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Val de Lea and Arndean, Moor Lane, Bishopthorpe

PRELIMINARY ECOLOGICAL APPRAISAL

September 2023

	Staff Member	Position
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1.0 EXECUTIVE SUMMARY

- 1.1 In September 2023, Wold Ecology was commissioned by Mark Smith to undertake an extended phase 1 habitat survey and a preliminary ecological appraisal at Val de Lea and Arndean, Moor Lane, (national grid reference SE 58282 46908) in Bishopthorpe, North Yorkshire.
- 1.2 In order to accomplish the brief, a desk top study, external consultation, a habitat classification field survey and preliminary ecological appraisal was undertaken by Wold Ecology staff.
- 1.3 The habitats within the Application Site comprise introduced shrub, amenity grassland, semi-improved grassland, mixed plantation, bare ground, and buildings located in a rural environment.
- 1.4 The proposed development involves site clearance and the erection of a small number of residential dwellings including services and infrastructure.
- 1.5 The field survey and ecological appraisal targeted the following species and habitats relevant to the Application Site and the development proposal. The field surveys and preliminary ecological appraisal results are summarised below:

		Application Site Status
Proceed with caution, timing constraints	Birds	The site is suitable for nesting birds with various designations. Any trees, shrubs, tall vegetation and buildings to be removed should be cleared outside of the bird nesting season (i.e. clearance should be undertaken between mid-September and early February inclusive) or be carefully checked by an ecologist to confirm no active nests are present - prior to removal during the summer period. If nesting birds are found during the watching brief, works will need to stop until the young have fledged.
Advisory note	Invasive non-native species	Himalayan balsam <i>Impatiens glandulifera</i> was recorded within the Application Site. It is recommended that a specialist contractor is employed to remove or control the species.
No ecological constraints.	Bats	Bat surveys were undertaken on buildings within the Application Site with no evidence of roosting bats were recorded. No further surveys are recommended.
	Badger	No further surveys recommended.
	Great crested newt	
	Reptiles	
	Habitats	There are no Statutory or non-statutory sites located within or adjacent to the Application Site. No Biodiversity Action Plan habitats are located within or adjacent to the Application Site.

- 1.6 This report is valid until **March 2025**. After this time, additional surveys need to be undertaken to confirm that the status of the site for protected species, site habitat composition and conclusions within this report have not changed.

- 1.7 Species list within this report may be forwarded to the local biodiversity records centre to be included on their national database. No personal information will be sent. Please contact Wold Ecology Ltd if you do not wish the species accounts and grid references to be shared.

2.0 INTRODUCTION

- 2.1 In September 2023, Wold Ecology was commissioned by Mark Smith to undertake an extended phase 1 habitat survey and a preliminary ecological appraisal at Val de Lea and Arndean, Moor Lane, (national grid reference SE 58282 46908) in Bishopthorpe, North Yorkshire.
- 2.2 An ecological assessment is a requirement of the Local Planning Authority (LPA), as part of the planning application process. This is specified in the following government policy:
National Planning Policy Framework (NPPF): Conserving and Enhancing the Natural Environment.
- 2.3 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.
 - 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.
 - c) Protect and enhance 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).
 - d) recognise 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.
 - e) Minimise impacts on and provide net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.
 - f) Prevent 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.
- 2.4 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.
 - c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused,

- unless there are wholly exceptional reasons, and a suitable compensation strategy exists; and
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.
- 2.5 The following should be given the same protection as habitats sites:
- a) potential Special Protection Areas and possible Special Areas of Conservation;
 - b) listed or proposed Ramsar sites; and
 - c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.
- 2.6 In addition, an ecological assessment is also required so that the local authority comply with the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and to have regard to the purpose of conserving biodiversity in the exercise of their functions (Natural Environment and Rural Communities (NERC) Act 2006).
- 2.7 Planning authorities must determine whether the proposed development meets the requirements of Article 16 of the EC Habitats Directive before planning permission is granted (where there is a reasonable likelihood of European Protected Species being present). Therefore, during its consideration of a planning application, where the presence of a European protected species is a material consideration, the planning authority must satisfy itself that the proposed development meets three tests as set out in the Directive as detailed below.
- 2.8 The LPA has to assess whether the development proposal would breach Article 12(1) of the Habitats Directive. If Article 12(1) would be breached, the LPA would have to consider whether Natural England was likely to grant a European protected species licence for the development; and in so doing the LPA would have to consider the three derogation tests:
- a) 'Preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment'.
- In addition, the LPA must be satisfied that:
- (b) 'That there is no satisfactory alternative'
 - (c) 'That the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range'.
- 2.9 Relevant Case Law
- Woolley v Cheshire East Borough (2009).
R. (Morge) v Hampshire County Council (2011).
Prideaux v. Buckinghamshire County Council and Fcc Environmental UK Limited (2013).
- 2.9.1 The rulings summarise that if it is clear or perhaps very likely that the requirements of the Directive cannot be met because there is a satisfactory alternative or because there are no conceivable 'other imperative reasons of over-riding public interest' then the authority should act on that and refuse permission.'

- 2.9.2 The conclusion of the judgement is that LPAs must ensure that the option/alternative that best takes into account all the relevant considerations (not just EPS) should be the preferred option assuming that the other two tests specified in Article 16 (1) are also met.
- 2.9.3 The judgements also clarified that it was not sufficient for planning authorities to claim that they had discharged their duties by imposing a condition on a consent that requires the developer to obtain a licence from Natural England. Natural England considers it essential that appropriate survey information supports a planning application prior to the determination. Natural England does not regard the conditioning of surveys to a planning consent as an appropriate use of conditions.

3.0 COMPANY PROFILE

- 3.1 Wold Ecology Ltd was established in 2006 and are experienced in providing a bespoke service for environmental management and ecological assessments. Wold Ecology Ltd employs several experienced and qualified staff/associates to undertake specialist ecological contracts.
- 3.2 Wold Ecology Ltd provides a wide range of specialised advice aimed at integrating business with nature. We specialise in ecological surveys, land management planning and site assessments which include:
European Protected Species Surveys and Natural England Licenses.
Ecological Impact Assessments and Preliminary Ecological Appraisals.
Ecological Construction Method Statements and Ecological Enhancements Plans.
Ecological Clerk of Works.
- 3.3 Surveyor Profile –Daniel Lombard B Sc., MCIEEM.
- 3.3.1 Qualifications.
B Sc. Environmental Science.
Great Crested Newt License –2015-17182-CLS-CLS
Bat License –2015-11490-CLS-CLS
Bird Ringing A Licence –A/6298
- 3.3.2 Professional Membership.
Full member of the Chartered Institute of Ecology and Environmental Management.
- 3.4 A detailed surveyor profile is included in Appendix 5.
- 3.5 Daniel Lombard meets the criteria for a suitably qualified ecologist by:
Holding a Bachelor of Science degree (hons) in Environmental Science;
Being employed as a practising ecologist since 2007, with over 10 years' relevant experience and;
Being a full member of the Institute of Ecology and Environmental Management (this makes him subject to peer review and bound by a professional code of conduct).
- 3.6 Chris Toohie M Sc. MCIEEM has read and reviewed the report and confirms that it:
Represents sound industry practice
Reports and recommends correctly, truthfully, and objectively
Is appropriate, given the local site conditions and scope of works proposed
Avoids invalid, biased, and exaggerated statements

4.0 HABITAT SURVEY METHODOLOGY

- 4.1 In order to fulfil the brief, the following has been undertaken:
- A desktop study and consultation.
 - Field survey including accessible adjacent land up to 1km.
 - The scope of the ecology survey is proportionate to the scale of the likely ecological effects and in this case, 2km from the Application Site.
 - A phase 1 habitat survey.
 - Preliminary ecological appraisal.
- 4.2 This report describes the findings of the field survey and desktop study whilst identifying the requirement for further ecological surveys to ensure that a comprehensive study is undertaken.
- 4.3 Where EcIA is not part of an Environmental Impact Assessment, the views of the competent authority, standing advice and use of a Preliminary Ecological Appraisal can assist with the scoping of a potential EcIA.
- 4.4 Consultation with the planning ecologists for Hull City Council, Ryedale District Council and East Riding of Yorkshire Council (July 2020) confirmed that EcIA's are only usually required when developments are likely to have significant ecological impact effects and that developments of this size are unlikely to require a specific EcIA. Wold Ecology Ltd have undertaken over 400 Preliminary Ecological Appraisals between 2015 and 2022 for similar sites and schemes; this report format and content within has been accepted by Local Authority planning ecologists during this time period without the request for an additional EcIA. This report format, which is also commonly used by ecological consultants, is widely accepted in support of planning applications.
- 4.5 Where further ecological surveys have been recommended, the impact assessment will be included within those specific reports.
- 4.6 Whilst an EcIA on its own is not a statutory requirement, the following principles which underpin EcIA are considered within this assessment:
- Avoidance - Seek options that avoid harm to ecological features (for example, by locating on an alternative site).
 - Mitigation - Adverse effects should be avoided or minimised through mitigation measures, either through the design of the project or subsequent measures that can be guaranteed –for example, through a condition or planning obligation.
 - Compensation - Where there are significant residual adverse ecological effects despite the mitigation proposed, these should be offset by appropriate compensatory measures.
 - Enhancements - Seek to provide net benefits for biodiversity over and above requirements for avoidance, mitigation or compensation.
 - Determine the importance of ecological features affected, through survey and/or research;
 - Assess impacts potentially affecting important features.

- 4.7 A field survey was undertaken at the Application Site on 25th September 2023. During the site visit, the whole of the Application Site and accessible neighbouring land was examined in detail.

Date of each survey visit	Type of survey	Weather
25/09/23	Habitat classification field survey	15°C, 20% cloud. Beaufort 2, SW. No recent rain.

- 4.8 The habitats within the Application Site were mapped (see Appendix 2) according to the techniques described in the publication *Handbook for Phase 1 Habitat Survey* (JNCC 2010). The CIEEM 'Guidelines for Preliminary Ecological Appraisal - Second Edition' (December 2017) state that this is an appropriate habitat classification system.
- 4.9 Target notes (if applicable) provide descriptions of the main habitats found on the site, including information about species composition, habitat structure, evidence of management, habitats too small to map and transitional or mosaic habitats.
- 4.10 Sufficient detail on the composition of the vegetation was obtained from the field survey, which enabled it to be successfully characterised and assessed.
- 4.11 During the site visit, notes were made of features of potential value to other groups such as birds, mammals, amphibians, reptiles, or invertebrates, paying particular attention to species protected by law:

Species/Group	Indicative habitat	Field signs (in addition to sightings)
Bats	Roosts - Trees, buildings, bridges, caves etc. Foraging and commuting areas - e.g. Parkland, waterbodies, wetlands, woodland, hedgerows and linear features.	Potential roost sites. Droppings, urine splashes, staining and feeding remains.
Otter	Rivers, streams, canals, ponds, lakes, ditches, drains and coastal areas.	Holts (or dens), prints, spraints, slide marks into watercourses and feeding signs.
Water Vole	Rivers, streams, canals, ponds, lakes, ditches, drains and marshes.	Burrow entrances, prints, distinctive latrine areas and feeding signs.
Birds	Habitat mosaic. Natura 2000 sites/SPA/SAC/Ramsar.	Nests, droppings below nest sites (especially in buildings of trees); tree holes.
Reptiles	Habitat mosaic.	Sloughed skins.
Great Crested Newt	Ponds within 250m of suitable habitat within the site boundary. Habitat Suitability Index (HSI assessment).	Egg wraps and animals (depending on time of year).

- 4.12 The field survey and ecology report reflect relevant guidance from the following CIEEM documents:
- Guidelines for Preliminary Ecological Appraisal - Second Edition, December 2017.
 - Guidelines for Ecological Impact Assessment in The UK And Ireland - Terrestrial, Freshwater, Coastal and Marine (September 2018).

4.13 Bat activity survey

4.13.1 Daytime and Visual Inspection

4.13.1.1 The daytime assessment identified whether the building within the red line boundary had any signs of occupancy, bat roosts and/or bat usage. This took the form of a methodical search, both internally and externally, for actual roosting bats and their signs. Specifically, the visual survey involved:

Assessment for droppings on walls, windowsills and in roof spaces.

Scratch marks and staining on beams, other internal structures and potential entrance and exit holes.

Wing fragments of butterfly and moth species underneath beams and other internal structures.

The presence of dense spider webs at a potential roost can often indicate absence of bats.

Assessment of crevices and cracks to assess their importance for roosting bats.

4.13.1.2 Summary of daytime inspection and visual survey

Date of each survey visit	Structure reference/ location	Equipment used/available	Weather
25/09/23	House	Cluson CB2 lamp Dart endoscope Dewalt Laser Measure. 3.9m telescopic ladders Binoculars	15°C, 20% cloud. Beaufort 2, SW. No recent rain.
Comments (to include # of surveyors used for each visit): 2 surveyors undertook the visual inspection.			
Personnel: Daniel Lombard (Class 1 bat licence –2015-11490-CLS-CLS) –25 th September 2023 Abi Catherall (Class 1 bat license 2022 -10667 -CL17 -BAT) – 25 th September 2023			

4.14 Activity Surveys

4.14.1 Emergence surveys are used to determine bat presence in a building and can also give a good estimate of the numbers present. Bats can emerge up to 15 minutes before sunset and 2 hours after sunset. The survey times ensured that bats would have emerged from their roost sites and would be foraging (see section 9.4 and 9.5).

4.14.2 Summary of emergence survey(s)

Date of each survey visit	Start/end times and times of sunset	Structure reference/ location	Equipment used/ available	Weather
25/ 09/ 23	Sunset: 1856 Start: 1841 Finish: 2030	House	Cluson CB2 lamp Digital thermometer Anabat Walkabout Wildlife Acoustics EM Touch 2 PRO EM3 Anabat Express Pulsar Helion thermal imaging scope Reolink 4K PoE IP Camera Nightfox Red Night vision camera	15°C, 20% cloud. Beaufort 2, SW. No recent rain.
Comments (to include # of surveyors used for each visit): 3 surveyors were positioned around the site so that all potential access points, identified in the daytime, visual inspection, could be observed.				
Personnel: Daniel Lombard (Class 1 bat licence –2015-11490-CLS-CLS) –25 th September 2023 Abi Catherall (Class 1 bat license 2022-10667-CL17-BAT) –25 th September 2023 Malcolm Richardson – 25 th September 2023				

4.15 Summary of personnel

Daniel Lombard MCIEEM	Experienced bat surveyor since 2008, Daniel has assisted with over 500 bat surveys for Wold Ecology and is currently working towards his bat handling license.	2015-11490-CLS-CLS
Abi Catherall	Experienced bat surveyor, Abi has conducted over 100 bat activity surveys including bat monitoring with the North Yorkshire Bat Group.	2022-10667-CL17-BAT
Malcolm Richardson	Wold Ecology Ltd associate with bat activity survey experience undertaken under the tuition of Wold Ecology licensed bat ecologists.	N/ A

5.0 LIMITATION OF FIELD SURVEY

- 5.1 Whilst the majority of the Application Site was examined at the macro scale, many species will have been overlooked at the micro level because it is not the purpose of a phase 1 habitat survey to classify all taxa occurring in the Application Site. In addition, whilst the actual timing of the survey was adequate to classify the habitat types, there is undoubtedly a strong seasonal element to the presence of species within the site and species occurring outside of the survey period will have been overlooked.
- 5.2 This report will serve to indicate the possible value of the site in nature conservation terms based upon the initial field survey and desk top data gathered. As with any survey of this kind, it cannot be a definitive description of the site and its associated habitats and species.
- 5.3 Access was only granted within the Application Site and land owned by the client; in some instances neighbouring land was studied from vantage points and public land, maps within the public domain and aerial photography, it is possible that habitats important to the ecology of the Application Site may not have been recorded fully.
- 5.4 It is not always possible to identify every pond within 250m of an Application Site and whilst every effort was made to access all ponds, Wold Ecology Ltd do not guarantee that every pond within 250m have been included within this assessment.
- 5.5 Invasive Non-Native Species (INNS) are species listed on Schedule 9 of the Wildlife and Countryside Act (1981), for which it is an offence to cause or allow it to grow in the wild. It is not always possible to conclude absence from a preliminary survey alone due to factors including:
Season.
Accessibility.
Recent ground clearance.
3rd party attempts to hide evidence or undisclosed treatment programmes.
- 5.6 However, a phase 1 habitat survey and preliminary ecological appraisal of this nature, supported by a thorough desk top survey, is sufficient to make a number of informed assumptions about the ecology of the site.
- 5.7 Bat activity surveys between the months of May and August have not been undertaken.

6.0 DESKTOP STUDY

6.1 General description

6.1.1 The Application Site is located 700m southwest of Bishopthorpe village, in a rural location. The Application Site is approximately 0.7ha and is immediately surrounded by arable/grazed pasture and residential dwellings with mature private gardens.

6.1.2 Habitats within 2km surrounding the Application Site is primarily low-lying agricultural land dominated by arable production with some grazed pasture. Woodland cover within 2km is limited and occurs as fox coverts, riparian woodland, semi natural woodland, shelterbelts and plantations adjacent to farms and small holdings. Whilst the Application Site is not connected to any ecologically valuable habitat, connectivity within 2km is provided by hedgerows, hedgerows with trees and ditches that drain the predominant arable land and link the Application Site with the wider countryside. In addition, the River Ouse (1.7km east) and associated riparian habitats, provide connectivity to the wider countryside.

6.1.3 A summary of the surrounding habitat is (radius of < 2km from the site):

- Buildings –farm buildings and residential properties

- Hedgerow

- Mature trees and woodland

- Askham Bog

- Arable

- Mature private gardens

- Ponds and watercourses

- River Ouse

- The Foss (Drain)

- Town Ings Drain

- Grazed pasture

6.2 Desktop Study.

6.2.1 Natural England, the North & East Yorkshire Ecological Data Centre (NEYEDC), www.magic.gov.uk, social media, local authority planning portal and Wold Ecology employees, field surveyors and network of associate ecologists were consulted in order to obtain any ecological information that they hold of relevance to the Application Site and surrounding area.

6.2.2 The desk top study identifies land parcels of nature conservation value within 2 km of the Application Site. Relevant extracts from associated documentation are highlighted below. The following data resources were searched:

- Sites of Special Scientific Interest (SSSI)

- Special Protection Areas (SPA)

- National Parks

- National Reserves

- Special Areas of Conservation (SAC)

- Ramsar sites

- Areas of Outstanding Natural Beauty (AONB)

- Local Nature Reserves (LNR)

Local wildlife sites (LWS) or equivalent
 Natural England Habitat Inventories
 Natural Character Area documentation
 European protected species records
 UK Biodiversity Action Plan habitats and species records
 Local Biodiversity Action Plan habitats and species records
 Notable species records

6.2.3 International Designated Sites

6.2.3.1 There are no International Designated Sites within 2 km of the Application Site.

6.2.4 Nationally Designated Sites

6.2.4.1 The following National Designated Sites lie within 2 km of the Application Site (see figure 2):

Site Code	Site Name	Distance (m)
1.	Askham Bog SSSI	1327
2.	Church Ings SSSI	1644
3.	Naburn Marsh SSSI	1790

6.2.4.2 Askham Bog is described by Natural England as:

Askham Bog is the remnant of a valley-mire which formed between two ridges of glacial moraine in the Vale of York just southwest of the City. Base-rich ground-water draining the moraines has led to the development of a rich-fen community which demonstrates stages in seral succession to fen woodland. In the central areas there is a poor-fen community, thought to represent incipient raised-bog, where vegetation has grown above the influence of the ground-water and conditions have become acidic through the leaching action of rain-water and the growth of bog mosses *Sphagnum spp.* The present habitats are considered to be secondary, raised-bog having largely replaced the original fen before peat-cutting in the Middle Ages brought the vegetation back within the influence of base-rich ground-water with the consequent reversion to fen conditions.

The majority of the site consists of birch *Betula pubescens* and oak *Quercus robur* woodland with alder *Alnus glutinosa* at the dyke margins. There is extensive willow carr *Salix cinerea*, and the shrub layer also includes alder buckthorn *Frangula alnus* and bog myrtle *Myrica gale*. The open fen communities are very rich in flowering plants such as meadowsweet *Filipendula ulmaria*, common meadow rue *Thalictrum flavum*, yellow loosestrife *Lysimachia vulgaris*, common marsh bedstraw *Galium palustre* and woody nightshade *Solanum dulcamara*. Sedges are particularly well represented and include fibrous tussock-sedge *Carex appropinquata*, elongated sedge *C. elongata* and great fen-sedge *Cladium mariscus*. The site is also noted for the occurrence of royal fern *Osmunda regalis* and marsh fern *Thelypteris thelypteroides*. More acidic elements of the ground flora include broad buckler-fern *Dryopteris dilatata*, narrow buckler-fern *D. carthusiana*, purple moor-grass *Molinia caerulea* and bog mosses *Sphagnum fimbria tum*, *S. squarrosum* and *S. palustre*. In addition to the peatland habitats there is grassland along the northern and southern margins which has several species of interest such as adder's-tongue fern *Ophioglossum vulgatum* and early

marsh-orchid *Dactylorhiza incarnata*, and the dykes are rich in aquatic plants, in particular the water violet *Hottonia palustris*

The site is renowned for its insect fauna which includes the scarce beetles *Dromius sigma* and *Agabus undulatus* and the fen square-spot moth *D iarsia florida*.

6.2.4.3 Church Ings is described by Natural England as:

Church Ings comprises two unimproved alluvial flood meadows, adjacent to the River Ouse at Acaster Malbis in the Vale of York. These meadows are of particular importance for their neutral grassland plant community which is an increasingly rare habitat type, threatened nationally as a result of drainage and agricultural improvement.

The sward includes a variety of characteristic plant species, with great burnet *Sanguisorba officinalis*, meadowsweet *Filipendula ulmaria*, meadow buttercup *Ranunculus acris*, pepper saxifrage *Silaum silaus*, ribwort plantain *Plantago lanceolata*, common bistort *Polygonum bistorta*, ragged-robin *L ychnis flos-cuculi*, cuckooflower *Cardamine pratensis*, meadow foxtail *A lopecurus pratensis*, creeping bent *Agrostis stolonifera*, red fescue *Festuca rubra*, crested dog's-tail *Cynosurus cristatus* and common sedge *Carex nigra*.

Where ground conditions are wettest there are stands of brown sedge *C arex disticha*.

The nature conservation interest is dependent upon the maintenance of a high water-table and on management by mowing for hay followed by aftermath grazing.

6.2.4.4 Naburn Marsh is described by Natural England as:

The flood meadows at Naburn marsh are contained within a bend of the River Ouse about 4 km south of the centre of the City of York. The site comprises a mosaic of species-rich flood meadow grassland with swamp and inundation communities. This type of flood meadow grassland is now nationally rare and further threatened by conversion to arable land or more intensive grassland. The special interest of the site is augmented by the presence of a sequence of grassland and inundation communities which reflect the variations in topography and hydrology of the site.

At Naburn Marsh the higher ground supports species-rich flood meadow grassland. Great burnet *Sanguisorba officinalis*, meadowsweet *F ilipendula ulmaria*, meadow buttercup *Ranunculus acris*, ribwort plantain *Plantago lanceolata*, meadow vetchling *Lathyrus pratensis* and meadow foxtail *A lopecurus pratensis* are prominent in the sward together with large stands of bistort *Polygonum amphibium* and clumps of marsh marigold *Caltha palustris*. Of more scattered occurrence are pepper-saxifrage *Silaum silaus*, ragged robin *L ychnis flos-cuculi* and water forget-me-not *Myosotis scorpioides*.

The lower lying central area is covered in water for longer periods during winter floods and also remains damper during the summer months. Here, there are large stands of reed canary-grass *Phalaris arundinacea* swamp with creeping bent *Agrostis stolonifera* and common couch *Elymus repens*. Occasional plants of meadow buttercup, great burnet and common marsh bedstraw *Galium palustre* can also be found and there are several extensive areas of common meadow-rue *Thalictrum flavum*. Short inundation grassland dominated by marsh foxtail *Alopecurus geniculatus*, with creeping bent, rough meadow-grass *Poa trivialis* and creeping buttercup *Ranunculus repens*, occurs in the damper areas in a mosaic with the beds of reed canary-grass.

6.2.4.5 The Nationally Designated Sites are all located over 1.5km from the Application Site. Consequently, the impact to the Nationally Designated Sites is considered to be negligible.

6.2.5 Locally Designated Sites

6.2.5.1 The following locally designated sites lie within 2 km of the Application Site (see figure 2):

6.2.5.1.1 Yorks Site of Importance for Nature Conservation

Site Code	Site Name	Distance (m)
1.	Sim Hill	1510
2.	Knivesmire Wood	1977
3.	Middlethorpe Crematorium	1998
4.	Archbishops Palace Grounds	1599
5.	Bond Hill Ash Farm Fen	938
6.	A64/036 Interchange Roundabout	827
7.	Drome Lane Hay Meadow	608
8.	Drome Lane Field Copmanthorpe	721
9.	Bishopthorpe Ings	1504
10.	Church Ings	1873
11.	Naburn Hall Meadow	1738
12.	York -Selby Cycle Track	1944
13.	River Ouse	1571

6.2.5.1.2 Yorkshire Wildlife Trust Reserves

Site Code	Site Name	Distance (m)
1.	Askham Bog	1324

6.2.5.2 The Locally Designated Sites will not be impacted on due to the small-scale nature of the proposed development and the distance between the Application Site and the nearest Locally Designated Site which is greater than 600 metres. Consequently, the impact to Locally Designated Sites is considered to be negligible.

6.2.6 Natural England Habitat Inventories

6.2.6.1 All the Natural England Priority Habitat inventories were searched, including the woodland inventory and grassland inventory. The following areas of notable habitat from the Habitat Inventories list were found within 2 km of the Application Site (see Figure 3).

In Application Site	Site Name	Min Distance (m)
No	Ancient and Semi Natural Woodland	1323
No	Coastal Floodplain and Grazing Marsh	1135
No	Coastal Floodplain and Grazing Marsh, Lowland Meadow	1510
No	Deciduous Woodland	693
No	Lowland Fens	1442
No	Lowland Meadows	1611
No	Traditional Orchard	476

6.2.6.2 The Natural England Priority Habitats will not be impacted on due to the small-scale nature of the proposed development and the distance between the Application Site and the notable habitat, which is greater than 450 metres. Consequently, the impact to the Natural England Priority Habitat is considered to be negligible.

Figure 1.

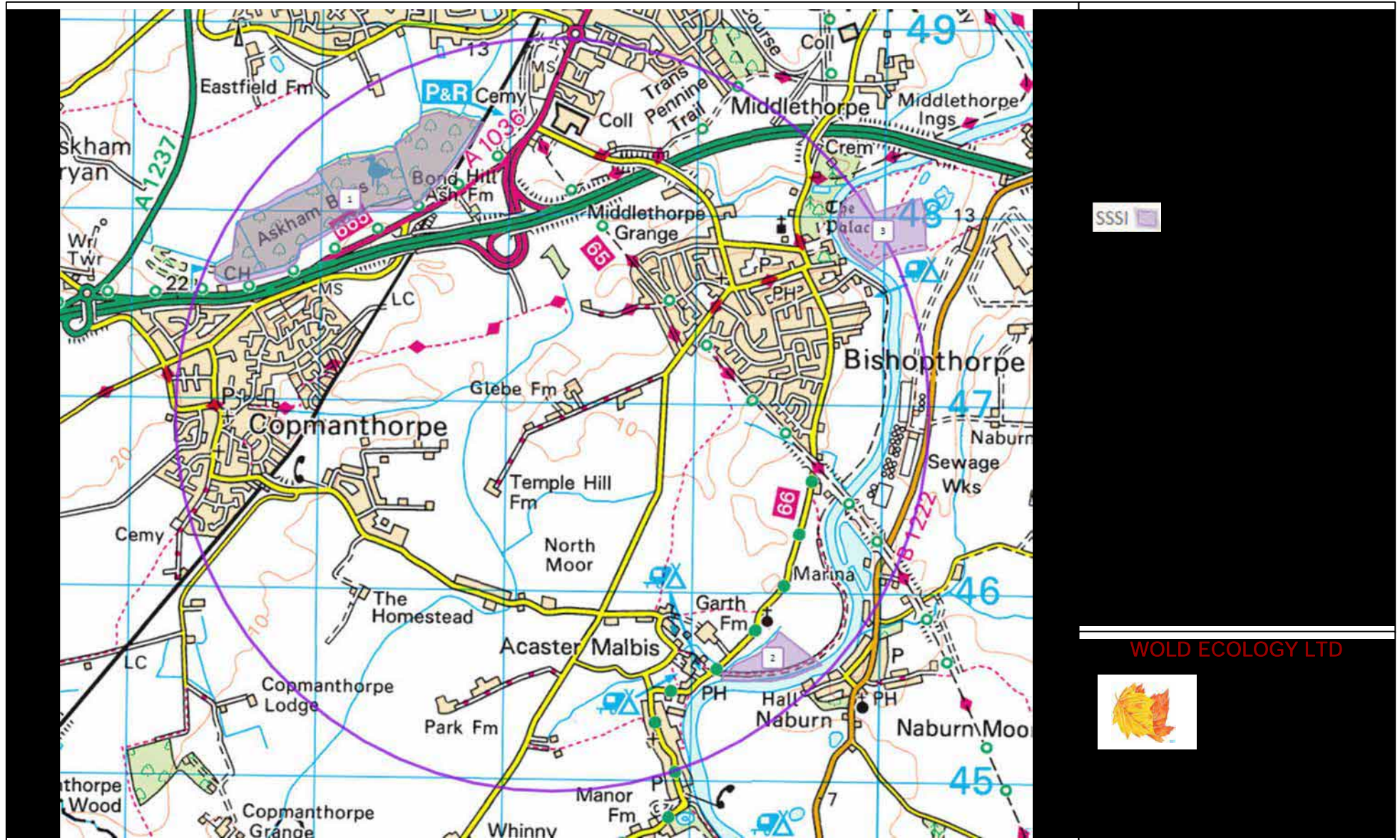
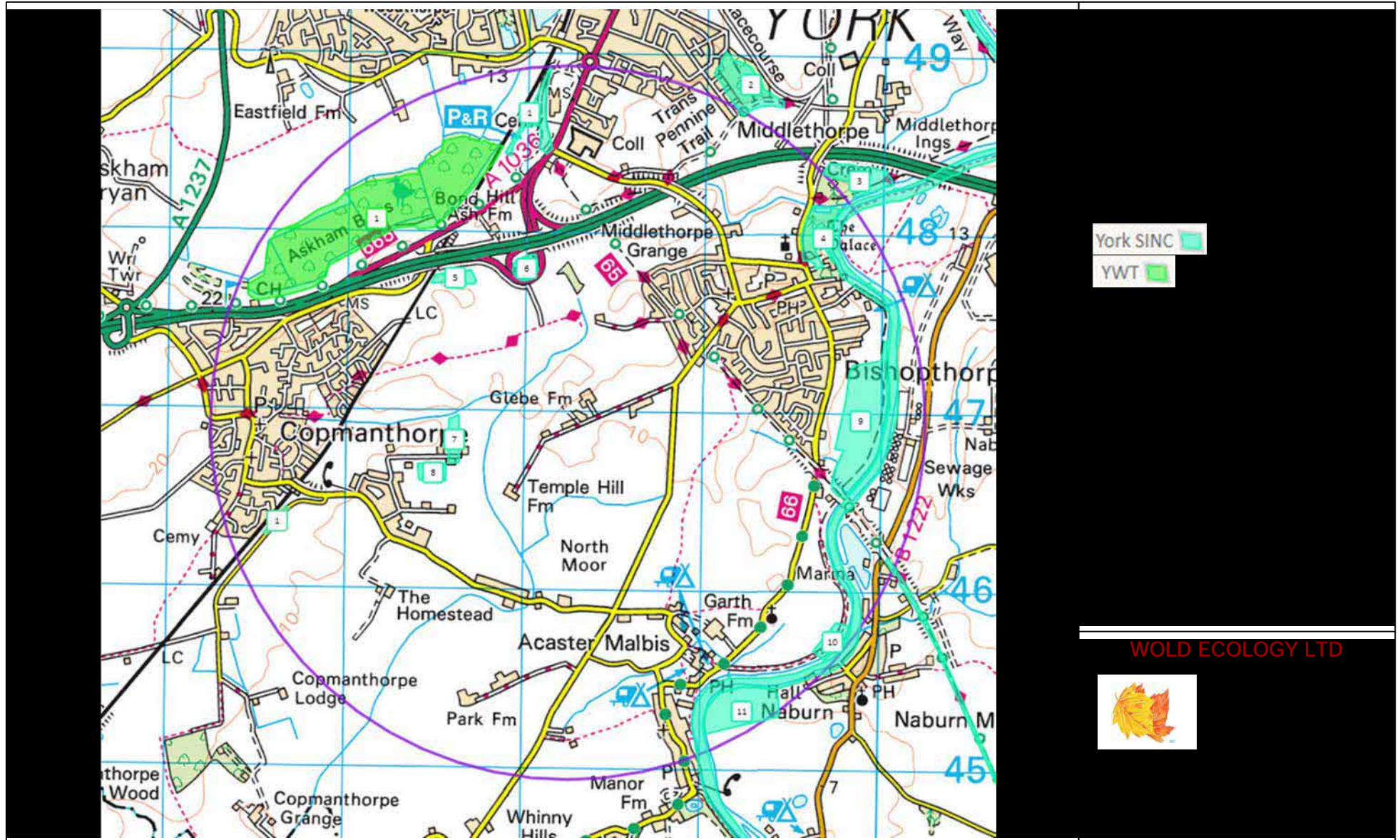


Figure 2.

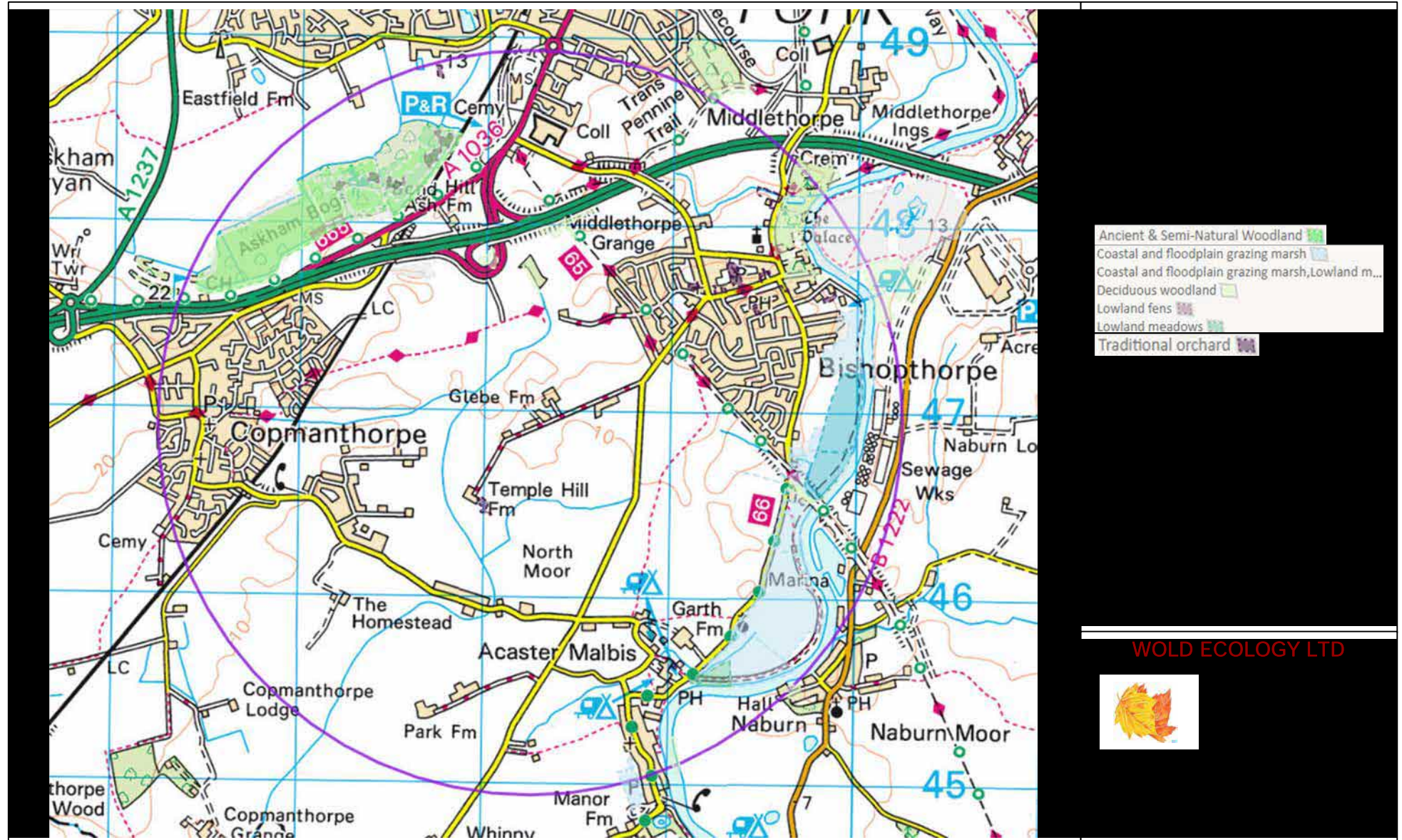


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Figure 3.

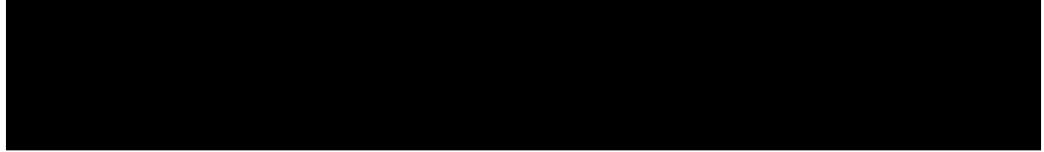


6.3 Natural Character Areas

- 6.3.1 National Character Areas (NCAs) divide England into 159 distinct natural areas. Each is defined by a unique combination of landscape, biodiversity, geodiversity, and cultural and economic activity. Their boundaries follow natural lines in the landscape rather than administrative boundaries, making them a good decision-making framework for the natural environment.
- 6.3.2 NCA profiles are guidance documents which will help to achieve a more sustainable future for individuals and communities. The profiles include a description of the key ecosystem services provided in each character area and how these benefit people, wildlife, and the economy. They identify potential opportunities for positive environmental change and provide the best available information and evidence as a context for local decision making and action.
- 6.3.3 The Application Site lies within Natural Character Area 28 The Vale of York and is summarised below:
- 6.3.3.1 The Vale of York is an area of relatively flat, low-lying land surrounded by higher land to the north, east and west. High-quality soils across most of the National Character Area (NCA) mean that arable cultivation is the predominant land use, although some pig and dairy farming takes place in the western parts of the NCA. A key feature of the NCA is the rivers that drain surrounding higher land and run southwards through the Vale on towards the Humber basin. Natural floodplain habitats and associated species are still found within the Lower Derwent Valley (designated as a Special Protection Area, Special Area of Conservation and Ramsar site) although, like other flood plains, this area is threatened due to water quality issues.
- 6.3.3.2 The City of York, a settlement that has been an important focus since Roman times, sits at the centre of this NCA. The prominent York Minster can be seen from lower-lying surrounding countryside and, together with the city walls, provides the setting for the historic city.
- 6.3.3.3 Food and water provision and the regulation of water flow and water quality are key ecosystem services provided by this NCA. Flooding affects a number of communities within the NCA, as they are within the lower stretches of the river flood plains. More than 7,000 properties are at risk of flooding in York, Bishopthorpe, Haxby and Strensall from the River Ouse catchment.
- 6.3.4 There are no relevant Statements of Environmental Opportunities that are relevant to the Application Site.

6.4 European Protected Species records (relevant to the Application Site)

6.4.1



6.4.2 Bats

Currently, there is no pre-existing information on bats at the site.

There are records of brown long-eared *Plecotus auritus*, noctule *Nyctalus noctula*, Natterer's bat *Myotis nattereri*, Daubenton's bat *Myotis daubentonii*, whiskered *Myotis mystacinus*, soprano pipistrelle *Pipistrellus pygmaeus* and common pipistrelle *Pipistrellus pipistrellus* within the surrounding 5km radius of the Application Site. (source –NEYEDC 2023 and Wold Ecology network pers comm). Wold Ecology bat records date from 2006 and include over 1000 bat activity surveys.

There are no known Natural England development licenses relating to bats within 2km of the Application Site (source –www.magic.gov.uk).

6.4.3 Great crested newts

Great crested newt *Triturus cristatus* is recorded within the surrounding 2km radius with records at:

Location	Distance from site	Direction
Askham Bog	1324m	NW
source –NEYEDC 2023 and Wold Ecology network pers comm		

There are no Natural England eDNA records within 2km of the Application Site (source – <https://naturalengland-defra.opendata.arcgis.com/datasets/great-crested-newts-edna-pond-surveys-for-district-level-licensing-england>)

There are no great crested newt Natural England development licenses within 1km of the Application Site (source –www.magic.gov.uk).

6.4.4 Water vole

Water vole *Arvicola amphibious* is recorded within the surrounding 2km radius with records at:

Location	Distance from site	Direction
Askham Bog	1324m	NW
The Fleet	1954 km	SW
source –NEYEDC 2023 and Wold Ecology network pers comm		

6.4.5 Otter

There are no otter *Lutra lutra* records within 2km of the Application Site (source –NEYEDC 2023).

6.4.6 Reptiles

There are no reptile records within 2km of the Application Site (source – NEYEDC 2023 and Wold Ecology network pers comm).

7.0 PHASE 1 FIELD SURVEY RESULTS

7.1 The following habitat types were recorded within the Application Site:

Phase 1 Habitat Classification	JNCC Reference Code
Coniferous plantation	A1.2.2
Mixed plantation	A1.3.2
Semi improved neutral grassland	B2.2
Amenity grassland	J1.2
Introduced shrub	J1.4
Intact species poor hedge	J2.1.2
Fence	J2.4
Buildings	J3.6
Bare ground	J4

7.2 Coniferous plantation

7.2.1 A belt of mature Leyland cypress occurs along the southern boundary of the Application Site and achieves a height of over 7 metres and has presumably been planted to act as a wind break from adjacent agricultural land to the south. Whilst originally maintained as a hedge, these are no longer managed and have now formed into trees.

7.3 Mixed plantation

7.3.1 A block of plantation occurs in the northern part of the Application Site and this stand of trees has a single age structure of approximately 40 years old. This plantation occurs on flat, well drained, eutrophic soils and appears to have been planted to act as a wind break, as well as screen the yard to the north of the site. The trees all appear to be in relatively good health, with deadwood communities absent from this area. A mixture of coniferous and deciduous species make up the canopy in this area.

7.3.2 Species in this habitat includes hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, wild cherry *Prunus avium*, damsons *Prunus domestica subsp. insititia*, silver birch *Betula pendula*, pedunculate oak *Quercus robur*, Lawson cypress *Chamaecyparis lawsoniana*, horse chestnut *Aesculus hippocastanum*, Scots pine *Pinus sylvestris*, field maple *Acer campestre*, hazel *Corylus avellana*, Sitka spruce *Picea sitchensis*, downy birch *Betula pubescens*, ash *Fraxinus excelsior* and cherry laurel *Prunus laurocerasus*.

7.3.3 A shrub layer is poorly developed or absent from most of this habitat, basally nitrogen liking species dominate including stinging nettle *Urtica dioica*, Himalayan balsam *Impatiens glandulifera*, herb Robert *Geranium robertianum*, elder *Sambucus nigra*, bramble *Rubus fruticosus agg.* and hedge woundwort *Stachys sylvatica*.

7.4 Semi-improved grassland

7.4.1 This habitat occurs in the north-west corner of the Application Site, adjacent to the plantation. This habitat has arisen through a lack of management and is likely to formerly been mown. Consequently, this habitat appears to have arisen from a lack

of regular grassland management. The soils appear to be nutrient rich, but free draining, with sandy friable soils.

7.4.2 Botanical species observed include false oat grass *Arrhenatherum elatius*, ribwort plantain *Plantago lanceolata*, cocksfoot *Dactylus glomerata*, dewberry *Rubus caesius*, ragwort *Jacobaea vulgaris*, hogweed *Heracleum sphondylium*, red fescue *Festuca rubra*, dandelion *Taraxacum officinale*, stinging nettle *Urtica dioica*, small nettle *Urtica urens*, common knapweed *Centaurea nigra*, yarrow *Achillea millefolium*, spear thistle *Cirsium vulgare*, hedge bindweed *Calystegia sepium*, agrimony *Agrimonia eupatoria*, common couch *Elymus repens*, birds-foot trefoil *Lotus corniculatus*, tufted-hair grass *D. eschampsia cespitosa* and silverweed *Potentilla anserina*.

7.5 Amenity grassland

7.5.1 Habitats immediately surrounding the house is dominated by this habitat type and comprises short and lush grass that is cut regularly throughout the growing season. It also appears to be subjected to occasional weed removal and applications of fertilisers and herbicides.

7.5.2 Species composition is relatively poor and botanical species observed included perennial ryegrass *Lolium perenne*, white clover *Trifolium repens*, annual meadow grass *Poa annua*, creeping buttercup *Ranunculus repens*, dandelion, daisy *Bellis perennis*, common ragwort *Jacobaea vulgaris*, red fescue, spear thistle and doves-foot cranesbill *Geranium molle*. Species diversity tends to increase in marginal areas. All species are common and widespread in amenity grasslands with a reduced ecological value due to management and soil fertility.

7.6 Introduced shrub

7.6.1 A small number of shrubberies of limited ecological interest are situated within the boundaries of the Application Site. These are primarily associated with the edges of the rear garden lawn. These shrubberies have been planted for their amenity value and are regularly maintained for their amenity value and consist of low maintenance hardy species.

7.6.2 Shrub species observed include osier *Salix viminalis*, cherry laurel, elder, dogwood *Cornus sanguinea*, butterfly bush *Buddleia davidii*, *Magnolia sp.* and *Berberis sp.*

7.7 In-tact species poor hedge

Location	This hedge forms the sections of the west and south boundaries of the Application Site.		
Height	2-5m	Width	2-3m
Cross Section	Sections boxed and other sections left unmanaged		
Gap –hedge base	Gap between ground and base of canopy less than 0.5 m for more than 90% of length.		
Gap - hedge canopy continuity	Gaps make up less than 10% of total length No canopy gaps greater than 5m		

Undisturbed ground and perennial vegetation	Less than 1m width of undisturbed ground with perennial herbaceous vegetation for more than 90% of its length. Adjacent land use (within 10m) comprises short grassland.
Species composition	Sections all comprise of single species and include beech <i>Fagus sylvatica</i> , hawthorn and cherry laurel. More than 90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species.
Species rich (four woody species per 30m length)	The hedgerow is not species rich and there are no ancient woodland or hedgerow communities associated with these hedges.
Management and current damage	Regularly cut, no evidence of coppicing or laying. Uncut hedge. More than 90% of the hedgerow or undisturbed ground is free of damage caused by human activities. There was no evidence to suggest that the hedgerows are old landscape features.

7.8 Fence

7.8.1 A diversity of fencing types occurs within the Application Site and are predominantly to restrict pedestrian as boundary garden fencing. Fencing comprises timber panel fencing that has a low ecological significance.

7.9 Buildings

7.9.1 The following buildings are present within the Application Site:

- a. *House*—is two storeys and comprises brick and rendered walls and a hipped roof covered with pan tiles. The roof is supported by smooth sawn timbers and is underdrawn with a breathable membrane and bitumen felt product. The dwelling is unoccupied.
- b. *Garden Shed*—is single story and comprises wooden panelled walls and a pitched wooden roof covered with a bitumen felt membrane. The roof is supported by smooth sawn timbers and is not underdrawn. The building is used for storage.

7.10 Bare ground

7.10.1 Bare ground habitats within the Application Site consist of pathways, roads, paving and parking areas. They comprise concrete, paving stones and bare soil substrate. These habitats are of no ecological significance and are starting to become colonised by species like butterfly bush due to a lack of regular disturbance.

7.11 Invasive species

7.11.1 Himalayan balsam has been identified within the Application Site. This species are included on Schedule 9 of the Wildlife and Countryside Act 1981 (Section 2).

7.12 The following species of fauna were recorded during the field survey:

Blackbird	<i>Turdus merula</i>
Robin	<i>Erithacus rubecula</i>
Blue tit	<i>Cyanistes caeruleus</i>
Starling	<i>Sturnus vulgaris</i>
House sparrow	<i>Passer domesticus</i>
Chaffinch	<i>Fringilla coelebs</i>
Goldfinch	<i>Carduelis carduelis</i>
Woodpigeon	<i>Columba palumbus</i>
Dunnock	<i>Prunella modularis</i>
Carrion crow	<i>Corvus corone</i>
Magpie	<i>Pica pica</i>
Jackdaw	<i>Corvus monedula</i>
Rook	<i>Corvus frugilegus</i>
Pheasant	<i>Phasianus colchicus</i>

8.0 SPECIES APPRAISAL

8.1 The habitats within and surrounding the Application Site are potentially important, and the development area may impact upon mobile species. Consequently, the field survey and preliminary ecological appraisal targeted the following species relevant to the Application Site and proposed development:

Bats
Great crested newt
Badger
Reptiles
Birds
Hedgehog

8.2 Bats

8.2.1 Legislation

8.2.1.1 All bats and their roosts are fully protected under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000) and are further protected under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

8.2.1.2 The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, provision 41 states an offence is committed if a person:

- (a) Deliberately captures, injures, or kills any wild animal of a European protected species (i.e. bats),
- (b) Deliberately disturbs wild animals of any such species,
- (c) Deliberately takes or destroys the eggs of such an animal, or
- (d) Damages or destroys a breeding site or resting place of such an animal.

8.2.1.3 Section 9 of the Wildlife and Countryside Act (1981) states:

It is an offence for anyone without a licence to kill, injure, disturb, catch, handle, possess or exchange a bat intentionally. It is also illegal for anyone without a licence to intentionally damage or obstruct access to any place that a bat uses for shelter or protection.

8.2.1.4 Bat roosts are protected throughout the year, whether or not bats are occupying a roost site.

8.2.2 Field Survey Methodology

8.2.2.1 The daytime assessment identified whether the trees and building had any signs of occupancy and/or bat usage. This took the form of a methodical search, both internally and externally, for actual roosting bats and their signs. Specifically, the visual survey involved the following:

8.2.2.2 Trees

- a. Assessment and evaluation of the trees and their potential to support bats;
- b. Tree hazard assessment including tree characteristics, health, site conditions, and defects in relation to a trees potential to support bats. Features that might indicate the presence of bats are as follows:

Trees that contained a cavity or space of at least 10mm

Woodpecker holes, rot holes, cavities, loose bark and ivy, examples of known roost sites

Tree diameter at chest height of > 20cm (less indicates that bats are less likely to be present)

Trees < 80 years of age are less likely to be attractive to bats

Droppings, scratch marks and staining on beams, cavities and under bark.

- b. Assessment of crevices and cracks to assess their importance for roosting bats.

8.2.2.3 Buildings

Assessment for droppings on walls, windowsills and in roof spaces

Scratch marks and staining on beams, other internal structures and potential entrance and exit holes

Wing fragments of butterfly and moth species underneath beams and other internal structures

The presence of dense spider webs at a potential roost can often indicate absence of bats

Assessment of crevices and cracks in the buildings to assess their importance for roosting bats

8.2.3 Field Survey Results

- 8.2.3.1 Following the visual inspection, an assessment was made of the buildings and trees suitability to support roosting bats.

- 8.2.3.2 **House** - the following roosting opportunities were present within the fabric of the building:

Gaps beneath the ridge tiles where mortar has been displaced.

There are no missing ridge tiles.

Loose fitting pan tiles with gaps beneath.

Gaps in missing mortar below gable tiles.

Gaps below lead flashing.

Gaps above the eaves.

The timber doors and timber window frames were tight fitting.

Gaps above the internal wall plates.

Gaps between felt and pan tiles above.

Gaps in the internal brick work.

There was no open doors/window access into the building.

No evidence of bats was observed.

The building has been assessed as having a LOW SUITABILITY to support bats.

- 8.2.3.3 **Shed** - no roosting opportunities were present within the fabric of the shed due to the following:

The timber frame, and timber panelling were tightfitting.

The eaves are tight fitting and there are no gaps in the external structure suitable for roosting bats.

The single skin wooden structure ensures that there are no gaps within a wall cavity.

The timber doors and timber window frames were tight fitting.
 There are no gaps in the roof structure to support roosting bats.
 There was no open doors/window access into the building.
 There were no obvious access points into the roof void.
 No evidence of bats was observed.
 The building has been assessed as having a NEGLIGIBLE SUITABILITY to support bats.

8.2.3.4 Based on the field survey and the criteria in table 4.1 (Bat Surveys for Professional Ecologists –3rd Edition, p35. Bat Conservation Trust, 2016), the Application Site and studied building has the following suitability for bats:

	Negligible	Low	Moderate	High
Application Site habitats (<3km)		X		
House		X		
Shed	X			

8.2.4 Justification of activity surveys

8.2.4.1 The level of survey to give confidence in a **negative result** is summarised as (Bat Surveys for Professional Ecologists, 3rd Edition. Bat Conservation Trust, 2016):

Low Roost Suitability	Moderate Roost Suitability	High Roost Suitability
One survey visit. One dusk emergence or dawn re-entry survey.	Two separate survey visits. One dusk emergence survey and a separate dawn re-entry survey.	Three separate survey visits. At least one dusk emergence survey and a separate dawn re-entry survey. The third visit could either be dusk or dawn.
May to August.	May to September with at least one survey between May to August.	May to September with at least two surveys between May to August.
Activity surveys should be at least 2 weeks apart. Moderate buildings will be assessed according to site location and habitats within the locality and if there is a possibility that late emerging bats are present, a dawn survey will be more appropriate.		

8.2.4.2 The Application Site requires the following surveys between May and late September:

	Emergence (dusk)			Re-entry (dawn)		
	LOW	MOD	HIGH	LOW	MOD	HIGH
House	x 1					
Shed	Negligible –no further surveys required.					

Table 4.1 Guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement.

Suitability	Description Roosting habitats	Commuting and foraging habitats
Negligible	Negligible habitat features on site likely to be used by roosting bats.	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions ^a and/or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation ^b). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential. ^c	Habitat that could be used by small numbers of commuting bats such as a gappy hedgerow or unvegetated stream, but isolated, i.e. not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions ^a and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions ^a and surrounding habitat.	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river valleys, streams, hedgerows, lines of trees and woodland edge. High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed parkland. Site is close to and connected to known roosts.

Source - Bat Surveys for Professional Ecologists –3rd Edition, p35. Bat Conservation Trust, 2016.

8.2.5 Results of Activity Surveys

8.2.5.1 25th September 2023

The first common pipistrelle bat was detected at 1920. This was close to the anticipated (< 30 minutes after sunset) emergence time and suggests that the bat emerged from a roost close by. The bat appeared from the direction of the adjacent housing to the east.

Common pipistrelle, soprano pipistrelle and brown long-eared bats were detected and/or observed foraging and commuting around the site in low numbers.

No bats were observed emerging from the house.

8.2.5.2 For survey results see appendix 7.

8.2.6 Site Status Assessment

8.2.6.1 The site is currently used by foraging and commuting common pipistrelle, soprano pipistrelle and brown long-eared bats, a maximum of two bats were observed at any one time.

- 8.2.6.2 No roosting bats or evidence of roosting bats were observed during the field surveys. The impact to roosting bats is considered to be **neutral**.
- 8.2.6.3 The wider area supports habitats which offer alternate foraging and commuting habitat for bats. The Application Site habitats are similar to surrounding village habitats and consequently, the Application Site is not considered integral to the favourable population status of local bat populations. The impact to foraging and commuting bats is considered to be **neutral**.
- 8.2.7 Biodiversity Gains and Recommendations
- 8.2.7.1 As no bat roosts or evidence of bats were detected in the house during the surveys, demolition work to the aforementioned building would not require a Natural England development licence. However, the building has a low suitability of bat interest and therefore has features that could support roosting bats. There is a low possibility that individual bats could roost in the building at any time during the year. The following procedures highlighted in Section 8.2.7 should be adopted during the demolition works. Section 8.2.7 identifies working practices or precautions necessary to avoid injury or death to any bats that may be present in the buildings.
- 8.2.7.2 **This statement should be copied to contractors and all those involved with tile removal, soft strip, demolition and building works, whose work may affect bats and their roosts on site. Even though bats have not been found, works should occur as though bats could be present.**
- 8.2.7.3 Timing
- 8.2.7.3.1 There are no mandatory timing constraints when roosting bats have not been found.
- 8.2.7.4 Locating Bats
- 8.2.7.4.1 Bats are by nature highly secretive, mobile mammals, therefore bats and their roosts can be very difficult to detect. A pipistrelle bat is capable of roosting in a crack measuring 20mm. In order to reduce any unnecessary disturbance, injury or death of any late discoveries of individual bats roosting in the buildings the following procedures should be implemented. Common roost locations must be checked. These include:
- Underneath ridge tiles
 - Underneath pan tiles
 - Gaps in mortar
 - Above the eaves and internal wall plates
 - Under lead flashing
 - Roof timbers including ridge beams and rafters
- 8.2.7.5 Working Approach
- 8.2.7.5.1 Careful removal by hand of all fittings and fixtures as describe in 8.2.7.4.1. Wall cavities should be checked prior to demolition (if applicable).
- 8.2.7.5.2 Remove roof coverings by hand. Only half of the roof should be removed on the first day and the second half 24 hours later. This will create unfavourable conditions

for any bats still roosting within the roof structure and encourage the bats to leave on their own accord.

- 8.2.7.5.3 In the unlikely event that bats are discovered:
Immediately stop the work that you are undertaking.
Do not expose the bat or cause it to fly out of the roost on its own accord.
Contact Wold Ecology on 01377 200242 or 07795 071504 for advice.
Advise colleagues in the vicinity of your work why you have stopped and advise them to be aware of the potential for bats being disturbed, injured or killed.
Immediately report the matter to your site manager/line manager who will inform relevant personnel.
Grounded bats must be carefully placed in a lidded, ventilated box with a piece of clean cloth and a small shallow container with some water. The box must be kept in a safe and quiet location.
Any underweight or injured bats must be taken into temporary care by an experienced bat carer and looked after until such time that the bat can be transferred to a suitable replacement roost at the same site, or weather conditions are suitable for release at the same site.
- 8.2.7.5.4 Bats will only be handled by a licensed bat ecologist, wearing gloves, who has received a rabies vaccination. The bat will be placed either into a holding box, with water provided, and re-released close to the farm at dusk, or placed into a bat box located on site.
- 8.2.7.5.5 Injured bats will be taken into care (as directed by the Bat Workers Manual, section 7.3, pages 64 –66: 3rd edition 2004) and fed and cared for until such time when conditions are suitable (night time temperature are $>6^{\circ}\text{C}$) for them to be released at dusk in the mitigation area.
- 8.2.7.6 Specially designed bat boxes can be located on site. Schwegler Bat Boxes are recommended and well tested boxes. The following bat boxes provide additional roost habitats and are available from Wold Ecology:
The **1FQ** is an attractive box designed specifically to be fitted on the external wall of a house, barn or other building. Equally appealing to bats as a roost or a nursery, it features a special porous coating to help maintain the ideal temperature inside along with a rough sawn front panel to enable the bats to land securely.
Bat Tube (**1FR** and **2FR**) system. The tube is designed to meet behavioural requirements of the types of bats that roost in buildings i.e. pipistrelle spp. This design can be installed flush to external walls and beneath a rendered surface.
Alternative bat boxes are available, these should comprise woodcrete and not timber.
- 8.2.7.7 The majority of these boxes are self-cleaning as they are designed so that the droppings fall out of the entrance. This reduces the possibility of smell during the summer months. For more information on designs and installation of bat boxes see: www.schwegler-natur.de and www.bct.org.uk.

- 8.2.7.8 Wold Ecology recommends that at least 1 bat box is sited on a new building on site. Bat boxes should be erected on south, east or west elevations; 3-5 metres above ground level or close to roof lines.
- 8.2.7.9 Lighting has a detrimental effect on bat activity; many bats will actually avoid areas that are well lit. Lighting can cause habitat fragmentation by preventing bats from commuting between roosts and foraging grounds (A.J Mitchell-Jones 2004).
- 8.2.7.10 It is recommended that a lighting consultant is employed to design a lighting plan based on the following principles:
- Luminaire and light spill accessories - Lighting should be directed to where it is needed, and light spillage avoided. This can be achieved by the design of the luminaire and by using accessories such as hoods, cowls, louvres and shields to direct the light to the intended area only.
 - If applicable, the height of lighting columns in general should be as short as is possible as light at a low level reduces the ecological impact. However, there are cases where a taller column will enable light to be directed downwards at a more acute angle and thereby reduce horizontal spill. For pedestrian lighting, this can take the form of low level lighting that is as directional as possible and below 1 lux at ground level.
 - Aim for lighting column of 5m or less, hooded and cowled to prevent light spill, for main lighting columns.
 - All luminaires should lack UV elements when manufactured. Metal halide, fluorescent sources should not be used.
 - LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
 - A warm white spectrum (ideally <2700Kelvin) should be adopted to reduce blue light component.
 - Luminaires should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012).
 - Internal luminaires can be recessed where installed in proximity to windows to reduce glare and light spill.
 - The use of specialist bollard or low-level downward directional luminaires to retain darkness above can be considered.
 - Only luminaires with an upward light ratio of 0% and with good optical control should be used.
 - Luminaires should always be mounted on the horizontal, i.e. no upward tilt.
 - Any external security lighting should be set on motion-sensors and short (1min) timers.
 - As a last resort, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed.
 - Light spill can be successfully screened through soft landscaping and the installation of walls, fences and bunding
- 8.2.7.11 At this site, new lighting design will ensure lights will **not** be mounted where they will shine directly on to bat boxes, or the surrounding habitat used by foraging and commuting bats. A light intrusion lux level besides bat boxes will be 1 lux or below.

8.3 Great crested newt.

8.3.1 Legislation

8.3.1.1 The great crested newt is protected under European and British legislation. Under European legislation it is protected under EC Directive (92/43/EEC) 'The Conservation of Natural Habitats and of Wild Fauna and Flora', being listed under Annexes IIa and IVa. This is implemented in Britain under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000) and is further protected under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. This prohibits the intentional killing of newts, the deliberate taking or destruction of eggs, damage or destruction of a breeding site or resting place, intentional/reckless damage to or obstruction of a place used for shelter or protection, possession of a great crested newt and any form of trade of great crested newts.

8.3.1.2 Under British legislation, the great crested newt is given full protection under section 9 of the Wildlife and Countryside Act 1981 (as amended). This Act transposes into UK law the Convention on the Conservation of European Wildlife and Natural Habitats (commonly referred to as the 'Bern Convention'). This prohibits the intentional killing, injuring or taking, possession or disturbance of great crested newts whilst occupying a place used for shelter or protection and the destruction of these places. Protection is given to all stages of life (e.g. adults, sub-adults, larvae, and ovae).

8.3.1.3 In combination the above legislation prohibits the following:

- Intentionally kill, injure or take a great crested newt;
- Possess or control any live or dead specimen or anything derived from a great crested newt;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a great crested newt;
- Intentionally or recklessly disturb a great crested newt while it is occupying a structure or place which it uses for that purpose;
- Deliberately capture or kill a great crested newt;
- Deliberately disturb a great crested newt;
- Deliberately take or destroy eggs of a great crested newt;
- Damage or destroy a breeding site or resting place of a great crested newt.

8.3.1.4 The great crested newt is therefore described as 'fully protected'.

8.3.2 Field Survey Methodology

8.3.2.1 A habitat assessment was completed on the proposed development area and surrounding land (250 metres radius) accessible at the time of the survey. The assessment combined Great Crested Newt Mitigation Guidelines (English Nature 2001) and Evaluating the Suitability of Habitat for the Great Crested Newt (R. S. Oldham, J. Keeble, M. J. S. Swan and M. Jeffcote, undated) methodology.

8.3.2.2 The entire Application Site was assessed for its potential to support great crested newts, whilst conducting the field survey. In addition, aerial photographs, maps and physical searches of the surrounding landscape identified how the Application Site is connected to ponds within the locality and potentially, great crested newt populations.

8.3.2.3 Amphibians can take refuge under logs, bark and stones whilst in terrestrial habitat. All available features within the Application Site were turned over to search for the presence of amphibians. This method is not an effective method of presence/absence; however, it can be used as a general indication of amphibians within an area. Despite the time of year amphibians are occasionally found outside of hibernacula in such situations, especially during mild damp weather such as that prior and during the field survey.

8.3.3 Field Survey Results

8.3.3.1 No records of great crested newt occur within 1km of the Application Site. The closest known populations are in excess of 1km and are fragmented by expanses of arable land and road networks.

8.3.3.2 No ponds or permanent water bodies suitable for breeding great crested newts were observed within the Application Site, the field survey and analysis of maps suggests that the nearest pond is located over 250m from the Application Site. The wider habitat is largely well drained except for ornamental garden ponds associated with the nearby housing estate. Ornamental ponds are typically sub-optimum great crested newt habitat and have reduced potential for great crested newt; they are not considered to be of any significance to the species. Key attributes to the decreased probability of great crested newts being present within ornamental garden ponds are:

High density of stocked fish, which predate great crested newt larvae, eggs, and adults. The London Essex and Hertfordshire Amphibian and Reptile Trust state that 'Despite the natural protection of a poisonous secretion which makes the adults unpalatable to most predators, the larvae are highly vulnerable to fish predation. Entire colonies can be impacted upon by the introduction of fish'. It is unlikely that ponds with fish support great crested newts.

Decrease macrophyte growth due to fish disturbance and foraging and decreased water turbidity.

Increased water turbidity due to fish disturbance and associate high nitrate input.

Fish likely to predate large numbers of the invertebrates important for great crested newt reproduction and adult diet.

Poor vegetation structure, creating cold micro-climate and lack of sunlight penetration.

Usually small pond size, limiting the reproductive value for such water bodies, not allowing sufficient recruitment to support viable populations.

Isolated nature resulting in failure to form meta-populations and limits genetic diversity, further limiting breeding recruitment.

Often ornamental ponds have raised sides making it impossible for amphibians to access them.

Fishponds usually have pumps, filters, waterfalls and fountains which reduce the value to great crested newts. Free swimming larvae struggle to swim in moving water, also amphibians are prone to being killed by getting sucked into pump and filter systems.

8.3.4 Site Status Assessment

8.3.4.1 Whilst it is not always possible to demonstrate site absence from a single site survey, with the evidence collected from a habitat survey and desk top study, the likelihood of the presence of great crested newts in the Application Site is decreased. Key attributes to the reduced probability of great crested newts being present are:

No records of great crested newt exist within 1km of the Application Site.

There is no current knowledge of great crested newts within the Application Site.

No suitable ponds exist within the Application Site.

No suitable breeding ponds were observed within 250m of the Application Site.

The surrounding arable landscape significantly hampers great crested newt dispersal into the area, without the aid of humans. Great crested newts tend not to occur within areas of arable land unless it is directly adjoined to a breeding pond, unlike in the Application Site. Arable land is open, well drained with limited refugia leading to a significant risk of predation. The use of pesticides, lack of vegetation diversity and lack of refuge leads to poor invertebrate habitat and therefore poor foraging habitat.

8.3.5 **Wold Ecology does not recommend any further surveys for great crested newts.**

8.3.6 Access was only granted within the Application Site and land owned by the client; neighbouring land was only studied from vantage points, maps and aerial photography and it is possible that some ponds may not have been recorded.

8.4 Birds

8.4.1 Birds are afforded various levels of protection and levels of conservation status on a species by species basis. The most significant general legislation for British birds lies within Part 1 of the Wildlife and Countryside Act 1981 (as amended). Under this legislation, it is an offence to, kill, injure or take any wild bird, take, damage or destroy the nest of any wild bird while that nest is in use or being built, take or destroy an egg of any wild bird.

8.4.2 Schedule 1 Birds

8.4.2.1 Schedule 1 birds are rare or scarce species afforded the same protection as above (8.4.1.1), but also have additional protection under Part 1 of the Wildlife and Countryside Act 1981 (as amended). This further protection protects these species from being intentionally or recklessly disturbed whilst nesting, either at or close to the nest site.

8.4.3 Planning consent for a development does not provide a defence against prosecution under this act.

8.4.4 Field Survey Methodology

8.4.4.1 All bird species recorded by either sight, song or call were noted, in addition particular attention was given to key species of conservation concern and which habitat within the Application Site they were recorded using. All active (and disused)

nests, territorial, breeding, and foraging birds were recorded in further detail to analyse how breeding birds use the Application Site.

- 8.4.4.2 The survey followed guidance and methods recommended within *Bird Monitoring Methods, a manual of techniques for key UK species* Gilbert et.al RSPB 1998, *Common Standards Monitoring Guidance for Birds* JNCC 2004 and *Survey Techniques Leaflet 8*.
- 8.4.4.3 Wold Ecology assessed the site for schedule 1 listed species recorded having bred or attempted to breed in Yorkshire (Wold Ecology, NEYEDC), which have the potential to breed within the Application Site and/or surrounding adjacent local area or breed elsewhere whilst using the Application Site to forage or roost.
- 8.4.5 Field Survey Results
 - 8.4.5.1 Schedule 1 Listed Birds
 - 8.4.5.1.1 Wold Ecology concludes that the Application Site is of low value to schedule 1 listed species. This is primarily due to the managed/disturbed nature of the Application Site, it is surrounded by high hedges and trees, lack of suitable or extensive habitats in the locality and adjacent habitats with no features to support nesting Schedule 1 listed species. None of the trees within the Application contain suitable nesting locations for Schedule 1 Listed Birds.
 - 8.4.5.2 None-schedule 1 birds - breeding birds
 - 8.4.5.2.1 Impacts related to breeding birds are essentially related to the temporary loss of habitat which is utilised by breeding species. Related to this is the risk that birds could be nesting within impacted habitats at the time that construction work is programmed to start. Of relevance to this project are small passerine species, particularly those associated with the trees, buildings, shrubberies, and hedgerows.
 - 8.4.5.3 None-schedule 1 birds - wintering birds
 - 8.4.5.3.1 The Application Site is not considered to be valuable to wintering birds like wildfowl and waders. The Application Site is too enclosed, with high hedgerows and is bounded by housing and roads causing regular disturbance, reducing the value of the habitat for these species groups, nor is it in close proximity to suitable aquatic habitats. The only impact typically of any relevance to wintering birds are those associated with the temporary loss of food sources. This is principally associated with the loss of any sections of hedgerow and scrub which provide a potential source of food to a range of wintering species. However, these habitats are abundant within the wider area and are not thought to be of significant importance to birds.
- 8.4.6 **Wold Ecology does not recommend any further surveys for birds.**
- 8.4.7 Biodiversity Gains and Recommendations
 - 8.4.7.1 It is concluded that the Application Site is a suitable habitat for woodland edge and agricultural bird species with various designations. There is nesting potential for a range of birds such as thrushes, finches, sparrows, wood pigeon *Columba palumbus*, magpie *Pica pica*, dunnock *Prunella modularis* and wren *Troglodytes troglodytes*. Several simple management prescriptions can improve the site for breeding bird species.

8.4.7.2 Any buildings, trees, hedgerows, shrubberies and tall vegetation to be removed should be cleared outside of the bird nesting season (i.e. clearance should be undertaken between mid-September and early February inclusive) or be carefully checked* by an ecologist to confirm no active nests are present - prior to removal during the summer period. If nesting birds are found during the watching brief, works will need to stop until the young have fledged. Since a number of nests are active, work will need to wait until fledging has occurred, then trees should be removed immediately to avoid other nests being created.

* Thick and overgrown hedgerows are often difficult to inspect fully and removal of a hedge during the spring/summer period is not recommended.

8.4.7.3 In order to increase nesting opportunities for birds, it is recommended that Schwegler bird boxes are erected throughout the site. A summary of recommended bird boxes is listed below:

Name	Description	Number
Schwegler swift box #16S	Building box for eaves	2
Schwegler sparrow terrace #1SP	Brick building box	2

8.4.5.4 Boxes should be placed so that the entrance does not face the prevailing wind, rain and strong sunlight. The sector from north to south east should be used, with south facing boxes positioned in more shaded areas.

8.4.5.5 Many species will use boxes at a wide variety of heights however to give the box protection in areas with a lot of human or mammalian predator activity they should be placed approximately 3-4 metres above ground level. A clear flight path should be available to and from the nest box.

8.5

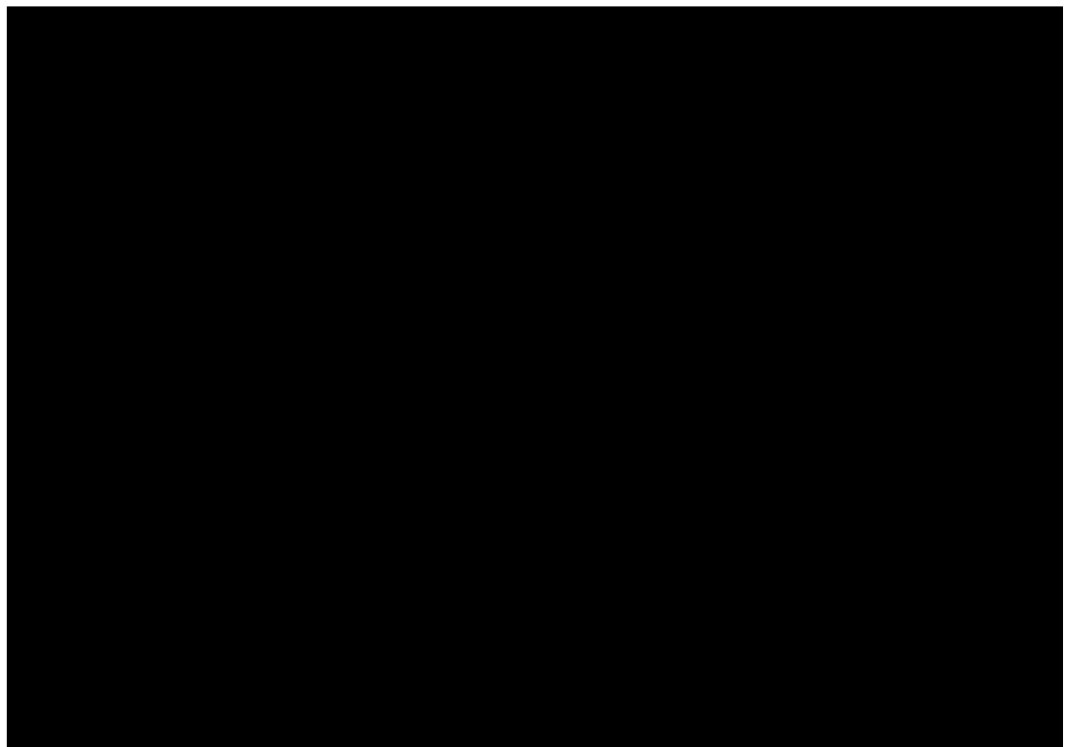
8.5.1

8.5.1.1

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8.5.2.1



8.5.2.2

8.5.3

8.5.3.1

8.5.3.2

8.6 Reptiles

8.6.1 Legislation

8.6.1.1 The legislation relating to the protection of the more common reptiles (adder *Vipera berus*, grass snake *Natrix helvetica*, common lizard *Zootoca vivipara* and slowworm *Anguis fragilis*) in Britain is contained mainly within the Wildlife and Countryside Act (1981) as amended by the Countryside and Rights of Way Act (2000). Their inclusion on Schedule 5 gives 'partial protection' (i.e. only parts of section 9 apply). Under the Act it is an offence to;

Intentionally (or recklessly) kill or injure commoner reptile species.

8.6.1.2 The less common reptile species such as sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca* have a higher level of protection under the Wildlife and Countryside Act (1981). However, these species will not be present within the Application Site, owing to their restricted southerly British distribution and the lack of suitable habitat.

8.6.1.3 Since its original enactment, the Wildlife and Countryside Act has been subject to many changes (notably via Schedule 12 of the Countryside and Rights of Way Act 2000) and is further protected under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. These have in particular affected penalties and enforcement. Offences under section 9 of the Act are now 'arrestable'. Enforcement is usually by the Police and less frequently by Natural England. However, section 25(2) of Wildlife and Countryside Act also states that a local authority may institute proceedings. Prosecutions can result in a level five fine (currently £5000) for each offence (and the Act is specific that killing/injuring of each individual animal can constitute a separate offence), the forfeiture of any equipment, etc., used to perpetrate that offence and (under the Countryside and Rights of Way Act 2000) up to six months imprisonment.

- 8.6.2 Field Survey Methodology
- 8.6.2.1 No direct observations or field signs of reptiles was recorded on site. A full walkover was undertaken to assess the sites potential to support reptiles.
- 8.6.3 Field Survey Results
- 8.6.3.1 The desktop study did not identify any reptile records within 2km of the Application Site. Reptiles are moderately localised in North Yorkshire.
- 8.6.3.2 The Application Site is considered to be unsuitable for reptiles for the following reasons:
- The Application Site and adjacent habitats are heavily disturbed on a daily basis.
 - Reptiles thermoregulate in sheltered locations, predominantly in close proximity to cover such as rank or shrubby vegetation, large rocks, walls, and tree stumps in which they can quickly escape. The Application Site primarily consists of open exposed habitat, with limited and largely insufficient thicker marginal vegetation, making reptiles prone to predation.
 - Compost heaps, rotten logs and decaying vegetation provide important breeding, foraging and thermoregulation habitat for slow worm and grass snake. None of which are present in sufficient quantity within the Application Site.
 - Reptiles use cracks, crevices, and small mammal burrows to access underground refugia and hibernacula. These habitat features are limited within the Application Site, reducing the value to reptiles.
 - The lack of the above features, with a sufficient depth to remain frost free reduces the potential for reptiles to hibernate within the Application Site.
 - Reptiles are typically not very wide-ranging species, instead staying in optimum habitat. Such optimum habitat does not occur within or around the Application Site reducing the likelihood of animals passing through the site.
 - This past management is likely to have resulted in the site being sub-optimum for a long-time period, reducing the likelihood of viable populations persisting.
 - The open nature of the Application Site leaves reptiles open to predation from key predators including crows, kestrels, hedgehogs, domestic cats, and foxes.
 - The site is small, surrounded by disturbed land and fragmented from optimum reptile habitat in the wider area.
 - The poor value of the site to amphibians (grass snake's chief food source) further limit the sites importance to grass snakes.
- 8.6.4 **Wold Ecology does not recommend any further surveys for reptiles.**
- 8.7 **Hedgehog**
- 8.7.1 Legislation
- 8.7.1.1 Although the Hedgehog *Erinaceus europaeus* only receives partial protection under the Wildlife and Countryside Act 1981 (as amended), its numbers have declined dramatically over the past two decades, resulting in the suggested proposal of upgrade to a higher level of protected status. The British population has declined

by 25% over the past 10 years. The reasons for the decline are thought to be complex but include the loss of hedgerows and permanent grasslands as well as agricultural intensification.

8.7.2 Field Survey Methodology

8.7.2.1 All features of potential value to hedgehogs are surveyed; including areas of thick vegetation, outbuildings, lawns, grassland, scrub, woodland, and hedge bases. Evidence of breeding nests, hibernation nests and loafing nests were searched for in areas of suitable cover.

8.7.2.2 Well-worn animal paths, pool edges and footpaths were inspected for hedgehog footprints. Open areas were inspected for hedgehog droppings, particularly amenity grassland. Additionally, the surrounding road system was surveyed for road casualties.

8.7.2.3 The following field signs will indicate the presence of hedgehogs:

- Nests within dense vegetation, or under sheds
- Hedgehog droppings and prints
- Road casualties.

8.7.3 Field Survey Results.

8.7.3.1 No active or unused hedgehog nests were found within the Application Site. Most of the Application Site is too open to support nesting behaviour, although the hedgerow, woodland and shrub bases offer suitable habitat.

8.7.4 Biodiversity Gains and Recommendations

8.7.4.1 Care must be taken whilst carrying out vegetation clearance, or strimming. A thorough check of the vegetation prior to removal will help ensure that no hedgehogs are injured or killed during development works. Sleeping hedgehogs frequently suffer severe injuries from strimmers.

8.7.4.2 Avoid setting fire to piles of vegetation unless they have been turned, checked or moved immediately prior to burning. Hedgehogs often get killed or injured in fires during vegetation removal and during early November.

8.7.4.3 Encouraging thick hedgerow bases and areas of rough grassland will offer good hedgehog habitat within the study area. Hedgehogs favour lawned grassland in close proximity to rough grassland for foraging where they can access soil invertebrates on evenings.

8.7.4.4 A number of hedgehog houses should be positioned around the site within hedge bases, dense bramble and rough grassland –where applicable. These will provide important breeding and hibernation sites for hedgehogs within the local area. Boxes should be sited out of direct sunlight with the entrance facing away from prevailing winds, in or under thick vegetation. The boxes should be situated away from busy roads or areas of high disturbance.

8.7.4.5 Providing connectivity between habitats by leaving gaps below fences, gates and walls will allow hedgehogs access in and out of the site. Hedgehog holes must be

created in all partition fences, allowing free movement between gardens. Perimeter boundary fencing will include a hedgehog hole every 20m.

8.8 Invasive species

8.8.1 Legislation

8.8.1.1 As invasive plants listed under schedule 9 of the wildlife and countryside act have been identified on site, the site owner has a responsibility to prevent them spreading into the wild or causing a nuisance/damage.

8.8.1.2 You must not plant or otherwise cause to grow in the wild any plant listed on schedule 9 of the Wildlife and Countryside Act 1981.

8.8.1.3 Due to the presence of invasive plants within the Application Site, the owner must comply with specific legal responsibilities, including:

Spraying invasive plants with herbicide.

Cutting and burning invasive plants.

Burying invasive plant material on site.

Disposing of invasive plants and contaminated soil off site.

8.8.2 Field Survey Result

8.8.2.1 Himalayan balsam was recorded within the boundaries of Application Site.

8.8.2.2 Invasive non-native plants are species which have been brought into the UK which have the ability to spread causing damage to the environment, the economy and human health.

8.8.2.3 The site owner is not obliged to remove or treat invasive plants, but must not:
Allow invasive plants to spread onto adjacent land - the owner of that land could take legal action against you.
Plant or encourage the spread of invasive plants outside of your land - this can include moving contaminated soil from one place to another or incorrectly handling and transporting contaminated material and plant cuttings.

8.8.2.4 It is recommended that a specialist contractor (with appropriate experience and insurances) is employed to remove the Himalayan balsam off site.

9.0 HABITATS APPRAISAL

9.1 Biodiversity Action Plans (BAP) Habitats of Principal Importance for the Conservation of Biological Diversity

9.1.1 In 1995, 'Biodiversity: The UK Steering Group Report' was published, which aimed to conserve and enhance biological diversity within the UK, including action plans for 38 key habitats and for 402 of our most threatened species. These plans describe the status of each habitat and species, outline the threats they face, set targets and objectives for their management, and propose actions necessary to achieve recovery. The Biodiversity Action Plans (BAP) have recently been updated, new ones added, and others removed, so there are numerous habitats that have been listed as priorities for conservation action. A list of these UK BAP species and habitats can be found at <http://jncc.defra.gov.uk/page-5706>

9.1.2 In addition, there are approximately 150 Local Biodiversity Action Plans (LBAP), normally at county level. These plans usually include actions to address the needs of the UK priority habitats and species in the local area, together with a range of other plans for habitats and species that are of local importance or interest.

9.1.3 In summary, none of the following UKBAP Habitats (which meet the UKBAP Habitat criterion) were recorded on site:

UK BAP broad habitat.	UK BAP priority habitat.	Habitat present within the Application Site.
Rivers and Streams	Rivers	N
Standing Open Waters and Canals	Oligotrophic and Dystrophic Lakes	N
	Ponds	N
	Mesotrophic Lakes	N
	Eutrophic Standing Waters	N
	Aquifer Fed Naturally Fluctuating Water Bodies	N
Arable and Horticultural	Arable Field Margins	N
Boundary and Linear Features	Hedge rows	N
Broadleaved, Mixed and Yew Woodland	Traditional Orchards	N
	Wood -Pasture and Parkland	N
	Upland Oakwood	N
	Lowland Beech and Yew Woodland	N
	Upland Mixed Ashwoods	N
	Wet Woodland	N
	Lowland Mixed Deciduous Woodland	N
Coniferous Woodland	Upland Birchwoods	N
Acid Grassland	Native Pine Woodlands	N
Calcareous Grassland	Lowland Dry Acid Grassland	N
	Lowland Calcareous Grassland	N
Neutral Grassland	Upland Calcareous Grassland	N
	Lowland Meadows	N
Improved Grassland	Upland Hay Meadows	N
	Coastal and Floodplain Grazing Marsh	N
Dwarf Shrub Heath	Lowland Heathland	N
	Upland Heathland	N
Fen, Marsh and Swamp	Upland Flushes, Fens and Swamps	N

	Purple Moor Grass and Rush Pastures	N
	Lowland Fens	N
	Reedbeds	N
Bogs	Lowland Raised Bog	N
	Blanket Bog	N
Montane Habitats	Mountain Heaths and Willow Scrub	N
Inland Rock	Inland Rock Outcrop and Scree Habitats	N
	Calaminarian Grasslands	N
	Open Mosaic Habitats on Previously Developed Land	N
	Limestone Pavements	N
Supralittoral Rock	Maritime Cliff and Slopes	N
Supralittoral Sediment	Coastal Vegetated Shingle	N
	Machair	N
	Coastal Sand Dunes	N
Marine Habitats		N

9.2 Hedgerows

9.2.1 Legislation

9.2.1.1 **Permission should be granted from the planning authority prior to removing a hedge and new hedgerows should be planted to compensate for the hedge removal –if applicable.**

9.2.2 UKBAP Habitat criterion

9.2.2.1 A hedgerow is defined as any boundary line of trees or shrubs over 20m long and less than 5m wide, and where any gaps between the trees or shrub species are less than 20m wide (Bickmore, 2002). Any bank, wall, ditch or tree within 2m of the centre of the hedgerow is considered to be part of the hedgerow habitat, as is the herbaceous vegetation within 2m of the centre of the hedgerow. All hedgerows consisting predominantly (i.e. 80% or more cover) of at least one woody UK native species are covered by this priority habitat, where each UK country can define the list of woody species native to their respective country. Climbers such as honeysuckle and bramble are recognised as integral to many hedgerows, however they require other woody plants to be present to form a distinct woody boundary feature, as such they are not included in the definition of woody species. The definition is limited to boundary lines of trees or shrubs and excludes banks or walls without woody shrubs on top of them.

9.2.2.2 Based on an analysis of Countryside Survey data, using the threshold of at least 80% cover of any UK native woody species, it is estimated that 84% of countryside hedgerows in GB would be included. Hedgerows are a primary habitat or at least 47 species of conservation concern in the UK, including 13 that are globally threatened or rapidly declining, more than for most other key habitats. They are especially important for butterflies and moths, farmland birds, bats and dormice (where locally present).

9.2.2.3 Since 1945 there has been a continual decline in both the quantity and quality of the UK's native hedgerows either through removal or poor management practices. The Environment Act 1995 introduced an enabling power to protect important

hedgerows in Britain. Land managers are required to consult local authorities before hedgerows can be removed. Article 10 of the EC Habitats Directive requires member states to encourage the management of linear features such as hedgerows in their planning and development policies and with a view to improving the ecological coherence of the Natura 2000 network. This is supported by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, which recognises the importance of these features for the migration, dispersal, and genetic exchange of wild species. NPPF further encourages the development of policies for the management of hedgerows.

- 9.2.2.4 UKBAP targets for hedgerows are:
- Maintain the net extent of hedgerows across the UK
 - Maintain the overall number of individual, isolated hedgerow trees and the net number of isolated veteran trees;
 - Ensure that hedgerows remain, on average, at least as rich in native woody species
 - Achieve favourable condition of 348,000 km (50%) by 2015
 - Reverse the unfavourable condition of over-managed hedgerows across the UK by reducing the proportion of land managers who trim most of their hedges annually
 - Halt further decline in the condition of herbaceous hedgerow flora in Great Britain by 2010 (and improve their condition by 2015)
 - Improve the condition of the hedgerow tree population by increasing numbers of young trees (1-4 years) in Great Britain to 80,000 by 2015 and
 - Achieve a net increase in the length of hedgerows of an average of 800 km per year in Great Britain to 2015.
- 9.2.2.5 The criteria for an important hedgerow are one or more of the following:
- Marks a pre-1850 parish or township boundary.
 - Incorporates an archaeological feature.
 - Is part of, or associated with, an archaeological site.
 - Marks the boundary of, or is associated with, a pre-1600 estate or manor.
 - Forms an integral part of a pre-parliamentary enclosure field system.
 - Contains certain categories of species of bird, animals or plants listed in the Wildlife and Countryside Act or Joint Nature Conservation Committee (JNCC) publications and includes:
 - (a) at least seven woody species, on average, in a 30m length.
 - (b) at least six woody species, on average, in a 30m length and has at least three associated features.
 - (c) at least six woody species, on average, in a 30m length including a black-poplar tree, or a large-leaved lime, or small-leaved lime, or wild service-tree.
 - (d) at least five woody species, on average in a 30m length and has at least four associated features.
- 9.2.2.6 Runs alongside a bridleway, footpath, road used as a public path, or a byway open to all traffic and includes at least four woody species, on average, in a 30m length and has at least two of the associated features listed at (i) or (v) below. The associated features are:
- (i) a bank or wall supporting the hedgerow.
 - (ii) less than 10% gaps.

- (iii) on average, at least one tree per 50m.
- (iv) at least three species from a list of 57 woodland plants.
- (v) a ditch.
- (vi) a number of connections with other hedgerows, ponds or woodland.
- (vii) a parallel hedge within 15m.

9.2.2.7 Based on the criteria above, Wold Ecology does not consider the hedgerows within and adjacent to the Application Site to be important UKBAP habitat.

9.2.3 Biodiversity Gains and Recommendations

9.2.3.1 If applicable, hedges should be cleared outside of the bird nesting season (i.e. clearance should be undertaken between mid-September and early February inclusive) or be carefully checked* by an ecologist to confirm no active nests are present - prior to removal during the summer period. If nesting birds are found during the watching brief, works will need to stop until the young have fledged.

* Thick and overgrown hedgerows are often difficult to inspect fully and removal of a hedge during the spring/summer period is not recommended.

9.2.3.2 During the construction period, it is important that a root protection exclusion zone is in place adjacent to any hedgerow. This must be at least 5m from the centre of the hedge and must be kept free of plant and storage of building supplies.

9.2.3.3 The hedgerows bounding the site should be kept free of fertilisers, pesticides and development on land within 3m of the hedge centre. The long-term management of these hedges will add to their biodiversity value; the hedge should be cut only once every two or three calendar years and on alternate sides. Cutting the hedge in January will provide maximum quantities of food for birds over winter.

9.2.3.4 A minimum 3m grass margin adjacent to the hedges adjacent within the Application Site should be encouraged and allowed to provide rough grassland dispersal routes and habitat for small mammals. The grassland should be cut during late summer (August/September) with all cuttings should be removed from the site to stop soil enrichment and the smothering of less competitive species of herb. The grassland should be cut every 2-3 years, as part of the management program on a 2-3-year rotation, to avoid scrub encroachment. The grassland margins should be topped at 12cm to encourage tussocks.

9.3 Trees

9.3.1 Any trees to be retained should be protected by barriers erected following guidelines given in BS5837:2012 "Trees in Relation to Construction". English Nature (2000) recommends that 'an exclusion zone of 15 times the diameter of the tree at breast height is created'. This will protect the roots from compaction and physical damage whilst protecting the tree from fertilizers and chemical applications. The latter can have a detrimental effect on the tree's relationship with lichens and mycorrhizal fungi. Root protection zones should be free of plant, storage of building sundries and excavation works should be limited where possible; this will help preserve the life of the trees.

9.4 Management planning

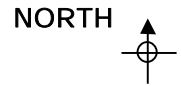
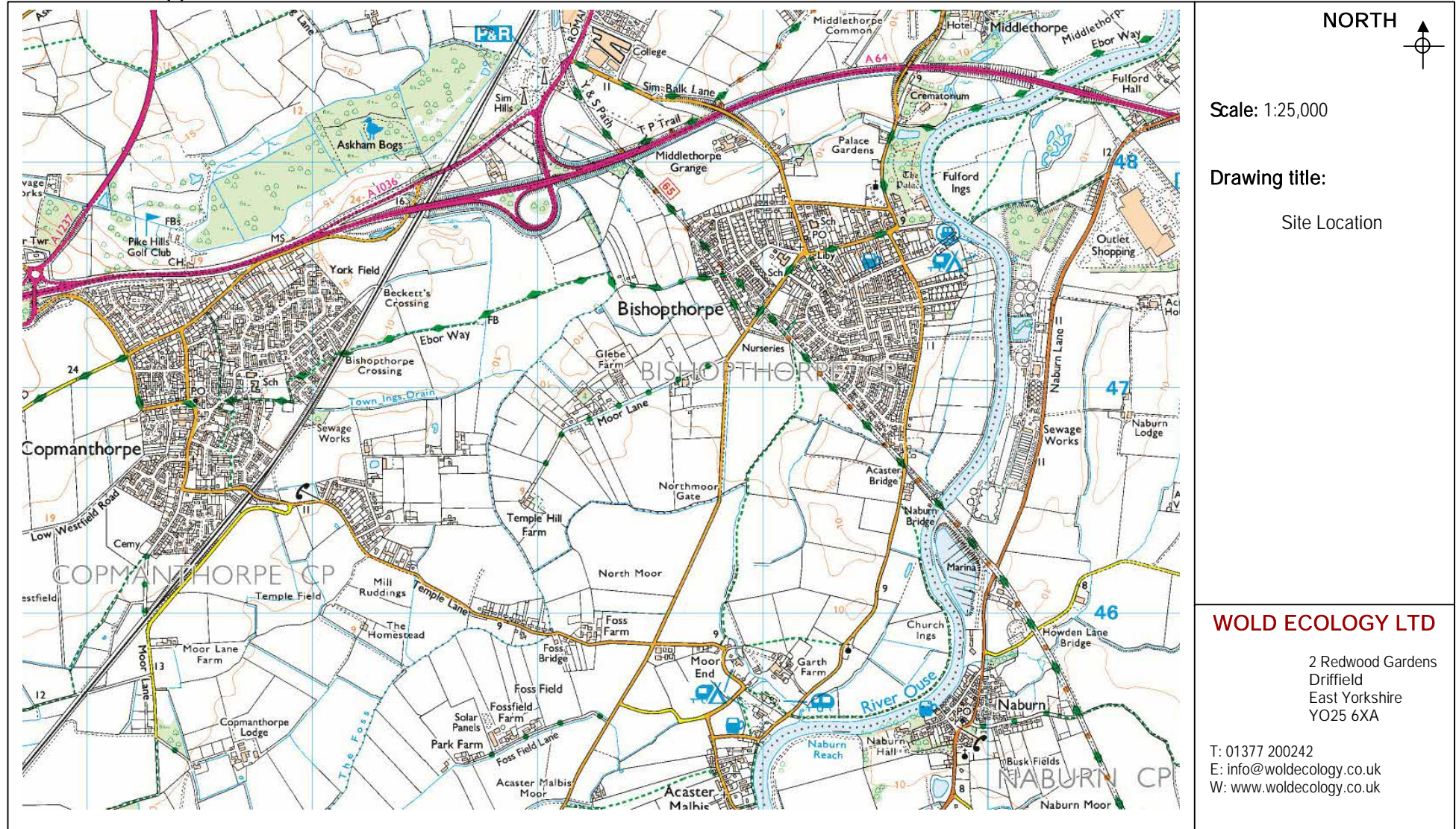
- 9.4.1 It is recommended that a detailed Ecological Construction Method Statement and an Ecological Enhancement Management Plan is produced in order to protect, maintain and enhance the sites ecological value.

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11.0 APPENDICES

11.1 Appendix 1



Scale: 1:25,000

Drawing title:

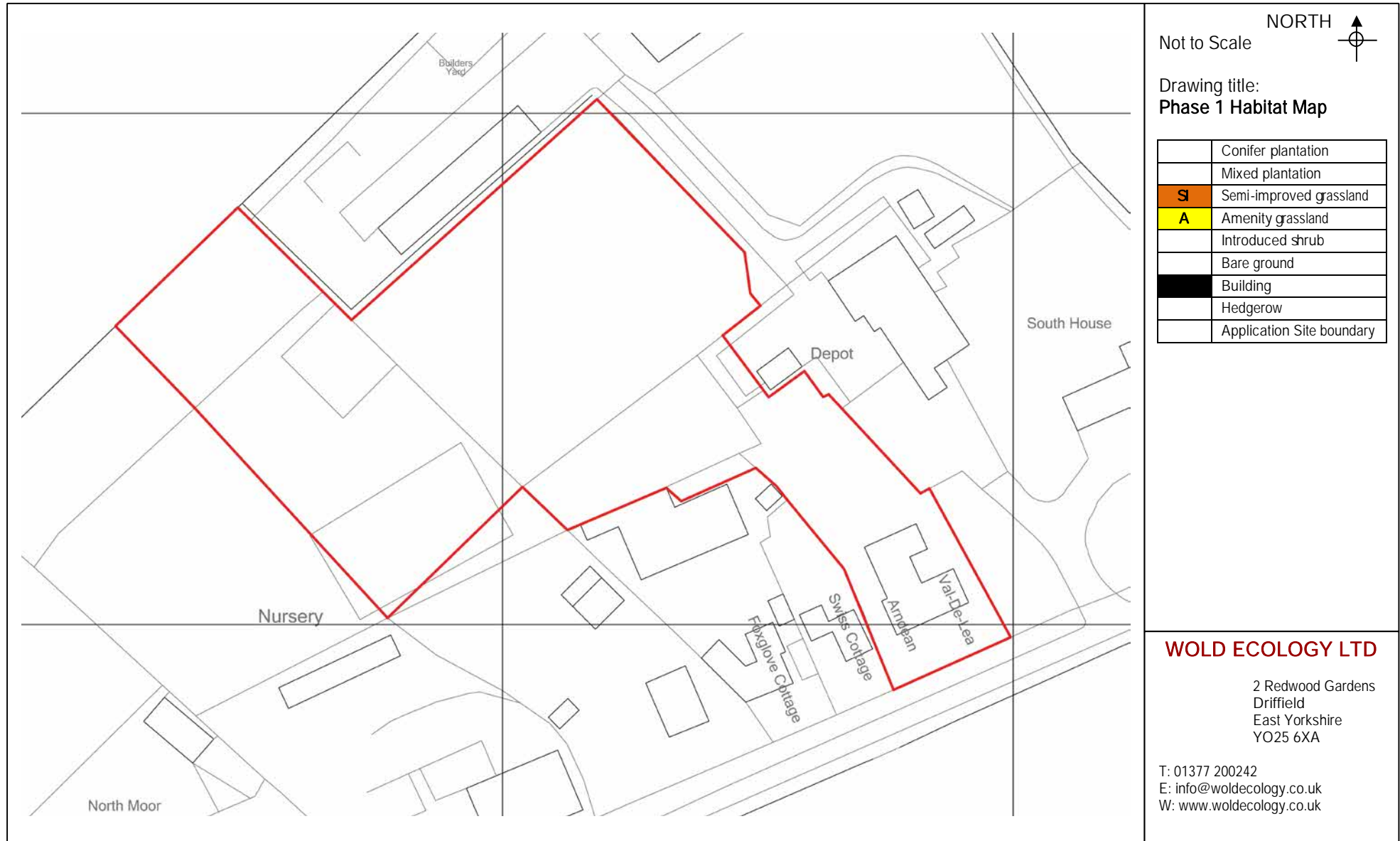
Site Location

WOLD ECOLOGY LTD

2 Redwood Gardens
Driffeld
East Yorkshire
YO25 6XA

T: 01377 200242
E: info@woldecology.co.uk
W: www.woldecology.co.uk

11.2 Appendix 2



11.3 Appendix 3 –Summary of desktop study

Organisation.	Response Summary.	Date.
Natural England.	Local designations.	October 2023
Natural England.	UKBAP species and habitats within 2 km.	October 2023
North and East Yorkshire Ecological Data Centre.	Species lists within 2 km.	October 2023
www.magic.gov.uk	European Protected species licenses within 2km.	October 2023
Wold Ecology network.	Species lists within 5 km of the Application Site.	2006 – to present day.

11.4 Appendix 4 - Protected Species Legislation

The following provides background to the current legislation in England - for full details reference should be made to the relevant legislation. A number of wild animals are classified as Protected Species as they are protected by various pieces of legislation. The most commonly encountered Protected Species of animal are listed in the table below. This table summarises which sections of legislation each species is protected by and the legislative text is provided on the following pages.

Legislation	Schedule 5 Wildlife and Countryside Act 1981 (As amended) Part 1							EPS	PBA
	S1 (1)	S1 (4 & 5)	S9 (1)	S9 (2)	S9 (4)(a)	S9 (4)(b)	S9 (5)		
Adder <i>Vipera berus</i>			√*				√		
Common lizard <i>Zootoca vivipara</i>			√*				√		
Grass snake <i>Natrix helvetica</i>			√*				√		
Slow worm <i>Anguis fragilis</i>			√*				√		
Smooth snake <i>Coronella austriaca</i>			√	√	√	√	√	√	
Sand lizard <i>Lacerta agilis</i>			√	√	√	√	√	√	
Great Crested Newt <i>Triturus cristatus</i>			√	√	√	√	√	√	
Natterjack Toad <i>Epidalea calamita</i>			√	√	√	√	√	√	
All UK bats <i>Chiroptera</i>			√	√	√	√	√	√	
Water vole <i>Arvicola amphibious</i>			√	√	√	√	√		
Otter <i>Lutra lutra</i>			√	√	√	√	√	√	
Dormouse <i>Muscardinus avellanarius</i>			√	√	√	√	√	√	
Badger <i>Meles meles</i>									√
Red Squirrel <i>Sciurus vulgaris</i>			√	√	√	√	√		
Pine Marten <i>Martes martes</i>			√	√	√	√	√		
Scottish Wildcat <i>Felis silvestris</i>			√	√	√	√	√	√	
White-clawed crayfish <i>Austropotamobius pallipes</i>			√				√		
All Nesting birds	√								
Specific Nesting birds i.e. Barn Owl, Black Redstart	√	√							

S = Section

() = Paragraph

EPS = European Protected Species i.e. listed under Regulation 40 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019

PBA = Protection of Badgers Act 1992

* = Only part of this section

Legislative Text

Wildlife and Countryside Act 1981 (as amended)

Since its original enactment, the Wildlife and Countryside Act has been subject to many changes (notably via Schedule 12 of the Countryside and Rights of Way Act 2000). These have in particular affected penalties and enforcement. Offences under section 9 of the Act are now 'arrestable'. Enforcement is usually by the Police and less frequently by Natural England. However, section 25(2) of Wildlife and Countryside Act also states that a local authority may institute proceedings. Prosecutions can result in a level five fine (currently £5000) for each offence (and the Act is specific that killing/injuring of each individual animal can constitute a separate offence), the forfeiture of any equipment, etc., used to perpetrate that offence and (under the Countryside and Rights of Way Act 2000) up to six months' imprisonment.

The Wildlife and Countryside Act 1981 (as amended), transposes into domestic law the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention). It is an offence under the various sections of Part 1 of the Act to -

- S.1 (1) intentionally kill, injure, or take any wild bird or their eggs or nests.
- S.1 (4) intentionally or recklessly kill, injure, or take any wild bird listed on Schedule 1 of the Act, or their eggs or nests (special penalties apply if convicted) (For a full list of Schedule 1 bird species see the full text of the Wildlife and Countryside Act 1981 [as amended])
- S.1(5) (a) disturb any wild bird listed on Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or
(b) disturb dependent young of such a bird
- S.9 (1) intentionally or recklessly kill, injure or take any wild animal included in Schedule 5 (certain reptiles are only protected from killing and injuring);
- S.9 (2) be in possession or control of any live or dead wild animal included in Schedule 5 or any part or derivative;
- S.9 (4) (a) intentionally or recklessly damage or destroy, or obstruct access to, any structure or place used by a Schedule 5 animal for shelter or protection;
- S.9 (4) (b) disturb any such animal while it is occupying such a structure or place which it uses for that purpose
- S.9 (5) (a) sell, offer for sale, possess or transport any live or dead wild animal included in Schedule 5 for the purpose of sale or any part or derivative;
- S.9 (5) (b) advertise for buying or selling such things.

European Protected Species (EPS)

EPS and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. These Regulations transpose Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law.

A person who—

- (a) deliberately captures, injures or kills any wild animal of a European protected species,
- (b) deliberately disturbs wild animals of any such species,
- (c) deliberately takes or destroys the eggs of such an animal, or

(d) damages or destroys a breeding site or resting place of such an animal, is guilty of an offence.

For the purposes of paragraph (b), disturbance of animals includes in particular any disturbance which is likely—

(a) to impair their ability—

(i) to survive, to breed or reproduce, or to rear or nurture their young, or

(ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or

(b) to affect significantly the local distribution or abundance of the species to which they belong.

(However, please note that the existing offences under the Wildlife and Countryside Act, which cover obstruction of places used for shelter or protection (for example, a bat roost), disturbance and sale, still apply to EPS.)

These actions can be made lawful through the granting of licenses by the appropriate authorities, e.g. Natural England. Licenses may be granted for a number of purposes (such as science and education, conservation, preserving public health and safety), but only after the appropriate authority is satisfied that there are no satisfactory alternatives and that such actions will have no detrimental effect on the wild population of the species concerned.

Protection of Badgers Act 1992 (PBA)

The main legislation protecting badgers is the Protection of Badgers Act 1992. This Act consolidates all previous legislation including the Badgers Act 1973 (as amended) and the Badgers (Further Protection) Act 1991. Under the 1992 Act it is an offence to:

destroy a sett

interfere with a badger sett by damaging a sett or any part thereof

obstruct access to a sett

disturb a badger while occupying a sett

wilfully kill, injure, take or attempt to kill, injure or take a badger;

dig for a badger

possess a dead badger or any part of a badger

cruelly ill-treat a badger

use badger tongs in the course of killing, taking or attempting to kill a badger

sell or offer for sale or control any live badger

mark, tag or ring a badger

cause a dog to enter a sett

The 1992 Act defines a badger sett as: “any structure or place which displays signs indicating current use by a badger”. Since development operations may take place over a protracted period, Natural England recommends that licences be sought for developments that may affect seasonally-used setts as well as main setts. Natural England considers a good guide to be that if a sett has shown signs of occupation within the past twelve months it is considered active.

The Protection of Badgers Act 1992 allows for licences to be issued for a number of purposes, including development under the Town and Country Planning Act 1990 and to prevent serious damage to property. Licences to interfere with badger

setts or disturb badgers for development are issued by the Government's statutory nature conservation agencies, e.g. Natural England.

11.5 Appendix 5 - Staff Profiles

Field Surveyor Profile –Daniel Lombard B Sc. (Hons), MCIEEM.

Job title: Senior Ecologist.

Career Summary.

Daniel has spent all his working life in the environmental sector. He is an experienced and competent field ecologist with proven skills in species identification across a range of biota and an in-depth appreciation of many aspects of biodiversity, ecology and biology.

Upon leaving University Daniel volunteered with a range of conservation organisations including The Wildlife Trust, North York Moors National Park, BTO and RSPB.

Daniel is currently involved in a number of local projects in which he has volunteered his time and resources. He is a member of Filey Bird Observatory and acts as the recorder for both Dragonflies and Butterflies within the group. He acts as an ecologist giving free advice to the Yorkshire branch of Butterfly Conservation including habitat management plans and field surveys. He also contributes to the BTO bird ringing scheme, helping in the scientific study birds.

Daniel also contributes to national invertebrate, bird, fungi and mammal recording schemes.

Project Experience.

Daniel has undertaken over 400 bat activity surveys since 2010 including dawn and dusk surveys at a range of sites across England.

Daniel specialises in reptile, amphibian, bird and mammal surveys and has undertaken a wide range of surveys for species including otter, water vole, badger, adder, grass snake, common lizard, slow worm and great crested newt. This includes writing and contributing towards mitigation strategies and habitat enhancements where appropriate. He has also contributed to white clawed crayfish surveys.

Daniel has undertaken a large number of Phase 1 ecology surveys and Preliminary Ecological Appraisals and EIA assessments.

Daniel has undertaken and helped supervise seabird surveys on the North Yorkshire coastline at an internationally important seabird colony on the behalf of Natural England and the Environment Agency. This has involved leasing with a variety of conflicting stakeholders to mitigate against potential adverse impacts to the colony.

11.6 Appendix 6 – Identification of Legal and Planning Policy Issues in England

Scope of Assessment

The first step is to identify any biodiversity features found on the site that are subject to legal or policy controls, as follows:

Designated Sites

The location of the site is compared to the distribution of sites with a statutory or non-statutory nature conservation designation using information derived from the desk study. Consideration is given to designated sites that could be affected directly or indirectly by the proposed development.

Habitats outside Designated Sites

The habitats known to occur on the site are compared to those which receive some protection, in law or policy, outside of designated sites i.e. hedgerows, uncultivated land and semi-natural areas, habitats listed as Priorities in the UKBAP, habitats listed as Habitats of Principal Importance for the Conservation of Biodiversity by the Secretary of State and habitats listed as requiring action in the Local Biodiversity Action Plan.

Ancient Woodland

The ancient woodland inventory is checked to determine whether any known ancient woodland occurs either on the site or nearby.

Protected Species

The species known to occur on the site as a result of the desk study and Phase 1 habitat survey are compared with those listed in nature conservation legislation i.e. the Wildlife and Countryside Act 1981, as amended, and the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019.

In addition, the species known to occur on the site as a result of the desk study and Phase 1 habitat survey are compared with those listed in animal welfare legislation, i.e. the Badgers Act 1992 and the Wild Mammals (Protection) Act 1996.

Biodiversity Action Plan Priority Species

The species known to occur on the site are compared with those listed as Priorities in the UKBAP, Species of Principal Importance for the Conservation of Biodiversity by the Secretary of State or requiring action in the Local Biodiversity Action Plan.

Other Species of Conservation Concern

The species known to occur on the site are compared with other nature conservation listings, such as red data books.

Invasive Plant Species

The species of plant present on the site are compared with those listed by government agencies as invasive non-natives, with particular attention given to those listed in the Wildlife and Countryside Act.

Review of Legislation and Policy

If any of the above are found to occur on or near the site and are likely to be affected by the development in any way, the relevant legislation and planning policy

(including national, regional, county and borough policies) are examined to determine whether the proposed development is compliant.

Ecological Enhancement

Planning policy generally requires new developments to be enhanced for biodiversity. The existing proposals are considered to determine whether biodiversity enhancements are offered and whether they are adequate to meet the policy requirements. Again, national, regional, county and borough policies are considered.

Identification of Potential Further Ecological Issues

Further ecological issues are those which cannot be resolved during the desk study, extended phase 1 habitat survey and preliminary ecological appraisal for any reason, including the following:

- The development is near a designated site and consultation with the relevant regulator is required to determine whether further assessment is required;

- Suitable habitat is present on or near the site for a protected species/species of conservation concern and specialist survey techniques are required for their detection;

- Suitable habitat is present on or near the site for a protected species/species of conservation concern and the extended phase 1 habitat survey and preliminary ecological appraisal was not undertaken at a suitable time of year for their detection;

- A protected species/species of conservation concern was found on or near the site but further information on population size or distribution is required to resolve any legal and planning policy issues (such as obtaining licences).

Discussion of issues raised by 3rd parties, e.g. reports of protected species from the site by local people, may also be discussed under this heading.

The desk study is used as a guide to the protected species/species of conservation in the local area, however, the list is not taken to be exhaustive and it is borne in mind that some species may no longer occur in the locality.

No attempt is made to evaluate the importance of the site for species not yet confirmed to be on or near the site, nor to discuss the implications for the development if the species were to be found on the site.

11.7 Appendix 7 –Bat survey data

Bat records for activity survey conducted in 2023

Date –25 th September 2023					
Loc.	Time	Species	kH z	Direction	Comment
1	1920	C. Pipistrelle	45	S	Commuting
2	1920	C. Pipistrelle	45	N	Commuting
3	1920 – 1925	C. Pipistrelle	45		Foraging
1	1921	C. Pipistrelle	45	W	Commuting
2	1924	C. Pipistrelle	45		Audible
1	1925	C. Pipistrelle	45	N	Commuting
2	1927	C. Pipistrelle	45	N	Commuting
1	1932	C. Pipistrelle	45	N	Commuting
2	1933	C. Pipistrelle	45		Foraging
2	1935	S. Pipistrelle	55		Audible
3	1935 – 1940	C. Pipistrelle	45		Foraging
1	1936	C. Pipistrelle	45	W	Commuting
2	1938	C. Pipistrelle	45		Audible
2	1943	C. Pipistrelle	45		Audible
2	1947	C. Pipistrelle	45		Audible
2	1950	S. Pipistrelle	55		Audible
3	1950	C. Pipistrelle	45		Audible
2	1951	C. Pipistrelle	45		Audible
3	1953	C. Pipistrelle	45		Audible
3	2000	C. Pipistrelle	45		Audible
1	2001	C. Pipistrelle	45	W	Commuting
1	2006	C. Pipistrelle	45	S	Commuting
3	2007	Brown long-eared	39		Audible
3	2008	C. Pipistrelle	45		Audible
2	2009	C. Pipistrelle	45		Audible
3	2010	C. Pipistrelle	45		Audible
3	2015	Brown long-eared	39		Audible
2	2019	S. Pipistrelle	55		Audible
3	2021	Brown long-eared	39		Audible
2	2022	C. Pipistrelle	45		Audible
2	2029	C. Pipistrelle	45		Audible

Photographs of key features –September 2023
Plate 1 –House, south and west elevation



Plate 2 –House, north and east elevation

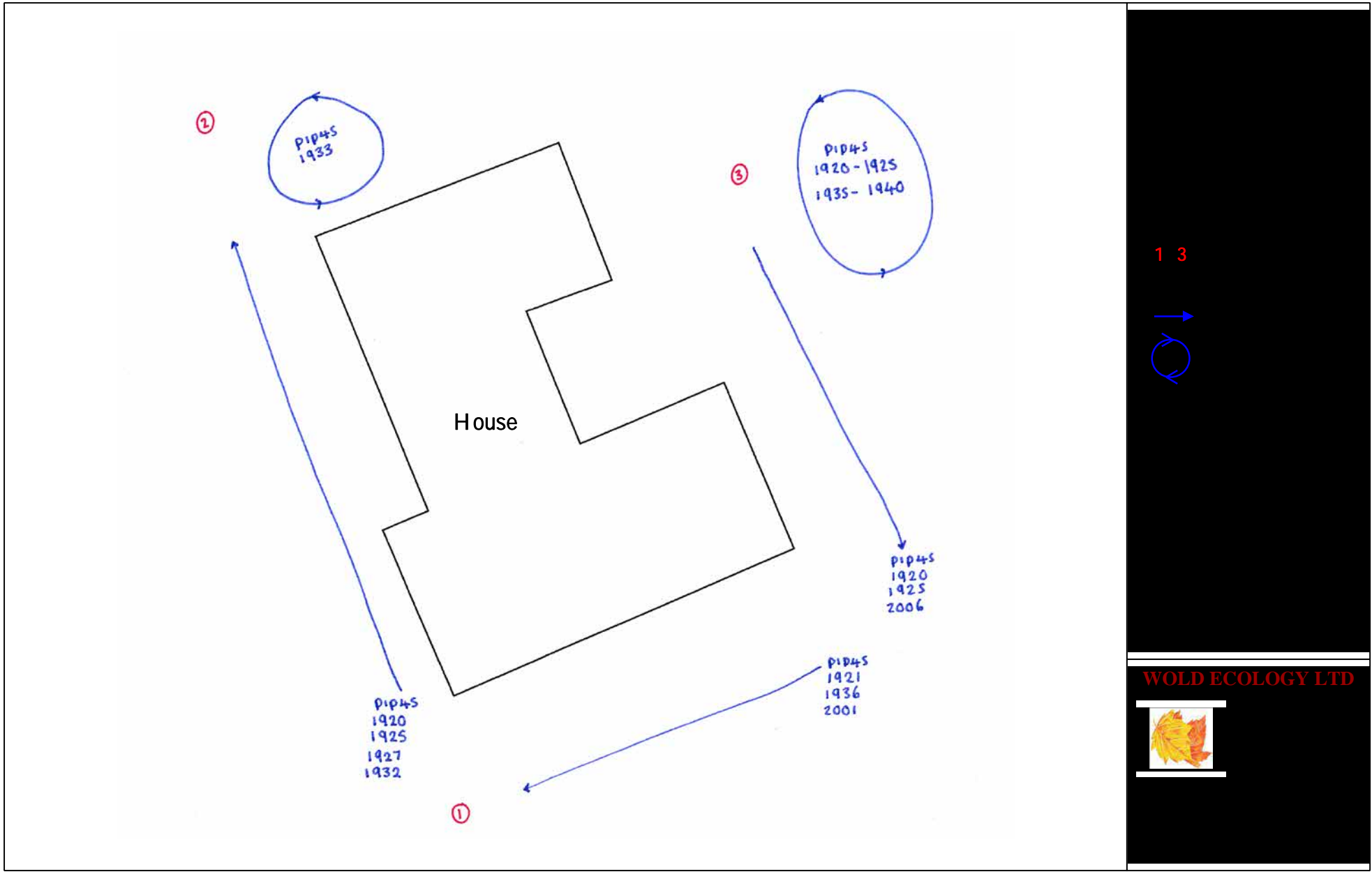


Plate 3 –House, north and west elevation



Plate 4 –House, internal roof void.





1 3

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