as pear *Pyrus spp.*, apple *Malus spp.*, or mountain ash *Sorbus aucuparia*. These could include historically important varieties rare in the county. These species provide foraging opportunities for badgers, birds and small mammals.

Sward management around planted trees should be careful to avoid damage to trees and should be as varied as the rest of the amenity grassland within the wider site boundary.

Hedge planting: the scheme should include new hedge planting along linear boundaries using a native species-rich hedgerow mix to include a minimum of 7 species from the following list: hazel, hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, spindle *Euonymus europaea*, wayfaring tree *Viburnum lantana*, crab apple *Malus sylvestris*, hornbeam *Carpinus betulus*, dog rose, field maple *Acer campestre* and wych elm *Ulmus glabra*. Furthermore, any existing hedgerows in the wider site boundary should be gap planted and bolstered with species from the list above.

Scattered mature standards comprising hornbeam *Carpinus betulus*, field maple, or lime *Tilia cordata* var. 'Green Spire' should be planted across the site to increase woody coverage and connectivity. These species are hardy, low maintenance and also do not risk dominating the landscape in later life as they can be coppiced or pollarded effectively.

Additionally, honeysuckle *Lonicera periclymenum* should be included in hedgerow mixes.

Areas of hedgerow with non-native and / or invasive species should have these species removed and replaced with native species.

New hedgerows should be planted at a density of 10 plants per metre in two rows of 5 plants each, with rows 30cm apart and plants 20cm apart. Bolster planting should be undertaken at the same density taking into account existing mature individuals as contributing to this density; *e.g. existing hedgerow has density of 3 plants per metre, bolster planting would comprise 7 additional plants.*

Hedge cutting; Existing and new hedgerows on site should be cut biannually (every 2 years) except around gateways (annually). Hedgerows gradually lose their shape and density at the cost of amenity and functionality as they mature; therefore, hedge laying in the traditional Kent or Sussex style should occur every 10 years on rotation to maintain hedge structure.

Mowing regime; areas of grassland on site should be mown on a scheme that benefits both biodiversity and the usage of the site. Areas away from roadways should be left long and cut once in October to allow the soil nutrients to be removed. These measures can also be supplemented for 'planting of a wildflower meadow' below.

Planting of a wildflower meadow; an increase in invertebrate habitat should be a key part of the plan, to include wildflower planting for bees and other pollinators within the site boundary to the east and south of the site to help increase the number of foraging opportunities available for bats.

Wildflower meadow mixes are available online, and should preferably focus on native bee-friendly mixtures to include the following species:

Common agrimony	Cornflower	Wild marjoram
Borage	Ox-eye daisy	Meadow cranesbill
Wild clary	Wild foxglove	Musk mallow
Red clover	Common knapweed	Common poppy
White clover	Greater knapweed	Ragged robin
Corn cockle	Purple loosestrife	Sainfoin
Field scabious	Bird's-foot trefoil	Yarrow

Wildflower mixes should focus on supporting invertebrates (such as bees, ants, wasps, butterflies and flies) and birds, and should ideally not contain non-native species as these can out-compete native plants for pollination.

Butterfly planting should focus on species rare in Sussex and Kent such as the silver-spotted skipper *Hesperia comma*, dingy skipper *Erynnis tages*, grizzled skipper *Pyrgus malvae*, Adonis blue *Polyommatus bellargus*, chalk hill blue *Polyommatus corridon*, small heath *Coenonympha pamphilus*, and fiery clear wing *Pyropteron chrysidiformus*. Plant species to encourage these butterflies should include the following in a large planter or area of ornamental planting (species that support more than one of these butterfly species are in bold):

Common sorrel	Tormentil	Birds foot trefoil
Curled dock	Salad burnet	Horseshoe vetch
Sheep's fescue	Agrimony	Wild strawberry

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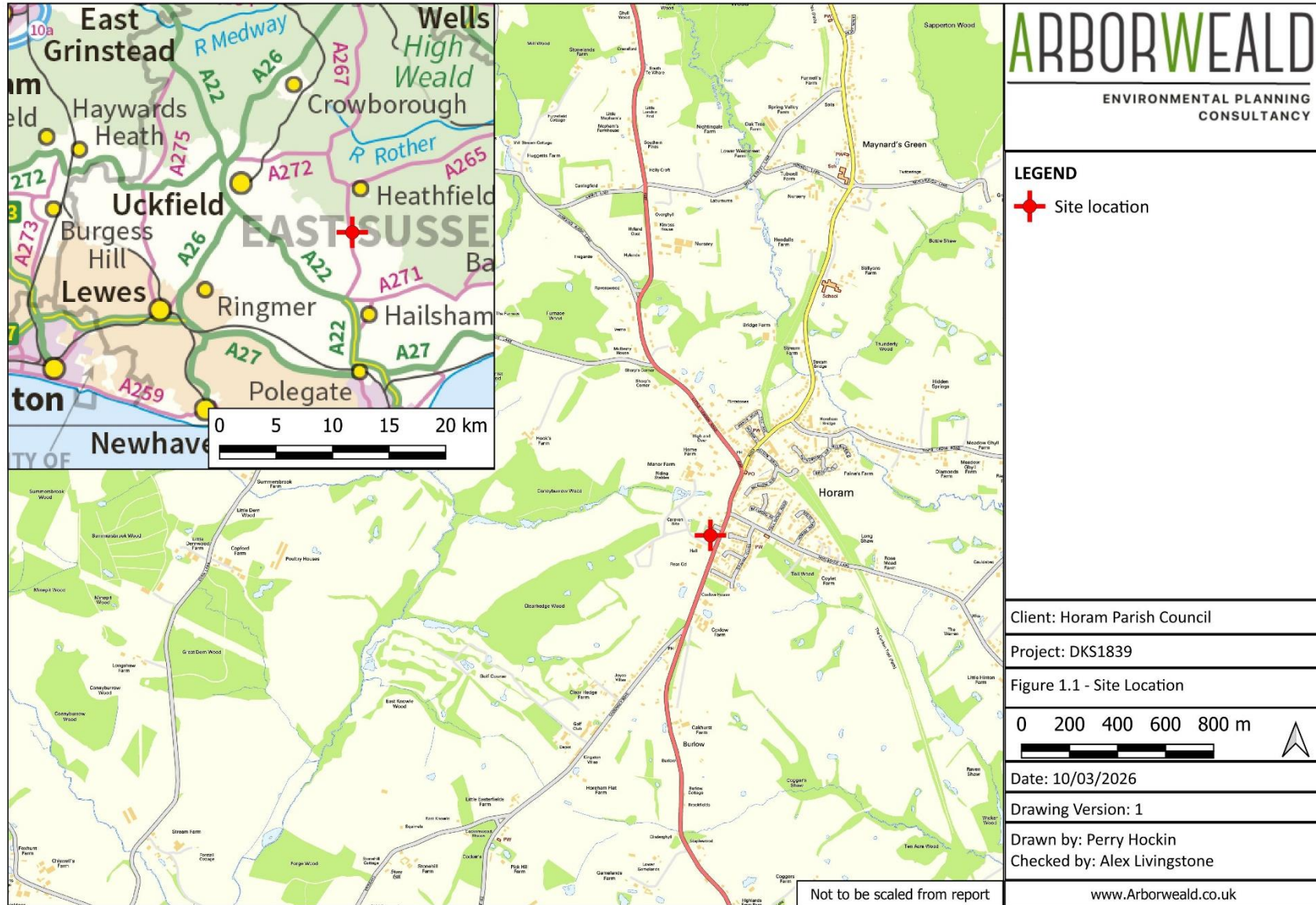
FIGURES

Figure 1.1 Location of site

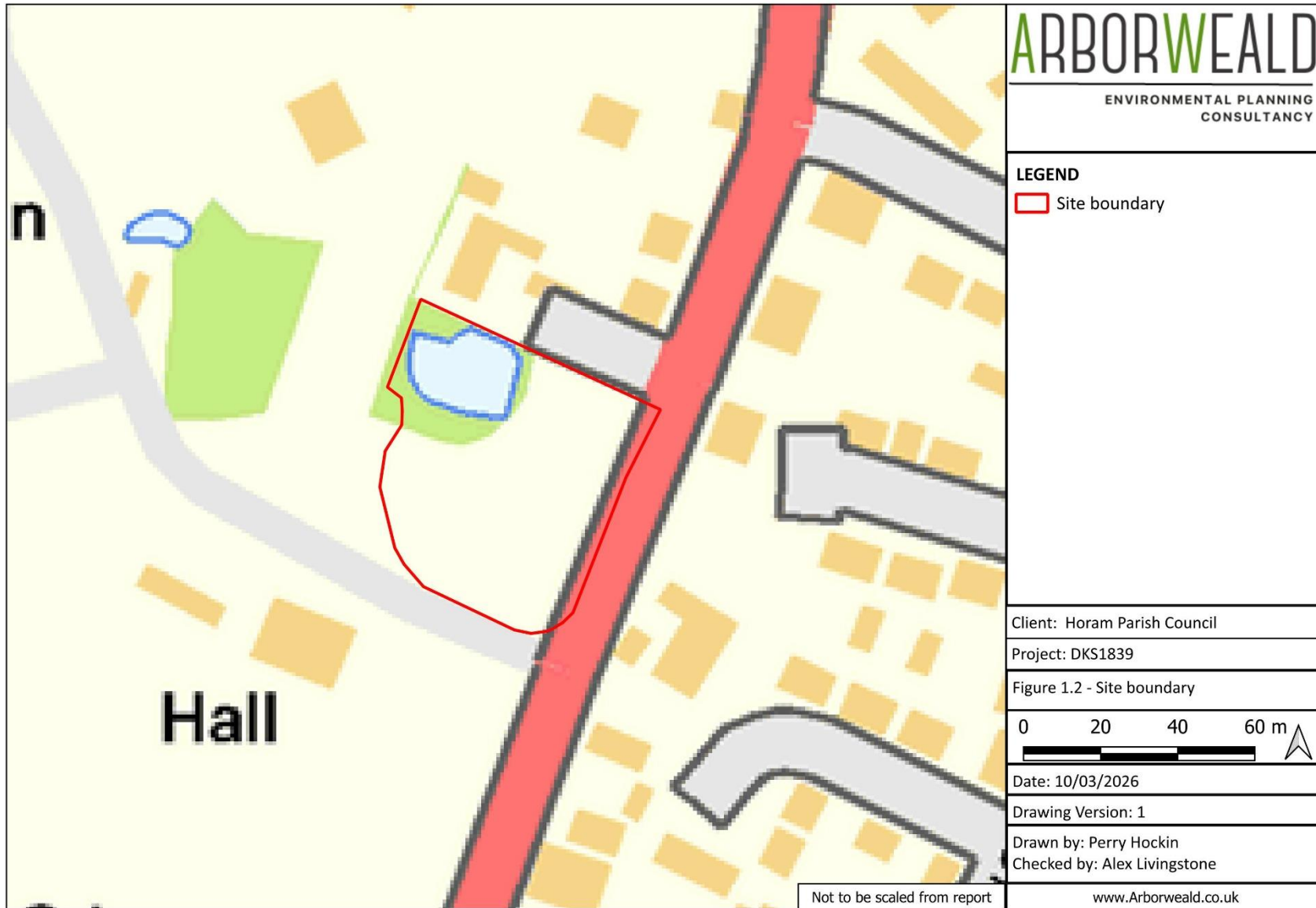
Figure 1.2 Extent of site boundary

Figure 3.1 Waterbodies within 500 m of site boundary

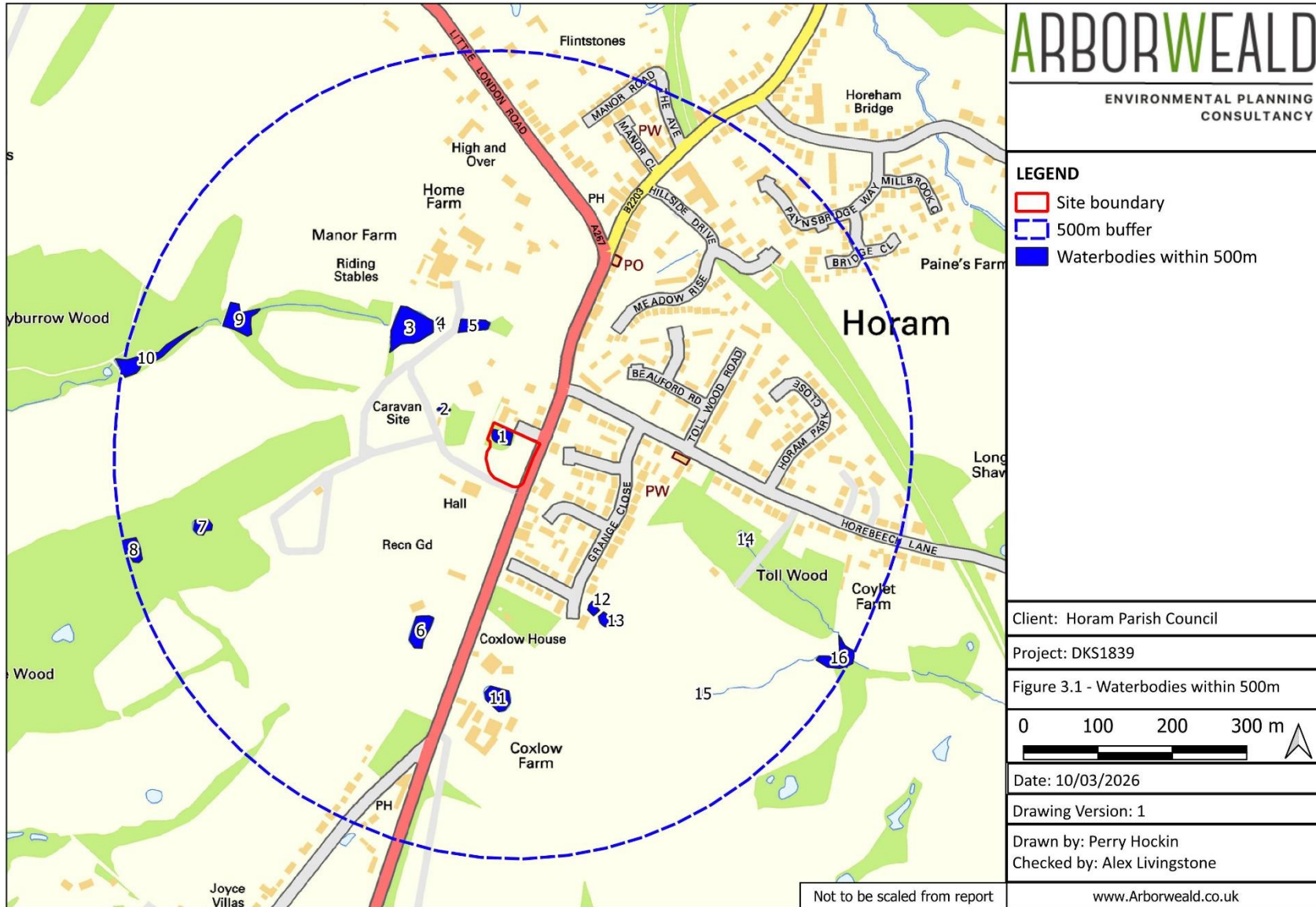
Figure 3.2 Phase 1 habitat survey



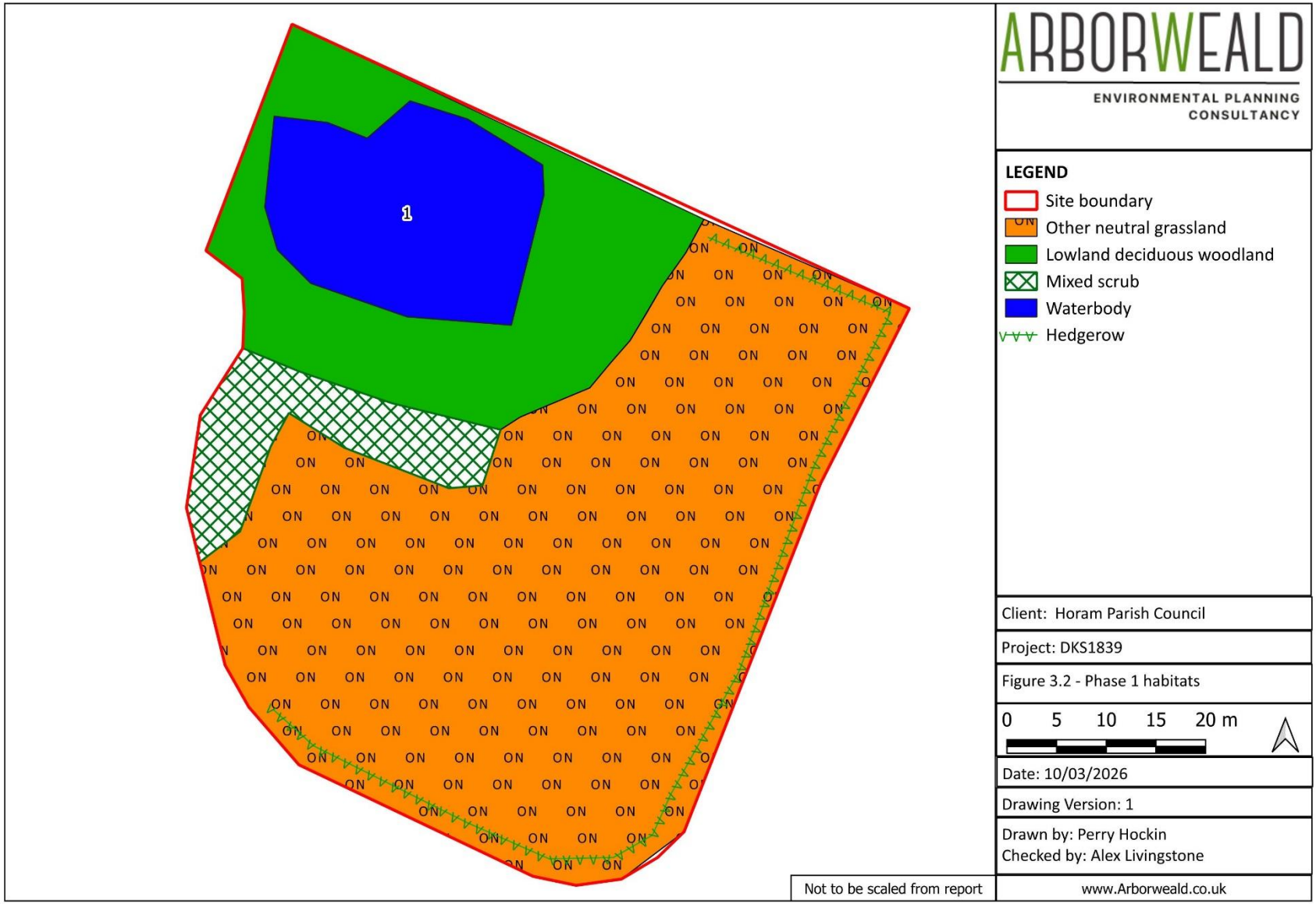
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APPENDIX A Legislation

Natural Environment and Rural Communities Act

Section 41 of the Natural Environment and Rural Communities Act (2006) lists the species and habitats of principal importance for the conservation of biodiversity in England and acts as a guide to local authorities in implementing their duties under Section 40, to have regard to the conservation of biodiversity in England.

Protection of Badgers Act

The Protection of Badgers Act (1992) prohibits reckless and/or intentional cruelty, injury or killing of badgers and the interference with badger setts.

National Planning Policy Framework

Under The National Planning Policy Framework (NPPF, 2024) protected sites and species are a material consideration in determining planning applications in terms of minimising impacts on biodiversity.

National Planning Policy guidance uses a mitigation hierarchy, whereby:

- Potential impacts are first avoided through changes to design plans
- Unavoidable impacts are mitigated against to reduce the negative effect of the impact;
- Finally, residual impacts that remain after avoidance and mitigation measures are applied are compensated for (BS 42020, 2013, Section 5.2).

Further to this, it is a requirement under National Planning Policy for developers to actively enhance the biodiversity value of development projects.

The Environment Act 2021

In England, biodiversity net gain is now required under statutory frameworks introduced by Schedule 7A of the Town and Country Planning Act 1990 (inserted by the Environment Act 2021). Under this framework, every grant of planning permission will be deemed to have been granted subject to a general biodiversity gain condition. This requires developments to deliver at least a 10% increase in biodiversity value relative to the pre-development biodiversity value of all onsite habitats.

This is a pre-commencement condition requiring the provision of a Biodiversity Gain Plan to be submitted and approved before works can be commenced, but after planning permission has been granted

In principle, the grant of planning permission is not within the scope of BNG, however it is important to consider as part of the consenting body's decision-making process how a scheme will be able to demonstrate BNG after permission is granted.

Biodiversity Net Gain Hierarchy

The statutory framework allows for the 10% biodiversity gain to be delivered through onsite biodiversity gains, registered offsite biodiversity gains or statutory biodiversity credits. However, as set out in Articles 37A and 37D of the Town and Country Planning (Development Management Procedure) (England) Order 2015, development must consider the biodiversity net gain hierarchy when designing scheme proposals. This sets out hierarchy of actions as follows:

- First, for all medium, high and very high distinctiveness habitats, the avoidance of any adverse effects.
- Where these can't be avoided, mitigating any adverse effects on medium, high and very high distinctiveness habitats.
- Then, for all onsite habitats (including low distinctiveness), adverse effects should be compensated by in accordance with the following hierarchy:
 1. Prioritising the enhancement of existing habitats; then
 2. Creation of onsite habitats;
 3. Allocation of registered offsite unit gains; then
 4. Purchase of biodiversity credits

Proposals must demonstrate how the biodiversity hierarchy has been applied to or provide the reasons for any deviation. This biodiversity net gain hierarchy is distinct from the mitigation hierarchy set out in paragraph 186(a) of the National Planning Policy Framework.

Protected species

Certain habitats and species including nesting birds, bats, dormice, and great crested newts, are afforded protection under the Conservation of Habitats and Species Regulations 2017 and the Wildlife & Countryside Act 1981 (as amended). Further information on the legislation is included in Appendix A.

In general, the above legislation makes it an offence to:

- Deliberately/intentionally or recklessly kill, injure, or take a protected species;
- Intentionally or recklessly damage, destroy or obstruct access to any place that a protected species uses for shelter or protection whether the species is present or not;
- Intentionally or recklessly disturb a protected species while it is occupying a structure or place that it uses for shelter or protection;
- Deliberately take or destroy the eggs of species protected by this legislation (such as nesting birds).

Strict Liability vs Mens Rea

Wildlife offences are classified in one of two ways;

Some are *strict liability*, meaning that a person can be found guilty regardless of intent or knowledge. In strict liability cases, the defendant cannot argue lack of knowledge as a defence (e.g., not knowing a bird was protected). However, statutory defences may apply (e.g., under Section 4 for acts done for humane reasons).

Other offences require intention, recklessness, or knowledge, and are governed under *Mens-rea* law whereby the offence must be proven to have been committed intentionally, through recklessness (such as not seeking prior knowledge), or when already in possession of that knowledge e.g. *having had a toolbox talk prior to undertaking works*.

The following table outlines which wildlife offences are Strict Liability, and which are Mens-rea.

Species	Primary protection legislation	Liability
Bats	Wildlife and Countryside Act 1981 (WCA 1981) – Schedule 5 Conservation of Habitats and Species Regulations 2017 (Habitats Regulations)	<p style="text-align: center;">Strict liability</p> <ul style="list-style-type: none"> • WCA 1981 – Section 9(1): Prohibits killing, injuring, or taking bats. • Habitats Regulations – Regulation 43(1): Prohibits deliberate capture, killing, or disturbance of bats.
		<p style="text-align: center;">Mens-rea</p> <ul style="list-style-type: none"> • WCA 1981 – Section 9(4): Prohibits damage to or destruction of a bat’s place of shelter but requires intent or recklessness. • Habitats Regulations – Regulation 43(2): Prohibits damage to or destruction of breeding sites or resting places, requiring intent or recklessness.
Birds	Wildlife and Countryside Act 1981 – Section 1	<p style="text-align: center;">Strict liability</p> <ul style="list-style-type: none"> • Section 1(1): Prohibits killing, injuring, or taking any wild bird. • Section 1(2): Prohibits taking, damaging, or destroying an active nest. • Section 1(3): Prohibits taking or destroying eggs.
		<p style="text-align: center;">Mens-rea</p> <ul style="list-style-type: none"> • Section 1(5): Prohibits disturbing birds at nest sites (for Schedule 1 birds), requiring intent or recklessness.
Badgers	Protection of Badgers Act 1992	<p style="text-align: center;">Mens-rea</p> <ul style="list-style-type: none"> • Section 1: Prohibits wilfully killing, injuring, or taking a badger (requires intent). • Section 3: Prohibits interfering with a badger sett (requires intent or recklessness).
Dormice	Wildlife and Countryside Act 1981 (WCA 1981) – Schedule 5 Conservation of Habitats and Species Regulations 2017 (Habitats Regulations)	<p style="text-align: center;">Strict liability</p> <ul style="list-style-type: none"> • WCA 1981 – Section 9(1): Prohibits killing, injuring, or taking a dormouse. • Habitats Regulations – Regulation 43(1): Prohibits deliberate capture, killing, or disturbance.
		<p style="text-align: center;">Mens-rea</p> <ul style="list-style-type: none"> • WCA 1981 – Section 9(4): Prohibits damaging or destroying a place of shelter (intent or recklessness required). • Habitats Regulations – Regulation 43(2): Prohibits destruction of breeding/resting sites (intent or recklessness required).
Great-crested newts	Wildlife and Countryside Act 1981 (WCA 1981) – Schedule 5 Conservation of Habitats and Species Regulations 2017 (Habitats Regulations)	<p style="text-align: center;">Strict liability</p> <ul style="list-style-type: none"> • WCA 1981 – Section 9(1): Prohibits killing, injuring, or taking a dormouse. • Habitats Regulations – Regulation 43(1): Prohibits deliberate capture, killing, or disturbance.
		<p style="text-align: center;">Mens-rea</p> <ul style="list-style-type: none"> • WCA 1981 – Section 9(4): Prohibits damaging or destroying a place of shelter (intent or recklessness required). • Habitats Regulations – Regulation 43(2): Prohibits destruction of breeding/resting sites (intent or recklessness required).
Reptiles	Wildlife and Countryside Act 1981 – Schedule 5	<p style="text-align: center;">Strict liability</p> <ul style="list-style-type: none"> • WCA 1981 – Section 9(1): Prohibits killing, injuring, or taking a protected reptile (e.g., sand lizard, smooth snake).
		<p style="text-align: center;">Mens-rea</p> <ul style="list-style-type: none"> • WCA 1981 – Section 9(4): Prohibits damaging or destroying a place of shelter (intent or recklessness required).
Invasive species	Wildlife and Countryside Act 1981 (WCA 1981) – Section 14, Schedule 9	<p style="text-align: center;">Strict liability</p> <ul style="list-style-type: none"> • WCA 1981 – Section 14: Prohibits the release or escape of invasive non-native species (e.g., Japanese knotweed, grey squirrel)
		<p style="text-align: center;">Mens-rea</p> <ul style="list-style-type: none"> • WCA 1981 – Section 14: Prohibits causing the spread of invasive non-native species (e.g., Japanese knotweed, grey squirrel)
Other species	Wildlife and Countryside Act 1981 (WCA 1981) – Schedule 5 Conservation of Habitats and Species Regulations 2017 (Habitats Regulations)	<p>Also covered under Section 9 of the WCA 1981 are otter, water vole, red squirrel, pine marten, sturgeon, lamprey, and certain invertebrates. For all these species, they are protected as follows:</p> <p style="text-align: center;">Strict liability</p> <ul style="list-style-type: none"> • WCA 1981 – Section 9(1): Prohibits killing, injuring, or taking a protected reptile (e.g., sand lizard, smooth snake). <p style="text-align: center;">Mens-rea</p> <ul style="list-style-type: none"> • WCA 1981 – Section 9(4): Prohibits damaging or destroying a place of shelter (intent or recklessness required).

Schedule 8

Specific species of plants listed in Schedule 8 are protected. It is an offence: to intentionally pick, uproot or destroy a wild plant listed in Schedule 8.

Schedule 9

Invasive non-native species are listed under Schedule 9. It is an offence:

- to plant or otherwise cause to grow in the wild.
- If soils are contaminated by invasive non-native plant species it becomes classified as '*controlled waste*' under the Environmental Protection Act 1990 (England, Wales & Scotland), and must be disposed of accordingly.

APPENDIX B Site photographs

	
<p>Figure B1 Woodland pond seen facing east.</p>	<p>Figure B2 Frogspawn within woodland pond (foreground of B1).</p>
	
<p>Figure B3 Woodland and scrub viewed from centre of site showing shorter grassland in foreground with taller scrub behind.</p>	<p>Figure B4 Leyland cypress hedgerow with A267 in background looking north-east showing variable habitat conditions either side of the informal footpath.</p>
	
<p>Figure B5 Southern boundary hedgerow.</p>	<p>Figure B6 South-western curved boundary.</p>

APPENDIX C Species habitat suitability criteria

For the purposes of this report, Arborweald have developed habitat suitability criteria for protected species where specific categorisation methodology is not provided by the generally accepted literature (such as for bats or great crested newts).

Reptiles

Suitable reptile habitats include the following habitat types:

Heathland;	Sand dune;
Moorland;	Hard and soft cliffs;
Grasslands;	Vegetated shingle;
Scrub;	Open mosaic habitats; and
Woodland;	Coastal lagoon.
Wetlands;	

These habitats can be found within a broad range of land use types, including:

Farmland;	Churchyards;
Brownfield sites;	Mineral sites;
Gardens and allotments;	Road and rail embankments; and
Parks and grounds;	River and sea walls.

Other habitat and land use types may be utilised by reptiles, if their basic ecological requirements (foraging, shelter, protection, basking, breeding and/or hibernation) are met by the habitat. It is therefore imperative that all sites / habitats are assessed based on their ecological functionality for reptiles, rather than making hard and fast judgements based on broad habitat and/or land use type.

The below suitability criteria have been devised to provide a structured way of assessing ecological functionality for reptiles, which can be applied by suitably experienced ecologists.

Reptiles require large areas, or closely spaced patches, of suitable habitat to support viable population in the long term. Therefore, habitat connectivity is important on a landscape level but also within a site.

The below has been adapted from the *Reptile Habitat Management Handbook* and details the habitat requirements of reptiles (Edgar, Foster and Baker, 2010).

The factors cited in the first table (C1.1) have been used to develop the suitability criteria that are set out in the second table (C1.2).

Requirement	Description
Insolation (exposure to sun)	<p>Reptiles bask openly in direct sunlight or seek warm sites under cover (in vegetation or under object) or partially exposed amidst dense vegetation (mosaic basking).</p> <p>Varied topography (south-facing slopes are particularly favoured by reptiles) and a mosaic of open, sunny areas and dense cover provide the best range of basking opportunities.</p>
Shelter from the elements (heat, dry weather and wind), predators	<p>Reptiles need vegetation cover and open areas in close proximity to each other.</p> <p>The best habitats are structurally diverse habitats, or mosaics of vegetation of differing heights, ages or types. Thorny or prickly plants such as gorse and bramble can provide particularly good refuge from predators and may be used as sheltered basking sites.</p>
Hibernation opportunities (shelter during the winter)	<p>Hibernation sites must be climatically stable, frost-free, humid (but not wet) and safe from flooding and predators. Typical hibernation sites include mammal burrows, rotted tree stumps and root holes, fissures in soil / substrate, large grass tussocks, anthills, old walls and building foundations, piles of rubble and other debris and under large logs and fallen trees.</p> <p>Sand lizard, grass snake, smooth snake and adder usually make seasonal movements to hibernation sites.</p> <p>Slow worm and common lizard may also make shorter distance migrations to hibernation features, but the location of hibernation features normally corresponds with the areas used during the active season.</p>
Food	<p>Legged lizard (common lizard and sand lizard): Main prey items are insects and other invertebrates such as spiders.</p> <p>Legless lizard (slow worm): Main prey items are soft-bodied invertebrates such as slugs and worms.</p> <p>Smooth snake: Main prey items are reptiles and small mammals.</p> <p>Grass snake: Main prey items are amphibians and fish.</p> <p>Adder: Main prey items are small mammals and occasionally lizards.</p>
Breeding habitat	<p>Breeding sites are more likely to be found where structurally diverse habitats encourage high population densities.</p> <p>Reptiles require secluded areas close to, or under, secure cover for courting and mating. Grass snakes need access to decomposing material to lay their eggs. Typical egg-laying sites include manure heaps, compost heaps, piles of grass clippings, sawdust, cut reed and, in coastal areas, seaweed heaps. Sand lizards require areas of exposed sand (or similar loose substrate) with good sun exposure in which to lay their eggs.</p>

The below habitat suitability criteria have been adapted based on the ecology and specific ecological requirements of reptiles (as described in C1).

Habitat suitability category	Ecological Functionality for Reptiles (one or more species)	Typical Characteristics of habitats within this Category*
High	Provides significant opportunities for foraging; shelter / protection; basking; breeding; and hibernation.	Heterogenous habitat (e.g. grassland, scrub, woodland edges). Structurally diverse habitats, mosaics of vegetation of differing heights, ages or types (e.g. tussocky grassland, dense scrub/islands). Extensive landscape connectivity to suitable off-site reptile habitat.
Moderate	Provides significant opportunities for two or three of the above key ecological functions.	Homogenous / slightly heterogenous habitat (one to two dominant habitats e.g. grassland and scrub). Habitat structure is diverse, but habitat type is uniform (e.g. tussocky grassland only). Sub-optimal landscape connectivity to suitable off-site reptile habitat.
Low	Provides significant opportunities for one of the above key ecological functions or some limited (minimal) opportunities for two or more of these functions.	Uniform habitat composition (e.g. grassland). Limited vegetative structure (e.g. closely mown or grazed grassland). Possess limited landscape connectivity to suitable offsite habitat.
Negligible	Negligible Does not provide any opportunities for reptiles.	Unvegetated areas, such as bare ground and buildings.
*Note that the characteristics given in Column 3 of this Table are typical characteristics of high, medium, low and negligible suitability habitats, and are provided for illustrative purposes to aid the assignment of a habitat suitability category. They are not absolute criteria or universal rules that will always dictate the suitability category that the habitat within a given survey site must fall within.		

Hazel dormouse

The content of the below Table has been taken from the Hazel Dormouse Conservation Handbook and details trees and shrubs of value to dormice (Bright et al., 2006). The presence and percentage cover of tree and shrub species listed in this Table informs the suitability criteria that are set out within the following 'Hazel Dormouse Habitat Suitability Criteria' Table.

Species	Description
Hazel	Where present, this is the principal source of food (nuts) for fattening up prior to hibernation. Hazel also supports many insects, including caterpillars, which are potential dormouse food. Hazel forms a continuous understorey of sprawling poles, easy for arboreal activity and is a very valuable (but not essential) species for the dormouse.
Oak	An important source of insect food (including caterpillars). Dormice also eat oak flowers, but acorns are of little value
Honeysuckle	The plant's finely shredded bark is the preferred nesting material used by dormice. Honeysuckle flowers also provide food at a time when few other things are available, with berries later. The climbing strands also offer convenient routes into the trees and provide dense shelter in which to nest.
Bramble	Its flowers and fruits are very important dormouse foods and tend to be available for a long period (especially where the site has slopes which vary the amounts of sunlight on the shrubs) and the thorns provide good protection for nests. Bramble often flowers late, when many other species are over, and dormice also eat the berries and seeds in autumn. Dormice seem to thrive where blackberries are abundant, even in the absence of hazel. Bramble is best if scattered among hazels and trees.
Sycamore	A valuable source of insect food and pollen. A useful tree: dormice can survive in habitats with many sycamores. However, sycamores cast a dense shade which reduces the understorey. Thus sycamores should be kept few and scattered, perhaps coppiced to prevent seeding and to reduce the extent of shading.
Ash	Ripening seeds ('keys') are eaten whilst they are still on the tree, but ash supports few food insects. The canopy does not cast a dense shade, but generally ash woodlands are not good habitat.
Wayfaring tree	Fruits in late summer when little else may be available. Dormice eat the seeds and probably also the flowers. Yew The fruits are a favoured food and dormice will make special excursions to reach them, but the seeds are not eaten.
Hornbeam	Seeds are small and hard, but dormice eat them. The advantage is that they are too small to be attractive to squirrels, so they may form an alternative food where squirrels have taken most of the hazel nuts. Fruiting is erratic.
Broom	Flowers are eaten in early summer.
Sallow	Unripe seeds are eaten from the flowers in early summer. Sallow also supports many insects

Species	Description
Birch	The catkins are over too early in the year to be much use to dormice, but they can eat the seeds. These are too small to attract squirrels and may provide support where squirrels compete for hazel nuts.
Sweet chestnut	Chestnuts are an excellent food source and dormice may also eat the flowers.
Blackthorn	Fruits (kernels) are eaten but the flowers come too early in the year. Dense blackthorn thickets tend to be avoided where alternative shrubs are available.
Hawthorn	Flowers are an important food in the spring. The fruits are eaten occasionally.
Conifers	Little is known about the use made of these trees by dormice, but they often support many aphids and caterpillars – potential dormouse food. The trees may also provide shelter from the wind and rain in exposed sites.
Other species such as cherry, crab apple, holly, ivy.	Little is known about the value of these trees to dormice, but it is likely that they will eat the pollen (stamens) and perhaps fruits. Ivy is a useful source of food insects and its evergreen tangles among tree branches are often used for summer nesting sites.

The below habitat suitability criteria have been adapted based on the ecology and specific ecological requirements of the hazel dormice.

Suitability Category	Ecological Functionality for hazel dormice	Typical Characteristics of habitats within this Category
High	Provides significant opportunities for: - - foraging; - shelter / protection; - breeding; and - hibernation.	5 or more native tree and/or shrub species of value to dormice present (as per list provided in Table 8). Dense canopy, understorey and/or shrub layer (as present) with good aerial connectivity.
Medium	Provides opportunities for two or three of the above ecological functions.	Between 2 and 4 native tree and/or shrub species of value to dormice present. Sub-optimal aerial connectivity (non-continuous / 'gappy' canopy, understorey and/or shrub layer (as present)).
Low	Provides opportunities for one of the above ecological functions.	0 or 1 native tree or shrub species of value to dormice present. Canopy, understorey and/or shrub layer (as present) are 'sparse,' with poor / infrequent aerial connectivity.
Negligible	Does not provide any opportunities for hazel dormouse.	Un-vegetated areas, includes bare ground and buildings



Landscape, Arboriculture and Ecology

Surveys – Plans – Assessments - Mitigation – Solutions – Methodology

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