

# ECOLOGICAL APPRAISAL

## WEST MOOR FARM, WASHINGTON



FEBRUARY  
2020

<b>CLIENT</b>	Wardell Armstrong LLP
<b>PROJECT NAME</b>	West Moor (IAMP ONE Phase Two)
<b>PROJECT NUMBER</b>	5893
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R01	Draft	Feb 2020	1 <sup>st</sup> draft	BC		ADM
R02	Final	Feb 2020	Site boundary	ADM		GB

**Unless requested otherwise, the information below will be provided to the Local Environmental Records Centre**

Species	Recorder	Date	Location (4 Fig. NGR)	Abundance	Comment
House sparrow	E3Ecology Ltd	January 2020	NZ 33 59	10+	Wintering
Grey Partridge	E3Ecology Ltd	January 2020	NZ 33 59	7	Wintering
Kestrel	E3Ecology Ltd	January 2020	NZ 33 59	1	Wintering
Yellowhammer	E3Ecology Ltd	January 2020	NZ 33 59	3+	Wintering
Linnet	E3Ecology Ltd	January 2020	NZ 33 59	6+	Wintering

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## A. SUMMARY

E3 Ecology Ltd was commissioned by Wardell Armstrong LLP in 2019 to undertake an Ecological Appraisal of land at West Moor Farm, Washington (IAMP ONE Phase Two). Previous surveys have been undertaken by Durham Wildlife Services (DWS) in 2018 as part of the assessment of the wider IAMP ONE site. This report presents the results of the 2020 updating ecological appraisal at West Moor Farm only.

It is proposed to develop the Site with industrial units as part of the wider IAMP development.

Consultation with the MAGIC website<sup>1</sup> indicated that there are no nationally statutorily designated sites within 2km of the survey area; however both the Northumbria Coast Special Protection Area (SPA) and Durham Coast Special Area of Conservation (SAC) lie within 10km.

Ecological Appraisal indicated that the Site largely consists of arable and grassland fields surrounded by a mixture of intact and defunct species-poor hedgerows. Improved grassland, arable, bare ground and standing water habitats are considered to be of negligible habitat value. Poor semi-improved grassland, ephemeral vegetation, defunct hedgerows and tall ruderal habitats are considered to be of low habitat value. The intact hedgerow running on the west side of the track heading north from the farm buildings and the dense scrub is considered to be of local habitat value.

Bat activity surveys of West Moor Farm undertaken in 2019 recorded a low level of common pipistrelle foraging and commuting activity but no roosts (5893 West Moor R01 / Appendix 12.1); however, previous survey in 2018 by DWS recorded two common pipistrelle roosts within farm buildings. The only mature tree within the survey areas was assessed as of low suitability for roosting bats from a ground-based assessment. Foraging and commuting habitats on site are generally sub-optimal, the intact hedgerows within the west providing the best habitat. Overall the Site is considered to be of local value to bats.

Open arable and grassland fields are suitable for a range of ground nesting farmland birds and hedgerow and scrub habitats have the potential to support other species of farmland birds and urban fringe species including. Overall the Site is considered up to parish value to breeding birds but may form part of a wider assemblage of up to district value within the wider IAMP site.

Habitats are sub-optimal for badger sett creation but may provide potential foraging habitat. Badger may therefore be present on site on occasion. Overall the Site is considered to be of up to local value to badger.

The semi-improved grassland and bare ground habitats are suitable for reptiles but are newly developed and the former arable land is likely to have been unsuitable. Surrounding habitat is either developed, under development or is still intensively managed arable land which isolates the Site from other habitat potentially suitable for reptiles. Reptiles are considered likely to be absent from the site.

Semi-improved grassland habitats are suitable to support breeding populations of small heath and wall butterflies and overall the Site is considered to be of up to parish value to these species, if present.

Grassland and arable habitats have the potential to support both brown hare and hedgehog. Brown hare may both forage and breed on site and overall the Site is considered to be of up to

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<sup>1</sup> MAGIC website: [www.magic.gov.uk](http://www.magic.gov.uk)

parish value. Habitats are sub-optimal for hedgehog to breed; however, there is an abundance of potential foraging habitat. Overall the Site is considered to be of local value to this species.

No other protected or priority species is likely to be affected by the proposals due to a lack of suitable habitat.

*If you are assessing this report for a local planning authority and have any difficulties interpreting plans and figures from a scanned version of the report, E3 Ecology Ltd would be happy to email a PDF copy to you. Please contact us on 01434 230982.*

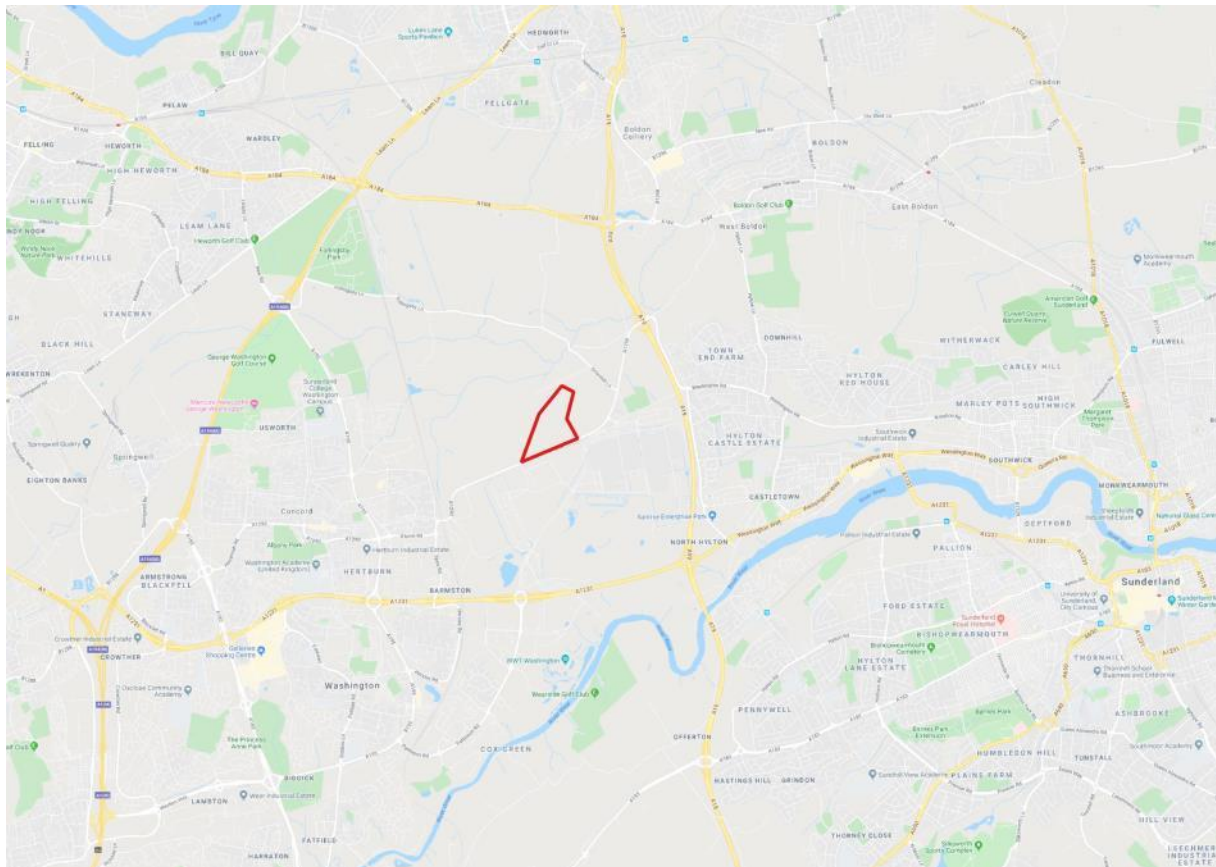
## B. INTRODUCTION

E3 Ecology Ltd was commissioned by Wardell Armstrong LLP in 2019 to undertake an Ecological Appraisal of land at West Moor Farm, Washington (IAMP ONE Phase Two). Previous surveys have been undertaken by Durham Wildlife Services (DWS) in 2018 as part of the assessment of the wider IAMP ONE site. This report presents the results of the 2020 updating ecological appraisal at West Moor Farm only.

The purpose of this report is:

- To identify and describe all potentially significant ecological effects associated with the proposed development
- To set out the mitigation measures required to ensure compliance with nature conservation legislation and to address any potentially significant ecological effects
- To identify how mitigation measures will/could be secured
- To provide an assessment of the significance of any residual effects
- To identify appropriate enhancement measures

The Site is located near Washington at an approximate central grid reference of NZ 3313 5850. The Site location is illustrated in the figure below.



**FIGURE 1: SITE LOCATION**  
(OS mapping © Crown copyright and database rights)

It is proposed to develop the Site with industrial units as part of the wider IAMP development.





## C. PLANNING POLICY AND LEGISLATIVE CONTEXT

### C.1 NATIONAL PLANNING POLICY

The table below details the key paragraphs from the National Planning Policy Framework (NPPF)<sup>2</sup> relating to the natural environment:

TABLE 1: NATIONAL PLANNING POLICY FRAMEWORK: CONSERVING AND ENHANCING THE NATURAL ENVIRONMENT	
Statement	Paragraph
<p>Planning policies and decisions should contribute to and enhance the natural and local environment by:</p> <ul style="list-style-type: none"> <li>a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);</li> <li>b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;</li> <li>c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;</li> <li>d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;</li> <li>e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and</li> <li>f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.</li> </ul>	170
<p>Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework<sup>3</sup>; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.</p>	171
<p>Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas, and should be given great weight in National Parks and the Broads<sup>4</sup>. The scale and extent of development within these designated areas should be limited. Planning permission should be refused for major development<sup>5</sup> other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:</p> <ul style="list-style-type: none"> <li>a) the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;</li> <li>b) the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and</li> <li>c) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.</li> </ul>	172
<p>Within areas defined as Heritage Coast (and that do not already fall within one of the designated areas mentioned in paragraph 172), planning policies and decisions should be consistent with the special character of the area and the importance of its conservation. Major development within a Heritage Coast is unlikely to be appropriate, unless it is compatible with its special character.</p>	173

<sup>2</sup> National Planning Policy Framework (February 2019), Department for Communities and Local Government,

<sup>3</sup> Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality.

<sup>4</sup> English National Parks and the Broads: UK Government Vision and Circular 2010 provides further guidance and information about their statutory purposes, management and other matters.

<sup>5</sup> For the purposes of paragraphs 172 and 173, whether a proposal is 'major development' is a matter for the decision maker, taking into account its nature, scale and setting, and whether it could have a significant adverse impact on the purposes for which the area has been designated or defined.

TABLE 1: NATIONAL PLANNING POLICY FRAMEWORK: CONSERVING AND ENHANCING THE NATURAL ENVIRONMENT	
Statement	Paragraph
<p>To protect and enhance biodiversity and geodiversity, plans should:</p> <ul style="list-style-type: none"> <li>a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity<sup>6</sup>; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation<sup>7</sup>; and</li> <li>b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.</li> </ul>	174
<p>When determining planning applications, local planning authorities should apply the following principles:</p> <ul style="list-style-type: none"> <li>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;</li> <li>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;</li> <li>c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons<sup>8</sup> and a suitable compensation strategy exists; and</li> <li>d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.</li> </ul>	175
<p>The following should be given the same protection as habitats sites:</p> <ul style="list-style-type: none"> <li>a) potential Special Protection Areas and possible Special Areas of Conservation;</li> <li>b) listed or proposed Ramsar sites<sup>9</sup>; and</li> <li>c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.</li> </ul>	176
<p>The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.</p>	177

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.

Planning Practice Guidance<sup>10</sup> states:

<sup>6</sup> Circular 06/2005 provides further guidance in respect of statutory obligations for biodiversity and geological conservation and their impact within the planning system.

<sup>7</sup> Where areas that are part of the Nature Recovery Network are identified in plans, it may be appropriate to specify the types of development that may be suitable within them.

<sup>8</sup> For example, infrastructure projects (including nationally significant infrastructure projects, orders under the Transport and Works Act and hybrid bills), where the public benefit would clearly outweigh the loss or deterioration of habitat.

<sup>9</sup> Potential Special Protection Areas, possible Special Areas of Conservation and proposed Ramsar sites are sites on which Government has initiated public consultation on the scientific case for designation as a Special Protection Area, candidate Special Area of Conservation or Ramsar site.

<sup>10</sup> Planning Practice Guidance: Natural Environment ([www.planningguidance.communities.gov](http://www.planningguidance.communities.gov)) Updated July 2019

- Planning authorities need to consider the potential impacts of development on protected and priority species, and the scope to avoid or mitigate any impacts when considering site allocations or planning applications. (para. 016)
- Information on biodiversity and geodiversity impacts and opportunities needs to inform all stages of development (including site selection and design, pre-application consultation and the application itself). An ecological survey will be necessary in advance of a planning application if the type and location of development could have a significant impact on biodiversity and existing information is lacking or inadequate. (para. 018)
- Even where an Environmental Impact Assessment is not needed, it might still be appropriate to undertake an ecological survey, for example, where protected species may be present or where biodiverse habitats may be lost. (para. 018)
- As with other supporting information, local planning authorities should require ecological surveys only where clearly justified. Assessments should be proportionate to the nature and scale of development proposed and the likely impact on biodiversity. (para. 018)
- The National Planning Policy Framework encourages net gains for biodiversity to be sought through planning policies and decisions. Biodiversity net gain delivers measurable improvements for biodiversity by creating or enhancing habitats in association with development. Biodiversity net gain can be achieved on-site, off-site or through a combination of on-site and off-site measures. (para. 022)

## C.2 PROTECTED SPECIES LEGISLATION

The table below details the relevant legislation for those protected species that may be present on this site.

TABLE 2: SUMMARISED SPECIES LEGISLATION		
Species	Relevant Legislation	Level of Protection
<b>Bats (All species)</b>	<ul style="list-style-type: none"> <li>• Protection under the Wildlife and Countryside Act (WCA) (1981) (Listed on Schedule 5) - as amended</li> <li>• Classified as European protected species under Conservation of Habitats and Species Regulations 2017</li> <li>• Bats are also protected by the Wild Mammals (Protection) Act 1996</li> </ul>	<p>The WCA (1981) and Conservation of Habitats and Species Regulations 2017 make it an offence to:</p> <ul style="list-style-type: none"> <li>• Intentionally kill, injure, or take any species of bat</li> <li>• Intentionally or recklessly disturb bats</li> <li>• Intentionally or recklessly damage destroy or obstruct access to bat roosts</li> </ul>
<b>Birds</b>	<ul style="list-style-type: none"> <li>• Protection under the Wildlife and Countryside Act (1981) as amended with the exception of some species listed in Schedule 2 of the Act</li> </ul>	<p>The WCA (1981) makes it an offence to (with exceptions for certain species):</p> <ul style="list-style-type: none"> <li>• Intentionally kill, injure or take any wild bird</li> <li>• Intentionally take, damage or destroy nests in use or being built (including ground nesting birds)</li> <li>• Intentionally take, damage or destroy eggs</li> <li>• Species listed on Schedule 1 of the WCA or their dependant young are afforded additional protection from disturbance whilst they are at their nests</li> </ul>
<b>Badger</b>	<ul style="list-style-type: none"> <li>• Protection of Badgers Act 1992</li> <li>• Badgers are also protected by the Wild Mammals (Protection) Act 1996</li> </ul>	<p>The Protection of Badgers Act (1992) makes it an offence to intentionally or recklessly:</p> <ul style="list-style-type: none"> <li>• Damage a badger sett or any part of it</li> <li>• Destroy a badger sett</li> <li>• Obstruct access to, or any entrance of a badger sett</li> <li>• Disturb a badger whilst it is occupying a badger sett</li> </ul>

Species	Relevant Legislation	Level of Protection
<b>Common reptiles (Slow-worm, Adder, Grass Snake, Common Lizard)</b>	<ul style="list-style-type: none"> <li>Partially protected by the Wildlife and Countryside Act</li> </ul>	The WCA (1981) makes it an offence to: <ul style="list-style-type: none"> <li>intentionally kill or injure these animals</li> <li>sell, offer for sale, advertise for sale, possess or transport for the purposes of selling any live or dead animals or part of these animals</li> </ul>
<p><i>Under the Countryside and Rights of Way Act 2000 (CROW Act) the offence in section 9(4) of the Wildlife and Countryside Act 1981 of damaging a place of shelter or disturbing those species given full protection under the act is extended to cover reckless damage or disturbance.</i></p>		

### C.3 INVASIVE SPECIES LEGISLATION

The table below details the legislation in relation to invasive species and lists those invasive species most likely to be found in this region.

Relevant Legislation	Description of Offence	Species <i>(Covered by the Legislation and most likely to be found in this Region)</i>
Listed on Part II of Schedule 9 of the Wildlife and Countryside Act (1981 as amended)	Section 14 of the WCA (1981) states: <ul style="list-style-type: none"> <li>if any person plants or otherwise causes to grow in the wild any plant which is included in Part II of Schedule 9, he shall be guilty of an offence.</li> </ul>	Himalayan balsam Cotoneaster Montbretia Japanese knotweed Giant hogweed Rhododendron

### C.4 PROTECTED SITE LEGISLATION

Details of the legislation surrounding protected sites are provided in the appendices.

### C.5 PRIORITY SPECIES

Although not afforded any legal protection, national priority species (species of principal importance, as listed in Section 41 of the NERC Act (2006)), and local and regional priority species, as detailed within the relevant biodiversity action plans, are material considerations in the planning process and as such have been assessed accordingly within this report.

The table below details the species/species groups and habitats listed as priorities within the local biodiversity action plan relevant to the area within which this Site lies.

<b>Northumberland Biodiversity Action Plan</b>					
<b>Species</b>			<b>Habitats</b>		
Barn Owl	Bats	Black Grouse	Blanket Bog	Built Environment	Brownfield Land
Coastal Birds	Common Seal	Dingy Skipper	Calaminarian Grassland	Coastal heathland	Fen, Marsh & Swamp
Dormouse	Farmland Birds	Freshwater Fish	Gardens & Allotments	Heather Moorland	Lowland Heathland

Freshwater Pearl Mussel	Garden Birds	Great Crested Newt	Lowland Meadows & Pastures	Maritime Cliffs & Slopes	Native Woodland
Grey Seal	Hedgehog	Otter	Ponds, Lakes & Reservoirs	Recreational & Amenity Space	Reedbed
Red Squirrel	River Jelly Lichen	Upland Waders	Rivers & Streams	Rocky Shore, Reefs & Islands	Saline Lagoons
Violet Crystalwort	Water Rock- bristle	Water Vole	Saltmarsh & Mudflat	Sand Dunes	Transport Corridors
White-Clawed Crayfish			Trees & Hedgerows	Upland Hay Meadows	Whin Grassland

## D. METHODOLOGY

### D.1 SCOPE OF STUDY

The scope of the study, in terms of the survey area and the desk study area, is based on professional judgement. The likely zone of influence of the proposal has been considered, including both potential direct effects, such as habitat loss, and potential indirect effects, such as disturbance. Consideration has been given to potential effects both during the construction and operational phases of the development.

For this Site, the survey area comprised the green line boundary as defined within the figure below with, in addition, a 50m buffer around the periphery appraised where access was available. The desk study included an assessment of land-use in the surrounding area and a data search covering a 2km buffer zone (see below for further detail).

The following types of ecological receptors have been considered:

- Statutorily designated sites for nature conservation
- Non-statutorily designated sites for nature conservation
- Species protected by law
- Species and/or habitats listed under the NERC Act (2009) as being of principal importance for conservation of biodiversity
- Species and/or habitats listed in relevant local biodiversity action plans

The figures below illustrate firstly the Site boundary and secondly the broad habitats present on Site and within an approximate 500m buffer zone.



**FIGURE 3: SITE BOUNDARY**  
(Reproduced under licence from Google Earth Pro.)



**FIGURE 4: SITE AND SETTING**  
(Reproduced under licence from Google Earth Pro.)

## D.2 DESK STUDY

Initially, the Site was assessed from aerial photographs and 1:25,000 Ordnance Survey maps. Following this, a data search was submitted to the Local Records Centre in October 2019 requesting data relating to protected or otherwise notable species and non-statutory sites for nature conservation within 2km of the survey area. In addition, a search was made of the MAGIC website<sup>11</sup> for all statutorily protected sites for nature conservation within 2km of the survey area.

## D.3 PRELIMINARY FIELD SURVEY METHODOLOGY

### D.3.1 PHASE 1 HABITAT SURVEY

#### D.3.1.1 SURVEY METHODS

The field survey of the proposed Site was conducted using the methodology of the Joint Nature Conservation Committee's Phase 1 Habitat Survey, as outlined in their habitat-mapping manual<sup>12</sup>. Each parcel of land was assessed by a trained surveyor and classified as one of ninety habitat types. These were then mapped and the habitat information supplemented by dominant and indicator species codes and target notes where appropriate. Where areas within the study area do not fall into the Phase 1 Habitat Survey classification, alternative methods of classification have been used.

#### D.3.1.2 SURVEY EQUIPMENT

The following equipment was used during the phase 1 habitat survey:

- Digital camera
- Tablet computer
- Opticron 10x42 binoculars

### D.3.2 PRELIMINARY PROTECTED AND PRIORITY SPECIES APPRAISAL

#### D.3.2.1 SURVEY METHODS

Where there is a risk of legally protected species and/or otherwise notable species<sup>13</sup> being present, an initial appraisal was completed to inform the proposals. This appraisal included the following key elements:

- Structures and trees were assessed for the risk of supporting roosting bats (see below).
- Wetlands, where present, were reviewed for their potential use by great crested newt, otter and water voles,
- If present, any trackways regularly used by badger were noted and any badger sett usage assessed by the presence of freshly dug earth or bedding at the entrance.
- The suitability of the suite of habitats present for use by reptiles was assessed.
- Likely use of the Site by birds was assessed from the species seen during the survey, and the habitats present.
- Potential use by otherwise notable species was determined based on the broad habitat types present on site, any recent records obtained through the desk study and the geographical distribution of the species. Where specific habitat requirements for notable

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<sup>11</sup> MAGIC Website: [www.magic.gov.uk](http://www.magic.gov.uk)

<sup>12</sup> Handbook for Phase 1 habitat survey, A Technique For Environmental Audit, JNCC, 2010

<sup>13</sup> To include national priority species as listed in Section 41 of the NERC Act (2006) and local or regional priority species as listed within the relevant Biodiversity Action Plan

species have been recorded on site these have been noted, and used as part of this appraisal. The species groups assessed are limited to birds, freshwater fish, amphibians, reptiles, terrestrial mammals, butterflies and dragonflies.

A preliminary assessment, based on inspection from within the Site boundary, was made of any trees affected by the proposed development. Trees were inspected and assessed for their potential to support roosting bats and were categorised as negligible, low, moderate or high suitability for roosting bats based on guidelines provided within the Bat Conservation Trust Bat Survey: Good Practice Guidelines<sup>14</sup> and detailed within the table below.

<b>TABLE 5: GUIDELINES FOR ASSESSING THE POTENTIAL SUITABILITY OF PROPOSED DEVELOPMENT SITES FOR BATS, BASED ON PRESENCE OF ROOSTING HABITAT FEATURES (TREES)</b> (TO BE APPLIED USING PROFESSIONAL JUDGEMENT, TABLE 4.1 BAT SURVEY GUIDELINES)	
<b>Suitability</b>	<b>Roosting Habitats</b>
Negligible	Negligible habitat features on site likely to be used by roosting bats.
Low	A tree of sufficient size and age to contain potential roost features but with none seen from the ground or features seen with only very limited roosting potential.
Moderate	A tree with one or more potential 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 (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).
High	A tree with one or more potential roost site 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.

The assessment is based upon the age and species of the tree, the presence of features with potential to support roosting bats and the location of the tree and habitats present in the surrounding area. Any potential roosting locations and field signs that could indicate bat use, such as droppings, staining and scratch marks were noted.

Where it is considered likely that there is a significant risk of protected or otherwise notable species being affected or where habitats are of particularly high value additional specialist survey work has been recommended. Further survey work may also be recommended where development proposals have the potential to affect statutorily designated sites in the vicinity.

### D.3.3 ENVIRONMENTAL CONDITIONS

The table below details the environmental conditions during the preliminary ecological appraisal.

<b>TABLE 6: SURVEY CONDITIONS</b>				
<b>Date</b>	<b>Temperature</b>	<b>Cloud Cover</b>	<b>Precipitation</b>	<b>Wind Conditions</b>
22/01/2020	10°C	30%	None	F1

### D.3.4 SURVEY CONSTRAINTS

Survey was undertaken at a sub-optimal time of year for the identification of some flowering plants.

Some areas of the Site were not accessible due to ongoing works to lay a gas pipeline, however these areas were bare ground at the time of survey and are not considered to be of ecological value.

<sup>14</sup> Collins, J. (ed) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3<sup>rd</sup> Edition). Bat Conservation Trust



## D.4 PERSONNEL

The table below details the personnel who undertook the survey work.

Name	Position	Professional Qualifications	Natural England Survey Licence Numbers
Ben Crossman	Ecologist	BSc MRes ACIEEM	2015-17869-CLS-CLS (GCN*)

\*GCN – Great Crested Newt,

Further details of experience and qualifications are available at [www.e3ecology.co.uk](http://www.e3ecology.co.uk).

## D.5 ASSESSMENT METHODOLOGY

The relative value of the ecological receptors (habitats, species and designated sites) was assessed using a geographical frame of reference. For designated sites this is generally a straightforward process with the assigned designation generally being indicative of a particular value, e.g. Sites of Special Scientific Interest are designated under national legislation and are therefore generally considered to be receptors of national value. The assignment of value to non-designated receptors is less straightforward and as recognised by the Guidelines for Ecological Impact Assessment produced by the Chartered Institute of Ecology and Environmental Management<sup>15</sup>, is a complex and subjective process and requires the application of professional judgement.

When assessing the value of species and habitats, relevant documents and legislation are considered including the lists of species and habitat of principal importance annexed to the NERC Act (2006) and those provided within relevant local Biodiversity Action Plans. Data provided through consultation is also considered. These data sources can provide context at a local, regional and national scale.

The table below provides examples of receptors of value at different geographical scales.

Level of Value	Examples
International	An internationally designated site or candidate site. A site meeting criteria for international designation.
	A substantial* area of a habitat listed on Annex I of the EC Habitats Directive or smaller areas of such habitat, which are considered likely to be essential to maintain the functionality of a larger whole. The site is of functional importance** to a species population with internationally important numbers (i.e. >1% of the biogeographic population)
National	A nationally designated site. A substantial* area of a habitat listed as a Habitat of Principal Importance within Section 41 of the NERC Act (2006) or smaller areas of such habitat, which are considered likely to be essential to maintain the functionality of a larger whole.
	The site is of functional importance** to a species population with nationally important numbers (i.e. >1% of the national population)
Regional	An area of habitat that falls slightly below the criteria necessary for designation as a SSSI but is considered of greater than county value. The site is of functional importance** to a species population with regionally important numbers (i.e. >1% of the regional population)
	A Local Wildlife Site (LWS) or equivalent, designated at a County level A substantial* area of a habitat listed within the relevant County Biodiversity Action plan or smaller areas of such habitat, which are considered likely to be essential to maintain the functionality of a larger whole.

15 Chartered Institute for Ecology and Environmental Management (2016) Guidelines for Ecological Impact Assessment in the UK and Ireland - Terrestrial, Freshwater and Coastal

TABLE 8: ECOLOGICAL RECEPTOR VALUATION

Level of Value	Examples
	The site is of functional importance** to a species population of county value (i.e. >1% of the county population)
<b>District</b>	A Local Wildlife Site (LWS) or equivalent, designated at a District level
	A substantial* area of a habitat listed within the relevant District Biodiversity Action plan or smaller areas of such habitat, which are considered likely to be essential to maintain the functionality of a larger whole.
	The site is of functional importance** to a species population of district value (i.e. >1% of the district population)
<b>Parish</b>	Area of habitat or species population considered to appreciably enrich the habitat resource within the context of the parish.
	Local Nature Reserves
<b>Local</b>	Habitats and species that contribute to local biodiversity but are not exceptional in the context of the parish.
<b>Low</b>	Habitats that are unexceptional and common to the local area.
*Substantial defined as 'of considerable size or value within that area based on professional judgement, rather than a small, inconsequential area'	
** Functional importance defined as 'a feature which, based on professional judgement, is of importance to the day to day functioning of the population, the loss of which would have a detectable adverse effect on that population'	

## E. RESULTS

### E.1 DESK STUDY

#### E.1.1 PRE-EXISTING INFORMATION

##### **ORDNANCE SURVEY MAPPING AND AERIAL PHOTOGRAPHY**

The figures in Section B and D show that the general land use in the surrounding area is industrial units to the south, and arable to the north.

The most recent aerial photograph (2018) indicates that habitats on site are dominated by arable land, bound by hedgerows surrounding central farm buildings. Historic imagery suggests that the Site has remained similar since at least 2001.

##### **MAGIC WEBSITE<sup>16</sup>**

There are no nationally statutorily designated sites within 2km of the survey area; however there are several internationally protected sites within 10km. The table below details internationally statutorily designated sites within 10km and the locally designated sites within 2km. The Site is not within a SSSI impact risk zone.

<b>Designation</b>	<b>Site Name</b>	<b>Brief Reason for Designation</b>	<b>Distance from Survey Area</b>
RAMSAR	Northumbria Coast	Designated for wintering turnstone and purple sand piper as well as breeding little tern and arctic tern	7.5km east
Special Protection Areas	Northumbria Coast	Designated for wintering turnstone and purple sand piper as well as breeding little tern and arctic tern	7.5km east
Special Areas of Conservation	Durham Coast	Vegetated sea cliffs on Magnesian Limestone	7.7km east
Local Nature Reserve	Hylton Dene	Ancient woodland and wildflower meadows	1.5km south
	Barmston Pond	A pond important for wildfowl and waders	1.0km south

MAGIC also provided 3 records of granted European protected species licenses all of which are for great crested newts, located in a cluster between 800m and 1km to the south west. There is no ancient woodland within the Site or 500m of the Site boundary.

##### **PREVIOUS SURVEY WORK**

Bat risk assessment and activity surveys of the farm buildings at West Moor Farm were undertaken in June and July 2019, the results of which are presented within a separate report (5893 West Moor R01). DWS have undertaken bat activity surveys of the farm buildings in 2018 prior to this.

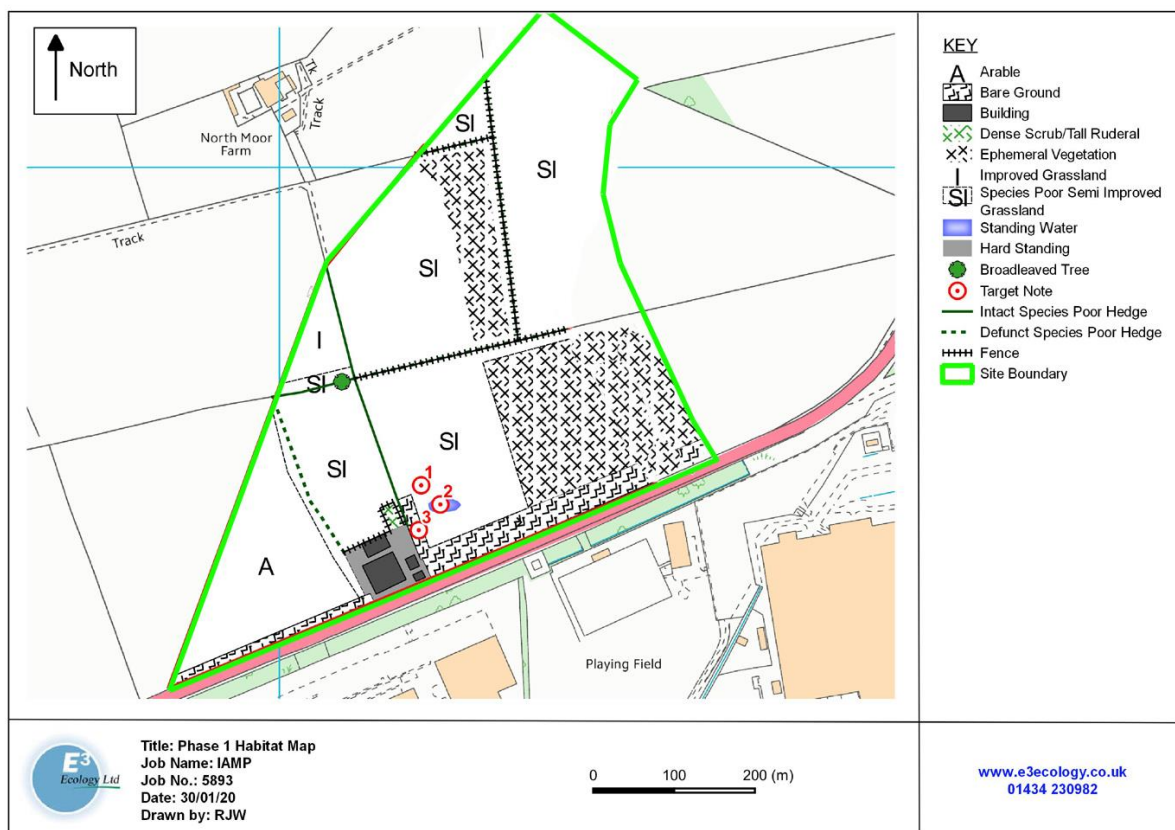
<sup>16</sup> Multi Agency Geographic Information for the Countryside (MAGIC) [www.magic.gov.uk](http://www.magic.gov.uk)

## E.2 FIELD SURVEY

### E.2.1 HABITATS

The sites consists of a series of arable fields and former arable fields, bound by hedgerows surrounding a small cluster of farm buildings on three sides. The A1290 forms the southern boundary of the site.

The habitats present within the survey area are illustrated within the figure below and described in more detail below.



**FIGURE 5: HABITAT MAP**  
 (OS mapping © Crown copyright and database rights)

### SEMI-IMPROVED GRASSLAND

The majority of the Site consists of semi-improved grassland but much of it has formed differently and so is different in character.

Within the centre of the Site, directly to the north of the farm buildings is a semi-improved grassland field which has developed from a field of improved grassland. This area is completely dominated by grasses (95% of cover) with no bare ground and a sward height of 30 cm. Species present include: brome *Bromus sp.* (D), cocksfoot *Dactylis glomerata* (O), broadleaf dock *Rumex obtusifolius* (O), common chickweed *Stellaria media* (O), red fescue *Festuca rubra* (O), creeping buttercup *Ranunculus repens* (O) and cow parsley *Anthriscus sylvestris* (O).

Almost the entirety of the eastern half of the Site consists of what were large arable fields, which have been ploughed, left uncultivated and have developed into a mixture of semi-improved grassland, ephemeral vegetation and tall ruderal vegetation. The edges of the field are dominated by grasses; however, towards the centre of the fields tall ruderal vegetation becomes more dominant and there is more bare ground. The edges of the field have a ratio of 70/30 grasses to forbs and are 10% bare ground. The centre of the fields has a 50/50 ratio of grasses to forbs and between 50% and 80% bare ground.

Species within the largest field directly to the east of the farm buildings include: oxeye daisy *Leucanthemum vulgare* (R), Scentless Mayweed *Tripleurospermum inodorum* (R), creeping buttercup (F), Timothy *Phleum pratense* (O), brome (O), perennial rye-grass *Lolium perenne* (O), creeping thistle *Cirsium arvense* (O), tufted hair grass *Deschampsia cespitosa*, (O), broadleaf dock (O), Yorkshire fog *Holcus lanatus* (O), red fescue (O), common ragwort *Senecio vulgaris* (O), broadleaf willow herb *Epilobium montanum* (O), speedwell *Veronica spp.* (O), spear thistle *Cirsium vulgare* (O), bent grasses *Agrostis sp.* (O), gorse *Ulex europaeus* (R), compact rush *Juncus conglomeratus* (R), hard rush *Juncus inflexus* (R) and oil seed rape *Brassica napus* (O).

The field to the north is similar but has a greater cover of grassland.

The field forming the far north-east corner of the Site is also similar but has some small areas of marshy grassland. Additional species recorded to



those above include: Timothy (A), rush species *Juncus sp.* (O) and reed species *Phragmites sp.*(O).

The marginal areas of these fields and the margin of the arable field within the west of the Site consists of coarse grassland, with no bare ground and a sward height of 50cm. Species include: cocksfoot (D), tufted hair grass (D), nettle *Urtica dioica* (O), creeping thistle (O), bramble *Rubus fruticosus*, (O), broadleaf dock (O), and brome grasses (F).



Part of the Site includes a corner of semi-improved grassland field which until recently appears to have been grazed by horses. This grassland has a sward height of 30cm and is dominated by grasses, with no bare ground. Grasses form 90% of the cover and include cocksfoot (O), crested dogs tail *Cynosurus cristatus* (A), bent grasses (A), and Timothy (O). Forbs include creeping buttercup (O), selfheal *Prunella vulgaris*, (O), creeping thistle (O), sedge *Carex sp.* (R), spear thistle (O) and common knapweed *Centaurea nigra* (R).



#### TALL RUDERAL VEGETATION

Within a fenced area north of the farm buildings is an area of tall ruderal vegetation. Species present include common hogweed *Heracleum sphondylium* (O), cow parsley (O), nettle (F), creeping thistle (A), rosebay willow-herb *Chamerion angustifolium* (F), bramble (F) and cocksfoot (A).



#### ARABLE

The westernmost field was stubble at the time of survey with some wheat *Triticum sp.* re-growth.



## BARE GROUND

Along the southern boundary of the Site and to the east of the farm buildings was an active works area which was bare ground at the time of survey with little to no vegetation.

## HEDGEROWS

All of the fields are bound by a mixture of intact and defunct hedgerows. From west to east these include:

A defunct hedgerow along the eastern boundary of the arable field consisting of immature trees, growing to 2m in height. Species include: oak *Quercus robur*, field maple *Acer campestre*, lime *Tilia sp.*, silver birch *Betula pendula*, willow *Salix sp.*, hawthorn *Crataegus monogyna* and dog rose *Rosa canina*.

An intact species-poor hedge running along the boundary between the improved grassland field and the semi-improved grassland field to the south. It has a height of 2m-3m and is dominated by hawthorn, with occasional elder *Sambucus nigra*. A single mature ash *Fraxinus excelsior* tree is present towards the eastern extent of the hedge and is 10m in height.

An intact hedgerow running north south, on the west side of the track heading north from the farm buildings. It is 2-3m high and dominated by hawthorn. Other species present include dog rose (O), sycamore *Acer pseudoplatanus* (O), bramble (F), elder (O), blackthorn *Prunus spinose* (A) and lime (R).

The area of tall ruderal vegetation is fenced and this is planted with hawthorn and silver birch.

A defunct hedge running east-west forming the boundary of the two largest semi-improved grassland fields. This hedgerow largely consists of the immature re-growth of felled trees and has grown to a height of 2m. Species present include hawthorn, ash, dog rose, cherry *Prunus sp.*, field maple, oak, elder and sycamore.

A defunct hedge running north-south forming the boundary of the large northern grassland field and



the north-eastern field. Dominated by bramble and hawthorn with occasional gorse *Ulex europaeus* and dog rose, growing to a height of 1m.

A defunct hedge forming the southern boundary of the horse grazed field, growing to 1m in height and consisting of gorse, dog rose and hawthorn.



### **IMPROVED GRASSLAND**

Within the north-west of the Site is an improved grassland field which is entirely perennial rye-grass and has a sward height of 5cm. Bare ground makes up 5% of cover.



### **DENSE SCRUB**

There is an area of dense scrub with some emergent trees north of the farm buildings. This habitat is dominated by bramble but includes occasional hawthorn and emergent, cherry and sycamore trees to a height of 5m.



## **E.2.2 SPECIES**

### **BATS**

Full results of bat activity survey undertaken of the buildings at West Moor Farm can be found within a separate report (5893 West Moor R02 / ES Appendix 12.1). Bat surveys undertaken by DWS across the wider IAMP ONE site only recorded a low level of bat activity, largely from common pipistrelle.



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A single mature ash tree within a hedgerow along the boundary between the improved grassland field and the semi-improved grassland field was assessed as of low suitability for roosting bats from a ground based assessment.

The Site is generally open and dominated by semi-improved grassland and arable habitats which provide sub optimal habitat for foraging bats. Hedgerows and area of scrub provide better quality foraging and commuting routes through the site.

#### ***GREAT CRESTED NEWT***

Areas of standing water were present within the field to the east of the farm buildings (Target Note 1). Much of this standing water is highly ephemeral in nature and therefore not considered suitable for great crested newts. A more permanent area of standing water was recorded close to the site cabin to the east of the farm buildings (Target Note 2). This waterbody has been recently created as part of ongoing works along the southern boundary of the Site.

There are no ponds within 500m of the Site boundary evident on either OS maps or aerial imagery. Semi-improved grassland and scrub habitat provides some suitable habitat for this species, however arable and bare ground habitats are considered sub-optimal. Overall great crested newts are considered likely absent from the site.

#### ***BIRDS***

Skylark, blue tit, magpie, meadow pipit, great tit, wren, house sparrow, grey partridge, kestrel, blackbird, yellowhammer, wood pigeon and linnet were all recorded during the walkover in January 2020. The habitats on site have the potential to support breeding territories of all of the above species along with a wider range of farmland bird species, including ground nesting birds.

The open fields also have the potential to support an assemblage of wintering birds including finches, gulls and small numbers of waders within the wetter parts of the site.

#### ***BADGER***

No evidence of badger was recorded during the survey and the majority of the habitats on site are considered sub-optimal for sett creation as they are generally open and flat. All habitats present have the potential to provide foraging opportunities for this species and badger may forage on site on occasion if they are present in the wider area.

#### ***OTTER/ WATER VOLE/ WHITE-CLAWED CRAYFISH***

There are no watercourses on or adjacent to the site, therefore these species are considered absent from the site, due to a lack of suitable habitat.

#### ***REPTILES***

The area was largely in arable cultivation until recently and reptiles are considered to be most likely to be absent.

#### ***RED SQUIRREL***

Habitats on site are not considered suitable for this species and red squirrel are considered absent.

#### ***INVERTEBRATES***

The larval food plants of grayling, wall and small heath butterfly were all recorded on site; however, habitats are not considered suitable for grayling butterfly. The other species may be present on site, however.

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**NATIONAL PRIORITY AND LOCAL BAP SPECIES**

Habitats are suitable for brown hare, hedgehog and toad, although the lack of suitable breeding ponds in the local area reduces the likelihood of toad being present. Grassland habitats provide foraging habitat suitable for both brown hare and hedgehog and brown hare may breed on site in low numbers if present in the local area.

**E.2.3 TARGET NOTES**

**TARGET NOTE 1**

An area of ephemeral water to the east of the farm buildings.



**TARGET NOTE 2**

A recently created area of standing water east of the farm buildings.



**TARGET NOTE 3**

A site compound consisting of a fenced area in which there are cabins laid on an area of stone chippings.

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## F. SITE ASSESSMENT

### F.1 HABITATS

The Site largely consists of arable, unmanaged former arable land and grassland fields surrounded by a mixture of intact and defunct species poor hedgerows. Habitats present include poor semi-improved grassland, improved grassland, arable, ephemeral vegetation, bare ground, standing water, species-poor hedgerows, tall ruderal vegetation and a small amount of dense scrub. Improved grassland, arable, bare ground and standing water habitats are considered to be of negligible habitat value. Poor semi-improved grassland, ephemeral vegetation, defunct hedgerows and tall ruderal habitats are considered to be of low habitat value. The intact hedgerow running on the west side of the track heading north from the farm buildings and the dense scrub is considered to be of local habitat value.

### F.2 NOTABLE SPECIES

Bat activity surveys of West Moor Farm undertaken in 2019 recorded a low level of common pipistrelle foraging and commuting activity but no roosts; however previous survey in 2018 by DWS recorded two common pipistrelle roosts within farm buildings. The full results of bat activity surveys can be found in a separate report. There are no other roosting opportunities within the Site boundary. The only mature tree within the survey areas was assessed as of low suitability for roosting bats from a ground-based assessment.

Habitats on site are generally sub-optimal for foraging bats, largely consisting of open grassland and arable fields. Most of the hedgerows are less than 2m in height and are defunct, reducing their value as both foraging and commuting habitat. The intact hedgerows within the west of the Site provide better foraging and commuting habitat. Overall the Site is considered to be of local value to bats.

Open arable and grassland fields are suitable for a range of ground-nesting farmland birds including skylark, meadow pipit, yellow wagtail, grey partridge and lapwing. Hedgerow and scrub habitats have the potential to support other species of farmland birds along with more urban fringe species including yellowhammer, tree sparrow and house sparrow. Overall the Site is considered to be of up to parish value given the abundance of similar habitat in the surrounding area. Previous surveys by Dendra in 2018 recorded an assemblage of district value within the wider IAMP site and the breeding assemblage on site forms part of this greater assemblage.

The Site provides potential foraging habitat for badger and they may be present on site on occasion if present within the wider area. Overall the Site is considered to be of up to local value to badger.

Semi-improved grassland habitats are suitable to support breeding populations of small heath and wall butterflies but given their generally recent establishment on arable land they are most likely to be absent.

Grassland and arable habitats have the potential to support both brown hare and hedgehog and both species have been recorded during survey of the wider IAMP site by Dendra and DWS. Brown hare may both forage and breed on site and overall the Site is considered to be of up to parish value. Habitats are sub-optimal for hedgehog to breed; however, there is an abundance of potential foraging habitat. Overall the Site is considered to be of local value to this species.

### **F.3 LIMITATIONS**

Survey was undertaken at a sub-optimal time of year for the identification of flowering plants and the species list compiled within the main body of the report will not be exhaustive.

Access to some parts of the Site was limited during the initial walkover as works were ongoing to install a foul rising main; however, these areas consisted of bare ground and are not considered to be of ecological value.

Ecological studies of the wider IAMP site have been undertaken for a number of years so there is good baseline data for the area.

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## APPENDIX 1. STATUTORILY AND NON-STATUTORILY DESIGNATED SITES

### A1.i Statutorily Designated Sites

#### Ramsar Sites

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. The Convention recognizes wetlands as important ecosystems and includes a range of wetland types from marsh to both fresh and salt water habitats. The wetlands can also include additional areas adjacent to the main water-bodies such as river banks or coastal areas where appropriate.

#### Special Protection Areas (SPAs)

SPAs are classified by the UK Government under the EC Birds Directive and comprise areas which are important for both rare and migratory birds.

#### Special Areas of Conservation

SACs are designated under the EC Habitats Directive and are areas which have been identified as best representing the range and variety of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the Conservation of Habitats and Species Regulations 2017 unless they are offshore.

#### Sites of Special Scientific Interest

SSSIs are designated as sites which are examples of important flora, fauna, or geological or physiographical features. They are notified under the Wildlife and Countryside Act 1981 with improved provisions introduced by the Countryside and Rights of Way Act 2000.

#### National Nature Reserves (NNRs)

NNRs are designated by Natural England under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981 and support important ecosystems which are managed for conservation. They may also provide important opportunities for recreation and scientific study.

#### Country Parks

Country Parks are statutorily designated and managed by local authorities in England and Wales under the Countryside Act 1968. They do not necessarily have any nature conservation importance, but provide opportunities for recreation and leisure near urban areas.

### A1.ii Non-Statutorily Designated Sites

#### Local Nature Reserves (LNRs)

LNRs are designated under the National Parks and Access to the Countryside Act 1949 by local authorities in consultation with Natural England. They are managed for nature conservation and used as a recreational and educational resource.

#### Non-Governmental Organisation Property

These are sites of biodiversity importance which are managed as reserves by a range of NGOs. Examples include sites owned by the RSPB, the Woodland Trust and the Wildlife Trusts.

#### Local Wildlife Sites (LWSs)

These are sites defined within the local plans under the Town and Country Planning system and are material considerations of any planning application determination. They are designated by the local authority although criteria for designation can vary between authorities.