APPENDIX 8.1b
PRELIMINARY ECOLOGICAL APPRAISAL (PEA)

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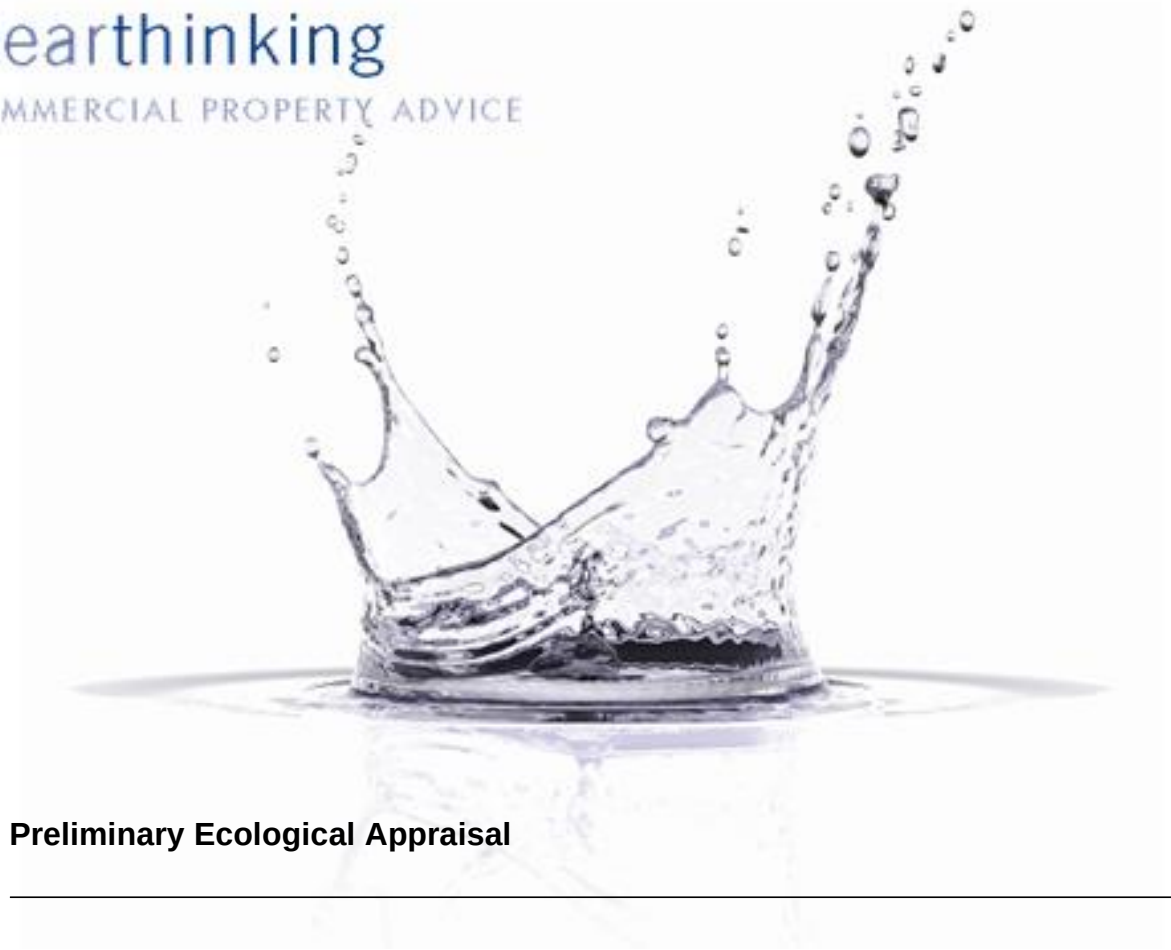
COMMERCIAL PROPERTY ADVICE



Preliminary Ecological Appraisal

Land off Radwinter Road, Saffron Walden

On Behalf Of:
Rosconn Group Ltd

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Job Ref: PE0166 Date: November 2020

Preliminary Ecological Appraisal

Land off Radwinter Road, Saffron Walden

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EXECUTIVE SUMMARY

Harris Lamb Property Consultancy (HLPC) was commissioned by Rosconn Group Ltd to undertake a Preliminary Ecological Appraisal (PEA) at land off Radwinter Road, Saffron Walden. The site consists of an arable field and grassland field surrounded by hedgerow with scattered trees. A metal agricultural building is present on site.

HLPC carried out an Extended Phase 1 Habitat Survey of the site in September 2020 undertaken by a suitably experienced ecologist. Desk-based consultation was undertaken with the local ecological records centre for records of protected species and habitats within 2km of the site.

The survey found that a proposed residential development at this site is not anticipated to have a significant direct impact on any site designated for its nature conservation interest at an international or national level. A landscaping scheme could be designed to retain habitat connectivity and offer enhancement through native planting.

Mitigation measures and additional survey recommendations prior to construction include a badger survey and bat survey of trees and hazel dormice survey (if direct impacts are proposed to trees/hedgerows). Vegetation clearance should be undertaken between September and February to avoid the nesting bird season.

Provided the measures within this report can be adopted for any future proposed development layout, it is anticipated that a scheme could be designed to mitigate impacts to protected species and habitats and provide ecological enhancements. It is, therefore, anticipated that a design could be brought forward for this site that would be compliant with current local and national biodiversity planning policy.

1.0 INTRODUCTION

1.1 Terms of reference

1.1.1 Harris Lamb Property Consultancy (HLPC) was commissioned by Rosconn Group Limited to undertake a Preliminary Ecological Appraisal (PEA) at land off Radwinter Road, Saffron Walden (national grid reference TL55793813), hereafter termed the 'site' (see Figure 1 below).

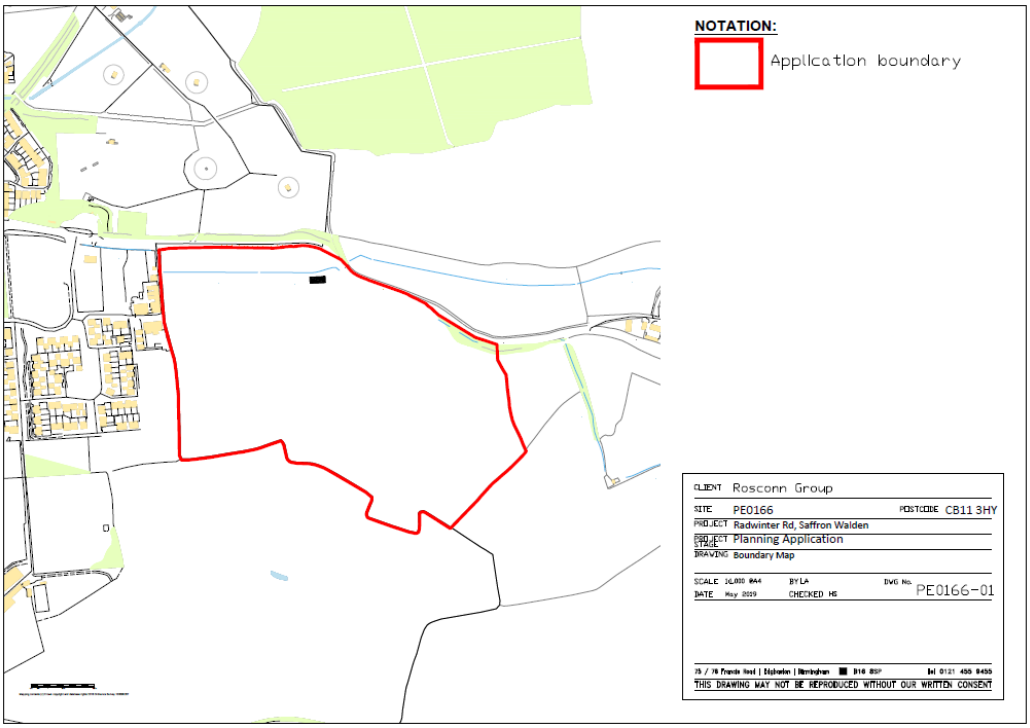

Figure 1: Site location. Not to scale.

1.2 Site location

1.2.1 The site is located on the eastern edge of Saffron Walden and is surrounded on two sides by agricultural land to the east and south, a new housing development to the west and Radwinter Road (B1053) to the north. The site is dominated by an arable field with a smaller grassland field all surrounded by hedgerows with scattered trees. A metal agricultural building is present on site.

1.3 Scope of work

1.3.1 This report has been produced with reference to current guidelines for PEA[1], which involves the evaluation of potential ecological receptors based on Extended Phase I Habitat Survey[2] data and background desk study.

1.3.2 The purpose of this PEA is to identify the potential ecological constraints within, or near the site, that should be considered within the proposed development design.

[1] CIEEM (2017) Guidelines for Preliminary Ecological Appraisal, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

[2] Joint Nature Conservation Committee (2010) Handbook for Phase 1 Habitat Survey. A Technique for Environmental Audit.

2.0 PLANNING CONTEXT

2.1 National Planning Policy Framework (NPPF)

2.1.1 National Planning Policy Framework (NPPF)[3] is the top tier of planning policy. The Framework provides guidance to local authorities and other agencies on planning policy and the operation of the planning system. Section 15 relates to 'Conserving and enhancing the natural environment'.

2.1.2 Relevant policies in relation to planning application include Paragraph 170:

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

a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and

f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

[3] National Planning Policy Framework (June 2019) Ministry of Housing Communities and Local Government

2.1.4 174. To protect and enhance biodiversity and geodiversity, plans should:

a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and

b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

2.1.5 175. When determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons58 and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be

encouraged, especially where this can secure measurable net gains for biodiversity."

2.2 Relevant local planning policy

2.2.1 Identified relevant local planning policy is summarised in Table 1 below.

Table 1: Summary of relevant biodiversity local planning policy

Policy	Description
UTTLESFORD LOCAL PLAN ADOPTED JANUARY 2005	
Policy ENV3	Open Spaces and Trees The loss of traditional open spaces, other visually important spaces, groups of trees and fine individual tree specimens through development proposals will not be permitted unless the need for the development outweighs their amenity value.
Policy ENV7	The Protection of the Natural Environment - Designated Sites Development proposals that adversely affect areas of nationally important nature conservation concern, such as Sites of Special Scientific Interest and National Nature Reserves, will not be permitted unless the need for the development outweighs the particular importance of the nature conservation value of site or reserve. Development proposals likely to affect local areas of nature conservation significance, such as County Wildlife sites, ancient woodlands, wildlife habitats, sites of ecological interest and Regionally Important Geological/ Geomorphological Sites, will not be permitted unless the need for the development outweighs the local significance of the site to the biodiversity of the District. Where development is permitted the authority will consider the use of conditions or planning obligations to ensure the protection and enhancement of the site's conservation interest.
Policy ENV8	Other Landscape Elements of Importance for Nature Conservation Development that may adversely affect these landscape elements Hedgerows Linear tree belts Larger semi natural or ancient woodlands Semi-natural grasslands Green lanes and special verges Orchards Plantations Ponds reservoirs River corridors Linear wetland features Networks or patterns of other locally important habitats. will only be permitted if the following criteria apply: a) The need for the development outweighs the need to retain the elements for their importance to wild fauna and flora; Uttlesford Local Plan – Adopted January 2005 29 b) Mitigation measures are provided that would compensate for the harm and reinstate the nature conservation value of the locality. Appropriate management of these elements will be encouraged through the use of conditions and planning obligations

2.3 Natural Environment and Rural Communities Act

2.3.1 In Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act, which came into force on 1st Oct 2006 requires the Secretary of State to publish "*a list of habitats and species which are of principal importance for the conservation of biodiversity in England*". This list guides decision-makers such as councils and statutory undertakers, as to their duty under Section 40 of the NERC Act, to "*have regard to the conservation of biodiversity in England*" in day-to-day decisions.

2.3.2 There are currently 56 habitats of principal importance and 943 species of principal importance included on the S41 list. The habitats recorded were considered against the list of species likely in the site's geographical area and supporting habitats.

3.0 METHODOLOGY

3.1 Study area

3.1.1 The study area is the application boundary shown on Figure 1. The study area was extended beyond the site where appropriate to undertake species-specific appraisals as detailed below.

3.2 Desk study

3.2.1 The desktop study was undertaken in September 2020 and included:

- Essex Wildlife Trust Biological Record Centre (EWTBRC),
- Multi Agency Geographic Information for the Countryside (MAGIC) website[4],
- Ordnance Survey (OS)[5], and
- Aerial imagery[6].

3.2.2 The geographical extent of the search area for biodiversity information was related to the significance of sites and species and potential zones of influence which might arise from development within the site. For this site the following search areas were considered to be appropriate:

- 10km around the site boundary for sites of International Importance (e.g. Special Area of Conservation (SAC), Special Protection Area (SPA), Ramsar site));
- 2km around the site boundary for sites of National or Regional Importance (e.g. Sites of Special Scientific Interest (SSSI)), protected or otherwise notable species and non-statutory designated sites of County Importance (e.g. Local Wildlife Sites (LWS);
- 1km for ancient woodland, and
- 2km for biological records.

[4] www.magic.gov.uk accessed September 2020
[5] www.bing.co.uk accessed September 2020

3.2.3 No pre-application consultation relating to ecology was undertaken at the time of writing this report. No previous ecological information relating to the site was identified. However a review of an ecological appraisal of an adjacent residential scheme (planning reference: UTT/13/3467/OP outline planning permission comprising the erection of 200 dwellings of mixed size and tenure, including link road, residential access roads, public open space, surface water attenuation areas and landscaping, and access to and preparation of land for a one form entry primary school) by First Environmental Consultants Ltd in 2016 was undertaken to provide wider understanding of the ecological value of the area.

3.3 Field survey

Flora

3.3.1 HLPC carried out an Extended Phase 1 Habitat Survey of the site in September 2020. The survey was carried out by an experienced and suitably qualified ecologist. The survey was undertaken in accordance with 'Extended Phase 1' methodology[6].

3.3.2 Specific habitat features were mapped using Target Notes (TN) to record ecological features of particular note where necessary.

Fauna

3.3.3 The fauna included within this assessment is based on the habitats present, data from the desk-based searches, and the following legislation[7]:

- Wildlife and Countryside Act 1981 (as amended);
- The Protection of Badgers Act 1992;
- The Conservation of Habitats and Species Regulations 2017 (as amended);
- The NERC Act 2006 – S41 Species of Principal Importance (SPI) for the conservation of biodiversity;
- The Countryside Rights of Way Act 2000.

[6] Joint Nature Conservation Committee (2010) Handbook for Phase 1 Habitat Survey. A Technique for Environmental Audit.
[7] See www.legislation.gov.uk

Amphibians

3.3.4 Waterbodies within 250m of the site boundary were identified using online Ordnance Survey maps and aerial imagery[8] and were assessed if necessary, for their suitability to support great-crested newts *Triturus cristatus* using a Habitat Suitability Index (HSI). The HSI is a numerical index, between 0 and 1. Values close to 0 indicate unsuitable habitat, 1 represents optimal habitat (Oldham *et al*., 2000) [9].

Reptiles

3.3.5 An assessment of the suitability of the habitats present to support common reptile species was undertaken. In accordance with current guidance, this assessment involved a review of habitats and habitat structure for suitable shelter for reptiles such as areas of scrub and woodpiles, grassland with well-developed and varied structure, areas suitable for basking, large tussocks etc.

Birds

3.3.6 Bird species identified at the time of survey were noted and nesting birds recorded as seen. An assessment of habitats was undertaken to determine the likely value to breeding and foraging birds.

Bats

3.3.7 Trees were assessed externally from ground level with the use of torch and binoculars, where required. During the survey Potential Roosting Features (PRF) for bats following current best practice[10],[11],[12] were recorded.

3.3.8 The potential for the site and immediate surrounds to support foraging and commuting bats was also assessed, with particular regard given to the presence of continuous treelines providing good connectivity in the

[8] www.bing.com/maps accessed December 2019

[9] Oldham *et al*., 2000. Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*). Herpetological Journal 10, 143-155

[10] Bat Conservation Trust (BCT) 2016. Bat Surveys for Professional Ecologists, Good Practice Guidelines, 3rd Edition

[11] Mitchell-Jones, A.J, & McLeish, A.P. Ed. 2004. Bat Workers' Manual 3rd Edition

[12] BCT (2015) Surveying for Bats in Trees and Woodland – Guide

landscape, and the presence of varied habitat such as scrub, woodland, grassland in the vicinity.

Badgers

3.3.9 A badger *Meles meles* survey was conducted in September 2020 of the site, and where accessible up to 30m from the site boundary. Areas of suitable habitat were surveyed for evidence of badger activity, such as mammal paths, setts, snuffle holes or latrines.

Hazel Dormice

3.3.10 Habitats present on site were assessed for their suitability to support hazel dormice *Muscardinus avellanarius*. They are typically found in deciduous woodland, species-rich hedgerows and scrub; with hazel, oak, bramble and honeysuckle being of particular importance to this species. Field signs include; gnawed hazel nuts, nests, honeysuckle with stripped bark, droppings. Any signs were recorded as seen.

Riparian mammals

3.3.11 A ditch was present within the site. The ditch was appraised for its suitability to support water vole *Arvicola amphibius*, and otters *Lutra lutra* and any signs of activity seen recorded from bankside access using binoculars if needed.

White-clawed crayfish

3.3.12 A ditch was present within the site. The ditch was appraised for its suitability to support white clawed crayfish *Austropotamobius pallipes* and any signs of activity seen recorded from bankside access using binoculars if needed.

Legally controlled species

3.3.13 Evidence of species listed on Schedule 9 of the Wildlife and Countryside Act (1981) as amended were recorded as seen.

3.4 Assessment limitations

3.4.1 Ecological surveys are limited by factors that affect the presence of plants and animals, such as the time of year, weather, migration patterns and behaviour. The initial survey was undertaken in September, which is towards

the end of the growing season, it was still possible to characterise the habitats present.

3.4.2 Some areas of vegetation adjacent to the site were dense bramble, hindering full access during the badger survey.

3.4.3 Some areas of the ditch bankside were not fully visible or accessible for water vole and otter survey.

3.4.4 Any absence of desk study records cannot be relied upon to infer absence of a species/habitat as the absence of records may be a result of under-recording within the given search area.

3.4.5 Phase 1 Habitat survey aimed to characterise the habitat on site and is not intended to give a complete list of plant species present.

4.0 RESULTS

4.1 Ecological designations

Internationally designated sites for nature conservation

4.1.1 No internationally designated sites for nature conservation was identified within 10km of the site.

Nationally designated sites for nature conservation designation

4.1.2 No nationally designated sites for nature conservation were recorded within 2km of the site.

Non-statutorily designated sites for nature conservation designation

4.1.3 Ten non-statutorily designated sites were identified within 2km of the site. None were recorded on site. The closest sites was Pounce Wood Local Wildlife Site (LWS) located c. 180 m north separated by Radwinter Road.

Table 2: Non-statutorily designated sites were identified within 2km of the site

Designation	Site name
LWS	Ashdon Road Verges
LWS	Wimbish Lanes
LWS	Whitehill Wood
LWS	Saffron Walden - Ashdon Road Protected Roadside Verge
LWS	Mollpond Wood
LWS	Martin's Wood
LWS	Robin's Grove/Hills Wood
LWS	Redgates & Noakes Grove
LWS	Redgates Lane
LWS	Pounce Wood

4.1.4 These sites are considered to be of importance to nature conservation up to a County level.

Ancient woodland

4.1.5 Pounce Wood and Martins Wood are Ancient Woodland recorded c. 180m north of the site and c. 600m north east of the site respectively.

4.2 Habitats

4.2.1 All habitats recorded within the site are described below and are shown on Figure 2 overleaf.

Arable

4.2.2 The majority of the site consists of an arable field dominated by bare ground with areas of tall ruderal habitat in the field margin (c. 1m wide). Species recorded include perennial ryegrass *Lolium perenne,* yarrow *Achillea millefolium*, broad-leaved dock *Rumex obtusifolius*, spear thistle *Cirsium vulgare*, common nettle *Urtica dioica* and creeping thistle *Cirsium arvense* (see Plate 1).

4.2.3 This habitat is considered species poor and widespread both locally and nationally and is not considered to be of value to nature conservation at greater than a site level.

Plate 1: Area of arable land

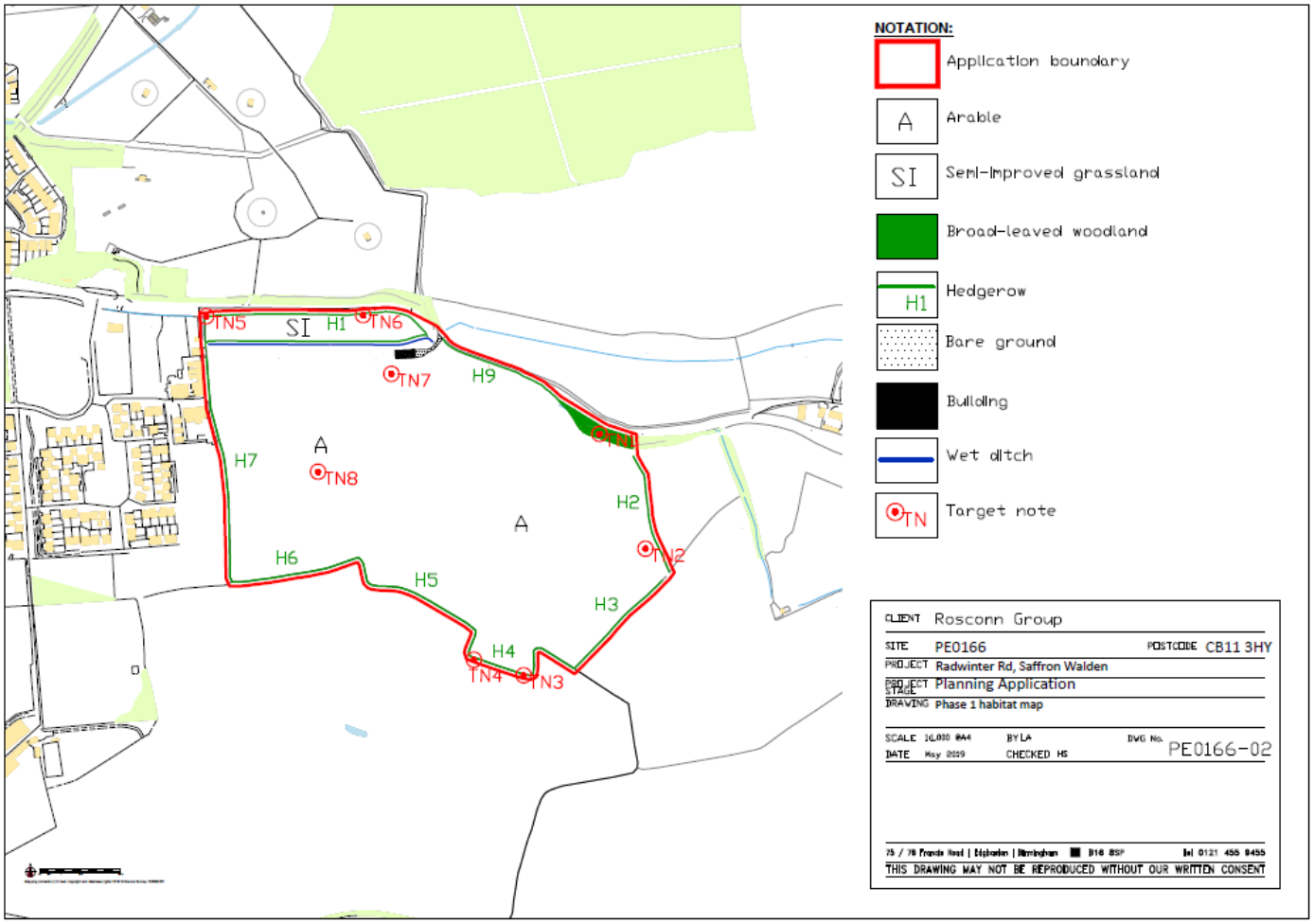

Figure 2: Phase 1 habitat map (not to scale)

Species-poor grassland

4.2.4 The smaller field was dominated grasses which appeared to have been sown in the past with perennial ryegrass *Lolium perenne*. Species recorded include, fescue *Festuca sp.*, cock's-foot *Dactylis glomerata*, yarrow *Achillea millefolium*, broad-leaved dock *Rumex obtusifolius*, broadleaved plantain *Plantago major*, false oat-grass *Arrhenatherum elatius*, white clover *Trifolium repens,* common nettle *Urtica dioica*.

4.2.5 This habitat is considered species poor and widespread both locally and nationally and is not considered to be of value to nature conservation at greater than a site level.

Scattered trees and hedgerows

4.2.6 The field boundaries are dominated by species-rich hedgerows with scattered mature and semi-mature trees (Table 3).

Table 3: Summary of hedgerows on site

Hedgerow number	Observations	Species recorded	Possible Species-rich under Hedgerow Regulations 1997?
H1	c. 4m tall	Blackthorn hazel, field maple, horse chestnut, dog rose, elder, hawthorn	YES
H2	Hedgerow in double row	Blackthorn hazel, field maple, horse chestnut, dog rose, elder, hawthorn, apple	YES
H3	Hedgerow in double row	Blackthorn hazel, field maple, horse chestnut, dog rose, elder, hawthorn, apple	YES
H4	Hedgerow in part double row	Blackthorn hazel, field maple, ash, dog rose, oak	Possible
H5	Hedgerow in single row. Dry ditch. Dead tree with moderate bat roost potential (TN3)	Blackthorn hazel, field maple, horse chestnut, dog rose, elder, hawthorn, apple	YES
H6	Hedgerow in single row becomes double at the end. Dry ditch. Dead tree with moderate bat roost potential (TN3)	Blackthorn hazel, field maple, horse chestnut, dog rose, elder, hawthorn, apple	YES
H7	Hedgerow in double row but adjacent to property. Dry ditch.	Blackthorn hazel, field maple, horse chestnut, dog rose, elder, hawthorn, yew, holly. Leylandii	Not likely – curtilage of a property

Hedgerow number	Observations	Species recorded	Possible Species-rich under Hedgerow Regulations 1997?
H8	c. 4m tall	Blackthorn hazel, field maple, horse chestnut, dog rose, elder, hawthorn	YES
H9	c. 4m tall	Blackthorn hazel, field maple, horse chestnut, dog rose, elder, hawthorn	YES

4.2.7 Hedgerows and scattered trees are considered to be of importance up to a local level, primarily due to the species diversity and habitat connectivity they provide.

Plate 3: Hedgerows

Watercourse

4.2.8 A ditch was present on site which was partially dry at the time of survey (see Plate 4). The ditch, c. 0.5m m wide with vegetated bank sides, heavily shaded by dominated by mature trees and hedgerow. The ditch appeared to be formed from a muddy substrate lacking frequent boulders and stones. The ditch is culverted under the access road. The ditch was dry in places and water did not have any visible flow.

4.2.9 It is considered likely to have been man-made or influenced and non 'near natural' has required by River and Stream Priority Habitats. It is considered to be of site level importance to nature conservation.

Plate 4: Example of watercourse (ditch)

Building

4.2.10 One building was present on site. A metal agricultural shed (see Plate 5). Consideration of its value for nature conservation is provided in Section 4.3 below.

Plate 5: Building

4.3 Species

Amphibians

4.3.1 No records of great crested newts within 2km of the site were provided by EWTBRC.

4.3.2 One pond was identified within 250m of the site located c. 170 m to the south of the site. Upon inspection the pond was largely dry and filled with terrestrial plant species (see Appendix 7.2 for HSI calculation) and was considered to offer poor suitability for great crested newts. Based on the lack of suitable breeding habitat identified within 250m of the site, great-crested newts are not considered likely to be a receptor with respect to proposed development of the site.

Reptiles

4.3.3 No records of reptiles within 2km of the site were provided by EWTBRC.

4.3.4 The habitats on site are considered to be suboptimal for supporting populations of reptiles due to the dominance of arable habitat. The site is connected to wider environs for reptiles through hedgerows and the ditch but these habitats are considered to offer suboptimal habitat for this group.

4.3.5 However it cannot be entirely ruled out that reptile species may be a receptor in respect of the proposed development and a precautionary approach is recommended.

Birds

4.3.6 Multiple records of bird species within 2km of the site were provide by EWTBRC.

4.3.7 The habitats on site are likely to provide suitable foraging and nesting habitat for a range of bird species particularly associated with the hedgerows and mature trees.

4.3.8 Foraging and nesting birds could be a potential receptor with respect to the proposed development.

Bats

4.3.9 Bat species reported within 2km of the site included common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, noctule *Nyctalus noctule*, serotine *Eptesicus serotinus* and brown long eared *Plecotus auratus* bat.

4.3.10 The scattered trees were considered to provide low to moderate bat roost potential.

4.3.11 The hedgerow habitat corridors on site are considered suitable for foraging/commuting bat species.

4.3.12 Foraging and roosting bats could be a potential receptor with respect to the proposed development.

Badger

4.3.13 No badger records within 2km of the site were provided by EWTBRC.

4.3.14 The habitats on site were suitable for supporting foraging, sheltering and commuting badgers.

4.3.15 No badger setts were identified on site, although rabbit warrens were frequently recorded within hedgerow bases and badgers may become established at any time.

4.3.16 Foraging badger could be a potential receptor with respect to the proposed development if they use the site as part of a wider foraging resource.

Hazel Dormice

4.3.17 No records of hazel dormice within 2km of the site were provided by EWTBRC.

4.3.18 The hedgerows on site were considered in places to provide the requires structural diversity to support hazel dormice. No records of this species are known in the area, however, due to potentially suitable habitat it cannot be entirely ruled out this species is a potential receptor with respect to the proposed development.

Otter and water vole

4.3.19 No records of water vole or otter within 2km of the site were provide by EWTBRC.

4.3.20 The watercourse, c. 0.5m m wide with vegetated bank sides, heavily shaded by dominated by mature trees and hedgerow. The ditch appeared to be formed from a muddy substrate lacking frequent boulders and stones. The ditch is culverted under the access road. The ditch was dry in places and water did not have any visible flow.

4.3.21 No signs of water vole or otter activity was recorded during the survey. The ditch is considered suboptimal for both species due to lack of foraging habitat for water vole and shelter for otters. Taken together with the lack of records in the area, it is considered unlikely that otter and water vole are receptors with respect to the proposed development.

White-clawed crayfish

4.3.22 No records of white-clawed crayfish within 2km of the site were provide by EWTBRC.

4.3.23 The ditch lacked water in many areas and was formed from a muddy substrate lacking frequent boulders and stones. Taken together with the lack of records for this species in the area, it is considered unlikely that white-clawed crayfish is a receptor with respect to the proposed development.

Other notable species

4.3.24 Hedgehogs have been recorded within 2km of the site. The habitats on the site are suitable for supporting this species and hedgehogs are considered a potential receptor with respect to future development.

Invasive non-native species.

4.3.25 No invasive species were identified on site at the time of survey.

5.0 ASSESSMENT OF EFFECTS AND MITIGATION MEASURES

5.1 Potential constraints & opportunities for ecological gain

5.1.1 The following ecological constraints to future development of the site have been identified (Table 4).

Table 4: Ecological constraints and potential for biodiversity gain

Habitat/ Species	Constraints identified	Further Survey required and timing	Design Considerations	Biodiversity gain
Poor Semi-improved Grassland	The LPA may require Biodiversity Impact Calculations (BIC) which could result in offsite financial contributions if habitat cannot be retained and enhanced on site.	None anticipated at this stage.	Creation of species rich grassland to mitigate and enhance the site. Retain habitat connectivity. Consider the buffer from the water course and SuDs for native wetland planting.	Enhance the species composition/diversity of the site in the POS.
Hedgerows and trees	Hedgerows and trees. may require land take. Hedgerows on site are likely to qualify as important under the wildlife and landscape criteria of the Hedgerow Regulations 1997.	An arboricultural survey is recommended for trees to establish root protection zones. If hedgerow loss cannot be avoided further survey may be requested to confirm whether they are Important under the Hedgerow Regulations.	Retain hedgerows and scattered trees where possible. Replacement planting with native species mix. Retain habitat connectivity around the site. Root protection zones for retained trees to inform layout.	Enhancement/mitigation could be achieved through additional native tree and hedgerow planting.
Watercourse	None	None	Retain ditch or replacement through SuDs scheme.	Enhance value through improving habitat quality (extent or marginal planting).
Common amphibians	Hedgerow may provide habitat for common amphibians. Recommend during construction CEMP includes measures to minimise harm should they be found during works.	NA	SuDs design if appropriate could include habitat for benefit of common amphibians.	SuDs could consider hibernacula for common amphibians.

Habitat/ Species	Constraints identified	Further Survey required and timing	Design Considerations	Biodiversity gain
Reptiles	Potential for reptiles to be present on site A Reasonable Avoidance Methodology via the CEMP is recommended together with vegetation clearance under this method statement between March and October.	A reptile presence/absence survey may be requested by LPA between April/May or September.	Retain watercourse. Maintain habitat connectivity especially along the site boundaries.	Landscaping can be designed to incorporate features for reptiles such as log piles.
Birds	Potential for breeding birds. Constraint on removing vegetation between March and August.	Vegetation removal should be undertaken outside of the breeding bird season (birds typically breed March to August inclusive).	Retention of trees on site and replacement planting to mitigate net loss.	Installation of bird boxes on buildings and/or retained trees.
Bats (roosting)	Potential for bats to roost in trees along the boundary of the site.	If to be felled, assess trees for bat roost potential and if needed undertaken bat survey to determine presence/absence. Emergence surveys to determine presence/absence only between May and August. Tree climbing for direct inspection possible all year around if trees are structurally sound for climbing.	Retention of trees along the boundary of the site and replacement planting to mitigate net loss. If bat roosts are found then licensing with Natural England will be required post planning consent. A sensitive lighting scheme will likely be required along retained site boundaries.	Installation of bat boxes on suitable retained trees and/or new buildings.
Bats (foraging)	Potential disruption to foraging habitat and	3no. bat transect surveys (spring, summer & autumn)	Retention of boundary trees and hedgerows to maintain commuting	Enhance structural diversity of landscape

Habitat/ Species	Constraints identified	Further Survey required and timing	Design Considerations	Biodiversity gain
	commuting routes.	may be requested by LPA to determine value of the site for foraging bats.	routes for bats. A sensitive lighting scheme will likely be required along retained site boundaries.	areas to enhance invertebrate assemblage and value to foraging bats.
Badgers	Potential for badgers to use the site despite no setts being found as they are highly mobile.	This species is highly mobile and can establish a sett at any time. Extensive rabbit warrens are present which could be used by badgers and survey undertaken when vegetation growth high. Badger activity survey to undertaken any time of year but ideally when vegetation has died back (November-March).	Retain habitat connectivity.	Enhance structural diversity of landscape areas to benefit badger.
Hazel dormice	No records of species but hedgerows potentially suitable.	Presence /absence surveys May to November if hedgerows to be affected.	Retain hedgerows and new hedgerows to enhance connectivity.	Additional native hedgerows, gap planting of existing hedgerows.
Hedgehogs	None anticipated	None anticipated	Boundary treatments should allow adequate gaps to allow hedgehog to move across the site. These can be marked with signs so that they are not blocked off in the future (https://www.hedgehogstreet.org/help-hedgehogs/link-your-garden/).	Creation of gaps in boundary treatment to allow movement of hedgehogs across the site.
Brown hare	None anticipated	None anticipated	None anticipated	None anticipated
Invertebrates	None anticipated	None anticipated	Grassland/wildflower mix to benefit pollinating insects. SuDs to be designed to encourage aquatic invertebrates.	Consider log piles

6.0 CONCLUSIONS

6.1.1 The proposed development at this stage is not anticipated to have a significant direct impact on any site designated for its nature conservation interest at an international or national level.

6.1.2 Additional surveys are recommended for roosting bats should trees be affected by proposals. Landscape proposals should include species rich grassland/wildflower planting to benefit birds and invertebrates. Drainage scheme to consider enhancing existing drainage ditch foe ecological benefit. Retention where possible and enhancement of hedgerows. Mitigation measures prior to construction include a pre-commencement badger survey and carrying out works under a Reptile RAMS would also help to minimise any impacts to these species, if present at the time of work.

6.1.3 Vegetation clearance should be undertaken between September and February to avoid the nesting bird season. If vegetation clearance is required further assessment regarding hazel dormouse will be required.

6.1.4 Provided the measures within this report for further survey and mitigation can be adopted for, the proposed development could be designed to mitigate impacts to protected species and habitats and provide ecological enhancements at a local level. It is, therefore, anticipated that a design could be brought forward for this site that would be compliant with current local and national biodiversity planning policy.

7.0 APPENDICES

7.1 Target Notes

Target Note Number	Description
TN1	Area of woodland along road bank and dense scrub falls steeply to road. Mature trees with low-moderate bat roost potential.
TN2	Mammal holes. Likely rabbit warren. Potential for badgers to create setts.
TN3	Dead ash tree with woodpecker holes. High bat roost potential.
TN4	Dead trees with moderate bat roost potential.
TN5	Mature trees with BRP
TN6	Ditch with static water in places. Banks heavily shaded with earth banks approx. 45 degrees or more. No visible flow and culverted under access road.
TN7	Metal corrugated modern shed with negligible bat roost potential.
TN8	Arable field with limited field margins c. 1m wide.

7.2 Habitat Suitability Index

ARGUK GCN HSI Calculator

	Site	Radwinter Road
	Project Number	PE0163
	Pond Number	1
	Grid Ref	TL55673788
SI No	SI Description	SI Value
1	Geographic location	1
2	Pond area	0.2
3	Pond permanence	0.1
4	Water quality	0.33
5	Shade	1
6	Water fowl effect	1
7	Fish presence	1
8	Pond Density	0.3
9	Terrestrial habitat	0.33
10	Macropyhyte cover	0.3
HSI Score		**0.43**
Pond suitability (see below)		Poor