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PROPOSED RESIDENTIAL DEVELOPMENT AT PLOTS ADJACENT TO SPRINGFIELD REJERRAH NEWQUAY CORNWALL TR8 5QA

HABITAT AND PROTECTED SPECIES REPORT

(DECEMBER 2020)

REPORT REF: 2074 - PHA

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1.0 INTRODUCTION

1.1 Paul Hicking Associates were commissioned by Mr and Mrs Hannaford to conduct a Habitat and Protected Species Assessment at Plots adjacent to Springfield Rejerrah, Newquay, Cornwall TR8 5QA in order to assess the potential impact by the new development.

Previous Survey History for Protected Species and Habitats

1.2 There are no previous survey records for the site

Previous Planning History for Protected Species and Habitats

There is no previous planning history for the site.

Site Description

1.3 Location

Rejerrah is a small hamlet near Cubert in Cornwall. This c0.2ha rectangular- shaped site is part of an existing area of grassland used as grazing pasture enclosed within a raised earth boundaries containing dense scrub habitats with scattered trees and stone walling. The site is accessed by an existing farm gate from the access road. The extent of the development site is shown within the site context photograph 1.4 below.

1.4 Aerial and context photograph of the site.

2.0 METHODOLOGY

2.1 This section describes how the essential evidence supporting this report was gathered and what equipment and techniques were used.

Desk Top Study

2.2 A desktop study was carried out to determine the presence of any protected or notable species records or designated statutory or non-statutory sites of nature conservation value (such as Sites of Special Scientific Interest or Local Wildlife Sites) within a 1km radius of the site. This included the study of ordinance survey maps and aerial photographs including Google Earth and 'Where's the path' maps.

2.3 The MAGIC (www.magic.gov.uk) and the NBN Gateway (www.nbn.org.uk) were visited, to identify records of protected species within a 1km radius of the site.

2.4 The OS grid reference is SW 180000 55927 and the site can be found on: -

- OS Explorer 104 – Redruth and St Agnes
- OS Explorer 105 - Falmouth & Mevagissey
- OS Landranger 200 – Newquay & Bodmin

Topographical Survey

2.5 A topographical survey was made available for the site (see Appendix 1). This survey was provided in a CAD format and includes the position of all significant trees and hedgerows on or immediately adjacent to the site. The survey also includes all other landscape features such as the position of existing buildings and structures, pathways and access roads. Changes in ground levels were also recorded on the survey and are related back to known ordinance survey levels and co-ordinates.

Habitat Survey

2.6 The terrestrial Habitat survey was carried out on the 7th October 2020 by experience surveyor and practical habitat manager Mr. P Hicking to determine the general ecological value of the habitats within the site. The surrounding area was also extensively walked to determine the sites connectivity to other adjacent habitats. A list of plant species was catalogued in accordance with habitat type and tested against Ratcliffe's Criteria. Habitats were mapped and classified in accordance with the Phase 1 Habitat Survey Methodology of the Joint Nature Conservation Committee (JNCC, 2010). The data was then checked against the data obtained from the desktop study to determine how the study site sits within the local network of habitats and its potential contribution.

2.7 Invasive species – The site was thoroughly search for the presence of invasive species such as Japanese Knotweed (*Fallopia japonica*) or Himalayan balsam (*Impatiens glandulifera*).

Fauna Survey

2.8 A protected species survey was conducted. Sightings or signs of protected species were recorded along with the suitability and connectivity of the habitats present to support protected species and are detailed as follows:

2.9 Badger (*Meles meles*): - are nocturnal animals and the survey therefore involved searching for evidence of this species.

Specific signs which were searched for as follows:

- Setts and day nests (bundles of grass and other vegetation where badgers may sleep above ground);
- Dung pits and latrines (i.e. concentration of dung pits);
- Paw prints and paths;
- Hairs (which may be found at the sett or caught on fences and vegetation);
- Scratching posts (found at the base of trees);
- Feeding signs (i.e. "snuffle holes' or small scrapes on the woodland floor and/or grassland where badgers have looked for earthworms and plant tubers etc.).

Survey Limitations

The development site itself is fully accessible however, some of the surrounding properties are inaccessible therefore limiting the extent of access to the surrounding area. Inaccessible areas were assessed within the desk top study.

2.10 Mammals Generally – There is potential for the presence of small mammals such as Hedgehog (*Erinaceus europaeus*) and signs were looked for including runways and droppings along with an assessment of available food source and habitat structure.

Survey Limitations

Recent heavy rains may wash away any small mammal droppings. The development site itself is fully accessible however, some of the surrounding properties are inaccessible therefore limiting the extent of access to surrounding area. Inaccessible areas were assessed within the desk top study.

2.11 Birds – The site was fully assessed for its potential suitability to support breeding birds along with an assessment of resident bird populations. All site records for birds were taken from site visual observations or by call. Leica 8 x 42 binoculars were used to observe and identify bird species. All birds could be observed without the aid of additional optical equipment i.e. a telescope.

Using the British Trust for Ornithology (BTO) Common Bird Census survey techniques species were recorded to note their abundance along with particular attention to the presence of any protected or Local Biodiversity Plan (LBAP) species which would be likely to use these habitats. This data was compared with data obtained from the desktop study. Existing trees and ground vegetation were also inspected for their potential to support breeding birds.

Survey Limitations

The survey was undertaken outside the bird breeding season and therefore the survey is limited to the presence of resident and any winter migrant bird populations.

2.12 Great Crested Newt – The surrounding area, where possible, was extensively walked to determine the presence of ponds and networks which may support this species. Data obtained within the desktop study was also reviewed to determine if this species had been recorded within the vicinity of the study site.

Survey Limitations

The development site itself is fully accessible however, some of the surrounding properties are inaccessible therefore limiting the extent of access to surrounding area. Inaccessible areas were assessed within the desk top study.

2.13 Amphibians Generally – The site and surrounding vicinity, where possible, was extensively walked to determine the potential for the presence of other amphibians such as Common Toad (*Bufo bufo*), Common Frog (*Rana temporaria*), Smooth (*Lissotriton vulgaris*) and Palmate Newt (*Lissotriton helveticus*). Data obtained within the desktop study was also reviewed to determine if any of these species had been recorded within the vicinity of the study site.

Survey Limitations

The development site itself is fully accessible however, some of the surrounding properties are inaccessible therefore limiting the extent of access to surrounding area. Inaccessible areas were assessed within the desk top study.

2.14 Reptiles – The site and surrounding vicinity was extensively walked to determine the potential for the presence of reptiles such as Grass snake (*Natrix natrix*) and Slow-worm (*Anguis fragilis*). Data obtained within the desktop study was also reviewed to determine if any of these species had been recorded within the vicinity of the study site.

Survey Limitations

The development site itself is fully accessible however, some of the surrounding properties are inaccessible therefore limiting the extent of access to surrounding area. Inaccessible areas were assessed within the desk top study. Reptiles are most effectively surveyed in April, May and

September. Surveys should not be undertaken during times of inactivity, which are typically from November to February inclusive, and occasionally during very hot, dry weather in July-August. There can be variation in these timings due to local weather patterns or species differences.

2.15 Invertebrates – are most effectively surveyed in May-August at the height of the flight period for most invertebrates. However, some invertebrates are active during the winter months including winter moth species. The study site was therefore assessed for its potential for the presence of invertebrates such as butterflies, bees, moths and Odonata (dragonflies and damselflies). Recommendation for the protection of habitats or introduction of enhancement features for invertebrates are based on this site assessment.

2.16 Bats:

Daytime Bat Survey

2.17 **Buildings.** There are no buildings within the development site.

Trees. There are scattered mature trees along the boundary of the development site. An examination of the trees was undertaken to search for the presence of features which could be of potential for bats such as splits, cracks, rot holes, coverings of ivy, peeling bark or similar. The potential for the trees to support roosting bats will be ranked in accordance with the criteria set out in the publication entitled 'Bat Surveys – Good Practice Guidelines,' by the Bat Conservation Trust (BCT)

Tree(s) were initially assessed from the ground during the walkover survey. Any trees of interest were identified and recorded for further investigation. Tree assessments may produce one of several outcomes that are categorised below:

- Roost: Direct or indirect evidence of bats was observed during the tree assessment. Ecologist involvement will be required that may require further survey work that should be undertaken at suitable times of the year. Additional surveys can be used to inform European Protected Species licence (EPS) from the local Statutory Nature Conservation Organisation (SNCO) if the proposed development is considered likely to cause an offence.

- Category 1* (High Potential): No evidence of bats was observed but the potential for bats is very good due to a variety of suitable features, good conditions and / or surrounding habitat or known bat roosts located within close proximity of the site. This category of trees is generally considered capable of supporting larger roosts than Category 1. Ecologist involvement is required.

- Category 1 (Moderate Potential): No evidence of bats was observed but the definite potential for bats due to a limited number of suitable features within the tree(s). This

category of trees is generally capable of supporting single bats. Further ecologist involvement is considered likely to be required, and precautions should be taken including a method statement outlining best practice guidelines and procedures in case new evidence is found e.g. soft felling, avoidance wherever possible.

- Category 2 (Low Potential): No evidence of bats was observed and potential for bats being present is considered unlikely. Crevices or cracks may be found but have limited potential for bats. Further ecologist involvement not considered necessary.

- Category 3 (No Potential): No evidence of bats was observed and potential for bats being present is considered negligible. No further action is considered necessary.

Trees that have been identified as Roost, Category 1* or Category 1 may require further investigation, including aerial tree surveys. Once trees have been aerially surveyed, they may be re-categorised as higher or lower risk.

Survey Limitations

Periods of heavy rain prior to and during the survey period may potentially wash-away evidence for the presence of bats.

3.0 RESULTS

3.1 The section states the findings of the survey effort.

Habitats

3.2 Maps published by the Ordnance Survey were consulted to ascertain the potential ecological connectivity of the area. Aerial photographs were also studied to detect possible navigable routes for between the study site and locations that might provide suitable foraging areas or potential alternative sites for roosting, nesting and hibernation. There are no UK Biodiversity Action Plan (UKBAP) habitats within the study site. Habitats outside the development site comprise of the following:

Outside the development site

- Arable and grazing pasture
- Solar farm
- Public footpaths and access roads
- Residential development
- Roadside verge
- Deciduous woodland and scattered trees
- Native species hedgerow

3.3 There are no statutory designated sites or local wildlife sites of nature conservation within the study site or within 1km of the study site. However, there are areas of priority deciduous and broad lead woodland within 1km to the north and east of the development site. The development site is also close to the boundary of National Habitat Network Expansion Zone.

3.4 The site comprises of the following habitats:

- Roadside verge
- A2 scrub.
- B2 Improved grassland
- J4 Concrete hardstanding

The locations of the above habitats within the study site are shown within Appendix 1.

3.5 **Roadside verge**

This is a traditional feature within the Cornish rural landscape defining each side of a single lane and narrow track road and comprises of a steep sided ivy covered raised embankment above the road level with mature trees with exposed tree roots and an inner layer of scrub vegetation forming a natural enclosure along the northern boundary. A stone wall encloses the site where ground levels are raised along the eastern boundary. A full list of species is included within table 2 below.

Table 2: The following species were recorded within the development site:

English Name	Scientific Name	
Common ivy	*Hedra helix*	A
Hawthorn	*Crataegus monogyna*	O
Sycamore	*Acer pseudoplatanus*	F
Bramble	*Rubus fruticosus*	F

3.6 **A2 Scrub**

Unmanaged scrub vegetation forms part of the natural enclosure of the grazing pasture and providing a stock-proof reinforced boundary within the site. The southern boundary also contains a small tree group of five Yew (*Taxus baccata*) trees. A full list of species is included within table 3 below.

Table 3: The following species were recorded within the development site:

English Name	Scientific Name	
Bramble	*Rubus fruticosus*	A
Hawthorn	*Crataegus monogyna*	A
Yew	*Taxus baccata*	O
Common ivy	*Hedra helix*	A
Bramble	*Rubus fruticosus*	A
Common nettle	*Urtica dioica*	F
Bracken	*Pteridium aquilium*	F
Rosebay willowherb	*Chamerion angustifolium*	F
Spear thistle	*Cirsium vulgare*	O

3.7 **B2 Improved grassland**

The majority of the site comprises of an area of grassland which has been previously used as a grazing pasture for horses. The grass has been left to grow however, the nitrification of the soil led to the grassland becoming dominated by a thick sward of short perennial rye grass (*Lolium perenne*). This habitat also forms part of a raised earth embankment with stone walling along the southern boundary forming an enclosure to the site. A full list of species is included within table 4 below.

Table 4: The following species were recorded within the development site:

English Name	Scientific Name	
Perennial rye-grass	*Lolium perenne*	A
Common ivy	*Hedra helix*	F
Common nettle	*Urtica dioica*	F
Clover	*Trifolium ripens*	A

Spear thistle	*Cirsium vulgare*	O
Broad-leaved dock	*Rumex obtusifolius*	F

3.8 **J4 Concrete hardstanding**

There is a short section of concrete hardstanding enclosed by a post and rain fence and metal farm gate at the entrance to the site.

Fauna

3.9 **Badger**

Potential Use of Site

The arable grassland habitat within the site is ideal for foraging badger however, no evidence of badger (including setts, latrines, hair or snuffle holes), were found within the development site or within 30m of the development site.

Background Records

There are no biological records for badger within 1km of the site.

Connectivity

The site is relatively open with good connectivity to the wider ecological network including nearby woodland.

3.10 **Mammals Generally** – the grassland and scrub habitats are ideal for foraging and there were numerous trails to suggest the presence of small mammals such brown rat. The surrounding area has good connectivity for hedgehog with biological records for 2015.

Table 7: The following species have been recorded within 1km of the study site:

English Name	Scientific Name	No. of Records/Most recent Date
Mammals		
Hedgehog	*Erinaceus europaeus*	1 record 2015
Wood mouse	*Apodemus sylvaticus*	1 record 2019
Brown rat	*Rattus norvegicus*	1 record 2010
Grey squirrel	*Sciurus carolinensis*	1 record 2010
Red fox	*Vulpes vulpes*	1 record 2014
European mole	*Talpa europaea*	1 record 2017
Roe deer	*Capreolus capreolus*	1 record 2014

3.11 Birds

Bird Survey

A total of 16 species were recorded during the survey including four red listed species and one amber listed species (at least a quarter of the species recorded present are of conservation concern). All habitats within the survey site have potential to support breeding birds including the and the arable grassland habitats and all provide a combination of invertebrate and berry bearing food source. The remains of this year's breeding season nests remain present within the hedgerows and trees The total list of species recorded is included within table 8 and relevant county records within table 9 below.

Table 8: The following species were recorded within the study site and surrounding area.

English Name	Scientific Name	No.	Details
Birds			
Blackbird	*Turdus merula*	1	
Carrion crow	*Corvus corone*	2	
Wood Pigeon	*Columba palumbus*	2	
Starling	*Sturnus vulgaris*	7	RED LISTED
Robin	*Erithacus rubecula*	1	
House sparrow	*Passer domesticus*	2	RED LISTED
Great tit	*Parus major*	2	
Blue Tit	*Cyanistes caeruleus*	3	
Dunnock	*Prunella modularis*	1	AMBER LISTED
Wren	*Troglodytes troglodytes*	1	
Chaffinch	*Fringilla coelebs*	1	
Fieldfare	*Turdus pilaris*	14	RED LISTED
Redwing	*Turdus iliacus*	30+	RED LISTED
Pheasant	*Phasianus colchicus*	1	
Buzzard	*Buteo buteo*	1	
Kestrel	*Falco tinnunculus*	1	

Table 9: The following species were recorded within 1km of the study site and surrounding area;

English Name	Scientific Name	No. of Records/Most recent Date
Birds		
Blackbird	*Turdus merula*	Several records 2019
Robin	*Erithacus rubecula*	Several records 2019
House sparrow	*Passer domesticus*	Several records 2019

Buzzard	*Buteo buteo*	Several records 2019
Sparrowhawk	*Accipiter nisus*	Several records 2019
Kestrel	*Falco tinnunculus*	Several records 2019
Carrion crow	*Corvus corone*	Several records 2019
Jackdaw	*Coloeus monedula*	Several records 2019
Rook	*Corvus frugilegus*	Several records 2019
Grey partridge	*Perdix perdix*	Several records 2019
Collared dove	*Streptopelia decaocto*	Several records 2019
Great spotted woodpecker	*Dendrocopos major*	Several records 2019
Greenfinch	*Chloris chloris*	Several records 2019
Dunnock	*Prunella modularis*	Several records 2019
Song thrush	*Turdus philomelos*	Several records 2019
Fieldfare	*Turdus pilaris*	Several records 2019
Redwing	*Turdus iliacus*	Several records 2019
Starling	*Sturnus vulgaris*	Several records 2019
Swift	*Apus apus*	Several records 2019
House martin	*Delichon urbicum*	Several records 2019
Swallow	*Hirundo rustica*	Several records 2019
Magpie	*Pica pica*	Several records 2019
Whitethroat	*Sylvia communis*	Several records 2019
Chiffchaff	*Phlloscopus colllybita*	Several records 2019
Willow warbler	*Phylloscopus trochilus*	Several records 2019
Blackcap	*Sylvia atricapilla*	Several records 2019
Goldfinch	*Carduelis carduelis*	Several records 2019
Wren	*Troglodytes troglodytes*	Several records 2019
Blue Tit	*Cyanistes caeruleus*	Several records 2019
Great tit	*Parus major*	Several records 2019
Long-tailed tit	*Aegithalos caudatus*	Several records 2019

The above records show the presence of a community of species associated with the habitats within the site and surrounding area however, recording has generally been associated with survey efforts within the surrounding area.

3.12 **Great Crested Newt** (*Triturus cristatus*) – There are no suitable breeding habitats (i.e. ponds), present within the site. Fiive ponds were identified from the OS maps within 350m to the north of the site and are associated with Rejerrah Mill.

There are no biological records for newts within 1km of the site.

3.13 **Amphibians Generally** – There are no biological records found for the study site but there are records for the surrounding vicinity and no amphibians were found within the habitats to the study site. However, it is likely that common frog and toad may be present within some of the surrounding vicinity.

3.14 **Reptiles** – The grassland habitats within the site offer little potential to support reptiles due to its short grazed sward and extent of ground disturbance. The existing raised bank scrub and wall boundaries contains some commuting potential for grass snake (*Natrix natrix*) but is lacking an understory structure to support hibernating. The stone walling provides some potential habitat for Common lizard (*Zootoca vivipara*). The presence of pheasant is also a deterrent to the presence of reptiles. There are no data records for this site or within 1km of the site.

3.15 **Invertebrates** – The habitats present within the site offer potential for range of common invertebrates including butterflies and bees. There are no biological records for notable species within 1km of the site.

3.16 **Invasive species** – There are no biological records for invasive non-native species within 1km of the site. No invasive species were found during the site survey undertaken.

3.17 **Bats** – Existing trees within the site are without features to support roosting bats due to their age and condition and are therefore classed at **Category 3** potential for roosting bats.

3.18 There is a single biological record for bat sightings and activity recording within 1km of the site. This seem to be associated with some nearby survey effort but this record is 10 years old.

Table 10: The following species were recorded within the study site and surrounding area;

English Name	Scientific Name	No. of Records/Most recent Date
Bats		
Common pipistrelle	*Pipistrellus pipistrellus*	1 record 2010

4.0 PLANNING AND NATURE CONSERVATION POLICY

4.1 This section provides an overview of National Planning Policy Framework (NPPF) adopted by Cornwall Council for policies in relation to nature conservation and biodiversity.

The Five Point Approach

4.2 The National Planning Policy Framework (NPPF) describes the Government's national policies on the protection of biodiversity [and geological] conservation through the planning system. NPPF emphasises the need for planning authorities to ensure that the potential effects of planning decisions on biodiversity conservation are fully considered. A five-point best practice approach to the assessment of such effects within the development control process is recommended:

1. **Information** – gathering a sufficient evidence base on which to make sound planning decisions.
2. **Avoidance** – adverse effects on habitats and species should be avoided where possible.
3. **Mitigation** – where it is unavoidable, mitigation measures should be employed to minimise adverse effects.
4. **Compensation** – where residual effects remain after mitigation it may be necessary to provide compensation to offset any harm.
5. **New benefits** – many planning decisions present the opportunity to deliver enhancements for habitats or species.

The assessment of ecological effects set out within this report is based on the above five-point approach, where appropriate.

Cornwall Council Core Policy

4.3 The county contains a range of habitats each supporting its own characteristic species along with a number of sites which receive specific protection because of their national or county/ regional importance for nature conservation.

4.4 The United Kingdom Biodiversity Action Plan (UKBAP) and Local Biodiversity Action Plan (LBAP), list a series of Priority Habitats of conservation concern that are considered to be priorities for nature conservation. **The following UKBAP and LBAP habitats and species of concern are present within or adjacent to the study site**:

- House sparrow (*Passer domesticus*) and Dunnock (*Prunella modularis*)
- Starling (*Sturnus vulgaris*)
- Roadside verge embankment with dense scrub vegetation and hedgerow with stone walling.

5.0 ASSESSMENT

Constraints On The Survey Information

5.1 Many species, including some which are protected by law, are highly mobile and may colonise or utilise a site at any time. Also, habitats may change over time in terms of their ecological value and the survey results reported here will therefore become less reliable as time progresses.

5.2 The site was assessed during the visit to establish the potential presence or absence of protected species. No continual survey monitoring has been undertaken therefore a lack of evidence of a protected species at this time does not necessarily indicate an absence of the species.

Potential impacts

5.3 **Designated sites and retained features** – there are are no designated sites within the site or within 1km of the site and therefore no designated sites will be directly or indirectly affected by this development.

5.4 **Trees** in close proximity to the boundary of the site are to be protected in accordance with BS 5837 : 2012.

5.5 **Control of dust** – all contractors have a duty of care to control dust as part of their health and safety under the Control of Substances Hazardous to Health (COSHH). The erection of modern building reduces the levels of dust through the use of modular materials which do not require site cutting or activities which generate dust.

Habitats

- Roadside verge
- A2 scrub.
- B2 Improved grassland
- J4 Concrete hardstanding

5.6 **Roadside verge** - The northern boundary of the site is enclosed by a traditional sloping sided raised roadside verge with mature tree standards which can be considered **high** in value due to their species composition, ability to support wildlife and potential importance as a local BAP habitat. Loss of this habitat is to be kept to a minimum to allow for the formation of the new entrance. New roadside habitat is to be created where old site entrances are to be sealed off. All existing trees are to retained and are to be protected in accordance with BS 5837 : 2012.

5.7 **A2 Scrub** – This habitat is **low** in species composition and structure and can dominate large areas of habitat if unmanaged however, scrub habitat does offer potential for overwintering eggs, pupae or larvae for invertebrates, safe passage for amphibians and reptiles and breeding, roosting and a

food source for birds. This habitat will be lost due to the development. The proposed development should therefore seek include for the creation of new species rich shrub and herb habitats and are to comprise of native species of local provenance. All existing trees are to retained and are to be protected in accordance with BS 5837 : 2012.

5.8 **B2 Improved grassland** - This habitat is **low** in value for biodiversity due to the variety of species present through grazing and nutrient enrichment. This habitat will be lost due to the development and therefore proposed development should therefore seek to maximise to include for the creation of new managed habitats to form a variety of structure and supportive of wildlife in the long term and are to comprise of species rich native species of local provenance. The existing raised embankment along the southern boundary will be retained and also enhanced

5.9 **J4 Concrete hardstanding** – this will be lost by the development. All new hard-landscaping should be installed as part of a sustainable drainage system (Suds). Open joins within paving can provide burrowing and hibernacula for invertebrates.

Fauna

5.10 **Badger** - It is concluded that the site is not currently used by badgers and there are no setts present within the site or 30m of the development site however, the site has good connectivity to the wider ecological network and badgers are able to access the site. Precautions for badgers during the construction works are to be undertaken and are outlined in section 6.6 are to be undertaken.

5.11 **Mammals Generally** – Small mammals are potentially present within the local vicinity and precautionary works are to be undertaken and are outlined within section 6.6 of this report.

5.12 **Birds** – A community of resident common bird and winter migrant species were recorded present including four red listed species and one amber listed species. Existing hedgerows and trees support breeding birds and also provided a source of winter berry food. There is also evidence on the form of remnant nest sites from this year's breeding season and winter thrush populations were observed using the hedgerows to feed from the stock available to support this. The removal of the grassland and tree habitats is to be kept to a minimum and will be constrained by the bird breeding season. To avoid conflict with the legislation for breeding birds the removal of the grassland must be undertaken outside the bird breeding season (March-September).

All existing retained habitats are to be managed and where possible enhanced including any gapping up where required. New habitat planting is to be carefully designed to provide a food source for birds to replace those lost due to the development.

5.13 **Great Crested Newt** – The site is not considered to offer potential to support GCN and is isolated from the ponds identified within this report by road network, no further survey work is recommended.

5.14 **Reptiles** – The site is considered to offer limited potential to support reptiles and the suitable habitats identified within this report are to be retained and protected and a protective barrier erected to separate and protect during the construction phase of the development.

5.15 **Amphibians** – The site is not considered to offer potential to support common amphibians and no further survey work is recommended.

5.16 **Invertebrates** – Overly underestimated in most mitigation work, invertebrates are vital to the health of habitats and provide a means of food source to a variety of species and for some there has been a decline in their number, most notably bee populations. Based on the survey work carried out so far existing habitats have a capacity to support a limited range of invertebrate populations. Habitats lost to accommodate the new development are to be replaced and any retained habitats are to be enhanced with new native species planting of local provenance carefully selected to attract and support invertebrates.

5.17 **Invasive species** – There are no invasive species within the study site and therefore any specialist work for the removal of invasive species is not required.

5.18 **Bats** – There are no opportunities for roosting bats within the development site and habitats are therefore limited to commuting and foraging, specifically along the tree-lined access roads however, the development does offer the opportunity for the introduction of permanent features for bats with the inclusion of roost chambers within the new buildings. Bat boxes may also be placed on existing mature trees along the roadside verge. External lighting should be carefully design to avoid impact on existing trees and potential flight zones.

5.19 DATA RECORDS – The information gathered from the various sources available mainly focused on known local wildlife sites. These sites are well visited and are common areas of study. The study site is a private site and not commonly available for study. The absence of data for this site does not preclude the assumption of the absence of species and every effort has been made to provide a thorough understanding of the sites availability for species. The data obtained has therefore been used to provide an indication of species present within the surrounding area, however this has limitations due to date of submission and should therefore be used to guide the direction of the area of study and potential update and reconfirm presence or absence.

Legislation

5.20 Amphibians (Common Species) – Common amphibian species (i.e. common frog, common toad, smooth newt and palmate newt) are afforded partial legal protection under UK legislation, i.e. Schedule 5, Section 9 (5) of the Wildlife and Countryside Act 1981 (as amended) and the Countryside Rights of Way (CRoW) Act 2000. This legislation prohibits:

- Sale;
- Transportation; and

- Advertising for sale.

5.21 Badger – Badger is a widespread and generally common species. However, they are legally protected under The Protection of Badgers Act 1992, which is based primarily on the need to protect badgers from baiting and deliberate harm or injury. Under this legislation to:

- Willfully kill, injure, take, or cruelly ill-treat a badger, or attempt to do so;
- Possess any dead badger or any part of, or anything derived from, a dead badger; and
- Intentionally or recklessly interfere with a sett by disturbing badgers whilst they are occupying a sett, damaging or destroying a sett, causing a dog to enter a sett or obstructing access to it.

A badger sett is defined in the legislation as "any structure or place, which displays signs indicating the presence of badger"

5.22 Birds – The bird breeding season generally lasts from early March to September for most species. All birds are protected under the Wildlife and Countryside Act 1981 (as amended), Countryside Rights of Way (CRoW) Act 2000. This legislation makes it illegal, both intentionally and recklessly to:

- Kill, injure or take any wild bird.
- Take, damage or destroy the nest of any wild bird while it is being built or in use.
- Take or destroy the eggs of any wild bird; and
- Possess or control and wild bird or egg unless obtained legally.

5.23 Birds listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) are afforded additional protection, which makes it an offense to disturb a bird while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such bird.

5.24 Great Crested Newt – Great Crested Newt and their habitat are afforded full protection under UK and European legislation, including the Wildlife and Countryside Act 1981 (as amended), Countryside Rights of Way (CRoW) Act 2000 and The Conservation of Habitats and Species Regulations 2010 (as amended). This makes it an offense to kill, injure or disturb great crested newts and destroy any place used for rest or shelter by a newt. The great crested newt is also listed on Annexes II and IV of the EC Habitats Directive and Appendix II of the Bern Convention. If a development activity is likely to result in disturbance or killing of a great crested newt, damage to its habitat etc, then a licence will usually be required from Natural England.

5.25 Reptiles – There are six native species of reptiles in the UK, including slow-worm, common lizard, grass snake and adder, smooth snake and sand lizard, which are afforded varying degrees of protection under UK and European Legislation. Slow-worm, viviparous/common lizard, adder and grass snake are protected under Schedule 5, Section 9 (1 and 5) of the Wildlife and Countryside

Act 1981 (as amended), Countryside Rights of Way (CRoW) Act 2000 against deliberate or reckless killing, injuring and sale.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Habitats and Protected Species

6.1 The development site is not subject to any statutory or non-statutory nature conservation designation. No designated sites will be directly or indirectly impacted by the proposed development.

6.2 The Habitats directly impacted by the development comprise of grassland grazing paddock and a short section of road verge to create a new entrance. All other habitats will be retained and protected and enhanced. All existing trees are to be retained. The development should seek to include new species rich habitats which vary in structure and density and to comprise of native species of local provenance (using recorded species within this report as a base-line guide), along with permanent features for nesting birds, and roosting bats, gaps below fences to allow passage of small mammals such as hedgehog. This may be secured by a planning condition for the implementation of an Ecological Management Plan (EMP) detailing the type, quantity and location of each feature and habitat type.

6.3 All retained trees are to be protected in accordance with BS 5837 ; 2012 during the construction period of the development and a subsequent management plan is to be put in place to maintain the health and density of this habitat.

6.4 Bats – There are currently no opportunities for roosting bats within the site and activity is therefore limited to commuting and foraging. The development provides the opportunity for the introduction bat features for roosting bats within the proposed new buildings along with bat boxes erected on to existing mature trees. The design of external lighting is to be carefully considered in accordance with the current edition Bat Conservation Trust guidelines for the design of artificial lighting to ensure that all potential bat flight zones and their roosts are protected.

6.5 Best Practice for Breeding Birds – All habitats clearance is to be undertaken to avoid the bird breeding season March-September (inclusive). If habitat clearance is unavoidable during the breeding season then the following action should be undertaken:

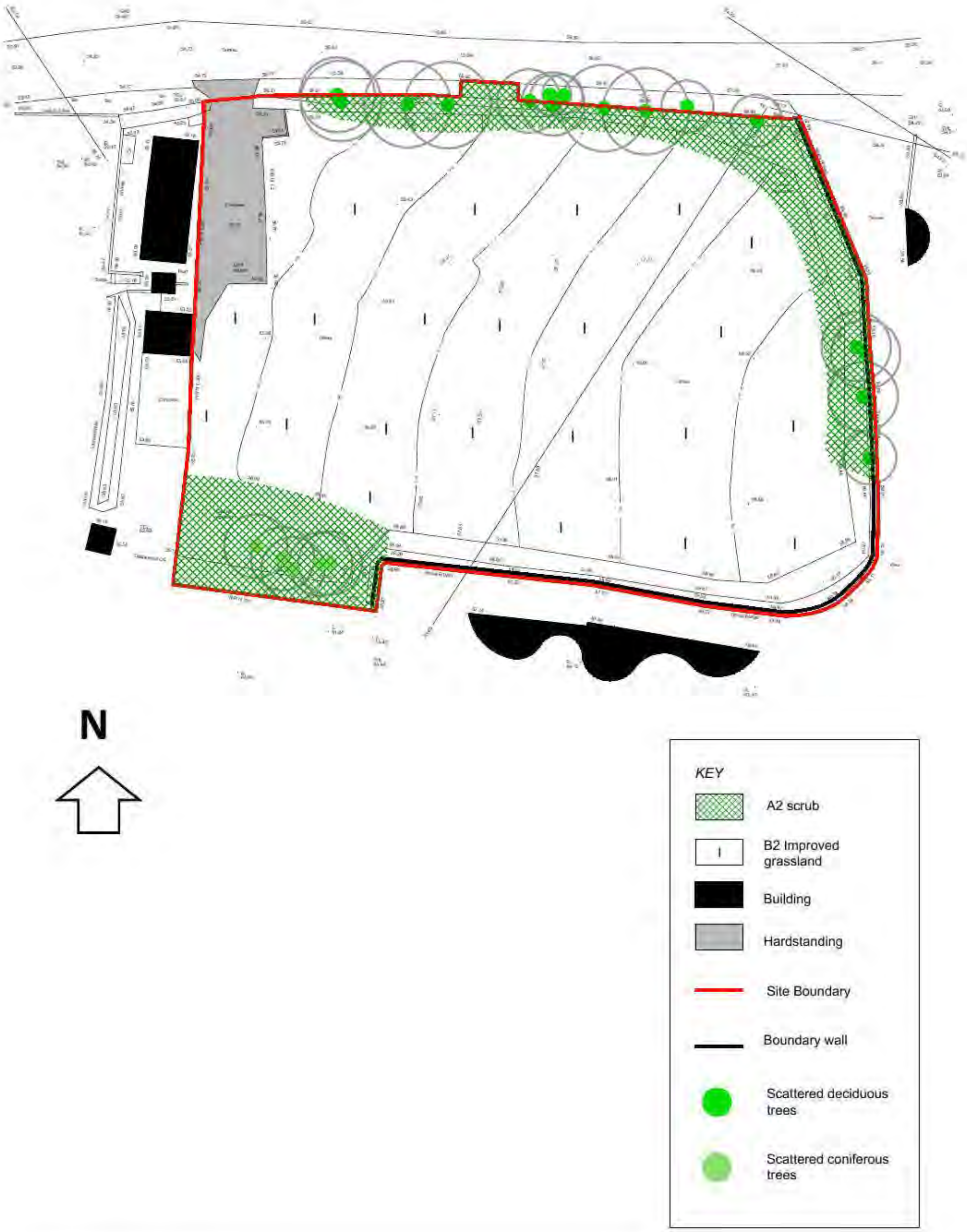
Prior to the commencement of works, the area including any affected vegetation, should be thoroughly searched by a suitably experienced ecologist for nesting birds. If a bird's nest is found then it should remain undisturbed and a 5m buffer zone should be created around the nest including above and below it. The zone around the nest site is to remain free of construction activities and disturbance until the young have fledged and left.

Permeant nest features are also to be included within the proposed buildings and landscaping including nest chambers for swifts.

6.6 Mammals –The arable grassland and hedgerow habitats are ideal for foraging and therefore site clearance work pose a potential threat to them. It is advised that a site walk-over survey is undertaken at least 4 weeks prior to any construction works being undertaken. The following is a guide for the protection of mammals during the construction works.

- No foundation work should be left uncovered, overnight or for any length of time to avoid mammals becoming trapped in foundation or services trenches. Where this is unavoidable then trenches should be left with a sloping end or ramp to allow any animal that may fall in to escape.
- Pipes over 150mm in diameter should be capped off at night to prevent animals entering.
- The site is to be recheck for the presence of hedgehog if the project is delayed at any time.

APPENDIX 1 – HABITATS PLAN



APPENDIX 2 - SITE PHOTOGRAPHS

Site entrance

Roadside verge habitats

View of grazing paddock from site entrance

Raised grass embankment along southern boundary

Scrub habitats along eastern boundary.

Scrub habitats along northern boundary.

Stone wall enclosure along the eastern boundary.