

NICHOLSONS LOCKHART GARRATT

Leading solutions for the natural environment

Preliminary Ecological Appraisal
Tophaven Sustainable Construction Ltd
Land to the Rear of Marshalls Road, Raunds

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REVISION HISTORY

Rev	Description of change	Date	Initials
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DISCLAIMER

It should be noted that the information above provides details of the Site's current ecological situation. In the event that the proposed development does not commence within 12 months of the date of this report, further advice should be sought from a suitably qualified ecologist as to whether the information provided requires updating in light of changing ecological conditions.

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1. EXECUTIVE SUMMARY

- 1.1 Nicholsons Lockhart Garratt was commissioned by Tophaven Sustainable Construction Ltd to carry out a Preliminary Ecological Appraisal (PEA) Survey including desk study for land to the rear of Marshalls Road, Raunds (hereafter referred to as “the Site”) for the proposed development of four residential properties with associated gardens, hardstanding and roads.
- 1.2 The Site itself is not subject to any statutory or non-statutory designation. There is one statutory designation within 2km of the Site namely, Stanwick Lakes SPA, SSSI and LWS located 1.87 km west of the Site. There were four non-statutory designations, the closest being Raunds, Pocket Park located approximately 0.86km south-west of the Site. A range of protected mammal and bird species were identified within 2km of the Site by the desk study.
- 1.3 The Preliminary Ecological Appraisal (PEA) Survey was undertaken on 31st May 2022. The habitat within the Site consisted of buildings, poor semi-improved grassland and improved grassland bound by hedgerows and scattered trees with areas of dense scrub, introduced shrub and tall ruderal vegetation.
- 1.4 Recommendations, in this context, are as follows:

Vegetation clearance works should be scheduled outside of the main bird breeding season (March to August inclusive). If in the event works need to proceed within this period, then specialist advice from a suitably qualified ecologist should be sought.

Any landscape planting should incorporate native species, including those species known to provide foraging opportunities for breeding birds and nectar sources for invertebrates.

Enhancements in the form of bird and bat boxes are also recommended.

2. INTRODUCTION

Terms of Instruction

- 2.1 Nicholsons Lockhart Garratt has been commissioned by Tophaven Sustainable Construction Ltd to undertake an ecological assessment of land to the rear of Marshalls Road, Raunds (“the Site”) in respect of the proposed development of five residential properties with associated gardens, hardstanding and roads.

Aim of the study

- 2.2 The purpose of this report is to provide an assessment of ecological features present within the Site, to identify any ecological constraints and provide appropriate avoidance, mitigation and compensation measures to ensure no net loss in biodiversity as a result of the proposals.

Documents Provided

- 2.3 As background information, the following documentation was provided:

(00) 01 Proposed Site Plan- Idea Architectural Technology April 2022

Site Description

- 2.4 The Site is located at grid reference SP 99599 72804. The assessment covered the whole of the Site.
- 2.5 At the time of the assessment the Site mostly comprised buildings, poor semi-improved grassland and improved grassland bound by hedgerows and scattered trees with areas of dense scrub, introduced shrub and tall ruderal vegetation.
- 2.6 The Site was located within the town of Raunds, and was surrounded by residential housing and associated roads and gardens. Located 0.11km to the east of the Site was an area of grassland sports fields and allotments surrounded by trees.
- 2.7 The Site location plan is provided below at Figure 1 and a survey boundary plan is provided below at Figure 2.

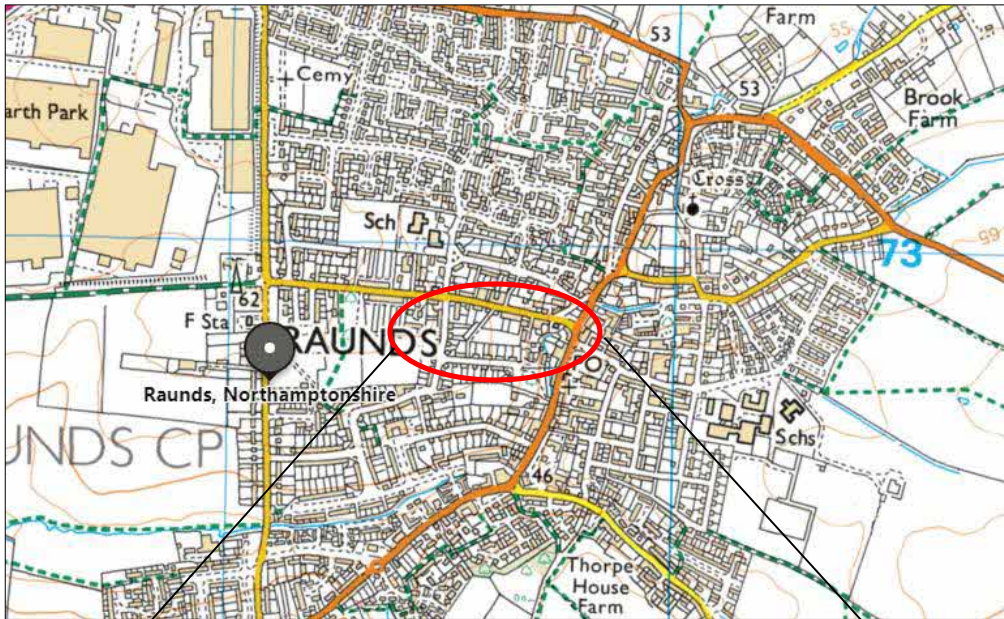


Figure 1: Site Location Plan



Figure 2: Survey Boundary

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Weldon, Corby, Northants NN17 5JG.

Proposed Development

- 2.8 The proposed development will include four detached bungalows and one four bedroom detached house. Each property will have gardens to the front and rear, hardstanding areas and garage. A hedgerow will be planted to the northern boundary and further landscape planting will be integrated into the design (hereafter referred to as the “Proposed Development”).



Figure 3: The Proposed Development

3. METHODOLOGY

- 3.1 The methodology for the ecological assessment was split into three main areas: a desk study, habitat survey and faunal survey. These are discussed in more detail below.

Desk Study

- 3.2 Existing ecological information on the Site and surrounding area was requested from the Northamptonshire Biodiversity Records Centre (NBRC) and Northants Bat Group. The purpose of the desk study was to collect baseline information to identify statutory and non-statutory designated sites, legally protected species and species of conservation concern within a 2km radius of the Site in line with CIEEM Guidelines for Preliminary Ecological Appraisal (2017). Full information may be provided on request.
- 3.3 A review of online resources, including the Multi Agency Geographic Information for the Countryside (MAGIC) database was also undertaken to establish the ecological context for the Site (accessed 6th June 2022). The MAGIC website was also reviewed to identify any designated sites of European Importance within 2km of the Site.
- 3.4 In addition, Ordnance Survey and aerial mapping was reviewed to identify any ponds within 500m of the Site.

Phase 1 Habitat Survey

- 3.5 The phase 1 habitat survey was conducted on 31st May 2022 in reasonable weather conditions (14°C, 100% cloud cover, Beaufort Scale 2).
- 3.6 A Phase 1 habitat survey was undertaken in order to ascertain the general ecological value of the Site and to determine the need for further assessment.
- 3.7 The Phase 1 habitat survey was undertaken in accordance with standard methodology (JNCC, 2010¹). The Phase 1 methodology involves the classification of habitat types based on vegetation present. The Site was classified into areas of similar botanical community types, with a representative species list provided for each habitat type identified. In addition, invasive weeds were also searched for during the Phase 1 Habitat Survey, as listed on Schedule 9 of the Wildlife and Countryside Act 1981 (as amended).
- 3.8 The information is presented in accordance with the standard Phase 1 habitat survey format with habitat descriptions and a habitat map, provided at Appendix 1. In addition, target notes providing supplementary information, for example relating to species, habitat composition, structure and management are also presented on the habitat map.
- 3.9 All of the species that occur within each habitat type would not necessarily be detectable during survey work carried out at any given time of year. The botanical work was undertaken within the optimal survey period, it is therefore considered that a robust assessment was undertaken.

Faunal Surveys

- 3.10 General faunal activity was recorded during the PEA field survey, including mammals and birds observed or heard. Specific attention was also paid to the potential presence of any protected, rare or notable species, as described below.

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

Bats

Tree Assessment

- 3.13 A preliminary ground-based assessment of all suitable trees located on or immediately adjacent to the study area was undertaken to determine their potential to support roosting bats (for details on the location of trees with bat roost potential refer to highlighted trees on the habitat map in **Appendix 1**).
- 3.14 All suitable features such as cracks and splits in limbs, hollows and cavities, natural holes, woodpecker holes, loose bark and dense ivy were assessed using binoculars and high powered torches where appropriate. Evidence of bat roost themselves, including droppings, feeding remains and urine staining were also searched for during the assessment.

Building Inspection

- 3.15 All buildings within the Site were subject to external and internal inspection to search for evidence of bat activity where safe to do so.
- 3.16 Internal voids within the structure(s) were subject to an internal inspection, whereby the surveyor used ladders, high-powered torches, mirrors to search for evidence of current or historic use by bats. Particular attention was paid to gaps between rafters and beams. Specific searches were undertaken for bat droppings, which can indicate current or past use by bats and indicate the extent of use.
- 3.17 An exterior inspection was undertaken in order to search for any signs of use by bats, such as droppings or staining, and to identify any potential access points. Binoculars were used to inspect any inaccessible areas more closely.
- 3.18 Where no direct or indirect evidence of roosting bats were confirmed, trees and buildings were categorised as being of high, moderate, low or negligible suitability to support roosting bats based on the type and number of suitable bat features present, in accordance with best practice guidance, Bat Conservation Trust (2016) *Bat Surveys: Good Practice Guidelines 3rd Edition*.
- High suitability – one or more potential roosting features present within a structure, with enough suitable surrounding commuting and foraging habitat, which is large enough to be able to shelter a large number of bats on a regular basis. These include maternity and hibernation roosts.

Moderate suitability – one or more potential roosting features present within a structure that is likely to shelter a number of bats, but unlikely to support a roost of conservation status.

Low suitability – one or more potential roost features present within a structure yet is not surrounded by suitable commuting and foraging habitat and does not provide enough protection and space to shelter a large number of bats. This also includes trees with no visible potential roost features but is of adequate age and structure to offer limited roosting potential.

Negligible suitability – whereby no evidence of bats was observed and no suitable features for bats are supported, such that their presence is considered negligible.

Principles of Ecological Evaluation

- 3.19 The evaluation of ecological features and an assessment of likely impacts should be based on available resources and the professional judgement of the ecologist concerned. Ecological value of features should be undertaken in accordance with the approach outlined in the Guidelines for Ecological Impact Assessment in the UK and Ireland (CIEEM, 2018).
- 3.20 A five-point evaluation scale has been applied to assist with the identification of key features of ecological significance in relation to the proposed development. This is an arbitrary scale based upon characteristics of ecological importance as listed in CIEEM (2018), which experience has shown is effective at this level of assessment.
- 3.21 In evaluating ecological features and resources, geographic frame of reference is considered. The value of an ecological feature is determined within a defined geographical frame of reference as detailed in Table 1:

Table 1: Classification of the value of ecological features and resources

Value	Importance	Species	Habitat
Very High	International	A regularly occurring population of an internationally important species, which is threatened or rare in the UK, where the population is a critical part of a wider population or where a species is at a critical phase in its life cycle at this scale.	An internationally designated site including SAC, SPA, Ramsar, or one proposed for designation. Sites supporting areas of priority habitats which are scarce at an international level of where it is needed to maintain the viability of a larger area at that level.

Value	Importance	Species	Habitat
High	National	A regularly occurring population / number of a nationally important species which is threatened, or rare, where the population is a critical part of wider population or where a species is at a critical phase in its life cycle at this scale. A regularly occurring population of a nationally important species on the edge of its natural range. A species assemblage of national significance.	A nationally designated site ie SSSI, or one that meets the published criteria. Sites supporting areas of priority habitats which are scarce at a national level or where it is needed to maintain the viability of a larger area at that level.
Medium	Regional / County	A regularly occurring locally significant population of a species listed as being nationally scarce or a county Red Data book or BAP on account of its rarity. A regularly occurring, locally significant number of a regionally / county important species or where the population is a critical part of a wider population or where a species is at a critical phase in its life cycle at this scale. A species assemblage of regional or county significance.	Sites supporting a viable area of a priority habitat which is scarce at a regionally or county level or where is needed to maintain the viability of a larger area. A County designated site or one that meets published criteria. Local Nature Reserves, Local Wildlife Sites / potential Local Wildlife Sites at that level.
Low	Local	A population of a species that is listed in a district BAP because of its rarity in the locality and a species assemblage of local or district significance. A regularly occurring, locally significant number of district importance or where the population is a critical phase in its life cycle at this scale.	Sites / features that are scarce within the local area or district. Areas of habitat considered enriching appreciably the habitat resource within the context of the locality or which buffer those of a more important nature.
Site	Site Only	Species, which are not protected or rare in the local area and are not at a critical phase in its life cycle at this scale.	Habitats of very low importance and rarity but of ecological importance within the Site.

3.22 Ecological features may also be deemed to be of negligible value if they are deemed to be of very low ecological importance and / or rarity.

3.23 Ecological features may be defined as:

Statutorily protected (Natura 2000, national Nature Reserves, Sites of Special Scientific Interest and Local Nature Reserves) or locally designated sites (local Wildlife Sites or Sites of Importance to Nature Conservation);

Sites and features of biodiversity value not designated in this way such as ancient woodland;
or

Species of biodiversity value or other significance, including those protected and controlled
by law.

4. LEGISLATION AND PLANNING POLICY OVERVIEW

- 4.1 A summary of the legislative and planning context which has been used to inform this ecological assessment is provided below.

Legislation

- 4.2 A number of tiers of legislation protect wildlife and habitats within England and Wales, the highest of which being European legislation. A summary of relevant legislation is provided below:

The Wildlife and Countryside Act 1981 (as amended).

The Natural Environment and Rural Communities Act 2006 (NERC).

The Conservation of Habitats and Species Regulations 2017.

Policy

- 4.3 The planning policy framework that relates to nature conservation in Raunds, East Northamptonshire is provided at two levels: nationally through the National Planning Policy Framework (NPPF) and locally through policies in the North Northamptonshire Joint Core Strategy 2011-2031.

Local Policy – North Northamptonshire Joint Core Strategy 2011-2031

- 4.4 POLICY 4 – Biodiversity and Geodiversity

“A net gain in biodiversity will be sought and features of geological interest will be protected and enhanced through:

a) Protecting existing biodiversity and geodiversity assets by:

- i. Refusing development proposals where significant harm to an asset cannot be avoided, mitigated or, as a last resort, compensated. The weight accorded to an asset will reflect its status in the hierarchy of biodiversity and geodiversity designations;
- ii. Protecting key assets for wildlife and geology, in particular the Upper Nene Valley Gravel Pits Special Protection Area and Ramsar Site, from unacceptable levels of access and managing pressures for access to and disturbance of sensitive habitats;
- iii. Protecting the natural environment from adverse effects from noise, air and light pollution;
- iv. where appropriate requiring developments to provide or contribute to alternative green infrastructure (Policy 19); and
- v. Ensuring that habitats are managed in an ecologically appropriate manner.

b) Enhancing ecological networks by managing development and investment to:

- i. Reverse the decline in biodiversity and restore the ecological network at a landscape scale in the Nene Valley Nature Improvement Area (NIA);
- ii. Reverse habitat fragmentation and increase connectivity of habitats where possible by structuring and locating biodiversity gain in such a way as to enlarge and/or connect to existing biodiversity assets such as wildlife corridors;
- iii. Preserve, restore and create priority and other natural and semi-natural habitats within and adjacent to development schemes;

c) Supporting, through developer contributions or development design, the protection and recovery of priority habitats and species linked to national and local targets. Such measures

could include the retention of, and provision of areas of open green space, and hard and soft landscaping to address habitat and visitor management.

d) Developments that are likely to have an adverse impact, either alone or in-combination, on the Upper Nene Valley Gravel Pits Special Protection Area or other European Designated Sites must satisfy the requirements of the Habitats Regulations, determining site specific impacts and avoiding or mitigating against impacts where identified. Mitigation may involve providing or contributing towards a combination of the following measures:

- i. Access and visitor management measures within the SPA;
- ii. Improvement of existing greenspace and recreational routes;
- iii. Provision of alternative natural greenspace and recreational routes;
- iv. Monitoring of the impacts of new development on European designated sites to inform the necessary mitigation requirements and future refinement of any mitigation measures.”

Biodiversity Action Plan (BAP) and 2006 NERC Act Habitats and Species of Principal Importance

- 4.5 In 2007, the UK Biodiversity Action Plan (BAP) Partnership published an updated list of priority UK species and habitats covering terrestrial, freshwater and marine biodiversity to focus conservation action for species and habitats in the UK. The UK Post-2010 Biodiversity Framework succeeds the UK BAP. The Framework continues the conservation work initiated by the UK BAP following the establishment of the Convention on Biological Diversity in 1992.
- 4.6 The purpose of the Framework is to set a broad structure for conservation across the UK until 2020. In summary:
 - To set out a shared vision and priorities for UK-wide activities, in a framework jointly owned by the four countries, and to which their own strategies will contribute;
 - To identify priorities at a UK scale which will help deliver biodiversity targets and the EU Biodiversity Strategy;
 - To facilitate the aggregation and collation of information on activity and outcomes across all countries of the UK; and
 - To streamline governance arrangements for UK-wide activities.
- 4.7 The habitats and species are identified as Habitats and Species of Principal Importance for the conservation of biological diversity in England under Section 41 of the 2006 Natural Environment and Rural Communities (NERC) Act. The NERC Act and NPPF make these species and habitats a material consideration in the planning process.
- 4.8 The Northampton Biodiversity Action Plan (NBAP) produced in 2008 lists a number of priority habitats and species for this Site, namely hedgerows, lowland meadow, common lizard *Zootoca vivipara* and farmland birds such as linnets *Carduelis cannabina* and house sparrow *Passer domesticus*.
- 4.9 The LBAP contains objectives and targets for the species and habitats identified above. They should be considered in regard to the proposed development in order to identify opportunities for avoidance, mitigation and enhancement.

5. DESK STUDY RESULTS

5.1 The full information collected during the desk study from the NBRC and the Northants Bat Group is available on request and summarised below.

Sites of Nature Conservation Interest

5.2 The Site itself is not subject to any statutory or non-statutory nature conservation designation.

5.3 The records search identified one statutory protected site and four non-statutory sites within 2km of the Site, as summarised in Table 2:

Table 2: Summary of Ecology Designations

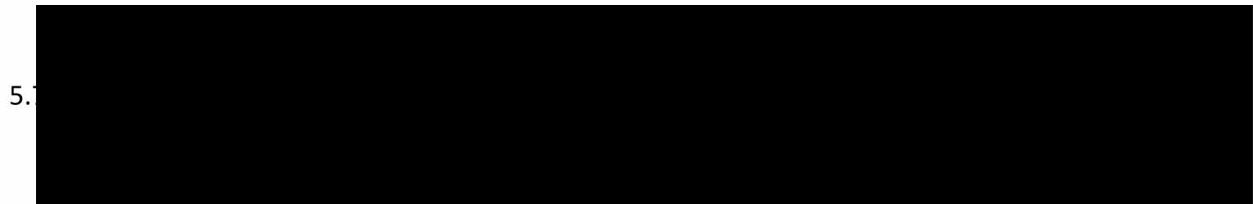
Designated Site Name	Designation	Proximity to Project	Description
Sanwick Lakes including the Upper Nene Valley Gravel Pits SSSI	SPA/SSSI/LWS/NIA	1.87km west	A large country park style reserve with a series of gravel pit lakes and surrounding grassland. Stanwick lakes provides an excellent mosaic of wetland habitats for wildlife.
Raunds Pocket Park	PP	0.86 km south-west	0.54ha of amenity parkland with grassland, scrub, trees and a pond.
Mallow Field Woodland	PWS	1.29km south-west	An area of developing dense scrubby woodland of value to local wildlife but not of Wildlife Site standard.
Mallows Cotton Wood	PWS/NIA	1.34km north-west	A predominantly ash dominated woodland with a moderate canopy diversity and limited understorey / ground flora.
933	PWS- Category 1	1.74km east	No information available.
<p>Key:</p> <p>SPA: Special Protection Area</p> <p>SSSI: Site of Special Scientific Interest</p> <p>LWS: Local Wildlife Site</p> <p>NIA: Nature Improvement Area</p> <p>PWS: Potential Wildlife Site</p> <p>PWS Category 1: Potential Wildlife Site never fully assessed against LWS criteria</p>			

Protected Species

- 5.4 Below provides a summary of protected species which have been recorded within 2km of the Site. It should be noted that the absence of records should not be taken as confirmation that a species is absent from the search area.
- 5.5 Records of amphibians, badgers, bats, birds and otter were recorded within 2km of the Site. No notable protected species were recorded within or adjacent to the Site.

Amphibians

- 5.6 Five records of GCN were received for within 2km of the Site. The closest record, dated 2019, is located approximately 0.91km north of the Site. Other amphibians recorded within 2km of the Site include smooth newt *Lissotriton vulgaris* and common frog *Rana temporaria*. No records of amphibians were received for within or adjacent to the Site.



Bats

- 5.8 Seven species of bat have been recorded within 2km of the Site, namely common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus*, Natterer's bat *Myotis nattereri*, Daubenton's bat *Myotis daubentonii*, whiskered bat *Myotis mystacinus* and noctule *Nyctalus noctula*. The closest record, dated 1996, relates to a grounded pipistrelle bat at Raunds, High Street, no accurate grid reference for this was available. 28 records of bats were received for within the town of Raunds, dating from 1982 to 2015. No records of bats were received for within or adjacent to the Site.

Birds

- 5.9 148 species of bird were recorded for within 2km of the Site. The majority of records related to wetland birds recorded at Stanwick Lakes SPA/SSSI. No records of protected or notable bird species were received for within or adjacent to the Site.

Otter

- 5.10 Six records of otter *Lutra lutra* were received for within 2km of the Site. All records related to sightings within Stanwick Lakes SSSI 1.87km west. No records of otter were received within or adjacent to the Site.

Reptiles

- 5.11 Three records of grass snake *Natrix helvetica* were returned for within 2km of the Site. All records were located at Stanwick Lakes SSSI 1.87km west of the Site. No records of reptiles were received for within or adjacent to the Site.

Other Species

5.12 17 records of west European hedgehog *Erinaceus europaeus* were received for within 2km of the Site. The majority of these records were located within residential areas of Raunds. The closest record was located at 0.18km south of the Site at Ashfield Avenue. No records of hedgehog were received for within or adjacent to the Site.

6. PHASE 1 HABITAT SURVEY RESULTS

Habitat Descriptions

- 6.1 The full Phase 1 habitat survey map detailing the location of the above habitats and other features of ecological interest with Target Notes (TN) is presented at Appendix 1. The habitat descriptions below should be read in conjunction with this plan and any associated Target Notes.
- 6.2 Habitats identified during the Phase 1 habitat survey are detailed below in alphabetical order (not in order of ecological importance):

Buildings

Dense Scrub

Hedgerows

Improved Grassland

Introduced Shrub

Poor Semi-improved Grassland

Scattered Trees

Tall Ruderal

Buildings

- 6.3 Five old, shed buildings were present at the Site, constructed from a range of materials including corrugated metal and wooden shiplap panels. These buildings were all single story at approximately 2-2.5m in height. The buildings were in poor condition and were subject to fluctuating temperatures due to the construction materials and many gaps within the panels.
- 6.4 None of the buildings present had any features suitable for roosting bats. Giving them all negligible suitability.
- 6.5 The buildings may however be suitable for nesting birds, none were recorded at the time of survey.



Figure 4: One of the sheds surveyed at the Site


Dense Scrub


- 6.6 An area of dense scrub was located to the north of the Site close to the shed buildings. This habitat consisted of overgrown cultivated blackberry *Rubus* sp.
- 6.7 This habitat was of low ecological value.

Hedgerows

- 6.8 Three hedgerows were present at the Site, located at the southern boundary, within the west and at the western boundary of the Site.

Table 3: Descriptions of hedgerows Surveyed within the Site

Hedgerow No. (Map Reference)	Description	Overall Ecological Value
H1	<p>Species-rich intact hedgerow with trees located to the southern boundary of the Site. This hedgerow was dominated by elder <i>Sambucus nigra</i> with hawthorn <i>Crataegus monogyna</i> and blackthorn <i>Prunus spinosa</i>, privet <i>Ligustrum vulgare</i>, dogrose <i>Rosa canina</i>, Bramble <i>Rubus fruticosus</i> and ivy <i>Hedera helix</i>. Trees present were ash <i>Fraxinus excelsior</i> of a variety of ages from young saplings to a mature tree. The understory consisted of broadleaved dock <i>Rumex obtusifolius</i>, ivy and bramble. This hedgerow was unmanaged and was 3-4m in height and 2-3m in width. H1 was determined to be a Habitat of Principle Importance at described within the NERC 2006 Act, due to its species composition of more than 80% native woody species.</p>  <p style="text-align: center;">Figure 5: H1</p>	Low
H2	<p>Species-poor intact hedgerow intersecting the western side of the Site. This hedgerow was dominated by conifer species with ash, hawthorn and scattered elder, bramble and ivy were also present. Two mature ash trees were located at the south. This hedgerow was unmanaged and measured approximately 3-4m in height and 2-3m in width. H2 was not determined to be a Habitat of Principle Importance due to its species composition of less than 80% native woody species.</p>	Site only

Hedgerow No. (Map Reference)	Description	Overall Ecological Value
	 <p data-bbox="767 781 892 808">Figure 6: H2</p>	
H3	<p data-bbox="518 846 1141 1097">A species poor defunct hedgerow located to the western boundary of the Site. consisting of coppiced hazel <i>Corylus avelana</i>, conifer and scattered elder, ivy and bramble and hedge bindweed <i>Calystegia sepium</i> was also present. This hedgerow was largely unmanaged and was 2-3m in height and 2m in width. H3 was not determined to be a Habitat of Principle Importance due to its species composition of less than 80% native woody species.</p>	Site only

Improved Grassland

6.9 To the west of the Site was an area of mown lawn grassland consisting of perennial rye grass *Lolium perenne*, common daisy *Bellis perennis*, dandelion *Taraxacum officinale* agg. and creeping buttercup *Ranunculus repens*.

6.10 This habitat was of Site only ecological value.

Introduced shrub

6.11 Areas of introduced shrub planting were associated with the eastern boundaries of the Site. Species present included buddleia *Buddleja* sp., euonymus *Euonymus* sp., honeysuckle *Lonicera* sp., lilac *Syringa* sp. and cotoneaster *Cotoneaster* sp., with hop *Humulus lupulus* and bindweed *Calystegia sepium* also present.



Figure 7: Introduced shrub at the Site

6.12 This habitat was of low ecological value.

Poor Semi-improved Grassland

6.13 Within the majority of the Site was poor semi-improved grassland consisting of grass species such as false oat grass *Arrhenatherum elatius*, Yorkshire fog *Holcus lanatus*, annual meadow grass *Poa annua*, rough meadow grass *Poa trivialis*, cocksfoot *Dactylis glomerata*, red fescue *Festuca rubra* with occasional herbaceous species such as ragwort *Jacobaea vulgaris*, cow parsley *Anthriscus sylvestris*, broad leaved dock, dandelion, field speedwell *Veronica persica* and common daisy.

6.14 At the time of survey this grassland had been cut back leaving the sward up to 20cm in height.

6.15 This habitat was of low ecological value.



Figure 7: Poor semi-improved grassland at the Site

Scattered Trees

6.16 A number of scattered trees were present at the Site including a mature holly *Ilex aquifolium* located to the north-west corner of the Site. A young walnut *Juglans sp.* was located within the

former garden of No.36 Marshalls Road to the west of the Site, and a mature ash tree was located at the south of H2 at the south-west of the Site.

- 6.17 None of the trees present at the Site possessed features suitable for roosting bats.



Figure 8: Mature holly tree at the Site

- 6.18 This habitat was of low ecological value.

Tall Ruderal

- 6.19 Small areas of tall ruderal habitat were located in association with the buildings at the Site consisting of common nettle *Urtica dioica* and cow parsley. Along the access road was a 0.5m strip of red valerian *Centranthus ruber*.

- 6.20 This habitat was of Site only ecological value.

Other Habitats

- 6.21 The access road from Marshalls Road leading into the Site was hardstanding and gravel. This narrowed into a single footpath intersecting the Site to the west. This habitat was of negligible ecological value.
- 6.22 A log pile was located near the northern boundary of the Site which would provide limited refugia for reptiles and amphibians.



Figure 9: Log Pile

Evidence of Protected Species and Other Faunal Interest.

6.23 No priority species were recorded during the survey, however, a number of common bird species were seen or heard during the survey including:

Wren Troglodytes troglodytes

Blackbird Turdus merula

Blackcap Sylvania atricapilla

Blue tit Cyanistes caeruleus

Greenfinch Chloris chloris

Woodpigeon Columba palumbus

7. EVALUATION OF ECOLOGICAL CONTEXT

The Site

- 7.1 The Site was located within the town of Raunds surrounded by residential housing and associated roads and gardens. Connectivity for many terrestrial species is limited, however, aerial species such as bats and birds would be able to migrate to the site from surrounding areas.

Statutory Sites

- 7.2 The Site itself is not subject to any statutory nature conservation designation.
- 7.3 The nearest statutory designated site is Stanwick Lakes SPA including the Upper Nene Valley Gravel Pits SSSI located at 1.87km west of the Site. This Site is designated due to its mosaic of habitat and its importance for wetland birds.
- 7.4 The habitats to be lost within the Proposed Development Site would not support any wetland birds originating from Stanwick Lakes. It is therefore unlikely that the Proposed Development will lead to any negative impacts on Stanwick Lakes SPA or the Upper Nene Valley SSSI.
- 7.5 Impact Risk Zones (IRZs) are a tool developed by Natural England to provide an initial assessment of the potential risks to SSSIs. The Site falls within one IRZ for the Upper Nene Valley Gravel Pits SSSI.
- 7.6 The IRZ applies to “Any residential developments with a total net gain in residential units”, as such, further Local Authority advice will be required.

Non-statutory Sites

- 7.7 The Site is not subject to any non-statutory designation.
- 7.8 The closest non-statutory designated site is the Raunds Pocket Park located at 0.86km south-west of the Site.
- 7.9 Connecting areas between the Site and the Raunds Pocket Park consist of residential housing at a high density. This would limit movement of many terrestrial species to the Proposed Development Site. Aerial species such as birds and bats may migrate to the Proposed Development Site on occasion. Overall, it is considered that the Raunds Pocket Park would not be adversely affected by the Proposed Development due to the distance from the Site and the scale of the Proposed Development.

8. HABITAT EVALUATION

- 8.1 At the time of the assessment the Site comprised buildings, poor semi-improved grassland and improved grassland bound by hedgerows and scattered trees with areas of dense scrub, introduced shrub and tall ruderal vegetation.
- 8.2 No habitats were found to be of regional, national or international ecological value.
- 8.3 Habitats to be lost for the Proposed Development will include the buildings, improved grassland and poor semi-improved grassland, dense scrub and tall ruderal vegetation. It is likely that some of the introduced shrub will be retained. None of the habitats to be lost were determined to be Habitats of Principle Importance as described by the NERC 2006 Act.
- 8.4 The improved grassland and tall ruderal habitats were found to be of Site only ecological value.
- 8.5 The poor semi-improved grassland introduced shrub and dense scrub vegetation were of low/local ecological value.
- 8.6 A number of scattered trees will be lost and/ or managed for the Proposed Development. Any trees lost should be replaced by appropriate species which provide benefits for biodiversity.

Hedgerows

- 8.7 H1 located to the southern boundary was species rich with trees was found to be of low/local ecological value, this hedgerow was determined to be a Habitat of Principle Importance as described by the NERC 2006 Act. However, this hedgerow was unmanaged and had therefore lost some structure. Both H1 and H3 will be retained and managed to improve its condition for the Proposed Development.
- 8.8 H2 and H3 were of Site only ecological value due to their species composition and lack of management. These hedgerows were not considered to be a Habitat of Principle Importance. H2 will be partially or entirely removed for the Proposed Development.
- 8.9 Additional hedgerow planting will be located to the northern boundary of the Site to compensate for the loss of H2. This planting is likely to include species know to thrive within the Site such as holly, hawthorn, blackthorn, and hazel.

9. FAUNAL EVALUATION

- 9.1 The desk study located a variety of protected species records for the local area (see plan and details at Appendix 1).
- 9.2 The Site has been assessed on the suitability of the habitats to support such protected species and the likelihood of those species being present. Table 9 provides a summary account of protected species within the Site and local area.
- 9.3 In the absence of mitigation and further assessment the impacts on each species have been assessed using the following scale:

Table 4: Impact Levels and Criteria

Classification	Criteria
Negative (Significant)	Likely to create a significant effect, including loss, or long-term irreversible damage on the integrity / status of a valued ecological feature
Negative (non-significant)	Likely to create a negative effect without causing long-term or irreversible damage on the integrity / status of a valued ecological feature
Neutral	Effects are either absent or such that no overall net change to the ecological feature occurs.
Positive (non-significant)	Likely to create a beneficial effect on an ecological feature, or providing a new (lower value) ecological feature, without improving its conservation status markedly
Positive (significant)	Activity is likely to create a significant beneficial effect, including long-term enhancement and favourable condition of an existing valued ecological feature, or creation of a new valued ecological feature.

Table 5: Summary of Protected Species Associated with the Site

Species	Recorded in Desk Study	Evidence on Site	Potential on Site to Support Presence	Description of likely Impact on Species	Likely Impact
Amphibians	Yes – GCN at 0.91km north of the Site.	None	Yes –Connectivity for amphibian species to the Site is limited by the Site location within residential housing. However, common amphibians may be present within the hedgerows, dense scrub, tall ruderal, under the shed buildings and log pile. There is no standing water at the Site.	H2 will be partially or entirely lost, and the dense scrub, tall ruderal, buildings and log pile will be lost for the Proposed Development, reducing sub-optimal terrestrial habitat for amphibians within the Site.	Negative (non-significant)
Badgers	[REDACTED]				
Bats	Yes – seven species including common species including soprano and common pipistrelle, brown long-eared bat and Daubenton’s bat. Less common species include Natterer’s bat, whiskered bat and noctule bat have also been recorded in the local area.	None	No – none of the buildings or trees at the Site were found to provide suitable roosting habitat for bats. The hedgerows and trees may provide some limited foraging habitat.	The Proposed Development will lead to the partial or full loss of H2, however replacement hedgerow will be planted to the northern boundary. Hedgerows H1 and H3 will be retained and managed. Suitable foraging habitat for bats will be reduced in the short-term as a result of the Proposed Development, however this will be offset by the replacement hedgerow planting.	Negative (non-significant)
Birds	Yes – a large number of wetland and garden birds.	Yes – an assemblage of common bird species	Yes – there is potential for birds to be utilising the hedgerows, scattered trees and introduced shrub for foraging and nesting.	The Proposed Development will lead to the loss of some scattered trees and the partial or full loss of H2. Hedgerows H1 and H3 and the introduced shrub at the Site will be managed by cutting back of vegetation. Further hedgerow and trees will be planted. This will reduce sheltering, foraging and nesting opportunities in the short-term, however	Positive (non-significant)

Species	Recorded in Desk Study	Evidence on Site	Potential on Site to Support Presence	Description of likely Impact on Species	Likely Impact
				this will be offset by replacement planting.	
Reptiles	Yes – grass snake was recorded 1.87km west of the Site.	None	Yes – connectivity for reptile species to the Site is limited by the Site location within residential housing. However, there may be limited potential for reptiles to be present within the hedgerows, dense scrub, tall ruderal, under the shed buildings and log pile.	H2 will be partially or entirely lost. The dense scrub, tall ruderal, buildings and log pile will be lost for the Proposed Development, reducing refugia and foraging opportunities for reptiles within the Site.	Negative (non-significant)
Otter	Yes – six records all at Stanwick Lakes SSSI 1.87km west	None	No – there is no running water on Site.	N/A	Neutral as there is no potential on Site.
Other faunal interest: Hedgehog	17 Records of west European hedgehog were received for within 2km of the Site.	None	Yes – there is potential for hedgehogs within the log pile, shed buildings and hedgerows.	H2 will be partially or entirely lost and the log pile and buildings will be lost for the Proposed Development, reducing foraging and sheltering opportunities for hedgehog.	Negative (non-significant)

10. RECOMMENDATIONS, FURTHER SURVEYS AND ENHANCEMENTS

Overview

- 10.1 Recommendations have been provided within this report that will safeguard the existing ecological interest features within the Site. Wherever possible, measures to enhance ecological and biodiversity value have also been set out.
- 10.2 Based on the survey undertaken to date and the recommendations for further surveys, the presence and potential presence of protected species has been given due regard.
- 10.3 In conclusion, implementation of the measures provided within this report enable the proposals to accord with national and local planning policy for nature conservation.

Designated Sites

- 10.4 Due to the distance between the Site and designated nature conservation sites in the local area it is considered unlikely that there will be any significant adverse effects on these sites as a result of the works. Therefore, no recommendations in relation to the designated sites are made.

Habitats

- 10.5 At the time of the assessment the Site mostly comprised buildings, poor semi-improved grassland and improved grassland bound by hedgerows and scattered trees with areas of dense scrub, introduced shrub and tall ruderal vegetation.
- 10.6 H1 and H3 will be retained and cut back improving the structure and density of the hedgerow for a number of species, providing nesting opportunities for birds and shelter and foraging opportunities for a range of wildlife.
- 10.7 H2 will be partially or entirely lost for the Proposed Development. However, to compensate for this loss new hedgerow planting will be integrated into the landscape design to the northern boundary. This hedgerow will consist of species such as holly, hawthorn, blackthorn and hazel which are known to thrive within the Site. These species will increase the biodiversity value of the Site as part of the Proposed Development as these species are known to provide foraging opportunities for breeding birds and nectar sources for invertebrates.

Species

Amphibians

- 10.8 Overall the Site was of low value to amphibians, with only small areas of potentially suitable terrestrial habitat present. Should any great crested newt be encountered, works must stop immediately, and a member of the Nicholsons Lockhart Garratt ecology team contacted for advice.

Amphibian and Reptile Phased Vegetation clearance

- 10.9 It is recommended that the amphibian method statement given below is implemented to safeguard any common amphibians which may use the Site on occasion:

Suitable refugia present within the proposed works area including materials from the shed buildings and log piles is to be searched and removed by the hand.

- Any amphibians or reptiles captured as part of this will be relocated to an area of habitat away from the construction area.
- Any areas of longer vegetation including the tall ruderal and dense scrub to be lost will be strimmed initially to a height of 150mm.
- After a 5 day period this area is then to be strimmed to a height of 50mm or to bare soil as required.

Mammal Safeguards

10.11 General construction safeguards should also be implemented as a precaution, which will also act to safeguard other mammals, such as fox and hedgehog:

- All contractors and Site personnel will be briefed on the potential presence of mammals such as hedgehog within the Site.
- Any trenches or deep pits within the Site are to be left open overnight will be provided with a means of escape should an animal enter. This could simply be in the form of a roughened plank of wood placed in the trench as a ramp to the surface. This is particularly important if the trench fills with water.
- Any trenches will be inspected each morning to ensure no animals have become trapped overnight.
- Food and litter should not be left within the working area overnight.

- [REDACTED] d

Bats

10.12 The Site currently lacks suitable habitat for roosting bats; however the Site may attract a small number of foraging and commuting bats along hedgerows and Site boundaries.

10.13 The existing scattered trees and hedgerows should be retained where possible so the foraging and commuting opportunities which this habitat currently offers for bats will be maintained.

10.14 Given the good number of records of bats within Raunds, enhancements may be considered giving opportunities for roosting bats within the Proposed Development. Integrated bat bricks should be considered within the building design. Ideally these need to be within a south facing wall with a clear flight path not obstructed by vegetation or buildings, located at 3-6m high. If this is not practical external bat boxes such as 2F Schwegler Bat Box should be erected on retained trees.

During and post-construction

- Night working should be avoided where possible, lighting used during the construction phase must be directed away from the trees and hedgerows at the boundaries of the Site.

Construction practices should follow best practice in terms of dust and noise and control.

Any exterior lighting installed on the new properties should be directed away from the retained trees and hedgerows. New external lighting should avoid up-lighting where possible. New lighting should include LED lights fitted with hoods to direct light downward and should be installed at first floor height.

Nesting Birds

- 10.15 As the scattered trees, introduced shrubs and hedgerows may potentially offer breeding opportunities for birds' works affecting these habitats should take place outside the bird breeding season (March to August inclusive). If in the event vegetation clearance works need to proceed within this period, then an ecologist will need to carry out a nesting bird check within 48 hours of vegetation removal and mark out any nests currently in use which must be left undisturbed until the chicks have fledged.

Reptiles

- 10.16 The Site offers some suitable habitat for reptiles through the presence of hedgerows, dense scrub, tall ruderal and log pile.
- 10.17 Recommendations provided in respect of amphibians will also act to safeguard any reptiles, which may use the Site on occasion.

Enhancements

- 10.18 Development proposals should seek to provide enhancement opportunities for species using the Site. This should include the following measures:
- Enhancement of hedgerows across the Site infilling with native species;
 - Planting of nectar, fruit and nut producing species;
 - Provision of bird nesting boxes within appropriate locations on the retained trees;
 - Provision of suitable gaps in fence lines to allow the movement of species such as hedgehog;

General

- 10.19 If in the unlikely event any protected species (e.g. amphibians, badgers, bats, reptiles, or nesting birds) are encountered as part of the works, then all works must stop, with advice sought immediately from Nicholsons Lockhart Garratt (01536 408840).

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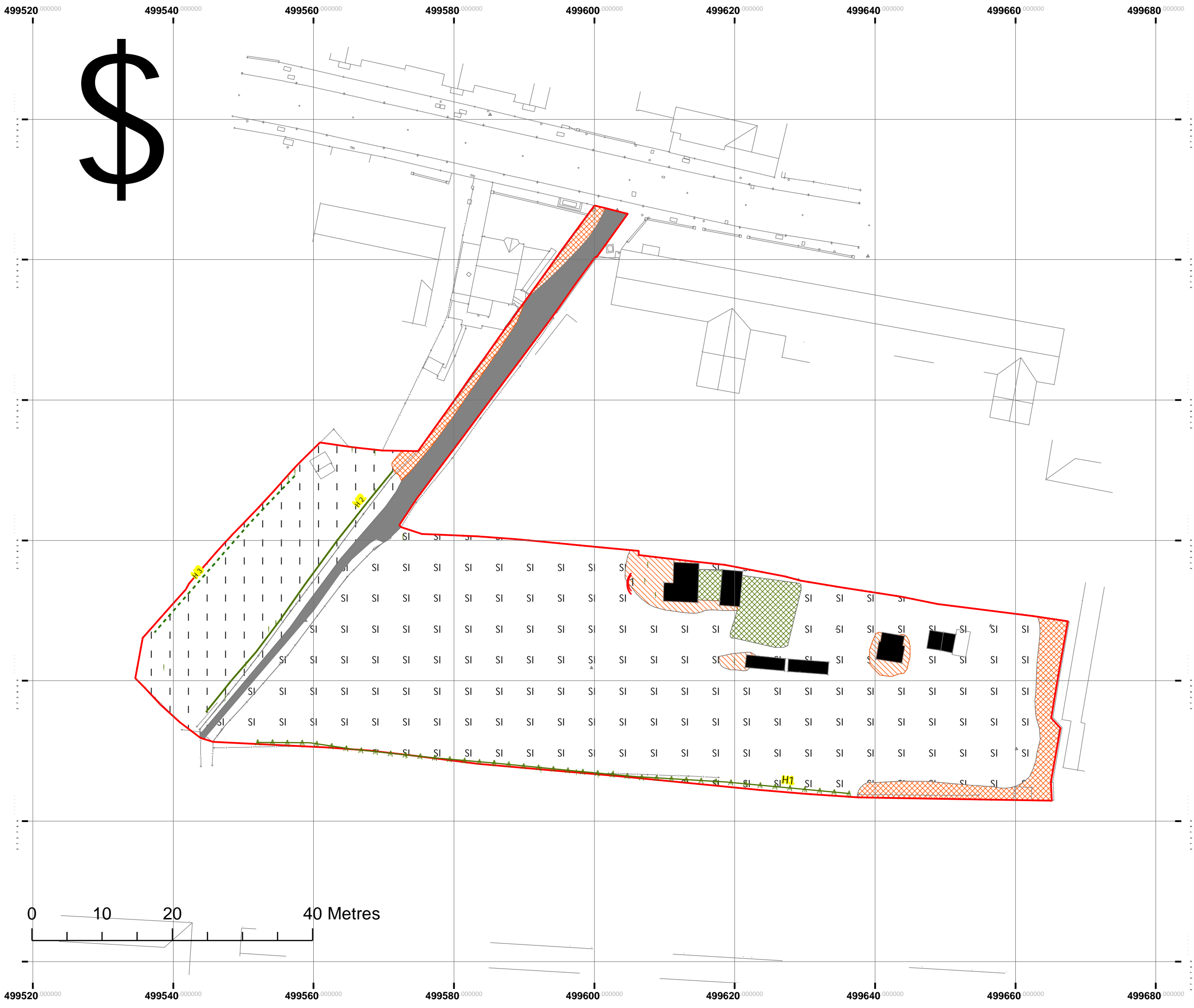
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







12. APPENDICES

Appendix 1: PEA Phase 1 Habitat Map

Ref: 22-0298



Legend:

-  Site Boundary
-  Scattered Tree
-  Building
-  Dense Scrub
-  Hardstanding
-  Improved Grassland
-  Introduced Shrub
-  Poor Semi-Improved Grassland
-  Tall Ruderal
-  Species Poor Defunct Hedgerow
-  Species Poor Hedgerow
-  Species Rich Hedgerow with Trees
-  Target Note:
1 - Log Pile

REVISIONS:		
DATE:	VERSION:	INITIALS:

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TITLE: Preliminary Ecological Appraisal

PROJECT/SITE: Marshalls Road, Raunds

CLIENT: Tophaven Sustainable Construction Ltd

MAP REF: 4898/01/22-0298

VERSION: v1

DATE: 16/06/22 SCALE: 1:500 @A3

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