

Land South of Holt Cottages, Ashford Hill

## Ecological Appraisal

August 2021

Quality Management	
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## Executive Summary

- i) **Introduction.** Aspect Ecology was commissioned by JPP Land Ltd. / Rosemary Pelham and Timothy Pyper in May 2021 to undertake an Ecological Appraisal in respect of the proposed development at Land South of Holt Cottages, Ashford Hill.
- ii) **Proposals.** The proposals are for development of the site to provide 45 residential dwellings, including affordable housing, with associated public open space and landscaping together with a means of access from the B3051. Development is proposed in the northern portion of the site and greenspace is proposed in the southern portion.
- iii) **Survey.** The site was surveyed in May 2021 based on standard extended Phase 1 methodology. In addition, a general appraisal of faunal species was undertaken to record the potential presence of any protected, rare or notable species, with specific surveys conducted in respect of bats, Badger and Great Crested Newts.
- iv) **Ecological Designations.** The site itself is not subject to any statutory or non-statutory ecological designations. The nearest statutory designation is Ashford Hill Woods and Meadows Site of Special Scientific Interest (SSSI) located approximately 25m north east of the site at its closest point. The nearest non-statutory designation is Fair oak Copse, Ashford Hill with Headley Site of Importance for Nature Conservation (SINC), located approximately 0.4km south west of the site.
- v) **Habitats.** The site comprises a single arable field surrounded by hedgerows and a treeline. A watercourse is present off-site, adjacent to the south-eastern boundary of the site. Features of ecological importance include the treeline, hedgerows and adjacent off-site watercourse. The off-site tree line, off-site watercourse and the majority of the hedgerows are to be retained under the proposals and protected during construction. A small section of hedgerow at the western boundary will be removed to facilitate vehicular access. This will be compensated by new, native shrub planting. The remaining habitats within the site are not considered to form important ecological features and their loss to the proposals is not significant.
- vi) **Protected Species.** The habitats within the site are considered to be important in the context of the site to foraging and commuting bats, birds and other mammals such as Hedgehogs. Mitigation measures and safeguards are proposed as required.
- vii) **Enhancements.** The proposals present the opportunity to secure a number of biodiversity benefits, including native tree and shrub planting and more diverse nesting habitats for birds and roosting opportunities for bats.
- viii) **Summary.** In summary, the proposals have sought to minimise impacts on biodiversity and subject to the implementation of appropriate avoidance, mitigation, and compensation measures, it is considered unlikely that the proposals will result in significant harm to biodiversity. On the contrary, it is considered that several biodiversity gains are achievable at this site, as set out in the report by Aspect Ecology titled 'Land South of Holt Cottages, Ashford Hill – Technical Briefing Note: Biodiversity Net Gain Assessment Using DEFRA Biodiversity Metric 3.0 Calculation Tool' dated August 2021.

# 1 Introduction

## 1.1 Background and Proposals

1.1.1 Aspect Ecology was commissioned by JPP Land Ltd. / Rosemary Pelham and Timothy Pyper in May 2021 to undertake an Ecological Appraisal in respect of the proposed development at Land South of Holt Cottages, Ashford Hill, centred at grid reference SU 5556 6146 (see Plan 6210/ECO1), hereafter referred to as 'the site'.

1.1.2 The proposals are for the development of the site to provide 45 residential dwellings, including affordable housing, with associated public open space and landscaping together with means of access from the B3051.

## 1.2 Site Overview

1.2.1 The site is located to the south of the village of Ashford Hill, Hampshire. The site is bound to the west by the B3051, beyond which lies arable fields and residential properties. A single track lane bounds the north of the site, beyond which lies Holt Cottages. The site is bound to the east and south by arable fields.

1.2.2 The site comprises an arable field, bordered by hedgerows and an off-site tree line. No ponds are present within the site, and three ponds have been identified within 250m of the site boundary.

## 1.3 Purpose of the Report

1.3.1 This report documents the methods and findings of the baseline ecology surveys and desktop study carried out in order to establish the existing ecological interest of the site, and subsequently provides an appraisal of the ecological status of the site, to inform the application. The importance of the habitats and species present is evaluated. Where necessary, recommended avoidance, mitigation and compensation measures are proposed so as to safeguard any significant existing ecological interest within the site and where appropriate, opportunities for ecological enhancement are identified with reference to national conservation priorities and local Biodiversity Action Plans (BAPs).

## 2 Methodology

### 2.1 Desktop Study

- 2.1.1 In order to compile background information on the site and its immediate surroundings Hampshire Biodiversity Information Centre (HBIC) was contacted, with data requested on the basis of a search radius of 2km.
- 2.1.2 Information on statutory designations was obtained from the online Multi-Agency Geographic Information for the Countryside (MAGIC) database, which utilises data provided by Natural England, with an extended search radius (25km). In addition, the MAGIC database was searched to identify the known presence of any Priority Habitats within or adjacent the site. Relevant information is reproduced on Plan 6210/ECO2, where appropriate.

### 2.2 Habitat Survey

- 2.2.1 The site was surveyed in May 2021 in order to ascertain the general ecological value of the land contained within the boundaries of the site and to identify the main habitats and ecological features present.
- 2.2.2 The site was surveyed based on standard Phase 1 Habitat Survey methodology<sup>1</sup>, whereby the habitat types present are identified and mapped, together with an assessment of the species composition of each habitat. This technique provides an inventory of the basic habitat types present and allows identification of areas of greater potential which require further survey. Any such areas identified can then be examined in more detail through Phase 2 surveys. This method was extended, in line with the Guidelines for Preliminary Ecological Appraisal<sup>2</sup> to record details on the actual or potential presence of any notable or protected species or habitats.
- 2.2.3 Using the above method, the site was classified into areas of similar botanical community types, with a representative species list compiled for each habitat identified. The nomenclature used for plant species is based on the Botanical Society for the British Isles (BSBI) Checklist.

### 2.3 Faunal Surveys

- 2.3.1 General faunal activity, such as mammals or birds observed visually or by call during the course of the surveys was recorded. Specific attention was also paid to the potential presence of any protected, rare or notable species, and specific consideration was given to bats, Badger and Great Crested Newts as described below.

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<sup>1</sup> Joint Nature Conservation Committee (2010, as amended) '*Handbook for Phase 1 habitat survey: A technique for environmental audit.*'

<sup>2</sup> Chartered Institute for Ecology and Environmental Management (CIEEM) (2013) '*Guidelines for Preliminary Ecological Appraisal.*'

## Bats<sup>3</sup>

### *Visual Inspection Surveys*

2.3.2 **Trees – Ground Level Assessment.** Trees likely to be affected by the proposals, such as those around the site boundaries, were assessed for their suitability to support roosting bats based on the presence of features such as holes, cracks, splits or loose bark. Suitability for roosting bats was rated based on relevant guidance<sup>4</sup> as:

- Negligible;
- Low;
- Moderate; or
- High.

## Badger (*Meles meles*)<sup>5</sup>

2.3.3 A detailed Badger survey was carried out in May 2021. The survey comprised two main elements. The first element involved searching for evidence of Badger setts. The second element involved searching for signs of Badger activity such as well-worn paths and push-throughs, snagged hair, footprints, latrines and foraging signs, so as to build up a picture of any use of the site by Badger.

## Great Crested Newt (*Triturus cristatus*)

### *Habitat Suitability Index (HSI)*

2.3.4 As a first step in identifying the potential presence of Great Crested Newt at the site, a Habitat Suitability Index (HSI) study was undertaken of all relevant water bodies within 250m<sup>6</sup> of the site boundary (based on a review of Ordnance Survey mapping and satellite imagery). Guidance set out within Natural England's Method Statement template, to be used when applying for a Great Crested Newt development licence, states that surveys of ponds within 500m of the site boundary are only required when '(a) data indicates that the pond(s) has potential to support a large Great Crested Newt population, (b) the footprint contains particularly favourable habitat, (c) the development would have a substantial negative effect on that habitat and (d) there is an absence of dispersal barriers.' Given that in this instance, none of the four points listed above are applicable to the site, it is considered that survey of ponds within 500m of the site boundary is not required, and that survey of ponds within 250m represents adequate survey effort.

2.3.5 An HSI study is used to assess the potential of water bodies to support Great Crested Newt. It is undertaken by attributing a score to a number of factors that can affect the presence or absence of this species. Ten factors are utilised in an HSI assessment, as described below:

- *S11 Location.* The location of the water body within Great Britain;
- *S12 Pond area.* The size of the water body;
- *S13 Permanence.* How often the water body dries out;

<sup>3</sup> Surveys based on: English Nature (2004) '*Bat Mitigation Guidelines*' and Collins, J. (ed.) (2016) '*Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3<sup>rd</sup> edn).' Bat Conservation Trust

<sup>4</sup> Collins, J. (ed.) (2016) '*Bat Surveys for Professional Ecologists: Good Practice Guidelines* (3<sup>rd</sup> edn).' Bat Conservation Trust

<sup>5</sup> Based on: Mammal Society (1989) '*Occasional Publication No. 9 – Surveying Badgers*'

<sup>6</sup> 250m is the typical maximum migratory range of this species, see English Nature (2004) '*An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt Triturus cristatus*'. English Nature Research Report 576

- *SI4 Water Quality*. The water quality, based primarily on invertebrate diversity;
- *SI5 Shade*. The percentage of the perimeter of the water body that is shaded;
- *SI6 Fowl*. The presence or absence of water fowl;
- *SI7 Fish*. The presence or absence of fish;
- *SI8 Pond Count*. The number of water bodies within 1km of the surveyed water body (not counting those on the far side of major barriers such as roads);
- *SI9 Terrestrial*. The quality of terrestrial habitat surrounding the water body; and
- *SI10 Macrophytes*. The percentage cover of the surface area of the water body covered by macrophytes (aquatic plants).

2.3.6 The overall suitability of the water body is then determined by entering these figures into an equation devised by Oldham *et al.* (2000)<sup>7</sup>. The suitability of water bodies is classed into one of five categories, either 'poor', 'below average', 'average', 'good' or 'excellent'.

2.3.7 This HSI study was undertaken in line with the guidelines developed by Oldham *et al.* and subsequently adapted by ARG UK (2010)<sup>8</sup>. A suitably experienced ecologist undertook the assessment in line with these guidelines, with the study also supplemented by desktop research where appropriate.

#### *Environmental DNA (eDNA)*

2.3.8 An eDNA survey was carried out to determine the presence/absence of Great Crested Newt within one off-site pond, P1 (see Plan 6210/ECO4). Water samples were collected on the 14/06/2021 following the procedure outlined in the methods manual prepared for DEFRA by Biggs *et al.* (2014)<sup>9</sup>. The survey fell within the acceptable seasonal window set out by Natural England (15<sup>th</sup> April to 30<sup>th</sup> June)<sup>10</sup>. Samples were collected by suitably licensed Aspect Ecology staff. The water samples were sent for laboratory analysis which was conducted by 'Fera' and also followed the procedure set out by Biggs *et al.* (2014)<sup>14</sup>.

## 2.4 Survey Constraints and Limitations

2.4.1 All of the species that occur in each habitat would not necessarily be detectable during survey work carried out at any given time of the year, since different species are apparent during different seasons. The Phase 1 habitat survey was undertaken within the optimal season therefore allowing a robust assessment of habitats and botanical interest across the site.

2.4.2 Access was not granted to off-site Pond P3 and therefore an eDNA survey was not possible for this pond. Pond P2 was no longer holding water at the time of the survey and so an eDNA survey was not undertaken on Pond P2.

2.4.3 Attention was paid to the presence of any invasive species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). However, the detectability of such species varies due to a number of factors, e.g. time of year, site management, etc., and hence the

<sup>7</sup> Oldham RS, Keeble J, Swan MJS & Jeffcote M (2000) 'Evaluating the suitability of habitat for the Great Crested Newt (*Triturus cristatus*)'. Herpetological Journal 10 (4), 143-155

<sup>8</sup> Amphibian & Reptile Groups of the UK (2010) 'ARG UK Advice Note 5: Great Crested Newt Habitat Suitability Index'

<sup>9</sup> Biggs J., Ewald N., Valentini A., Gaboriaud C., Griffiths R.A., Foster J., Wilkinson J., Arnett A., Williams P. and Dunn F. (2014). 'Analytical and methodological development for improved surveillance of the Great Crested Newt. Appendix 5. Technical advice note for field and laboratory sampling of great crested newt (*Triturus cristatus*) environmental DNA'. Freshwater Habitats Trust, Oxford.

<sup>10</sup> Natural England (2015) 'Great crested newts: surveys and mitigation for development projects. Standing advice for local planning authorities who need to assess the impacts of development on great crested newts'. Last updated at [www.gov.uk](http://www.gov.uk) on 24/12/2015.

absence of invasive species should not be assumed even if no such species were detected during the Phase 1 survey.

## 2.5 Ecological Evaluation Methodology

2.5.1 The evaluation of ecological features and resources is based on professional judgement whilst also drawing on the latest available industry guidance and research. The approach taken in this report is based on that described by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2018)<sup>11</sup>, which involves identifying 'important ecological features' within a defined geographical context (i.e. international, national, regional, county, district, local or site importance). For full details refer to Appendix 6210/1.

## 2.6 National Policy Approach to Biodiversity in the Planning System

2.6.1 The National Planning Policy Framework (NPPF)<sup>12</sup> describes the Government's national policies on 'conserving and enhancing the natural environment' (Chapter 15). NPPF is accompanied by Planning Practice Guidance on 'Biodiversity, ecosystems and green infrastructure' and ODPM Circular 06/2005<sup>13</sup>.

2.6.2 NPPF takes forward the Government's strategic objective to halt overall biodiversity loss<sup>14</sup>, as set out at Paragraph 174, which states that planning policies and decisions should contribute to and enhance the natural and local environment by:

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

2.6.3 The approach to dealing with biodiversity in the context of planning applications is set out at Paragraph 180:

*'When determining planning applications, local planning authorities should apply the following principles:*

- a) *if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- b) *development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- c) *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless*

<sup>11</sup> CIEEM (2018) 'Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine', Chartered Institute of Ecology and Environmental Management, Winchester

<sup>12</sup> Ministry of Housing, Communities & Local Government (2021) 'National Planning Policy Framework'

<sup>13</sup> ODPM (2006) 'Circular 06/2005: Planning for Biodiversity and Geological Conservation – A Guide to Good Practice'

<sup>14</sup> DEFRA (2011) 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services'

*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 improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.'*

2.6.4 The above approach encapsulates the 'mitigation hierarchy' described in British Standard BS 42020:2019<sup>15</sup>, which involves the following step-wise process:

- **Avoidance** – avoiding adverse effects through good design;
- **Mitigation** – where it is unavoidable, mitigation measures should be employed to minimise adverse effects;
- **Compensation** – where residual effects remain after mitigation it may be necessary to provide compensation to offset any harm; and
- **Enhancement** – planning decisions often present the opportunity to deliver benefits for biodiversity, which can also be explored alongside the above measures to resolve potential adverse effects.

2.6.5 The measures for avoidance, mitigation, compensation and enhancement should be proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed development (BS 42020:2019, section 5.5).

## 2.7 Local Policy

2.7.1 The site falls under the jurisdiction of Hampshire County Council and Basingstoke and Deane Borough Council. Policies relevant to Ecology and Biodiversity, are set out within the below document:

Basingstoke and Deane Local Plan 2011-2019, Adopted May 2016<sup>16</sup>

2.7.2 The Basingstoke and Deane Local Plan was adopted in May 2016 and has three policies relevant to this site and any future planning application:

### 2.7.3 Policy EM1 – Landscape

*Development will be permitted only where it can be demonstrated, through an appropriate assessment, that the proposals are sympathetic to the character and visual quality of the area concerned. Development proposals must respect, enhance and not be detrimental to the character or visual amenity of the landscape likely to be affected, paying particular regard to:*

- e) *Trees, ancient woodland, hedgerows, water features such as rivers and other landscape features and their function as ecological networks;*

<sup>15</sup> British Standards Institution (2013) 'Biodiversity – Code of practice for planning and development', BS 42020:2019

<sup>16</sup> Basingstoke and Deane Local Plan (2011-2019), Adopted May 2016

#### 2.7.4 Policy EM3 – Thames Basin Heaths Special Protection Area

*New residential development which is likely to have a significant effect on the ecological integrity of the Thames Basin Heaths Special Protection Area (SPA) will be required to clearly demonstrate that any potential adverse effects are fully mitigated.*

*For all net additional residential development within a 5km straight line distance of the SPA, relevant mitigation measures will be required in line with the Thames Basin Heaths Delivery Framework. This will include the provision of, or contributions towards, Suitable Alternative Natural Green Space (SANGS), and contributions towards Strategic Access Management and Monitoring (SAMM). Applications for large scale residential development (over 50 new dwellings) within 5-7km of the SPA will be assessed individually and, if needed, bespoke mitigation will be required in accordance with Natural England guidance.*

#### 2.7.5 Policy EM4 – Biodiversity, Geodiversity and Nature Conservation

1. *Development proposals will only be permitted if significant harm to biodiversity and/ or geodiversity resulting from a development can be avoided or, if that is not possible, adequately mitigated and where it can be clearly demonstrated that:*
  - a) *There will be no adverse impact on the conservation status of key species; and*
  - b) *There will be no adverse impact on the integrity of designated and proposed European designated sites; and*
  - c) *There will be no harm to nationally designated sites; and*
  - d) *There will be no harm to locally designated sites including Sites of Importance for Nature Conservation (SINCs) and Local Nature Reserves (LNRs); and*
  - e) *There will be no loss or deterioration of a key habitat type, including irreplaceable habitats; and*
  - f) *There will be no harm to the integrity of linkages between designated sites and key habitats. The weight given to the protection of nature conservation interests will depend on the national or local significance and any designation or protection applying to the site, habitat or species concerned.*
2. *Where development proposals do not comply with the above they will only be permitted if it has been clearly demonstrated that there is an overriding public need for the proposal which outweighs the need to safeguard biodiversity and/ or geodiversity and there is no satisfactory alternative with less or no harmful impacts. In such cases, as a last resort, compensatory measures will be secured to ensure no net loss of biodiversity and, where possible, provide a net gain.*
3. *Applications for development must include adequate and proportionate information to enable a proper assessment of the implications for biodiversity and geodiversity.*
4. *In order to secure opportunities for biodiversity improvement, relevant development proposals will be required to include proportionate measures to contribute, where possible, to a net gain in biodiversity, through creation, restoration, enhancement and management of habitats and features including measures that help to link key habitats.*

*Approaches to secure improvements could be achieved through:*

- a) A focus on identified Biodiversity Opportunity Areas and Biodiversity Priority Areas as identified in the councils Green Infrastructure Strategy (and subsequent updates) where appropriate; and through*
- b) On-site and/or off-site provision linked to new development in accordance with the council's adopted green space standards.*

## 3 Ecological Designations

### 3.1 Statutory Designations

#### Description

- 3.1.1 The statutory designations of ecological importance that occur within the local area are shown on Plan 6210/ECO2. The nearest statutory designation is Ashford Hill Woods and Meadows Site of Special Scientific Interest (SSSI) located approximately 25m north east of the site at its closest point. The SSSI is designated on the basis of supporting areas of ancient woodland and acid to neutral meadows, although the areas mapped as ancient woodland are further away in the eastern portion of the SSSI located approximately 0.45km east of the site boundary (see Plan 6210/ECO2). The next nearest statutory designation is Ashford Hill National Nature Reserve (NNR) located approximately 0.5km north east of the site, designated on the basis of its low-lying meadows and invertebrate assemblages. The NNR overlaps with the central northern portion of the SSSI.
- 3.1.2 The closest international / European designation is the Kennet and Lambourn Floodplain Special Area of Conservation (SAC), located approximately 6.2km north west of the site at its closest point. The SAC is designated on the basis of Annex II species Desmoulin's whorl snail *Vertigo moulinsiana*.
- 3.1.3 Natural England has developed Impact Risk Zones (IRZ's) as an initial tool to help assess the risk of developments adversely affecting SSSIs, taking into account the type and scale of developments. The site sits within an IRZ in relation to Ashford Hill Woods and Meadows SSSI, which relates to all planning applications (except householder applications) and therefore will require further consideration from the LPA.

#### Evaluation

- 3.1.4 The site itself is not subject to any statutory ecological designations. The majority of statutory designations in the surrounding area are well separated from the site by existing development and arable fields, and it is considered that these designations will remain unaffected by the proposals.
- 3.1.5 Ashford Hill Woods and Meadows SSSI is located 25m from the site on the opposite side of an off-site track separated by a hedgerow and an off-site watercourse. The SSSI contains a number of Public Rights of Way (PRoW) (and also appears to contain forestry/informal tracks through the woodland and meadows). These would be accessible to new residents who would need to exit the site at the pedestrian access point in the north west corner, walk along the track (PRoW) and then into the woodland on a further PRoW. The nearest PRoW into the woodland is approx. 700m away, although the nearest informal track appears to be approximately 200m from the site pedestrian link (i.e. an 1.4km round trip if using PRoW or 400m round trip if using the nearest informal path before even entering the SSSI).
- 3.1.6 In containing this network of paths (including the Brenda Parker Way long distance walking path) and several promoted walking and cycling routes, the SSSI and more distant NNR appear to be well set up to receive visitors. In addition, 75% of the SSSI units are recorded to be in 'favourable' condition and 25% in 'unfavourable – recovering' condition, and as such the SSSI does not appear to be vulnerable to increases in recreational pressure. Due to the proximity of the site to the SSSI, it is likely that a proportion of new residents will visit for example for dog walking, however this is unlikely to be on a daily basis as visiting would

involve a minimum 400m round trip before even entering the SSSI (or 1.4km is using PRoW). Therefore, it is considered a proportion of residents may only visit weekly/monthly.

- 3.1.7 There is the potential for residents to make informal paths out of the site onto the track, which may increase the attractiveness of visiting the SSSI (e.g. for daily dog walking) by decreasing the distance to it. This can be addressed by incorporating design measures into the detailed landscape plans which can be secured via planning condition (for example boundary fencing coupled with thorny planting). As shown on the Illustrative Masterplan, the site contains large areas of greenspace which would be designed to be attractive to residents to encourage them to stay on site and not visit the SSSI. The play area is located in the southern corner of the site as far away from the SSSI access point as possible.
- 3.1.8 On the basis of the above analysis and due to the small size of the development, the SSSI does not appear to be vulnerable to recreational pressure, it is not considered the proposals will affect the SSSI (and more distant NNR) in this regard.
- 3.1.9 The proposals have the potential to affect the SSSI and NNR indirectly during construction, for example from dust pollution and polluted surface water run and therefore mitigation will be implemented in relation to pollution prevention (see Chapter 6 below). With these measures in place it is considered the SSSI and NNR would not be adversely affected by the proposals.

## 3.2 Non-statutory Designations

### Description

- 3.2.1 The non-statutory designations of nature conservation interest that occur within the local area are shown on Plan 6210/ECO2. The nearest non-statutory designation is Fair oak Copse, Ashford Hill with Headley Site of Nature Conservation (SINC), located approximately 0.4km south west of the site, designated on the basis of ancient and semi-natural woodland. The next nearest non-statutory designation is Pithouse Copse & Fair oak Copse SINC, located approximately 0.6km south of the site. This SINC is also designated on the basis of ancient and semi-natural woodland.

### Evaluation

- 3.2.2 The site itself is not subject to any non-statutory nature conservation designations. All non-statutory designations in the surrounding area are well separated from the site by arable land and existing development and do not appear to be publicly accessible. As such, it is considered that these designations are unlikely to be affected by the proposals.

## 3.3 Priority Habitats, Ancient Woodland and Notable Trees

### Description

- 3.3.1 **Priority Habitats.** The closest area of Priority Habitat is associated with Butler's Copse to the east of the site. This area is marked as Priority Habitat Deciduous Woodland on the Multi-Agency Geographic Information of the Countryside (MAGIC) database. A small area of this mapped woodland extends along the northern edge of the track that bounds the north of the site.
- 3.3.2 **Ancient Woodland and Notable Trees.** No areas of ancient woodland are mapped within the site. Areas of ancient woodland within the wider area are shown in Plan 6210/ECO2. The nearest area of ancient woodland is Fair oak Copse, located approximately 0.4km south

west of the site. No ancient or veteran trees lie within the site boundary. The closest notable tree is an ancient Crack Willow *Salix fragilis*, located approximately 0.4km north-east of the site, associated with The Holt and Butler's Copse.

#### Evaluation

- 3.3.3 The areas mapped as Priority Habitat and ancient woodland overlap with the SSSI and NNR designations and are therefore considered as part of the assessment above. Subject to the implementation of appropriate mitigation measures (as discussed below in Section 6) it is unlikely that these habitats will be affected by development of the site.

### 3.4 Summary

- 3.4.1 In summary, the site itself is not subject to any statutory or non-statutory ecological designations and, subject to the implementation of appropriate mitigation measures, it is unlikely that any designations or Priority Habitats in the surrounding area will be adversely affected by the proposals.

## 4 Habitats and Ecological Features

### 4.1 Background Records

4.1.1 No specific records of any protected, rare or notable plant species from within the site were returned from the Records Centre. Information returned from the Records Centre included Nationally Rare species Lesser Spearwort *Ranunculus flammula* from within the 2km search radius around the site. Records of UK Priority Species Cornflower *Centaurea cyanus*, Tubular Water-dropwort *Oenanthe fistulosa*, Marsh Stitchwort *Stellaria palustris*, Spreading Hedge-parsley *Torilis arvensis*. No evidence for the presence of any of these species within the site was recorded during the survey work undertaken.

### 4.2 Overview

4.2.1 The habitats and ecological features present within the site are described below and evaluated in terms of whether they constitute an important ecological feature and their level of importance, taking into account the status of habitat types and the presence of rare plant communities or individual plant species of elevated interest. The likely effects of the development of the site on the habitats and ecological features are then assessed. The value of habitats for the fauna they may support is considered separately in Chapter 5 below.

4.2.2 The following habitats/ecological features were identified within/adjacent to the site:

- Arable;
- Hedgerows and Treeline;
- Tall Ruderal Vegetation;
- Dense Scrub;
- Log Piles and Bare Ground; and
- Off-site Watercourse.

4.2.3 The locations of these habitat types and features are illustrated on Plan 6210/ECO3 and described in detail below.

### 4.3 Priority Habitats

4.3.1 Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 places duties on public bodies to have regard to the conservation of biodiversity in the exercise of their normal functions. In particular, Section 41 of the NERC Act requires the Secretary of State to publish a list of habitats which are of principal importance for conservation in England. This list is largely derived from the 'Priority Habitats' listed under the former UK Biodiversity Action Plan (BAP), which continue to be regarded as priority habitats under the subsequent country-level biodiversity strategies.

4.3.2 Of the habitats within the site, hedgerows H1, H2, H3 and off-site treeline TL1 are considered to qualify as a Priority Habitat and therefore constitute important ecological features. This is discussed further in the relevant habitat section below.

## 4.4 Arable

### Description

- 4.4.1 The site comprises a single arable field, which at the time of survey was dominated by Pineappleweed *Matricaria discoidea*, as shown on Plan 6210/ECO3. Additional species recorded within the field, largely restricted to the peripheries, include Groundsel *Senecio vulgaris* and Scentsless Mayweed *Tripleurospermum inodorum*. These species were not present within the large majority of the arable field and only a few individual specimens of each of these species were recorded.

### Evaluation

- 4.4.2 Overall, the arable field supports a low diversity of common and widespread species. As such, this habitat is considered to be of negligible ecological value and does not form an important ecological feature and its loss under the proposals is insignificant.

## 4.5 Hedgerows and Off-site Treeline

### Description

- 4.5.1 Three hedgerows and one treeline mark the boundaries of the site, labelled H1, H2, H3 and TL1 as shown on Plan 6210/ECO3. Hedgerow H1 lies along the northern site boundary, hedgerow H2 along the northern half of the eastern boundary, hedgerow H3 along the western boundary, and treeline TL1 along the southern half of the eastern boundary adjacent to the off-site watercourse. The hedgerows and treeline are described in more detail in Table 4.1 below.

**Table 4.1.** Hedgerow descriptions.

No.	H	W	Woody species	Avg. per 30m*	Ground flora & climbers	Associated features	Comments (including structure / management)	Likely to qualify#
H1	1.5m	2m	Hawthorn <i>Crataegus monogyna</i> (D), Ash <i>Fraxinus excelsior</i> , Pedunculate Oak <i>Quercus robur</i> , Blackthorn <i>Prunus spinosa</i> , Honeysuckle <i>Lonicera periclymenus</i>	3	Bramble <i>Rubus fruticosus</i> , Lords-and-Ladies <i>Arum maculatum</i> , Cleavers <i>Galium aparine</i> , Common Nettle <i>Urtica dioica</i> , Ivy <i>Hedera helix</i> , Greater Periwinkle <i>Vinca major</i>	No gaps	Marks the northern boundary of the site, Evidence of recent management into a box shape by flailing. Barbed wire fence running through centre of hedge	N

No.	H	W	Woody species	Avg. per 30m*	Ground flora & climbers	Associated features	Comments (including structure / management)	Likely to qualify#
H2	2-4m	2-4m	<u>Hawthorn</u> , <u>Privet</u> , <u>Pedunculate Oak</u> , <u>Malus sp.</u> , <u>Holly</u> , <u>Elder</u> , <u>Sambucus nigra</u> , <u>Goat Willow</u> , <u>Rosa sp.</u> , <u>Salix sp.</u> , <u>Blackthorn</u>	4	Ivy, Bramble, Cleavers, Red Dead-nettle <i>Lamium purpureum</i> , Creeping Thistle <i>Cirsium arvense</i> , Bracken <i>Pteridium aquilinum</i> , Lords-and-Ladies, Yorkshire Fog <i>Holcus lanatus</i> , Field Bindweed <i>Convolvulus arvensis</i> , Honeysuckle, Groundsel <i>Senecio vulgaris</i> , Cock's-foot <i>Dactylis glomerata</i> , Cow Parsley <i>Anthriscus sylvestris</i>	-	Flailed into a box shape, Barbed wire fence running through hedgerow	N
H3	2m	1-2m	<u>Hawthorn</u> , <u>Elder</u> , <u>Elm sp.</u> , <u>Ulmus sp.</u> , <u>Field Maple</u> , <u>Acer campestre</u> , <u>Blackthorn</u> , <u>Red Acer</u> , <u>Salix sp.</u> , <u>Sycamore</u>	3	Ground Ivy <i>Glechoma hederacea</i> , Bramble, Ivy, Creeping Thistle, Dandelion, Broad-leaved Dock <i>Rumex obtusifolius</i> , Common Nettle, Cleavers, Red Dead-nettle, Lords-and-Ladies, White Dead-nettle <i>Lamium album</i> , Wood avens <i>Geum urbanum</i> , Cut-leaf Crane's-bill <i>Geranium dissectum</i> , Garlic Mustard <i>Alliaria petiolata</i> , White Clover <i>Trifolium repens</i> , Bindweed sp., Yorkshire Fog, Cow Parsley, Hogweed <i>Heracleum</i> , Greater Plantain <i>Plantago major</i> , Groundsel, Bracken	Standard trees	Evidence of previous management / flailing	N
Off-site TL1	16-20m	>4m	<u>Oak</u> <i>Quercus sp.</i> , <u>Hawthorn</u> , <u>Elder</u> , <u>Goat Willow</u> , <u>Cherry</u> , <u>Sycamore</u>	2	Ground Ivy, Bramble, Lords-and-Ladies, Cleavers, Broad-leaved Dock, Mayweed, Dandelion <i>Taraxacum sp.</i> , Hogweed, Red Campion <i>Silene dioica</i> , Cut-leaf Crane's-bill	Standard Trees	Evidence of recent management in the form of log piles and evidence of cleared branches.	N

Woody species (as listed under Schedule 3 of the Hedgerows Regulations 1997) and woodland ground flora species (as listed under Schedule 2 of the Hedgerows Regulations 1997) underlined, (D) = dominant species

\* estimated average number of woody species (as listed under Schedule 3 of the Hedgerows Regulations 1997) in any one 30m stretch

# likely to qualify – as 'important' under the wildlife and landscape criteria of the Hedgerows Regulations 1997

### Evaluation

4.5.2 The hedgerow and treelines recorded within and adjacent to the site show evidence of regular management via flailing and are not considered species-rich<sup>17</sup>, such that they are unlikely to qualify as ecologically 'important' under the Hedgerows Regulations 1997, based on the number of woody species and associated features.

<sup>17</sup> i.e. five or more native woody species within a 30m length (or four or more in Northern England) – FEP Manual

- 4.5.3 However, the hedgerows and off-site treeline TL1 are likely to qualify as a Priority Habitat based on the standard definition<sup>18</sup>, which includes all hedgerows (>20m long and <5m wide) consisting predominantly (≥80%) of at least one native woody species. It has been estimated that approximately 84% of countryside hedgerows in GB qualify as a Priority Habitat under this definition.<sup>183</sup>
- 4.5.4 On this basis, hedgerow H1, H2, H3 and off-site treeline TL1 constitute important ecological features, although given their composition, are only of importance at the site level.
- 4.5.5 The proposals incorporate the retention of all hedgerows and treelines within the site, with the exception of a small section of H3 marked for removal to provide access. The retained treeline and hedgerows will be protected during the construction phase of the proposals as per the measures set out in Section 6 below. Furthermore, the proposals incorporate new planting which can link with and strengthen the existing / retained hedgerows and treeline and enhance the value of these features for biodiversity.

## 4.6 Tall Ruderal Vegetation

### Description

- 4.6.1 Several small patches of tall ruderal vegetation are present within the site, largely associated with the field boundaries, hedgerows and the treeline. Species recorded include Nettle, Spear Thistle *Cirsium vulgare*, Cleavers, Willowherb sp. *Onagraceae sp.*, Ribwort Plantain *Plantago lanceolata*, Silverweed *Potentilla anserina*, Wood Avens *Geum urbanum*, Thyme-leaved Speedwell *Veronica serpyllifolia*, Dandelion, Cut-leaved Crane's-bill, Bracken, Forget-me-not *Myosotis sp.*, White Clover, Solomon's Seal *Polygonatum odoratum*, Groundsel, Red-dead Nettle, Yorkshire Fog, Annual Meadow Grass *Poa annua*, Scentless Mayweed.

### Evaluation

- 4.6.2 The areas of tall ruderal vegetation are dominated by common and widespread species, with no notable species observed. On this basis, the tall ruderal vegetation is not considered to constitute an important ecological feature and its loss under the proposals is therefore not significant.

## 4.7 Dense Scrub

### Description

- 4.7.1 A small area of dense scrub is present within the southern corner of the site boundary, encroaching from the surrounding hedgerow and treeline. The area was dominated by Bramble *Rubus fruticosus* agg., with Ragwort *Jacobaea vulgaris*, Broad-leaved Dock, Nettles and Cut-leaved Crane's-bill.

### Evaluation

- 4.7.2 The area of scrub is considered to be of negligible ecological value and does not constitute an important ecological feature. The loss of this habitat under the proposals is not considered to be significant and can be compensated for by new native scrub planting as part of the landscape proposals.

<sup>18</sup> Based on: Biodiversity Reporting and Information Group (2011) 'UK Biodiversity Action Plan (BAP) Priority Habitat Descriptions', ed. Ant Maddock

## 4.8 Log Piles and Bare Ground

### Description

- 4.8.1 Several deadwood log piles were present along the eastern boundary, largely associated with treeline TL1 and the off-site watercourse. In addition, small areas of bare ground were present in the centre and in the south east of the arable field, as shown on Plan 6210/ECO3.

### Evaluation

- 4.8.2 The log piles and bare ground are of inherently negligible ecological value and as such are not considered to be important ecological features. Potential for the log piles to support faunal species such as reptiles is discussed in Chapter 5 below.

## 4.9 Off-site Watercourse

### Description

- 4.9.1 An off-site watercourse, WC1, was present along the eastern boundary, beyond treeline TL1. At the time of survey, the channel was approximately 5-10cm deep and approximately 1m wide. The stream flow was fast, with the water flowing north. The banks of WC1 were heavily shaded by off-site tall ruderal vegetation, scrub, and log piles from recent tree management work. The banks were shallower on the eastern side compared to the west. The channel in southern portion of the watercourse deepened to approximately 30cm, and was more turbid than the northern section. The channel was heavily over shaded by Hemlock Water Dropwort *Oenanthe crocata* in addition to other tall ruderal species as described in Section 4.6 above.

### Evaluation

- 4.9.2 The off-site watercourse is considered to form an important ecological feature at the local level only. Potential for the off-site water course to support faunal species is discussed in Chapter 5 below.

## 4.10 Habitat Evaluation Summary

- 4.10.1 On the basis of the above, the following habitats within / adjacent to the site are considered to form important ecological features:

**Table 4.2.** Evaluation summary of habitats forming important ecological features.

Habitat	Level of Importance
Hedgerow and off-site tree line	Site
Off-site Watercourse	Local

- 4.10.2 Other habitats present within the site include arable, tall ruderal vegetation, dense scrub, log piles and bare ground. However, these habitats do not form important ecological features.

## 5 Faunal Use of the Site

### 5.1 Overview

5.1.1 During the survey work, general observations were made of any faunal use of the site with specific attention paid to the potential presence of protected or notable species. Specific survey work was undertaken in respect of Badgers, bats and Great Crested Newts, with the results described below.

### 5.2 Priority Species

5.2.1 Section 40 of the Natural Environment and Rural Communities (NERC) Act 2006 places duties on public bodies to have regard to the conservation of biodiversity in the exercise of their normal functions. In particular, Section 41 of the NERC Act requires the Secretary of State to publish a list of species which are of principal importance for conservation in England. This list is largely derived from the 'Priority Species' listed under the former UK Biodiversity Action Plan (BAP), which continue to be regarded as priority species under the subsequent country-level biodiversity strategies.

5.2.2 During the survey work undertaken, Schedule 1 Species Red Kite *Milvus milvus* was recorded flying over the site, but no additional Priority Species were recorded within the site itself. This is discussed further below.

### 5.3 Bats

5.3.1 **Legislation.** All British bats are classed as European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended) and are also listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). As such, both bats and their roosts (breeding sites and resting places) receive full protection under the legislation (see Appendix 6210/2 for detailed provisions). If proposed development work is likely to result in an offence a licence may need to be obtained from Natural England which would be subject to appropriate measures to safeguard bats. Given all bats are protected species, they are considered to represent important ecological features. A number of bat species are also considered S41 Priority Species.

5.3.2 **Background Records.** A number of records of bat species were returned from Hampshire Biodiversity Information Centre (HBIC). Species recorded included Brown Long-eared Bat *Plecotus auritus*, Unidentified Bat species *Chiroptera sp.*, Common Pipistrelle *Pipistrellus pipistrellus*, Soprano Pipistrelle *Pipistrellus pygmaeus*, Noctule *Nyctalus noctula*, unidentified Pipistrelle bat species *Pipistrellus sp.*, Serotine *Eptesicus serotinus*, and unidentified Long-eared bat species *Plecotus sp.*

5.3.3 No specific records for bats were returned from within the site boundary. The closest record was from 1986 for a Brown Long-eared Bat approximately 0.45km north east of the site.

#### 5.3.4 Survey Results

##### Visual Inspection Surveys

##### *Trees*

5.3.5 Six trees associated with hedgerow H2 and off-site tree line TL1 adjacent to the eastern site boundary were found to have features with the potential to support roosting bats. The

results of the tree assessment work undertaken at the site is illustrated on Plan 6210/ECO3 and summarised in Table 5.1 below.

**Table 5.1.** Tree Inspection Results

Tree No.	Species	Potential Roost Features	Bat Roosting Potential
T1	Oak	Dense ivy cover on main stem and branches	Low
T2	Hawthorn	Dense ivy cover	Low
T3	Oak	Dense ivy cover on main stem, Split limb	Low
T4	Oak	Dense ivy cover on main stem and branches	Low
T5	Goat Willow	Dense ivy cover on main stem and branches	Low
T6	Dead Willow sp.	Split limbs, lifted bark	Low

### 5.3.6 Evaluation and Assessment of Likely Effects

#### Roosting

##### *Trees*

5.3.7 Six trees offering low bat roosting potential were identified during the survey work undertaken. The majority of trees within the site are to be retained under the proposals such that in the event that bats are present within the trees they will remain unaffected. Tree T6, which comprises a dead Willow sp., is to be removed under the proposals and as such mitigation measures with regard to roosting bats are proposed in Section 6 below.

5.3.8 Bats are dynamic animals and as such it remains possible that individuals could colonise the site in the future. Natural England guidance in respect of European Protected Species<sup>19</sup> such as bats advises that, even where proposals are reasonably unlikely to result in any offence, such that licensing is not required, reasonable precautions should be taken to minimise the risk to protected species in the unlikely event that they should be found during the course of the activity. Accordingly, recommended further survey work and precautionary mitigation measures are set out at Chapter 6 below and subject to their implementation it is considered that roosting bats will be fully safeguarded under the proposals. Furthermore, it will be possible to incorporate faunal enhancements, such as bat boxes, into the detail design to support local bat populations.

#### Foraging and Commuting

5.3.9 The site is dominated by arable land with well-established hedgerows and an adjacent off-site tree line and watercourse which offer potential opportunities for foraging and commuting bats as a very small part of a wider landscape-scale resource. This combination of habitat occurs relatively frequently in the surrounding area and taking this into account, in addition to the small size of the site and habitats, the site is considered to be site level value to commuting / foraging bats.

5.3.10 The off-site treeline and the majority of hedgerows and trees within the site are to be retained under the proposals, whilst new tree and shrub planting will improve connectivity

<sup>19</sup> Natural England (2013) 'European Protected Species: Mitigation Licensing - How to get a licence (WML-G12)'

throughout the site and increase the foraging potential of the site. As such, overall there will be no loss / severance of commuting / foraging routes as a result of the proposals.

- 5.3.11 Accordingly, subject to the implementation of the recommendations outline at Chapter 6 below in relation to lighting, along with other ecological enhancements, it is considered that the conservation status of local bat populations will be fully safeguarded under the proposals.

## 5.4 Badger

- 5.4.1 **Legislation.** Badger receive legislative protection under the Protection of Badgers Act 1992 (see Appendix 6210/2 for detailed provisions), and as such should be assessed as an important ecological feature. The legislation aims to protect the species from persecution, rather than being a response to an unfavourable conservation status, as the species is in fact common over most of Britain. It is the duty of planning authorities to consider the conservation and welfare impacts of development upon Badger and issue permissions accordingly.

- 5.4.2 **Background Records.** Several records of Badger were returned from HBIC. The closest record was from 2015, from approximately 0.8km north east of the site.

- 5.4.3 **Survey Results and Evaluation.** The site provides limited optimal foraging and commuting habitat for Badger, as it is dominated by arable land. No evidence of Badger setts or Badger activity was recorded within the site during survey work undertaken.

- 5.4.4 Badger are a widespread and mobile species such that Badger may occasionally utilise the site for foraging, so general safeguards should be put in place during construction (see Chapter 6). With these measures in place, it is considered that Badger (if present in the wider area) are unlikely to be affected by future proposals.

## 5.5 Dormouse

- 5.5.1 **Legislation.** Dormouse is fully protected under the Wildlife and Countryside Act 1981 (as amended) and is a European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended). Such legislation affords protection to individuals of the species and their breeding sites and places of rest (see Appendix 6210/2 for detailed provisions). Dormouse is also a S41 Priority Species. On this basis, Dormouse is considered to form an important ecological feature.

- 5.5.2 **Background Records.** No records of Dormouse within 2km of the site were returned from the desktop study.

- 5.5.3 **Survey Results and Evaluation.** The hedgerow and treelines within the site are considered unlikely to be suitable for Dormouse given the lack of understorey and suitable fruit and nut bearing species to provide a range of food sources throughout the year. Given consideration to the above and the lack of records of Dormouse in the local area it is considered that the site is of negligible suitability to support Dormouse.

## 5.6 Water Vole and Otter

- 5.6.1 **Legislation.** Water Vole and Otter are fully protected under the Wildlife and Countryside Act 1981 (as amended) and are also both S41 Priority Species. The legislation affords protection to individuals of the species and their breeding sites and places of shelter. Otter

is also a European Protected Species under the Conservation of Habitats and Species Regulations 2017 (as amended). See Appendix 6210/2 for detailed provisions).

5.6.2 **Background Records.** No records of Water Vole within 2km of the site were returned from the desktop study. Several records of Otter were returned from HBIC, all associated with the River Enborne, approximately 1.5km north of the site. The Otter records returned from HBIC all date from 2012.

5.6.3 **Survey Results and Evaluation.** There is no potential habitat within the site to support Water Vole or Otter, as it is dominated by arable with no watercourses present within the site.

5.6.4 The off-site watercourse, WC1 on Plan 6210/ECO3, was assessed for its suitability to support Otter and Water Vole, and was found to be both narrow and shallow in addition to being heavily shaded in places. As such, it is considered to be limited in its suitability to support these species, with no evidence of the presence of these mammals recorded during the Phase 1 survey. Therefore, given the lack of records in the local area, it is considered that these species are absent from the watercourse.

## 5.7 Other Mammals

5.7.1 **Legislation.** A number of other UK mammal species do not receive direct legislative protection relevant to development activities but may receive protection against acts of cruelty (e.g. under the Wild Mammals (Protection) Act 1996). In addition, a number of these mammal species are S41 Priority Species and should be assessed as important ecological features.

5.7.2 **Background Records.** No specific records of other mammals from within or adjacent to the site were returned from the desktop study. The desktop study returned several records of Brown Hare *Lepus europaeus* within the 2km search area, the closest of which is located approximately 0.2km east of the site, dated 2020.

5.7.3 **Survey Results and Evaluation.** No evidence of any other protected, rare or notable mammal species was recorded within the site. Other mammal species likely to utilise the site, such as Fox *Vulpes vulpes*, remain common in both a local and national context, and as mentioned above do not receive specific legislative protection in a development context. As such, these species are not a material planning consideration and the loss of potential opportunities for these species under any future development proposals is not significant.

5.7.4 The desktop study returned background records of Hedgehog, a Priority Species, within the 2km search area surrounding the site. The site offers potential opportunities for this species, in addition to Brown Hare *Lepus europaeus*, largely in the form of areas of treeline, hedgerows and scrub for Hedgehog and the arable field for Brown Hare, and subject to the implementation of general mammal safeguards during construction (as detailed in Chapter 6 below) it is anticipated that Hedgehog and other mammal species will be fully safeguarded should they enter the site during construction. Potential for faunal enhancements designed to provide increased opportunities for Hedgehog within the site are detailed in Chapter 6 below.

## 5.8 Amphibians

5.8.1 **Legislation.** All British amphibian species receive a degree of protection under the Wildlife and Countryside Act 1981 (as amended). Great Crested Newt is protected under the Act and is also classed as a European Protected Species under the Conservation of Habitats and

Species Regulations 2017 (as amended). As such, both Great Crested Newt and habitats utilised by this species are afforded protection (see Appendix 6210/2 for detailed provisions). Great Crested Newt is also a S41 Priority Species, as are Common Toad *Bufo bufo*, Natterjack Toad *Epidalea calamita*, and Pool Frog *Pelophylax lessonae*. As such, these species should be assessed as important ecological features.

5.8.2 **Background Records.** The local records centre returned records for Common Toad *Bufo bufo* within 2km of the site boundary. The closest record, dated in 2004, approximately 1.1km south east of the site.

5.8.3 **Survey Results and Evaluation.** There are no waterbodies within the site itself. Three off-site ponds are shown on OS mapping and visible on aerial imagery within 250m of the site boundary (see Plan 6210/ECO4 for locations). An initial appraisal of the ponds was made using the HSI system to identify potential suitability to support Great Crested Newt, see Table 5.2, below.

**Table 5.2.** HSI survey results.

Pond	Suitability Indices										HSI Score	Suitability
	SI 1 Location	SI 2 Pond Area	SI 3 Pond Drying	SI 4 Water Quality	SI 5 Shade	SI 6 Water Fowl	SI 7 Fish	SI 8 Ponds	SI 9 Terrestrial Habitat	SI 10 Macrophytes		
P1	1	0.4	0.9	1.0	1.0	0.67	0.67	0.85	0.33	0.8	0.72	Good
P2	1	0.2	0.1	0.33	1.0	1.0	1.0	0.85	0.67	0.85	0.56	Below Average
P3	1.0	0.4	0.9	1.0	1.0	0.67	0.67	0.85	1.0	0.35	0.74	Good

5.8.4 There are no historic records of Great Crested Newt within 250m of the site. There is some potentially suitable terrestrial habitat present within the site in the form of the base of the hedgerows and off-site tree line. The site is bound by a road to the west, which although not heavily trafficked, may potentially deter Great Crested Newts from crossing from the off-site ponds and utilising the site.

5.8.5 Access was successfully obtained to one of the three ponds identified within 250m of the site boundary, as shown on Plan 6210/ECO4. Environmental DNA (eDNA) samples were taken from Pond P1. It was not possible to arrange access to survey P3, and P2 was no longer holding water at the time of the eDNA survey. The eDNA survey of Pond 1 returned a negative result.

5.8.6 The site is dominated by arable land and only limited areas of potentially suitable terrestrial habitat is present, limited to the areas of dense scrub, tall ruderal vegetation and hedgerows. Given the limited suitable terrestrial habitat within the site and the lack of records in the local area, it is considered unlikely that Great Crested Newts are present within the terrestrial habitats within the site. Accordingly, it is considered unlikely that amphibian populations will be affected by the proposals and no further survey work or mitigation is required.

## 5.9 Reptiles

- 5.9.1 **Legislation.** All six species of British reptile are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), which protects individuals against intentional killing or injury. Sand Lizard *Lacerta agilis* and Smooth Snake *Coronella austriaca* receive additional protection under the Conservation of Habitats and Species Regulations 2017 (as amended); refer to Appendix 6210/2 for detailed provisions. All six reptile species are also S41 Priority Species. As such, all reptile species should be assessed as important ecological features.
- 5.9.2 **Background Records.** The desktop study returned no records of reptiles within the site boundary. Records were returned for Common Lizard *Zootoca vivipara*, Grass Snake *Natrix helvetica* and Adder *Vipera berus* from the 2km search radius. The closest record was for Grass Snake, located within the 1km grid square approximately 0.75km north east of the site, dated 2008.
- 5.9.3 **Survey Results and Evaluation.** The majority of the site does not provide suitable habitats for reptiles, as it is dominated by arable land. Areas of suitable reptile habitat are therefore limited to the small area of dense scrub, log piles and the vegetation at the base of the hedgerows and treeline within the site. Due to the majority of suitable habitats being retained under the proposals, and the constraints of using artificial refugia over these habitats (i.e. cannot be used over scrub and log piles and the ruderal vegetation at the field margins was very narrow in nature), it was considered that a reptile survey would not be the most suitable approach. Due to the nature of the habitats present within the site, it is considered likely that, if present, reptiles would only be present in small numbers at the site and therefore we would propose to implement appropriate mitigation measures accordingly on that basis.
- 5.9.4 The hedgerows and off-site treeline are to be retained under the proposals and buffered with greenspace and as such it should be possible to retain (and expand) the vast majority of potential reptile habitat within the site. A small section of H3 will be required to be removed in order to facilitate access into the site, and mitigation will be implemented here (and in any other areas where it will not be possible to retain potential reptile habitat) in order to safeguard reptiles should they be present within the site.
- 5.9.5 Mitigation for the safeguarding of reptiles is detailed in Chapter 6 below. With the habitat protection and reptile mitigation in place it is considered likely that reptiles (if present) will be safeguarded throughout construction, and the status of local populations maintained through the incorporation of refugia such as log piles and hibernacula into the landscape proposals.

## 5.10 Birds

- 5.10.1 **Legislation.** All wild birds and their nests receive protection under Section 1 of the Wildlife and Countryside Act 1981 (as amended) in respect of killing and injury, and their nests, whilst being built or in use, cannot be taken, damaged or destroyed. Species included on Schedule 1 of the Act receive greater protection and are subject to special penalties (see Appendix 6210/2 for detailed provisions).
- 5.10.2 **Conservation Status.** The conservation importance of British bird species is categorised based on a number of criteria including the level of threat to a species' population status<sup>20</sup>.

<sup>20</sup> Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stroud DA and Gregory RD (2015) 'Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man' British Birds 108, pp.708-746

Species are listed as Green, Amber or Red. Red Listed species are considered to be of the highest conservation concern being either globally threatened and or experiencing a high/rapid level of population decline (>50% over the past 25 years). A number of birds are also S41 Priority Species. Red and Amber listed species and priority species should be assessed as important ecological features.

- 5.10.3 **Background Records.** A single record of Red Kite *Milvus milvus* was returned within the site boundary, dating from 2019.
- 5.10.4 A number of records of notable birds were returned from within the wider search area, such as species protected under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), including Barn Owl *Tyto alba*, Kingfisher *Alcedo atthis*, Fieldfare *Turdus pilaris*, Redwing *Turdus iliacus*, and Brambling *Fringilla montifringilla*, of which Fieldfare and Redwing, are also Red List Birds of Conservation Concern (BoCC4).
- 5.10.5 **Survey Results.** The site offers nesting and foraging opportunities for a range of common bird species, largely at the site boundaries in the form of the hedgerows and off-site tree line. Several species of bird were observed within the site during the Phase 1 survey including Robin *Erithacus rubecula*, Wood Pigeon *Columba palumbus*, Red Kite (flying over), Great Tit *Parus major*, House Sparrow *Passer domesticus*, Pheasant *Phasianus colchicus*, Carrion Crow *Corvus corone*, Pied Wagtail *Motacilla alba* and Jackdaw *Corvus monedula*. Though the site comprises an arable field, this was dominated by Pineappleweed and therefore is not considered to offer suitable habitat for ground nesting species such as Skylark *Alauda arvensis* which often utilise arable fields. The field is also small in nature, enclosed by hedgerows and the off-site treeline which further reduces its suitability for this species.
- 5.10.6 **Evaluation.** Most of the birds recorded within the site are not listed as having any special conservation status. The site offers suitable habitat for bird species in terms of feeding and nesting, however the habitats present are common in the surrounding area and there is no evidence to suggest the site is of elevated value for bird species. As such, it is considered that the site is of value to bird species at no more than the site level.
- 5.10.7 The proposals will result in the loss of a small sections of H3 to facilitate site access which could potentially affect any nesting birds that may be present at the time of works. Accordingly, a number of safeguards in respect of nesting birds are proposed, in order to safeguard any using the site during construction, as detailed in Chapter 6 below. In the long-term, it will be possible to incorporate new nesting opportunities for birds into future proposals, as described in Chapter 6 below.

## 5.11 Invertebrates

- 5.11.1 **Legislation.** A number of invertebrate species are listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). In addition, Large Blue Butterfly *Maculinea arion*, Fisher's Estuarine Moth *Gortyna borelii lunata* and Lesser Whirlpool Ram's-horn Snail *Anisus vorticulus* receive protection under the Conservation of Habitats and Species Regulations 2017 (as amended); refer to Appendix 6210/2 for detailed provisions. A number of invertebrates are also S41 Priority Species. Where such species are present, they should be assessed as important ecological features.
- 5.11.2 **Background Records.** No specific records of invertebrates were returned from the site. Records of UK Priority Species Knot Grass *Acrionicta rumicis*, Dark-barred Twin-spot Carpet *Xanthorhoe ferrugata*, Dot Moth *Melanchra persicariae*, Oak Hook-tip *Watsonalla binaria*, Shaded Broad-bar *Scotopteryx chenopodiata*, Dingy Skipper *Erynnis tages*, Ghost Moth

*Hepialus humuli*, Cinnabar *Tyria jacobaeae*, Beaded Chestnut *Agrochola lychnidis*, Blood-Vein *Timandra comae*, Brindled Beauty *Lycia hirtaria*, Buff Ermine *Spilosoma luteum*, Deep-brown Dart *Aporophyla lutulenta*, Green-brindled Crescent *Allophyes oxyacanthae*, Sallow *Xanthia icteritia* and Small Heath *Coenonympha pamphilus* were returned from the 2km search area. However, no evidence of these, or any other protected or notable species were recorded within the site during survey work undertaken.

**5.11.3 Survey Results and Evaluation.** No evidence for the presence of any protected, rare or notable invertebrate species was recorded within the site. The site is dominated by arable land and therefore does not contain any micro-habitats that would typically indicate elevated potential for invertebrates<sup>21</sup>, such as a variable topography with areas of vertical exposed soil, areas of species-rich semi-natural vegetation; variable vegetation structure with frequent patches of tussocks combined with short turf; free-draining light soils; walls with friable mortar or fibrous dung. Accordingly, given the habitat composition of the site and lack of adjacent sites designated for significant invertebrate interest, it is considered unlikely the proposals will result in significant harm to any protected, rare or notable invertebrate populations, and the site is not considered to support an important invertebrate assemblage and so is considered to be of negligible ecological value to invertebrates.

## 5.12 Summary

5.12.1 On the basis of the above, a summary of the evaluation of fauna is provided below:

**Table 5.3.** Evaluation summary of fauna.

Species / Group	Supported by or associated with the site	Level of Importance
Roosting Bats	Opportunities in the form trees with bat roosting potential	Site
Foraging and Commuting Bats	Limited opportunities given the size of the site	Site
Badger	Potential habitat and foraging opportunities at site boundaries	Site
Other Mammals – Hedgehog	Potential habitat and foraging opportunities at site boundaries	Site
Reptiles	Limited suitable habitat on site	Site
Birds	Limited nesting opportunities for common and widespread species.	Site

5.12.2 Other fauna such as Dormouse, Water Vole, Otter, Great Crested Newts, and notable invertebrates are likely absent from the site.

<sup>21</sup> Natural England (2010) 'Higher Level Stewardship – Farm Environment Plan (FEP) Manual', 3<sup>rd</sup> Edition

## 6 Mitigation Measures and Ecological Enhancements

### 6.1 Mitigation

6.1.1 Based on the habitats, ecological features and associated fauna identified within/adjacent to the site, it is recommended that the following mitigation measures (**MM1 – MM9**) are implemented. The implementation of these measures can be secured via suitably-worded planning conditions, as recommended by relevant best practice guidance (BS 42020:2019).

#### Protection of Retained and Off-site Habitats and Local Designations

6.1.1 **MM1 – Hedgerow and Tree Protection.** All hedgerows and trees to be retained under future proposals shall be protected during construction in line with standard arboriculturalist best practice (BS5837:2012) or as otherwise directed by a suitably competent arboriculturalist. This will involve the use of protective fencing or other methods appropriate to safeguard the root protection areas of retained trees / hedgerows.

6.1.2 **MM2 - Management of Recreation.** In order to deter new residents from visiting the nearby SSSI and NNR, the proposals incorporate a sizeable area of greenspace in the southern portion of the site, which will be developed into a naturalised wildflower field (as shown on the Illustrative Masterplan). This will create greenspace that will be attractive to new residents for everyday use such as daily dog walking, which will minimise visits to any off-site designations. At the detailed design stage, measures should be incorporated to make the greenspace attractive for daily dog walking such as providing dog waste bins. Measures should also be incorporated into the detailed landscape design to prevent informal paths being made through the northern site boundary onto the off-site PRoW, for example through boundary fencing and thorny planting.

6.1.3 **MM3 – Pollution Prevention.** The following safeguards will be implemented in order to safeguard the off-site designations local to the site, as well as the watercourse adjacent the eastern site boundary, against any potential run-off or pollution events during construction:

- Measures will be implemented to minimise generation of dust, and where dust is generated to suppress drifting onto retained habitats or off-site (e.g. damping down of roadways and spoil piles during periods of dry weather);
- Storage areas for chemicals, fuels, etc. will be sited well away from the watercourse adjacent to the eastern boundary (minimum 10m), and stored on an impervious base within an oil-tight bund with no drainage outlet. Spill kits with sand, earth or commercial products approved for the stored materials shall be kept close to storage areas for use in case of spillages;
- Where possible, and with prior agreement of the sewage undertaker, silty water should be disposed of to the foul sewer or via another suitable form of disposal, e.g. tanker off-site;
- Water washing of vehicles, particularly those carrying fresh concrete and cement, mixing plant, etc. will be carried out in a contained area as far from the watercourse as practicable (minimum 10m), to avoid contamination; and
- Refuelling of plant will take place in a designated area, on an impermeable surface, away from the watercourse (minimum 10m).

6.1.4 Post-development, the drainage system for the development will ensure the watercourse is not subject to adverse changes in surface water run-off or quality. On the contrary, the

removal of agricultural run-off from the land will likely be beneficial in terms of water quality.

### Bats

- 6.1.5 **MM3 – Update Survey.** Should any considerable time (e.g. >2 years) elapse between the survey work detailed above and any development works, a further assessment of the trees should be undertaken prior to the commencement of works.
- 6.1.6 **MM4 – Felling of Trees Supporting Bat Roosting Potential.** Six trees supporting bat roosting potential have been identified within the site. Tree T6, which is a dead Willow sp. with low bat roosting potential, will require felling under the proposals. Felling of this tree will therefore be undertaken under an ecological watching brief, and will be carried out using the soft-felling technique, whereby sections of the tree will be cut and lowered to the ground, followed by leaving the felled sections on the ground for a period of at least 24 hours to allow any bats, should these be present, to escape.
- 6.1.7 Should the need for removal of trees T1 – T5, pruning or felling works be identified at a later stage (e.g. for health and safety purposes), it is recommended that a suitably qualified ecologist is consulted to advise on any further survey requirements and mitigation measures. Such measures may include dusk emergence / dawn re-entry surveys, climbing inspections to investigate potential roosting features and soft felling of trees under an ecological watching brief.
- 6.1.8 If any evidence for the presence of roosting bats is recorded, works on that tree will be suspended and consideration will be given to the need to undertake works under a European Protected Species (EPS) development licence, and a licence application will be made to Natural England as required.
- 6.1.9 **MM5 – Sensitive Lighting.** Light-spill onto retained and newly created habitat, in particular any retained hedgerows, the off-site tree line and watercourse and scrub, will be minimised in accordance with good practice guidance<sup>22</sup> to reduce potential impacts on light-sensitive bats (and other nocturnal fauna). This may be achieved through the implementation of a sensitively designed lighting strategy, with consideration given to the following key factors:
- **Light exclusion zones** – ideally no lighting should be used in areas likely to be used by bats. Light exclusion zones or ‘dark buffers’ may be used to provide interconnected areas free of artificial illumination to allow bats to move around the site;
  - **Appropriate luminaire specifications** – consideration should be given to the type of luminaires used, in particular luminaries should lack UV elements and metal halide and fluorescent sources should be avoided in preference for LED luminaries. A warm white spectrum (ideally <2,700K) should be adopted to reduce the blue light component;
  - **Light barriers / screening** – new planting (e.g. hedgerows and trees) or fences, walls and buildings can be strategically positioned to reduce light spill;
  - **Spacing and height of lighting units** – increasing spacing between lighting units will minimise the area illuminated and allow bats to fly in the dark refuges between

<sup>22</sup> Bat Conservation Trust and Institute of Lighting Professionals (2018) ‘Guidance Note 08/18: Bats and artificial lighting in the UK’; Stone, E.L. (2013) ‘Bats and lighting: Overview of current evidence and mitigation guidance.’; ILP (2011) ‘Guidance notes for the reduction of obtrusive light’ Institution of Lighting Professionals, GN01:2011.

lights. Reducing the height of lighting will also help decrease the volume of illuminated space and give bats a chance to fly over lighting units (providing the light does not spill above the vertical plane). Low level lighting options should be considered for any parking areas and pedestrian / cycle routes, e.g. bollard lighting, handrail lighting or LED footpath lighting;

- **Light intensity** – light intensity (i.e. lux levels) should be kept as low as possible to reduce the overall amount and spread of illumination;
- **Directionality** – to avoid light spill, lighting should be directed only to where it is needed. Particular attention should be paid to avoid the upward spread of light so as to minimise trespass and sky glow;
- **Dimming and part-night lighting** – lighting control management systems can be used, which involves switching off/dimming lights for periods during the night, for example when human activity is generally low (e.g. 12.30 – 5.30am). The use of such control systems may be particularly beneficial during the active bat season (April to October). Motion sensors can also be used to limit the time lighting is operational.

#### Badger and Other Mammals

**6.1.10 MM6 – Badger Update Survey.** Badgers are dynamic animals and levels of Badger activity can rapidly change at a site, with new setts being created at any time. Given that no evidence of Badgers has been recorded within or adjacent to the site it is considered that Badgers do not currently pose a constraint to development. Nonetheless, it is recommended that an update survey is carried out prior to commencement of site works in order to confirm the current status of Badgers at the site. Should Badger setts be present within or in close proximity to the site boundary and likely to be affected by the proposals, the survey information will be used to inform a Natural England licence application.

**6.1.11 MM7 – Mammal Construction Safeguards.** In order to safeguard Badger or other mammals such as Hedgehog and Brown Hare should they enter the site during construction works, the following measures will be implemented:

- A watching brief should be maintained for Hedgehog, breeding Hares and other small mammals throughout any clearance works;
- Any piles of material already present on site, particularly vegetation/leaves, etc. and any areas of dense scrub or hedgerows, shall be dismantled/removed by hand and checked for Hedgehog prior to the use of any machinery/disposal;
- Any trenches or excavations within the site that are to be left open overnight will be provided with a means of escape should a Badger or other mammal enter. This could simply be in the form of a gently graded ramp or 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 material to be disposed of by burning, particularly waste from vegetation clearance and tree works, should not be left piled on site for more than 24 hours in order to minimise the risk of Hedgehogs occupying the pile. If this cannot be avoided, material should be stored within a container such as a skip to prevent animals from gaining access. Any material which has been stored on the ground overnight should be moved prior to burning to allow a thorough check for any animals which may have been occupying the pile;

- Any temporarily exposed open pipes (>150mm outside diameter) should be blanked off at the end of each working day so as to prevent Badgers or other mammals gaining access as may happen when contractors are off-site;
- Any trenches/pits will be inspected each morning to ensure no Badgers or other mammals have become trapped overnight. Should a Badger become trapped in a trench it will likely attempt to dig itself into the side of the trench, forming a temporary sett. Should a trapped Badger be encountered a suitably qualified ecologist will be contacted immediately for further advice;
- The storage of topsoil or other 'soft' building materials in the site will be given careful consideration. Badgers will readily adopt such mounds as setts. So as to avoid the adoption of any mounds, these will be kept to a minimum and any essential mounds subject to daily inspections with consideration given to temporarily fencing any such mounds to exclude Badgers;
- The storage of any chemicals at the site will be contained in such a way that they cannot be accessed or knocked over by any roaming Badgers or other mammals;
- Fires will only be lit in secure compounds away from areas of Badger activity and not allowed to remain lit during the night;
- Unsecured food and litter will not be left within the working area overnight; and
- In the event that an injured Hedgehog is found, the animal should be wrapped carefully in a towel, the British Hedgehog Preservation Society (BHPS) phoned (01584 890 801) and the Hedgehog taken to a local vet immediately.

#### Reptiles

**6.1.12 MM8 – Reptile Displacement Exercise – Phased Vegetation Removal.** As a precautionary measure to minimise the risk of harm to reptiles in the event any individuals are present around the site boundaries, potentially suitable habitat (i.e. the log piles, dense scrub and the bases of short sections of hedgerow which require removal to facilitate access) will be removed on a phased basis in order to displace reptiles present out of the works areas. The exercise will involve searching of the vegetation by an Ecologist, following by cutting using hand tools to a height of approximately 15cm. Following a second search, the vegetation will then be cut to ground level. This exercise should be carried out under the supervision of a competent Ecologist during the active reptile season (generally March / April to September / October, depending on prevailing weather) so that reptiles are active and able to move away from the works areas. Any potential refuge features, e.g. log piles, rubble piles, heavy logs, etc. will be fingertip-search by an Ecologist prior to being carefully disassembled by hand. Any reptiles encountered during the above works will be carefully captured by the supervising Ecologist and relocated to suitable nearby habitat.

#### Nesting Birds

**6.1.13 MM9 – Timing of Works.** Clearance of areas of suitable nesting habitat should be avoided during the breeding bird season (March to August). If this is not possible, any potential nesting habitat to be removed should first be checked by an ecologist to identify the location of any active nests. Any active nests identified would then need to be cordoned off (minimum 5m buffer) and protected until the birds have fledged. These checking surveys would need to be carried out no more than three days in advance of vegetation clearance.

## 6.2 Ecological Enhancements

6.2.1 The National Planning Policy Framework (NPPF) encourages new developments to maximise the opportunities for biodiversity through incorporation of enhancement measures. Future development of the site presents the opportunity to deliver ecological enhancements for the benefit of local biodiversity, thereby making a positive contribution towards the broad objectives of national conservation priorities and the local policies. The Basingstoke and Deane Local Plan states in Policy EM4 that *“in order to secure opportunities for biodiversity improvement, relevant development proposals will be required to include proportionate measures to contribute, where possible, to a net gain in biodiversity, through creation, restoration, enhancement and management of habitats and features including measures that help to link key habitats”*. The following ecological enhancements (**EE1 – EE10**) set out below should be considered appropriate given the context and size of the site.

### Habitat Creation

6.2.2 **EE1 – New Planting.** New planting within the site should largely be comprised of native species of local provenance, including trees and shrubs appropriate to the local area. Suitable species for inclusion within the planting could include native trees such as Oak, Birch *Betula pendula* and Field Maple, whilst native shrub species of particular benefit would likely include fruit and nut bearing species which would provide additional food for wildlife, such as Blackthorn, Hawthorn, Crab Apple *Malus sylvestris*, Hazel *Corylus avellana* and Elder. Where non-native species are proposed, these should include species of value to wildlife, such as varieties listed on the RHS’ ‘Plants for Pollinators’ database, providing a nectar source for bees and other pollinating insects. This can be implemented at the detailed design stage when the detailed soft landscaping plans and planting specifications are produced, and can be secured via condition.

6.2.3 **EE2 – Wildflower Grassland.** As shown on the Illustrative Masterplan, the southern portion of the site will be developed into a naturalised wildflower field. This would make a positive contribution towards the local BAP which lists ‘lowland meadows’ as a priority. Provision of other areas of wildflower grassland should be considered at the detailed design stage. It is recommended that these areas of wildflower grassland are created such that, in combination with new native landscape planting, opportunities for biodiversity will be maximised. This could be achieved, for example, by seeding with a wildflower seed mix suitable for the soil conditions (such as Emorsgate EM2 General Purpose Meadow Mixture). Consideration could be given to the laying of wildflower turfs, which would ensure rapid establishment and reduce the timeframe for delivering ecological benefits.

6.2.4 **EE3 – Wetland Features.** A Sustainable Drainage System (SuDS) will be incorporated into the proposals which will consist of a SuDS pond and several swales. Creation of this habitat would provide opportunities for a range of wildlife while also helping to attenuate surface water run-off. A suitable seed mix should be specified at the detailed design stage (e.g. Emorsgate EM8 Meadow Mix for Wetlands or similar).

### Bats

6.2.5 **EE4 – Bat Boxes.** It will be readily achievable to incorporate a number of bat boxes within the development, on trees and/or integral to new dwellings. The provision of bat boxes will provide new roosting opportunities for bats in the area, such as Soprano Pipistrelle, a national Priority Species. The precise number and locations of boxes / roost features should be determined by a competent ecologist, post-planning once the relevant final development design details have been approved.

### Birds

- 6.2.6 **EE5 – Bird Boxes.** It will be readily achievable to incorporate a number of bird nesting boxes within the development, thereby increasing nesting opportunities for birds at the site. Ideally, the bird boxes will have greater potential for use if sited on suitable, retained trees, situated as high up as possible. The precise number and locations of boxes should be determined by a competent ecologist, post-planning once the relevant final development design details have been approved.

### Hedgehog

- 6.2.7 **EE6 – Hedgehog Nest Domes.** It is recommended that Hedgehog nest domes be installed within sheltered areas, such as around the retained hedgerow and treelines to provide suitable nesting and hibernation sites for this species. The Hedgehog nest domes should be positioned out of direct sunlight, in areas of dense vegetation.
- 6.2.8 **EE7 – Hedgehog Cut Outs in Fences.** To maintain connectivity throughout the site for Hedgehog and to allow access to suitable foraging habitat contained within residential gardens, small holes (13cmx13cm) should be created within garden fences or under gates.

### Reptiles

- 6.2.9 **EE8 – Hibernaculum and Log Piles.** It is recommended that a number of hibernacula and refugia will be incorporated within the development, ideally within proposed areas of green space.

### Invertebrates

- 6.2.10 **EE9 – Bee Bricks.** It is recommended that a number of bee bricks be incorporated within any future development thereby increasing nesting opportunities for declining populations of non-swarming solitary bee populations. Ideally, bee bricks should be located within suitable south-facing walls (where architectural design allows), located at least 1m off the ground. The bricks should be unobstructed by vegetation, though within close vicinity of nectar and pollen sources.
- 6.2.11 **EE10 – Habitat Piles.** A proportion of any deadwood arising from vegetation clearance works should be retained within the site in a number of wood piles located within areas of new planting, new wetland habitats or areas of wildflower grassland in order to provide potential habitat opportunities for invertebrate species, which in turn could provide a prey source for a range of other wildlife. In addition, the provision and management of new native landscape planting will likely provide additional opportunities for invertebrates at the site in the long term.

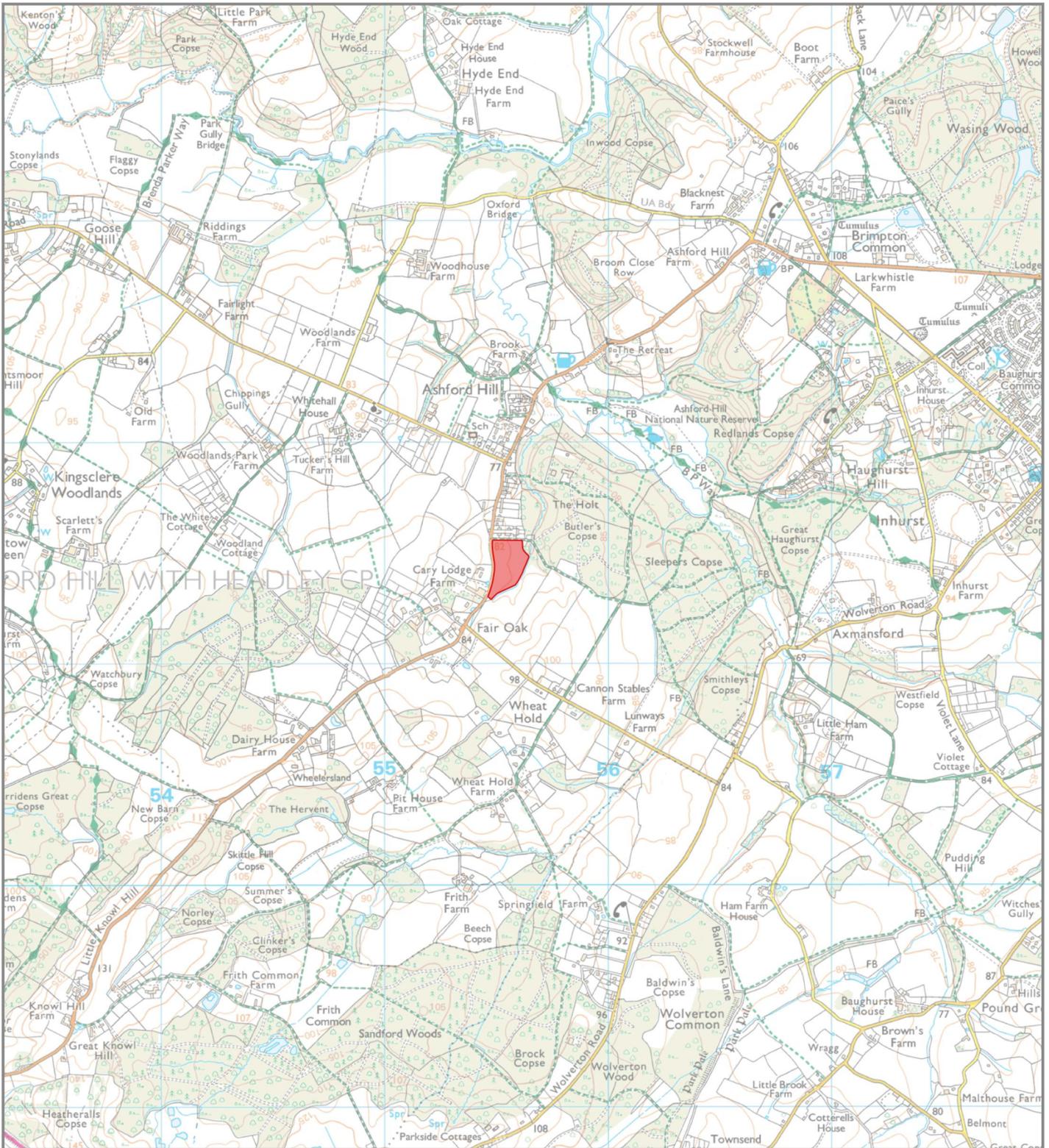
## 7 Conclusions

- 7.1 Aspect Ecology has carried out an Ecological Appraisal at Land South of Holt Cottages, Ashford Hill, based on the results of a desktop study, extended Phase 1 habitat survey, general faunal appraisal and Phase 2 surveys for Great Crested Newts.
- 7.2 The available information confirms that no statutory or non-statutory nature conservation designations are present within the site. The nearest statutory designation is Ashford Hill Woods and Meadows Site of Special Scientific Interest (SSSI) located approximately 25m north east of the site at its closest point. The nearest non-statutory designation is Fair oak Copse, Ashford Hill with Headley Site of Nature Conservation (SINC), located approximately 0.4km south west of the site. Subject to the implementation of mitigation measures to prevent pollution and manage recreation, it is considered that all designations are likely to be fully safeguarded under the proposals.
- 7.3 The Phase 1 habitat survey has established that the site is dominated by habitats not considered to be of ecological importance, whilst the proposals have sought to retain those features identified to be of value comprising the boundary hedgerows and treeline and the off-site watercourse. These features will be retained and buffered with greenspace and will be protected during construction. A small number of trees, which are either dead or have a limited life expectancy, and a small section of hedgerow H3 will require removal as part of property maintenance and to create a site access point, which will be compensated for with new planting.
- 7.4 The habitats within the site have the potential to support several protected species, including species protected under both national and European legislation. Accordingly, a number of mitigation measures have been proposed to minimise the risk of harm to any protected species that may be present within the site, with compensatory measures proposed, where appropriate, in order to maintain the conservation status of local populations.
- 7.5 In conclusion, the proposals have sought to minimise impacts and subject to the implementation of appropriate avoidance, mitigation, and compensation measures set out in this document, it is considered unlikely that the proposals of the site would result in significant harm to biodiversity, which is the current test for planning under the NPPF. On the contrary, it is considered that it will be possible to achieve several biodiversity gains under the proposals, as set out in the report by Aspect Ecology titled 'Land South of Holt Cottages, Ashford Hill – Technical Briefing Note: Biodiversity Net Gain Assessment Using DEFRA Biodiversity Metric 3.0 Calculation Tool' dated August 2021.

## Plan 6210/ECO1:

Site Location

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Key:

 Site Location

**aspect** ecology

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Land South of Holt Cottages,  
 Ashford Hill  
 Site Location

6210/ECO1

PROJECT

TITLE

DRAWING NO.

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REV

August 2021

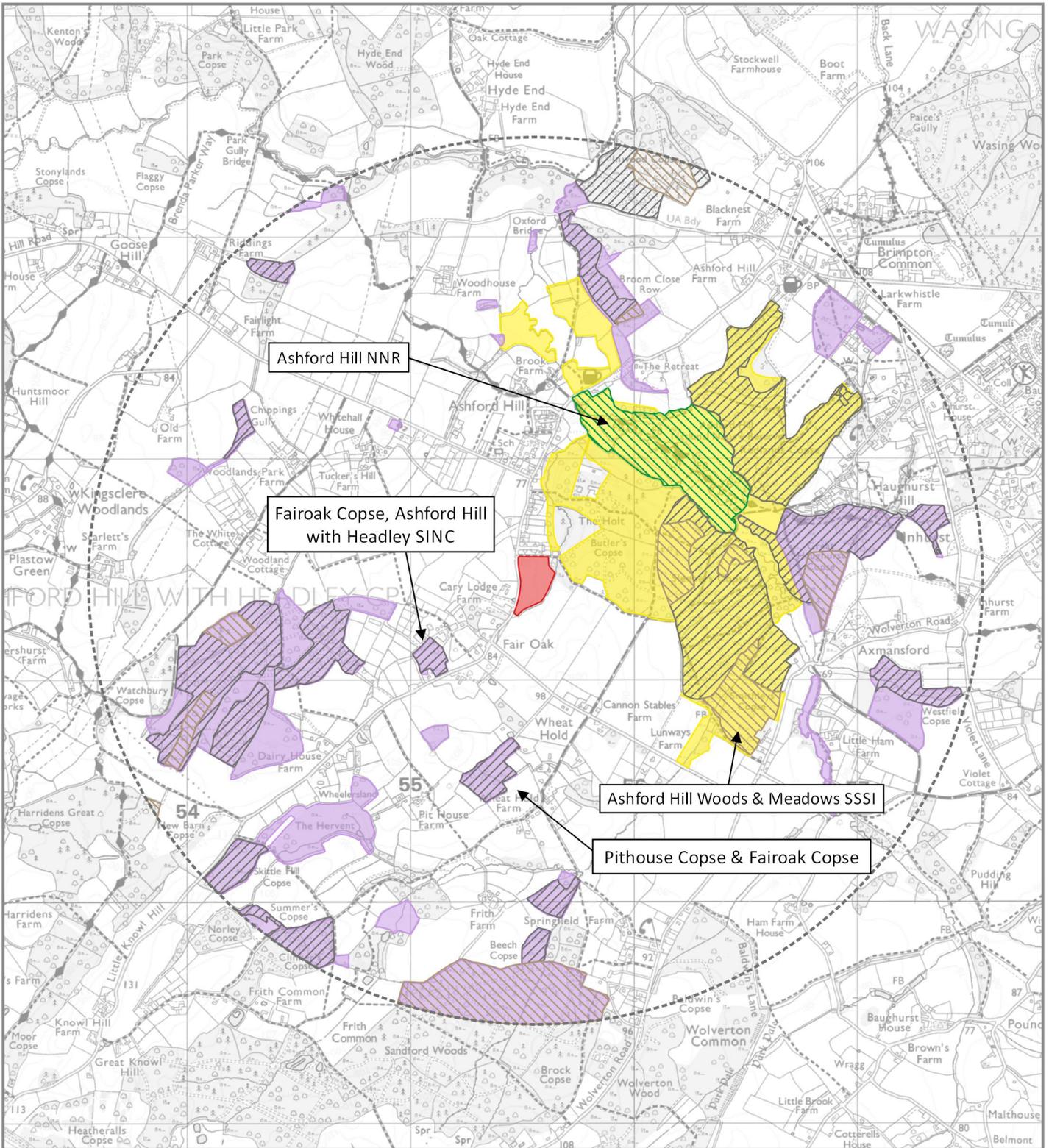
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## **Plan 6210/ECO2:**

Ecological Designations

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**Key:**

- Site Location
- Site of Special Scientific Interest (SSSI)
- National Nature Reserve (NNR)
- Ancient Replanted Woodland (ARW)
- Ancient Semi-Natural Woodland (ASW)
- Site of Importance for Nature Conservation (SINC)
- Local Records Centre 2km Search Area



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 Ecological Designations

6210/ECO2

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## **Plan 6210/ECO3:**

Habitats & Ecological Features

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- Key:
- Site Boundary
  - Arable
  - Deadwood
  - Bare Ground
  - Tall Ruderal Vegetation
  - Pond
  - Dense Scrub
  - Tree Line
  - Hedgerow
  - Watercourse
  - Tree
  - Tree with Low Bat Roosting Potential



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Land South of Holt Cottages,  
 Ashford Hill  
 Habitats and Ecological Features

6210/ECO3

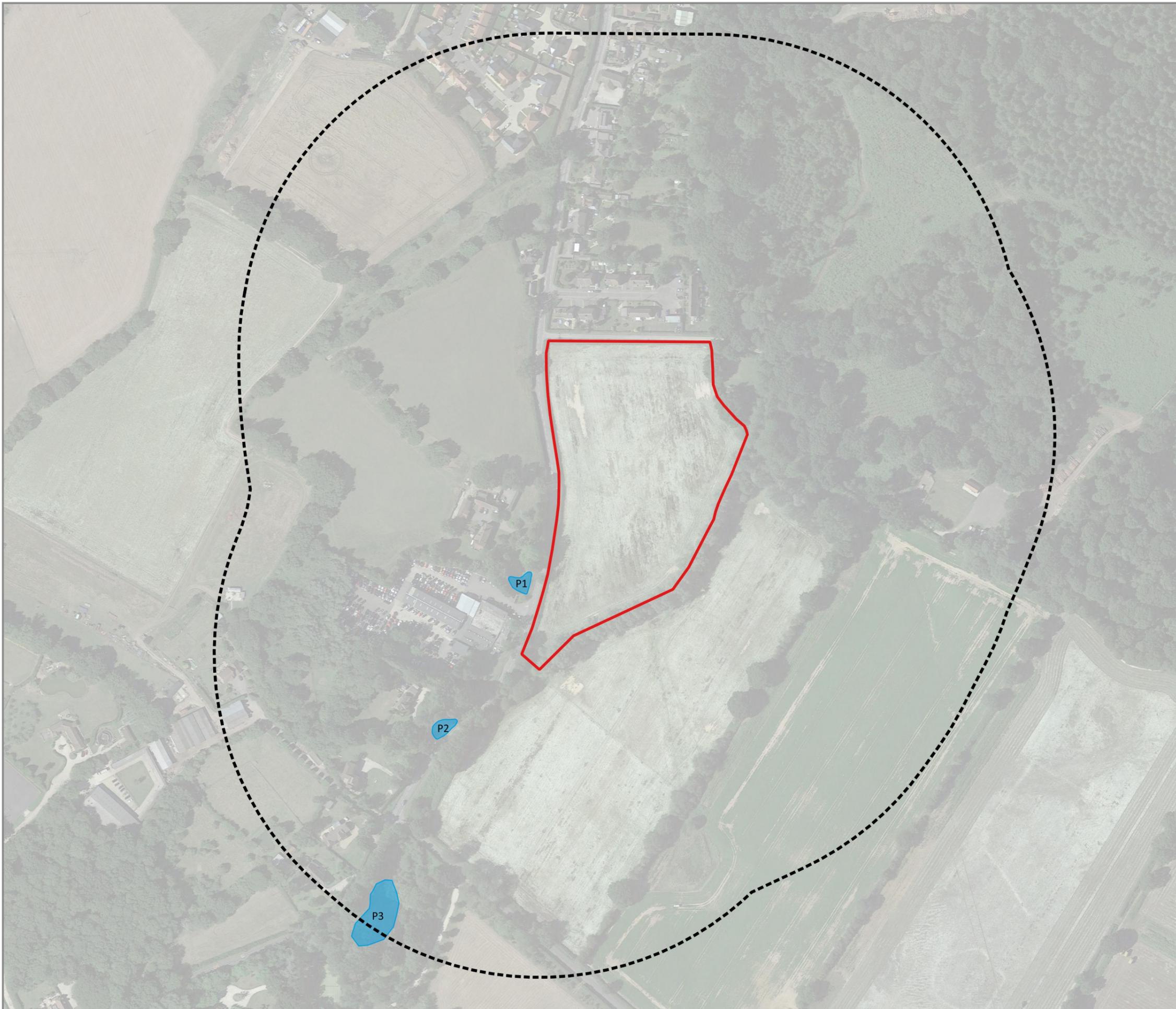


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## **Plan 6210/ECO4:**

Pond Location Plan

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Key:

-  Site Boundary
-  Pond
-  250m Buffer



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Land South of Holt Cottages,  
 Ashford Hill  
 Pond Location Plan

6210/ECO4

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## **Appendix 6210/1:**

Evaluation Methodology

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## Evaluation Methodology

1. The evaluation of ecological features and resources is based on professional judgement whilst also drawing on the latest available industry guidance and research. The approach taken in this report is based on that described by the Chartered Institute of Ecology and Environmental Management (CIEEM) 'Guidelines for Ecological Impact Assessment in the UK and Ireland' (2018)<sup>1</sup>.

### Importance of Ecological Features

2. Ecological features within the site/study area have been evaluated in terms of whether they qualify as 'important ecological features'. In this regard, CIEEM guidance states that *"it is not necessary to carry out detailed assessment of features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable"*.
3. Various characteristics contribute to the importance of ecological features, including:
  - Naturalness;
  - Animal or plant species, sub-species or varieties that are rare or uncommon, either internationally, nationally or more locally, including those that may be seasonally transient;
  - Ecosystems and their component parts, which provide the habitats required by important species, populations and/or assemblages;
  - Endemic species or locally distinct sub-populations of a species;
  - Habitat diversity;
  - Habitat connectivity and/or synergistic associations;
  - Habitats and species in decline;
  - Rich assemblages of plants and animals;
  - Large populations of species or concentrations of species considered uncommon or threatened in a wider context;
  - Plant communities (and their associated animals) that are considered to be typical of valued natural/semi-natural vegetation types, including examples of naturally species-poor communities; and
  - Species on the edge of their range, particularly where their distribution is changing as a result of global trends and climate change.
4. As an objective starting point for identifying important ecological features, European, national and local governments have identified sites, habitats and species which form a key focus for biodiversity conservation in the UK, supported by policy and legislation. These are summarised by CIEEM guidance as follows:

### *Designated Sites*

- Statutory sites designated or classified under international conventions or European legislation, for example World Heritage Sites, Biosphere Reserves, Wetlands of International Importance (Ramsar sites), Special Areas of Conservation (SAC), Special Protection Areas (SPA);

<sup>1</sup> CIEEM (2018) 'Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine', Chartered Institute of Ecology and Environmental Management, Winchester

- Statutory sites designated under national legislation, for example Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) and Local Nature Reserves (LNR);
- Locally designated wildlife sites, e.g. Local Wildlife Sites (LWS).

#### *Biodiversity Lists*

- Habitats and species of principal importance for the conservation of biodiversity in England and Wales (largely drawn from UK BAP priority habitats and priority species), often referred to simply as Priority Habitats / Species;
- Local BAP priority species and habitats.

#### *Red Listed, Rare, Legally Protected Species*

- Species of conservation concern, Red Data Book (RDB) species;
- Birds of Conservation Concern;
- Nationally rare and nationally scarce species;
- Legally protected species.

5. In addition to this list, other features may be considered to be of importance on the basis of local rarity, where they enable effective conservation of other important features, or play a key functional role in the landscape.

#### Assigning Level of Importance

6. The importance of an ecological feature should then be considered within a defined geographical context. Based on CIEEM guidance, the following frame of reference is used:
  - International (European);
  - National;
  - Regional;
  - County;
  - District;
  - Local (e.g. Parish or Neighbourhood);
  - Site (not of importance beyond the immediate context of the site).
7. Features of 'local' importance are those considered to be below a district level of importance, but are considered to appreciably enrich the nature conservation resource or are of elevated importance beyond the context of the site.
8. Where features are identified as 'important' based on the list of key sites, habitats and species set out above, but are very limited in extent or quality (in terms of habitat resource or species population) and do not appreciably contribute to the biodiversity interest beyond the context of the site, they are considered to be of 'site' importance.
9. In terms of assigning the level of importance, the following considerations are relevant:

### *Designated Sites*

10. For designated sites, importance should reflect the geographical context of the designation (e.g. SAC/SPA/Ramsar sites are designated at the international level whereas SSSIs are designated at the national level). Consideration should be given to multiple designations as appropriate (where an area is subject to differing levels of nature conservation designations).

### *Habitats*

11. In certain cases, the value of a habitat can be measured against known selection criteria, e.g. SAC selection criteria, 'Guidelines for the selection of biological SSSIs' and the Hedgerows Regulations 1997. However, for the majority of commonly encountered sites, the most relevant habitat evaluation will be at a more localised level and based on relevant factors such as antiquity, size, species-diversity, potential, naturalness, rarity, fragility and typicalness (Ratcliffe, 1977). The ability to restore or re-create the habitat is also an important consideration, for example in the case of ancient woodland.
12. Whether habitats are listed as priorities for conservation at a national level in accordance with Sections 41 and 42 of the Natural Environment and Rural Communities Act (NERC) 2006, so called 'Habitats of Principal Importance' or 'Priority Habitats', or within regional or local Biodiversity Action Plans (BAPs) is also relevant, albeit the listing of a particular habitat under a BAP does not in itself imply any specific level of importance.
13. Habitat inventories (such as habitat mapping on the MAGIC database) or information relating to the status of particular habitats within a district, county or region can also assist in determining the appropriate scale at which a habitat is of importance.

### *Species*

14. Deciding the importance of species populations should make use of existing criteria where available. For example, there are established criteria for defining nationally and internationally important populations of waterfowl. The scale within which importance is determined could also relate to a particular population, e.g. the breeding population of common toads within a suite of ponds or an otter population within a catchment.
15. When determining the importance of a species population, contextual information about distribution and abundance is fundamental, including trends based on historical records. For example, a species could be considered particularly important if it is rare and its population is in decline. With respect to rarity, this can apply across the geographic frame of reference and particular regard is given to populations where the UK holds a large or significant proportion of the international population of a species.
16. Whether species are listed as priorities for conservation at a national level in accordance with Sections 41 and 42 of the Natural Environment and Rural Communities Act (NERC) 2006, so called 'Species of Principal Importance' or 'Priority Species', or within regional or local Biodiversity Action Plans (BAPs) is also relevant, albeit the listing of a particular species under a BAP does not in itself imply any specific level of importance.
17. Species populations should also be considered in terms of the potential zone of influence of the proposals, i.e. if the entire species population within the site and surrounding area were to be affected by the proposed development, would this be of significance at a local, district, county or wider scale? This should also consider the foraging and territory ranges of individual species (e.g. bats roosting some distance from site may forage within site whereas other species such as invertebrates may be more sedentary).

## **Appendix 6210/2:**

Legislation Summary

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## LEGISLATION SUMMARY

1. In England and Wales primary legislation is made by the UK Parliament, and in Scotland by the Scottish Parliament, in the form of Acts. The main piece of legislation relating to nature conservation in the UK is the Wildlife and Countryside Act 1981 (as amended).
2. Acts of Parliament confer powers on Ministers to make more detailed orders, rules or regulations by means of secondary legislation in the form of statutory instruments. Statutory instruments are used to provide the necessary detail that would be too complex to include in an Act itself<sup>1</sup>. The provisions of an Act of Parliament can also be enforced, amended or updated by secondary legislation.
3. In summary, the key pieces of legislation relating to nature conservation in the UK are:
  - Wildlife and Countryside Act 1981 (as amended)
  - Protection of Badgers Act 1992
  - Hedgerows Regulations 1997
  - Countryside and Rights of Way (CROW) Act for England and Wales 2000
  - Natural Environment and Rural Communities Act 2006
  - Conservation of Habitats and Species Regulations 2017
4. A brief summary of the relevant legislation is provided below. The original Acts and instruments should be referred to for the full and most up to date text of the legislation.
5. **Wildlife and Countryside Act 1981 (as amended)**. The WCA Act provides for the notification and confirmation of Sites of Special Scientific Interest (SSSIs) identified for their flora, fauna, geological or physiographical features. The Act contains strict measures for the protection and management of SSSIs.
6. The Act also refers to the treatment of UK wildlife including protected species listed under Schedules 1 (birds), 5 (mammals, herpetofauna, fish, invertebrates) and 8 (plants).
7. Under Section 1(1) of the Act, all wild birds are protected such that it is an offence to intentionally:
  - Kill, injure or take any wild bird;
  - Take, damage or destroy the nest of any wild bird whilst in use\* or being built;
  - Take or destroy an egg of any wild bird.

\* The nests of birds that re-use their nests as listed under Schedule ZA1, e.g. Golden Eagle, are protected against taking, damage or destruction irrespective of whether they are in use or not.
8. Offences in respect of Schedule 1 birds are subject to special, i.e. higher, penalties. Schedule 1 birds also receive greater protection such that it is an offence to intentionally or recklessly:
  - Disturb any wild bird included in Schedule 1 while it is building a nest or while it is in, on or near a nest containing eggs or young;
  - Disturb dependent young of such a bird.

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<sup>1</sup> <http://www.parliament.uk/business/bills-and-legislation/secondary-legislation/statutory-instruments/>

9. Under Section 9(1) of the Act, it is an offence to:
  - Intentionally kill, injure or take any wild animal included in Schedule 5.
10. In addition, under Section 9(4) it is an offence to intentionally or recklessly:
  - Obstruct access to, any structure or place which any wild animal included in Schedule 5 uses for shelter or protection; or
  - Disturb any wild animal included in Schedule 5 while occupying a structure or place which it uses for that purpose.
11. Under Section 13(1) it is an offence:
  - To intentionally pick, uproot or destroy any wild plant listed in Schedule 8; or
  - Unless the authorised person, to intentionally uproot any wild plant not included in Schedule 8.
12. The Act also contains measures (S.14) for preventing the establishment of non-native species that may be detrimental to native wildlife, prohibiting the introduction into the wild of animals (releases or allows to escape) and plants (plants or causes to grow) listed under Schedule 9.
13. **Protection of Badgers Act 1992.** The Act aims to protect the species from persecution, rather than being a response to an unfavourable conservation status, as the species is in fact common over most of Britain. It should be noted that the legislation is not intended to prevent properly authorised development. Under the Act it is an offence to:
  - Wilfully kill, injure, take, possess or cruelly ill-treat\* a Badger, or attempt to do so;
  - To intentionally or recklessly interfere with a sett# (this includes disturbing Badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it).

\* the intentional elimination of sufficient foraging area to support a known social group of Badgers may, in certain circumstances, be construed as an offence

# A sett is defined as “any structure or place which displays signs indicating current use by a Badger”. Natural England advice (June 2009) is that a sett is protected so long as such signs remain present, which in practice could potentially be for some time after the last actual occupation by Badger. Interference with a sett includes blocking tunnels or damaging the sett in any way
14. Licences can be obtained from the Statutory Nature Conservation Organisation (SNCO) for development activities that would otherwise be unlawful under the legislation, provided there is suitable justification. The SNCO for England is Natural England.
15. **Hedgerows Regulations 1997.** ‘Important’ hedgerows (as defined by the Regulations) are protected from removal (up-rooting or otherwise destroying). Various criteria specified in the Regulations are employed to identify ‘important’ hedgerows for wildlife, landscape or historical reasons.
16. **Countryside and Rights of Way (CRoW) Act for England and Wales 2000.** The CRoW Act provides increased measures for the management and protection of SSSIs and strengthens wildlife enforcement legislation. Schedule 12 of the Act amends the species provisions of the WCA 1981, strengthening the legal protection for threatened species. The Act also introduced a duty on Government to have regard to the conservation of biodiversity and maintain lists of species and habitats for which conservation steps should be taken or promoted, in accordance with the Convention on Biological Diversity.

17. **Natural Environment and Rural Communities Act 2006.** Section 41 of the NERC Act requires the Secretary of State to publish a list of habitats and species that are of principal importance for the conservation of biodiversity in England. The S41 list is used to guide decision-makers such as local planning authorities, in implementing their duty under Section 40 of the Act, to have regard to the conservation of biodiversity in England, when exercising their normal functions. 56 habitats and 943 species of principal importance are included on the S41 list. These are all the habitats and species in England that were identified as requiring action in the UK Biodiversity Action Plan (BAP).
18. **Conservation of Habitats and Species Regulations 2017 (as amended).** The Regulations enact the European Union's Habitats Directive (92/43/EEC) in the UK. The Habitats Directive was designed to contribute to the maintenance of biodiversity within member states through the conservation of sites, known in the UK as Special Areas of Conservation (SACs), containing habitats and species selected as being of EC importance (as listed in Annexes I and II of the Habitats Directive respectively). Member states are required to take measures to maintain or restore these natural and semi-natural habitats and wild species at a favourable conservation status.
19. The Regulations also require the compilation and maintenance of a register of European sites, to include SACs and Special Protection Areas (SPAs)<sup>2</sup> classified under Council Directive 79/409/EEC on the Conservation of Wild Birds (the Birds Directive). These sites constitute the Natura 2000 network. The Regulations impose restrictions on planning decisions likely to significantly affect SPAs or SACs.
20. The Regulations also provide protection to European Protected Species of animals that largely overlaps with the WCA 1981, albeit the provisions are generally stricter. Under Regulation 43 it is an offence, *inter alia*, to:
  - Deliberately capture, injure or kill any wild animal of a European Protected Species;
  - Deliberately disturb any wild animals of any such species, including in particular any disturbance likely to impair their ability to survive, to breed or reproduce, to rear or nurture their young, to hibernate or migrate, or which is likely to affect significantly their local distribution or abundance;
  - Deliberately take or destroy the eggs of such an animal;
  - Damage or destroy a breeding site or resting place of such an animal.
21. Similar protection is afforded to European Protected Species of plants, as detailed under Regulation 47.
22. The Regulations do provide a licensing system that permits otherwise illegal activities in relation to European Protected Species, subject to certain tests being fulfilled.

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<sup>2</sup> Special Protection Areas (SPAs) are protected sites classified in accordance with Article 4 of the EC Directive on the Conservation of Wild Birds (79/409/EEC) (aka the Birds Directive), which came into force in April 1979. SPAs are classified for rare and vulnerable birds (as listed on Annex I of the Directive), and for regularly occurring migratory species.

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