

Relevant Extract from Environmental Appraisal September 2017

Ecological Phase 1 Survey Report

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STERLING CAPITOL

Capitol Park, Barnsley

Environmental Appraisal

September 2017

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6 PRELIMINARY ECOLOGICAL APPRAISAL

6.1 Introduction

6.1.1 This appraisal has been produced with reference to current guidelines for preliminary ecological appraisal (Chartered Institute of Ecology and Environmental Management (CIEEM 2012)) and British Standard BS 42020:2013 (BSI 2013) which involves the evaluation of potential ecological constraints based on Extended Phase I (Joint Nature Conservation Committee (JNCC 2010)) survey data and background desk study.

6.1.2 The purpose of the appraisal is to satisfy the requirements of the National Planning Policy Framework (NPPF), identifying the likely presence of ecological features within or near the application site that could potentially pose a constraint to the proposed development. The following ecological features have been considered:

- Statutory and non-statutory designated conservation areas;
- UK and local Biodiversity Action Plan (BAP) habitats;
- Areas of Ancient Woodland;
- Legally protected species;
- UK and local BAP species; and
- Invasive species.

6.1.3 This report also seeks to identify any requirement for further specialist survey where the initial assessment cannot be relied upon to adequately determine presence or reliably infer absence of protected species/taxa. Mitigation and enhancement opportunities are also discussed.

6.2 Background Information

6.2.1 The applicant has made representations to the New Local Plan, which was submitted to the Secretary of State and will be examined by an Inspector between May and October 2017. The updated Preliminary Ecological Appraisal will support the client's Hearing Statement in preparation for Stage 2 of the Examination to be held in July.

6.2.2 No further update of background information regarding planning.

6.3 Site Context

6.3.1 The area of detailed ecological study referred to as the site, comprises agricultural land covering approximately 5.7 ha. The site is bounded on all sides by fencing or stone walls, with the M1 corridor immediately beyond the north eastern site boundary and Higham Lane to the south and west. The Capitol Park industrial estate is located on land to the south east. The town of Barnsley lies immediate beyond the Motorway corridor to the north and east and the village settlement of Dodworth lies 0.5 km to the south with open arable and pastoral farmland dominating the wider landscape particularly to the west and south.

6.3.2 No statutory conservation areas are present within 2 km of the site.

6.4 Methodology

Desk Study

6.4.1 The desktop study was informed by review of existing available information provided by Sheffield Biological Records Centre (SBRC) and MAGIC¹ for a 2km search radius from the survey area boundary.

6.4.2 Specific information was sought for:

- Statutory designated sites;
- Locally designated sites;
- Ancient woodland;
- Protected and priority species; and
- Local BAP priority species.

Extended Phase 1 Habitat Survey

6.4.3 Wardell Armstrong LLP carried out an updated Extended Phase 1 Habitat Survey of the site on 11 April 2017. The survey was carried out by an Ecologist from Wardell Armstrong LLP. The survey updates a previous survey carried out by Wardell Armstrong on 16 July 2015.

6.4.4 The survey followed the 'Extended Phase 1' methodology (Institute of Environmental Assessment (IEA), 1995 and JNCC 2010). Each of the main habitats were classified

¹ www.magic.gov.uk

according to the relevant criteria including vegetation composition expressed according to the DAFOR² system.

6.4.5 In addition to the mapping and description of habitats, incidental observations of protected and/or BAP priority species and the potential for such species to occur on site (and in the surrounding landscape where relevant) were also noted.

6.4.6 Specific habitat features are mapped on Drawing SH11957/001 with appropriate reference numbers identifying waterbodies, buildings and trees of particular note.

Habitat Suitability Index (HSI)

6.4.7 All ponds outside the site within 500 m were subject to an assessment of their likely suitability for great crested newt (GCN), concurrently with the Extended Phase 1 Habitat Surveys during July 2015.

6.4.8 The HSI is a numerical index between 0 and 1, wherein a score of 1 represents optimal habitat for GCN. It is calculated by assigning a quantitative figure to each of 10 variables known to influence the presence of GCN (Oldham et al. 2000). The tenth root of the product of these variables is then calculated, giving a figure for habitat suitability. Since January 2008 it has been a requirement to include the results of HSI assessments in European Protected Species (EPS) Licence applications.

6.4.9 The variables to which a quantitative figure is assigned are:

- Location;
- Pond area;
- Pond drying;
- Water quality;
- Shade;
- Wildfowl presence;
- Fish presence;
- No. of ponds within 1 km;
- Quality of terrestrial habitat; and
- Presence of macrophytes.

² D – Dominant, A – Abundant, F – Frequent, O – Occasional, R – Rare.

6.4.10 The calculated HSI score is used to define the suitability of the pond on a categorical scale (Table 6.1). It should be noted, however, that the system is not sufficiently robust to reliably infer presence/absence of GCN.

Table 6.1: Great Crested Newt HSI Scoring System	
HSI Score	Pond Suitability for GCN
< 0.5	Poor
0.5 – 0.59	Below average
0.6 – 0.69	Average
0.7 – 0.79	Good
> 0.8	Excellent

Preliminary Building Survey - Bats

6.4.11 A single building on site was subject to an external building inspection. This was undertaken on 7 March 2017 by a Natural England Bat Licensed (Natural England Class Licence CL18 (Bat Survey Level 2): 2016-23725-CLS-CLS) Ecologist, from Wardell Armstrong LLP. See Drawing SH11957/001 for building location. The external examination of the building was undertaken using binoculars to check for potential bat entry points such as cracks or holes, evidence of bat activity such as staining, droppings and feeding remains.

6.4.12 Based on the location, age, type of building, features and evidence recorded, habitat and lighting present, the building was placed into one of the following categories of suitability for roosting bats (Collins, 2016):

- Confirmed roost – Bats or signs of bats discovered during the survey;
- High – A building with one or more suitable roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat;
- Moderate – A building with one or more suitable roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status;

- Low – A building with one or more suitable roost sites that could be used by individual bats opportunistically. However, these suitable roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by a large number of bats. i.e. unlikely to be used as a maternity roost or hibernation site; and
- Negligible – No roosting features present likely to be utilised by bats.

Nomenclature

6.4.13 Vascular plant names follow '*New Flora of the British Isles*' (Stace, 1997) with vernacular names as provided in the Botanical Society of the British Isles website (BSBI, 2013). All other flora and fauna names following the National Biodiversity Network (NBN) Gateway (NBN, 2013). The common and scientific name of species/taxa is provided (if available) when first mentioned in the text, with only the vernacular name referred to thereafter.

Caveat

6.4.14 Ecological surveys are limited by factors that affect the presence of plants and animals such as time of year, weather, migration patterns and behaviour. The survey was undertaken in March and therefore represents a valid sample of ecological evidence present on that date/season. The report is not designed, nor is it required to present a complete inventory of fauna/fauna.

6.4.15 The absence of desk study records is not relied upon to determine absence of a particular species/habitat. Often, the absence of records is a result of under-recording within the given search area and as such the experience of the ecologist concerned together with a range of additional factors, in particular the presence/absence of potentially supporting habitat; is used to infer likely presence/absence of ecological receptors.

Quality Assurance and Environmental Management

6.4.16 All Ecologists employed by WA are members of CIEEM, and are bound by its code of professional conduct. All surveys and assessments have been undertaken with reference to the recommendations given in BS 42020.

6.5 Results and Evaluation

Statutory and Non- Statutory Designated Sites

- 6.5.1 Desk study results for designated sites within the 2 km search radius are evaluated in Table 6.2, below.
- 6.5.2 Sites which are considered potentially sensitive to the development proposals by virtue of the sensitivity of supported species or habitat assemblages, the distance/ecological connectivity to the application site and the nature of the perceived impacts are highlighted in bold text and are discussed in detail in the final sections of the report.
- 6.5.3 Sites for which potential adverse effects are not anticipated are excluded from further assessment.

Table 6.2: Designated Sites Evaluation ³ .		
Site Name and Status ⁴	Reason for Designation	Potential effects
Hugset Wood LWS and Ancient Woodland	An area of woodland which occupies a low hill between the valley of the M1 motorway and the Silkstone Beck. Most of the site is classed as replanted ancient woodland. The eastern and western flanks are on the register of ancient and semi-natural woodlands. Numerous ancient woodland indicators have been recorded within the ground flora.	The application site lies wholly outside the designated area (all infrastructure will be approximately 1 km distant), with no obvious ecological connectivity.
Redbrook Pastures LWS	The site comprises two grassland fields with evidence of ridge and furrow. The northern field is surrounded by hedgerows and horse grazed. The southern field supports neutral grassland with elements of acidic grassland. Ancient woodland indicators bluebell <i>Hyacinthoides non-scripta</i> and wood millet <i>milium effusum</i> were recorded on site.	The site lies approximately 1 km distant from the site and is beyond the motorway corridor. No negative effects are considered likely.
Silkstone Fall wood LWS	The woodland occupies an area that is on the register of replanted ancient woodland sites.	The site is located 1.8 km distant from the survey area boundary.

³ Wardell Armstrong accept no responsibility for the accuracy of outputs provided by third parties including local data/records centres, and MAGIC websites.

⁴ SPA – Specially Protected Area, SAC – Special Area for Conservation, Ramsar – site designated under the Ramsar Convention, SSSI – Site of Special Scientific Interest, NNR – National Nature Reserve, LNR – Local Nature Reserve, LWS Local Wildlife Site.

Table 6.2: Designated Sites Evaluation ³ .		
Site Name and Status ⁴	Reason for Designation	Potential effects
	The woodland currently supports coniferous and mixed plantation. Ancient indicators have been recorded within the ground flora.	Given the distance from the site no negative effects to this site by development are anticipated.

Habitats

- 6.5.4 All habitats within the survey area are described in Table 6.3, below, together with an indication of their NC s2(4) and within the Barnsley Local BAP⁵. The table also provides an evaluation of the sensitivity of the habitats relative to the application proposals.
- 6.5.5 Habitats which are could be subject to adverse effects are indicated with bold text and are discussed in the latter sections of the report. Habitats for which potential adverse effects are not anticipated are excluded from further assessment.
- 6.5.6 The location and extent of habitats is shown on Drawing SH11957/001, Extended Phase 1 Habitat Survey Results.

⁵ <http://www.barnsleybiodiversity.org.uk/BarnsleyBAP2008.html>

Table 6.3: Habitat Description and Evaluation				
Phase 1 Habitats		NERC s.2(4)	LBAP	Potential Effects
Arable The dominant habitat type within the site, currently supporting agricultural grassland.. The grassland supports dominant meadow foxtail <i>Alopecurus pratensis</i> , Yorkshire fog <i>Holcus lanatus</i> , Timothy <i>Phleum pratense</i> , perennial rye-grass <i>Lolium perenne</i> creeping bent <i>Agrostis stolonifera</i> with frequent white clover <i>Trifolium repens</i> , field-speedwell <i>Veronica persica</i> , cleavers <i>Gallium aparine</i> and red dead nettle <i>Lamium purpureum</i> .		x	x	The habitat present on site is common and widespread.
Trees A narrow line of trees and shrubs are present along a steep bank along the western boundary of the site and includes ash <i>Fraxinus excelsior</i> , hawthorn <i>Crateagus monogyna</i> , alder <i>Alnus glutinosa</i> , field maple <i>Acer campestre</i> , hazel <i>Corylus avellana</i> , rowan <i>Sorbus aucuparia</i> , sycamore <i>Acer pseudoplatanus</i> , cherry spp <i>Prunus spp.</i> and pedunculate oak <i>Quercus robur</i> . Flora beneath the trees comprises ivy <i>Hedera helix</i> , common nettle, <i>Urtica dioica</i> , spear thistle <i>Cirsium vulgare</i> and dog's mercury <i>Mercurialis perennis</i> .		x	x	The habitat present on site is common and widespread.

Table 6.3: Habitat Description and Evaluation				
Phase 1 Habitats		NERC s.2(4)	LBAP	Potential Effects
Species Rich Hedgerow Two species rich hedgerows are present on site. The hedge that runs east to west is mature and unmanaged (3.5m tall x 3m wide) and is located within the centre of the site. Species present include frequent hawthorn, oak <i>Quercus</i> sp, holly <i>Ilex aquifolium</i>, blackthorn <i>Prunus spinosa</i> and occasional elder <i>Sambucus nigra</i>, hazel, goat willow <i>Salix caprea</i>, sycamore, ivy and ash. Ground flora is sparse beneath the hedge but common nettle, cleavers <i>Galium aparine</i>, wood avens <i>Geum urbanum</i>, bramble <i>Rubus fruticosus</i>, rosebay willowherb <i>Chamerion angustifolium</i>, garlic mustard <i>Alliaria petiolata</i>, vetch spp. <i>Vicia</i> spp. and broadleaved dock <i>Rumex obtusifolius</i> are present along the outer edge. The hedge that runs north to south is mature and unmanaged (3.5m tall x 3m wide) located along the eastern boundary of the site, hawthorn is the most abundant species but elder, hazel, downy birch <i>Betula pubescens</i>, blackthorn and oak spp. all occur frequently.		✓	✓	Lengths of BAP hedgerow may be lost to facilitate access tracks.
Amenity Grassland A small area of amenity grassland is present within the gardens of Lane Head Farm. The grassland has a uniform sward and is tightly mown.	No photo available	x	x	Habitat is common and widespread.
Semi-improved Neutral Grassland A narrow strip of semi-improved grassland is present around the periphery of the two fields. The species are similar to the central areas but have been left unmanaged. Grassland comprises meadow foxtail, Yorkshire fog, Timothy, false oat-grass <i>Arrhenatherum elatius</i> and perennial rye-grass. The grassy access track supports semi-improved unmanaged grassland. Here the compacted nature of the track and rabbit grazing has resulted in a shorter, stunted sward, species composition is similar to above with black medick <i>Medicago lupulina</i>, white clover and creeping bent also present.		x	x	As above

Table 6.3: Habitat Description and Evaluation				
Phase 1 Habitats		NERC s.2(4)	LBAP	Potential Effects
Tall Ruderal Patches of tall ruderal vegetation are present around the periphery of the two fields, but predominantly along the western boundaries. Tall ruderal vegetation comprises greater willowherb <i>Epilobium hirsutum</i>, rosebay willowherb, field bindweed <i>Convolvulus arvensis</i>, creeping thistle, <i>Cirsium arvensis</i>, common nettle, creeping buttercup <i>Ranunculus repens</i>, broadleaved dock <i>Rumex obtusifolius</i> and spear thistle <i>Cirsium vulgare</i>.		x	x	As above
Dense and Scattered Scrub Small patches of scrub habitat are present around the periphery of site. Species include dominant brambles, frequent common nettle, rosebay willowherb with occasional broadleaved dock and spear thistle.		x	x	As above

Table 6.3: Habitat Description and Evaluation				
Phase 1 Habitats		NERC s.2(4)	LBAP	Potential Effects
Ditches A ditch has been recently excavated along the north western boundary, the ditch is a shallow <0.3 m scrape, for the most part it is dry but there are damp areas in the higher elevation towards the southern end of the site. The vegetation cover is as described in the tall ruderal and field margin sections above.		x	x	As above
Buildings One building, Lane head Farm is present within the site. The building is described with regards to its potential to support roosting bats in section 3.3 (bats).		x	x	Habitat is of little intrinsic conservation value.

Table 6.3: Habitat Description and Evaluation				
Phase 1 Habitats		NERC s.2(4)	LBAP	Potential Effects
Standing Open Water No ponds were recorded on site. Three ponds were recorded on adjacent land within 500m of the site. Descriptions and photographs are provided in Appendix 6.2 – Great Crested Newt HSI assessment.		✓	✓	All ponds will be entirely avoided by the development proposals.

Species

6.5.7 Recorded protected and/or invasive species from the field survey or evidence of the presence of protected or BAP priority species are described below.

Bats

6.5.8 One house (B1) which is considered to be of 'moderate' suitability for roosting bats is present within the survey area.

6.5.9 The building is a small single story residential bungalow, constructed of red brick with a pitched roof covered in small clay (Rosemary) tiles and clay ridge tiles. Soffit boxes are present on all elevations, with a number of small gaps. A single story lean to is present to the east of the main house. The lean-to has a flat roof covered bituminous felt, fascia boards are present around the building. Lead flashing is present where the lean to joins the house. Windows and doors are all intact.

Birds

6.5.10 All birds recorded during the survey are summarised in Table 6.4, below together with a preliminary assessment of their likelihood to pose a constraint to the development. All nesting birds are discussed in the final section given the general legislative provisions relating to destruction of active nests. In addition, potential effects to species identified as potential constraints due to the presence extent and viability of supporting habitat, ecological connectivity and perceived nature and extent of effects also discussed in more detail (species highlighted in bold text) in the discussion section.

Table 6.4: Bird Species Recorded				
Common Name	Latin Name	Status ⁶	Supporting Habitat	Potential Effects
Blackbird	<i>Turdus merula</i>		Tree, hedge and scrub nesting habitat and grassland foraging	Species are common and widespread. Site is unlikely to support
Blue tit	<i>Cyanistes caeruleus</i>			

⁶ S1 – Schedule 1 Wildlife and Countryside Act, A1 – Annex 1 EU Birds Directive, RL - Birds of Conservation Concern 'red list', AL - Birds of Conservation Concern 'amber list', UKBAP – UK Biodiversity Action Plan Priority Species, LBAP Local Biodiversity Action Plan Priority Species.

Table 6.4: Bird Species Recorded				
Common Name	Latin Name	Status ⁶	Supporting Habitat	Potential Effects
Chaffinch	<i>Fringilla coelebs</i>		habitat.	significant local populations. No adverse effects, beyond minor losses of breeding habitat for widespread species.
Dunnock	<i>Prunella modularis</i>	AL		
Great tit	<i>Parus major</i>			
Goldfinch	<i>Carduelis carduelis</i>			
Greenfinch	<i>Chloris chloris</i>			
House sparrow	<i>Passer domesticus</i>	RL		
Magpie	<i>Pica pica</i>			
Robin	<i>Erithacus rubecula</i>			
Wood pigeon	<i>Columba palumbus</i>			

Invasive Plants

6.5.11 No invasive species were recorded during the field survey.

Ecological Evaluation

6.5.12 Protected, UK and Local Biodiversity Action Plan species are evaluated in order to identify potential ecological constraints in Table 6.5 below, based on the desk study records, presence extent and viability of supporting habitat, ecological connectivity and perceived nature and extent of effects.

6.5.13 Species/taxa for which potential adverse effects are not anticipated are excluded from further assessment.

Table 6.5: Protected Species Evaluation

Species/taxa	Desk Study record?	Status ⁷	Supporting Habitat	Potential effects
Bats <i>Chiroptera</i>	Pipistrelle spp <i>Pipistrellus spp.</i> Common Pipistrelle <i>Pipistrellus pipistrellus</i> Soprano Pipistrelle <i>Pipistrellus pygmaeus</i> Noctule <i>Nyctalus noctula</i> <i>Nyctalus spp</i>	EPS, WCA, UKBAP,	Yes – One building (B1) has moderate suitability for roosting bats. There are no trees on site which are suitable for roosting bats. The site also supports sub optimal foraging habitat associated with internal hedgerows although higher quality foraging habitat is located within woodlands to the west of the site.	B1 is to be demolished for the proposed development, any associated bat roosts will be adversely affected. There is some potential for minor indirect (disturbance) effects through increased lighting and noise particularly during the construction phase to foraging bats.
Badger <i>Meles meles</i>	x	BA	Yes –foraging habitat in the form of grassland and hedgerows is present on site. The tree lined embankment, hedgerows and areas of dense tall ruderal and scrub habitats also provides viable opportunities for sett creation.	The presence of setts is unlikely given that none were recorded in the desk study and during the 2010, 2015 and 2017 surveys. However adverse effects would be apparent in the event that a new sett was created prior to the onset of works.
Brown Hare <i>Lepus europaeus</i>	x	UKBAP	Yes - grassland habitat provides suitable habitat for this species.	There is an abundance of alternative suitable habitat for this species beyond the site boundaries.

⁷ EPS – European Protected Species, WCA – Wildlife and Countryside Act, A1 – Annex 1 (Birds Directive), BA – Protection of Badgers Act, BAP – Biodiversity Action Plan
Priority Species

Table 6.5: Protected Species Evaluation

Species/taxa	Desk Study record?	Status ⁷	Supporting Habitat	Potential effects
European Hedgehog <i>Erinaceus europaeus</i>	✓	UKBAP	Yes - supporting habitat is present within hedgerows on site.	The majority of suitable habitats for this species will to be retained, around the margins of the site (including woodland to the west). There is also an abundance of habitat off site in the wider area.
Dormouse <i>Muscardinus avellanarius</i>	x	EPS, WCA, UKBAP	No - The site is considered to be outside this species natural range.	n/a
Otter <i>Lutra lutra</i>	x	EPS, WCA, UKBAP	No suitable habitat is present on site	n/a
Water Vole <i>Arvicola amphibius</i>	x	WCA, UKBAP	No suitable habitat is present on site.	n/a
Reptiles	x	WCA, UKBAP	Yes – small isolated areas of sub-optimal habitat is present around the site periphery for common reptile species (namely common lizard <i>Zootoca vivipara</i> and slow worm <i>Anguis fragilis</i>) where areas are less intensively managed i.e. along hedgerow margins, grassland and scrub mosaics along field margins.	Small areas of potentially supporting (grassland) habitat may be lost.
Great Crested Newt <i>Triturus cristatus</i>	A single record, located 2km to the north of the site.	EPS, WCA, UKBAP	No ponds are present on site. Suitable terrestrial habitat is present particularly around the site periphery where grassland is not actively cropped, in addition to the tree lined embankment, and at the base of hedgerows.	If site clearance is to extend beyond the central arable areas and into the peripheral habitat, GCN presence/absence surveys may be required.

Table 6.5: Protected Species Evaluation

Species/taxa	Desk Study record?	Status ⁷	Supporting Habitat	Potential effects
			The HSI assessment of Ponds 1-3 located off site identified ponds P1 and P2 as below average and P3 as poor.	
Common Toad <i>Bufo bufo</i>	✓	UKBAP	Yes - sub-optimal habitat is present within peripheral habitat, and the bases of hedgerows.	Where possible peripheral habitat will be retained. Areas of optimal habitat is present within the wider survey area.
White-clawed Crayfish <i>Austropotamobius pallipes</i>	×	EPS, WCA, UKBAP	No suitable habitat is present on site.	n/a
Invertebrates	White letter hairstreak Small heath Wall Dingy skipper	LBAP	No butterflies listed on Barnsley BAP priority species were recorded on site. Minimal suitable habitat is present around the periphery of the site where land is less intensively managed. The central areas of the site are unsuitable.	It is likely that areas of most interest such as grassland within the peripheral habitat will be retained.
Birds	A wide range of BoCC and Red List species and WCA Schedule listed species including: Cuckoo Grasshopper warbler Grey Partridge Hawfinch House Sparrow Lapwing Reed Bunting	UKBAP, LBAP, WCA BoCC	Yes – Foraging and breeding in habitats around periphery of site, and for ground nesting species associated with arable habitats.	Breeding habitat will be lost/disturbed by proposals. Foraging habitat may also be lost.

Table 6.5: Protected Species Evaluation

Species/taxa	Desk Study record?	Status ⁷	Supporting Habitat	Potential effects
	Skylark Tree Sparrow Yellowhammer			
Protected Plant Species	x	WCA, UKBAP	No protected plants were recorded on site.	No, habitats on site are generally improved no negative effects are anticipated on protected plant species as a result of development.

6.6 DISCUSSION AND RECOMMENDATIONS

Potential Effects

6.6.1 The following designated sites, habitats and species (receptors) have been evaluated as being likely subject to adverse effects, and may therefore require further consideration in scheme design, further survey and/or mitigation:

- BAP Hedgerows;
- Badger;
- Bats;
- Reptiles;
- Great crested Newt;
- Birds (house sparrow, tree sparrow, grey partridge, lapwing, reed bunting, grasshopper warbler, yellowhammer); and
- Nesting birds (general).

6.6.2 Potential effects, requirements for further survey, and mitigation are discussed below for each receptor.

BAP Hedgerows

6.6.3 Where hedgerow removal cannot be avoided, any losses should be compensated for by the provision of a new hedgerow elsewhere on site of at least equivalent length. In this event, appropriate woody species of local provenance should be selected.

Badger

6.6.4 The site contains suitable habitats for foraging and sett creation (i.e. hedge base, scrub and pasture) including the adjacent plantation woodland. Assuming that hedgerows and scrub shall be avoided by the proposals no direct impacts to setts created prior to the onset of works are anticipated. In terms of loss of potential foraging habitat, a small reduction in grazed grassland is not expected to result in the loss of favourable conservation status if indeed badgers are present within the wider area.

- 6.6.5 No further surveys are considered necessary however in order to ensure compliance with the relevant legislation, it is recommended that a check for the presence of mammal burrows with an entrance diameter exceeding 100mm should be undertaken prior to the onset of works. In the event that such mammal burrows are recorded, clearance operations should cease until advice has been sought from a suitably qualified ecologist.

Bats

- 6.6.6 The site contains a single building (B1), which is considered to be of 'moderate' suitability for roosting bats. In the event that the building B1 (Lane Head Farm) is to be demolished or modified as part of the proposed development, further surveys would be required in advance of planning determination to establish whether bats are roosting within the building and what the likely impacts will be.
- 6.6.7 Surveys would comprise evening and dawn observation according to the recommendations given in Collins (2016), checking for roosting bats leaving or returning to roost locations within the fabric of the building. For buildings with 'moderate' suitability, two surveys are required covering all potential roost features of the building. The surveys can be conducted April – September inclusive, with at least one survey between May and August inclusive.
- 6.6.8 In the event that roosts are recorded, a European Protected Species Licence (EPSL) may be required, depending on the magnitude of impacts and sensitivity of the roost(s).
- 6.6.9 Activity surveys for foraging bats are not considered necessary assuming that better quality habitats associated with tree lines on adjacent land, especially to the west of the site can be retained and remain undisturbed by lighting during construction operations and also once the development is completed.

Reptiles

- 6.6.10 Given that the majority of the suitable reptile habitat is located around the site periphery, surveys are not considered necessary. Precautionary methods of working such as passive dissuasion may be used to ensure no reptiles are killed or injured during proposed development works.

Great Crested Newt

- 6.6.11 The majority of the habitats are sub-optimal for this species due to the intensively farmed nature of the arable land. In addition, the off-site ponds are sub optimal breeding habitats, based on the defined HSI assessments undertaken during 2017. Furthermore, Higham Road presents a barrier to GCN dispersal into the site from the ponds to the west. The internal site areas, which are regularly disturbed by farming operations are therefore considered unlikely to support great crested newt. However, in the event that suitable terrestrial habitats (woodland and established grassland) around the periphery of the site are to be cleared, the likelihood of incidental killing or injury would be greater. In this instance presence/absence surveys for great crested newt are likely to be required by the local planning authority in advance of the determination of planning consent.
- 6.6.12 Should they be required, presence /absence surveys are undertaken over four visits, between mid-March to mid-June, two of which must be completed between mid-April and mid-May. If great crested newt are identified a further two visits (6 in total) must be carried out to obtain population estimates by mid-June. Alternatively, Environmental DNA (eDNA) surveys could be undertaken, during spring 2017 to determine presence or infer absence of GCN. This approach requires a single visit to site to sample pond water within each pond between April and the end of June). The samples are sent away to an approved testing laboratory. If the eDNA assessment returns a positive result for GCN traditional surveys (6 visits) may still be required to estimate the population size.
- 6.6.13 In the event that GCN presence is detected by the surveys, a mitigation statement would be required to accompany the planning application, and potentially a European Protected Species Licence (EPSL) would need to be in place once planning consent has been granted, but prior to the onset of works. Licensing requirements would depend on the nature and scale of the identified impacts; but are likely to include timing restrictions, provision of compensatory habitat and protective measures during habitat clearance works.

Birds

- 6.6.14 The preliminary survey has confirmed that the site supports BoCC red and amber listed species (BOCC, 2009) house sparrow and dunnock, respectively. Furthermore, a range of UK BAP, LBAP and BoCC red listed bird species were identified by the desk study, which are mainly associated with scrub, hedgerow and treelines.
- 6.6.15 Ground nesting species such as grey partridge and lapwing were also identified by the desk study, although these species are considered to be absent from the site as they were not recorded by the surveys undertaken in 2010, 2015 and 2017.
- 6.6.16 The proposals are not anticipated to result in any reduction in the conservation status of bird species identified from the desk study/field surveys; given the small scale of the development, the low quality of the habitats and the wide availability of available nesting/foraging opportunities within the locality. On this basis no further bird surveys are recommended.
- 6.6.17 Hedgerow management provisions should be designed into the development proposals including rotational cutting to an 'A' shaped profile to retain nut and berry availability over autumn/winter. Any opportunities to gap fill hedgerows would also be of benefit to nesting birds.

Nesting Birds

- 6.6.18 In addition, due to the potential presence of nesting birds within the site, it is recommended that initial development works are undertaken outside of the usual bird breeding season (normally taken to be March – July inclusive). If such timescales cannot be accommodated, a check for the presence of active nests, and nesting birds should be undertaken by a suitably qualified ecologist prior to the commencement of works. Any active nests should be identified and protected subject to the relevant legal provisions until the nesting attempt is complete.

6.7 REFERENCES

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Appendix 6.1 – Legislation and Policy Summary

Legislation for Habitats/Sites

Designated Site/Habitat	Status
Ramsar Sites	Ramsar Sites are wetlands of international importance designated following The Ramsar Convention. RAMSAR sites have the same level of protection as SSSIs under the Wildlife and Countryside Act 1981 (as amended).
SPA (Special Protection Areas)	SPAs are classified in accordance with Article 4 of the EC Directive on the Conservation of Wild Birds (79/409/EEC), the Birds Directive. They are they seek to protect the habitats of rare and vulnerable birds, listed in Annex I of the Birds Directive, and for regularly occurring migratory species. The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010 implement the Birds Directive in the UK.
SAC (Special Areas for Conservation)	SACs are strictly protected areas which represent typical European Union of habitats and (non-bird) species listed in Annexes I and II of the EC Habitats Directive. The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2010 implement the Habitats Directive in the UK.
SSSI (Sites of Special Scientific Interest)	SSSIs protect the best examples of the UK's flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were renotified under the Wildlife and Countryside Act 1981 (as amended). Modified provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000.
NNR (National Nature Reserves)	NNRs are examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. NNRs are declared by the statutory country conservation agencies under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981 (as amended). Legal protection of NNRs is provided under The Wildlife and Countryside Act 1981 (as amended).

Designated Site/Habitat	Status
Hedgerows	All hedgerows are protected by the Hedgerows Regulations 1997, under which it is an offence to remove or destroy certain hedgerows without planning consent or permission from the Local Planning Authority. These regulations do not apply to any hedgerow within the curtilage of, or marking the boundary of the curtilage of, a dwelling house.
LNR (Local Nature Reserves)	Designated by the National Parks and Access to the Countryside Act 1949, LNRs may be declared for nature conservation by local authorities after consultation with the relevant statutory nature conservation agency. Legal protection of LNRs is provided under The Wildlife and Countryside Act 1981 (as amended).

Legislation for Species

Species	Legal Status
<i>European Legislation</i>	
Creeping Marshwort, Early Gentian, Fen Orchid, Floating-leaved Water Plantain, Killarney Fern, Lady's Slipper, Shore Dock, Slender Naiad, Yellow Marsh Saxifrage	Under the Conservation of Habitats and Species Regulations 2010 (and as amended), it is illegal to deliberately pick, collect, uproot or destroy any such species.
Bats, Dormouse, Otter, Wild Cat, Great Crested Newt, Natterjack Toad, Sand Lizard, Smooth Snake, Large Blue Butterfly	These animals and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats and Species Regulations 2010 (and as amended), which makes it illegal to: • Deliberately capture, injure or kill any such animal or to deliberately take or destroy their eggs; • Deliberately disturb¹ such an animal; and • Damage or destroy a breeding site or resting place of such an animal.

¹ Under the Conservation Regulations, disturbance of protected animals includes in particular any disturbance which is likely to: (i) impair their ability to survive, breed or reproduce, or to rear or nurture their young or to hibernate or migrate; (ii) significantly affect the local distribution or abundance of the species in question.

Species	Legal Status
	European Protected Species (EPS) licenses can be granted by Natural England in respect of development to permit activities that would otherwise be unlawful under the Conservation Regulations, providing that the following 3 tests (set out in the EC Habitats Directive) are passed, namely: • The development is for reasons of overriding public interest; • There is no satisfactory alternative; and • The favourable conservation status of the species concerned will be maintained and/or enhanced. Under Regulation 9(5) of the Conservation Regulations, Planning Authorities have a duty to 'have regard to the requirements of the EC Habitats Directive' i.e. LPA's must consider the above 3 'tests' when determining whether Planning Permission should be granted for developments likely to cause an offence under the Conservation Regulations.
<i>Domestic (UK) Legislations</i>	
Bats, Dormouse, Great Crested Newt, Heath Fritillary, High Brown Fritillary, Large Blue, Marsh Fritillary, Natterjack Toad, Pine Martin, Otter, Red Squirrel, Sand Lizard, Smooth Snake, Swallowtail, Water Vole, Wildcat	These animals receive full protection under the Wildlife and Countryside Act 1981 (and as amended), which makes it illegal (subject to certain exceptions) to: • Intentionally kill, injure or take any such animal; • Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any such animal; and • Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.
Adder, Common Lizard, Grass Snake, Slow Worm, White-clawed Crayfish	These animals receive partial protection under The Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which provide protection against intentional killing or injury of any such animal.
Nesting Birds	All wild birds (as defined by the act) are protected under the Wildlife and Countryside Act 1981 (and as amended), which makes it illegal (subject to exceptions) to: • Intentionally kill, injure or take any wild bird; • Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.

Species	Legal Status
WCA Schedule 1 listed Birds	Additional protection is provided to birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (and as amended). In addition to the offences detailed above relating to all wild birds, it is illegal to: Intentionally or recklessly disturb any bird listed on Schedule 1, or their dependent young while nesting.
Badgers	The Protection of Badgers Act 1992 makes it illegal to wilfully kill or injure a Badger, or attempt to do so and to intentionally or recklessly interfere with a Badger sett. This includes: - damaging or destroying an active sett; - obstructing access to a sett; and - disturbing a Badger while it is occupying a sett. Licences can be granted to permit sett closure and/or disturbance between July and November inclusive (i.e. outside the sow pregnancy/birth period).
Wild Mammals	The Wild Mammals (Protection) Act 1996 provides legal protection to all wild mammals (as defined by the act) against the following actions: mutilate, kick, beat, nail, or otherwise impale, stab, burn, stone, drown, crush, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.
<i>Invasive Species</i>	
WCA Schedule 9 listed animals (Part 1) and plants (part 2)	Certain species of plants and animals that do not naturally occur in Great Britain have become established in the wild and represent a threat to the natural fauna and flora. Section 14 of the Wildlife & Countryside Act prohibits the release of any animal species that are: <i>“not ordinarily resident in and is not a regular visitor to Great Britain in a wild state”</i>

Policy Summary

Section 40 of the Natural Environment and Rural Communities (NERC) Act imposes a legal duty on Planning Authorities to ‘have regard’ to the conservation of biodiversity when considering planning applications.

Section 41 of the NERC Act requires the Secretary of State to publish a list of species and habitats of principal importance for conserving biodiversity in the UK. Such Biodiversity Action Plan (BAP) Habitats and Species (2007) do not offer the species any specific protection but help to highlight the species importance at a national level. This list is used by Local Planning Authorities to identify the species and habitats that should be afforded priority when applying the requirements of the National Planning Policy Framework (NPPF).

The NPPF underpins the Government's planning policies for England and how these are to be applied. The central theme of the NPPF is a presumption in favour of sustainable development. This presumption does not apply where development requiring Appropriate Assessment under the Birds or Habitats Directives is being considered, planned or determined.

The NPPF states:

'When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:

- if significant harm 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;*
- proposed development on land within or outside a Site of Special Scientific Interest (SSSI) likely to have an adverse effect on a SSSI (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site's notified special interest features is likely, an exception should only be made where the benefits of the development, at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs;*
- development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;*
- opportunities to incorporate biodiversity in and around developments should be encouraged;*

- *planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss; and*
- *the following wildlife sites should be given the same protection as European sites: potential Special Protection Areas (SPA) and possible Special Areas of Conservation (SAC); listed or proposed Ramsar sites; and sites identified, or required, as compensatory measures for adverse effects on European sites, potential SPAs, possible SACs, and listed or proposed Ramsar sites.'*

The NPPF requires the Planning Authority to have a responsibility to promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan. In addition, the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

The National Planning Policy Guidelines (NPPG) provides information on the implementation of the policies set out within the NPPF and how these policies are associated with supporting legislation, policies and supplementary guidelines.

With regard to Schedule 1 and 2 projects, the NPPG explains the requirements of Town and Country Planning (EIA) Regulations 2011, including the legislation, stages and implementation of the act.

In terms of planning applications which fall outwith the EIA regulations the NPPG provides the following broad guidelines (extracts below):

Section 40 of the Natural Environment and Rural Communities Act 2006, places a duty on all public authorities in England and Wales to have regard, in the exercise of their functions, to the purpose of conserving biodiversity. A key purpose of this duty is to

embed consideration of biodiversity as an integral part of policy and decision making throughout the public sector, which should be seeking to make a significant contribution to the achievement of the commitments made by Government in its Biodiversity 2020 strategy.

Guidance on statutory obligations concerning designated sites and protected species is published separately Local planning authorities should take a pragmatic approach – the aim should be to fulfil statutory obligations in a way that minimises delays and burdens.

The National Planning Policy Framework is clear that pursuing sustainable development includes moving from a net loss of biodiversity to achieving net gains for nature, and that a core principle for planning is that it should contribute to conserving and enhancing the natural environment and reducing pollution.

A P P E N D I X 6.2

Habitat Suitability Index

Appendix 6.2 – Habitat Suitability Index

Pond Number	Photo	Description	HSI Score	HSI Potential
1		Pond 1 is located outside the survey area. The Pond is present at the base of slope (former shale tip) in Hugsett wood and is approximately 20m x 10m, with an unknown water depth and deep silty substrate. The water quality is considered to be bad/poor as clearly polluted Orange and milky white in colour) possibly supporting low/pollutant tolerant invertebrate diversity. No submerged plants only small area of emergent bulrush <i>Typha latifolia</i> (5%). The pond is approximately 70% shaded due to its position within woodland. Terrestrial habitat is considered to be good, as the woodland offers good opportunities for foraging and shelter. A ditch D1 runs from the west of the site (along the base of the wooded shale tip) into the ponds. All three Ponds P1 to P3 are connected by the drain.	0.56	Below Average
2		Located approximately 133m outside the survey area. The pond is approximately 10m x 7m has areas of open water which appear shallow depth, possible deep soft substrate. Water quality is poor and possibly polluted due to the milky /turbid water. The pond is approximately 40% shaded due to its position in the woodland. Terrestrial habitat is considered to be good, as the woodland offers good opportunities for foraging and shelter.	0.57	Below Average

Pond Number	Photo	Description	HSI Score	HSI Potential
3		Located approximately 152m outside the survey area. The pond is approximately 10m x 4m, very shallow and may possibly dry up in some years. The water is clearly polluted and is unlikely to support a diverse invertebrate population. The pond is heavily shaded (approximately 80% shade cover). The pond has minimal emergent vegetation possibly less than 5% cover. The surrounding terrestrial habitat is considered to be good as the woodland offers opportunities for foraging and shelter.	0.49	Poor

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