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South West Ecology

Ecology Assessment

North Dairy Farm

CONTENTS

1.0 INTRODUCTION

1.1 Background

SWE Limited was commissioned by Aardvark EM Limited, to undertake an ecological appraisal of a site (herewith referred to as ' the site', which is defined as the zone of influence of potential development works) located at North Dairy Farm, Pulham, Dorchester, Dorset DT2 7EA. The appraisal was undertaken to inform a planning application for a 49.99MW solar farm (BSR Energy. Drawing No. 1641-0201-01, 09.07.20).

An appraisal was undertaken of the North Dairy Farm landholding which equated to *c*. 168 ha. Subsequent to the appraisal, which included an ecological walkover, the site area was reduced to *c*. 76 ha (Ordnance Survey grid reference at approximate centre of the site: ST 729080). This avoided the River Lydden corridor which had potential for Eurasian otter *Lutra lutra*, water vole *Arvicola amphibius* and brown trout *Salmo trutta.*

1.2 Purpose of this Report

The purpose of this report is:

- to provide an ecological appraisal through consideration of field survey and historic biodiversity data;
- to identify potential ecological constraints and opportunities in relation to the development of a solar farm at the site;
- to identify mitigation measures which would be required to ensure compliance with nature conservation legislation; and
- to identify enhancement and compensation measures which could be incorporated into site design, in line with local and national planning policy.

This report was written in accordance with the guidance produced by the Chartered Institute of Ecology and Environmental Management (CIEEM) 2017[1].

[1] CIEEM (2017) *Guidelines on Ecological Report Writing*. Chartered Institute of Ecology and Environmental Management, Winchester.

1.3 Site Description

The site (Figure 1) consisted of an area of mixed rotation farmland consisting of cereal crops (predominantly maize) to the southern half of the site, and improved ley grassland to the northern half. The fields were bounded by hedgerows and streams, the latter draining into the River Lydden to the north of the site.

The wider landscape consisted of mixed farmland similar to that found at North Dairy Farm, but including small blocks of broadleaf woodland.

Figure 1. The site. Land holding shown in red; final site shown in blue. Source: Google Earth (2017 image).

1.4 Report Lifespan

In accordance with CIEEM guidance[2] the data presented within this report remains valid for 12 months.

[2] CIEEM. 2019. On the Lifespan of Ecological Reports and Surveys. Advice Note. April 2019.

1.5 Author

The author of this report, Dr Steve Holloway, has over twenty-five years' professional experience of ecology, environmental management and nature conservation in the private, public and voluntary sectors. Dr Holloway is a full member of CIEEM and is a Chartered Environmentalist (CEnv).

All work was undertaken in accordance with the most up-to-date and relevant survey guidance available at the time[3], and in compliance with BS:42020:2013 Biodiversity. Code of Practice for Planning and Development, and Dorset Council[4][5].

[3] CIEEM. 2017. Guidelines for Preliminary Ecological Appraisal. 2nd Edition. December 2017.

[4] https://www.dorsetcouncil.gov.uk/countryside-coast-parks/countryside-management/biodiversity/biodiversity-appraisal-in-dorset.aspx

[5] Dorset County Council. 2018. Dorset Biodiversity Appraisal Protocol. Guidance for Consultants. Natural Environment Team.

2.0 RELEVANT LEGISLATION AND PLANNING POLICY

2.1 Relevant Legislation[6]

2.1.1 Conservation of Habitats and Species Regulations 2017

The Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations) transpose Council Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Flora and Fauna (Habitats Directive) into English law, making it an offence to deliberately capture, kill or disturb[7] wild animals listed under Schedule 2 of the Regulations. It is also an offence to damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time). Species include all bats and great crested newt *Triturus cristatus*.

The Habitats Regulations 2017 will continue to implement the Habitats Directive and certain elements of the Birds Directives in England. The Habitats Regulations 2010 have been amended ten times since they were last consolidated (in 2010) and are likely to remain in place for some time after the UK exits the EU.

2.1.2 Wildlife & Countryside Act 1981

The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act (CRoW) 2000 and the Natural Environment and Rural Communities Act (NERC) 2006, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive), making it an offence to:

- Intentionally kill, injure or take *any* wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting;
- Intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act e.g. all bat and reptile species, great crested newt;

[6] Please note that the summary of relevant legislation provided here is intended for general guidance only. The original legislation should be consulted for definitive information.

[7] Disturbance, as defined by the Conservation of Habitats and Species Regulations 2010, includes in particular any action which impairs the ability of animals to survive, breed, rear their young, hibernate or migrate (where relevant); or which affects significantly the local distribution or abundance of the species.

- Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act;
- Intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection – species include all reptiles;
- Pick or uproot any wild plant listed under Schedule 8 of the Act (not applicable for the Site as no species listed on the Schedule were found); or
- Plant or cause to grow in the wild any plant species listed under Schedule 9 of the Act (not applicable for the Site as no species listed on the Schedule occur).

2.1.3 Natural Environment & Rural Communities (NERC) Act 2006

The NERC Act 2006 places a duty on authorities to have due regard for biodiversity and nature conservation during the course of their operations.

Section 41 of the Act requires the publication of a list of habitats and species publish which are of principal importance for the purpose of conserving biodiversity. The Section 41 list is used to guide authorities in implementing their duty to have regard to the conservation of biodiversity.

2.1.4 The Hedgerow Regulations 1997

The Hedgerow Regulations (1997) were made under Section 97 of the Environment Act 1995. They protect important hedgerows in the countryside, by controlling their removal through a system of notification. Permission is required from the local planning authority to remove important hedgerows (or sections of such hedgerows) either through submission of a hedgerow removal notice or valid planning permission.

The Regulations specify in detail how the criteria of important hedgerows are met, based on set criteria. These criteria include historical and archaeological features as well as criteria based on the flora and fauna contained within hedgerows.

2.2 National Planning Policy

The National Planning Policy Framework (NPPF)[8] sets out guidance for local planning authorities and decision-makers in how to apply planning policies when drawing up plans and making decisions about planning applications. Along with Government Circular 06/05[9], the

[8] Department for Communities and Local Government. 2019. *National Planning Policy Framework*.

[9] Office of the Deputy Prime Minister. 2005. Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System. ODPM Circular 06/2005.

broad policy objectives in relation to the protection of biodiversity and geological conservation in England through the planning system are set out.

Paragraph 175 of the NPPF deals with habitats and biodiversity in relation to planning applications. With respect to this assessment the following parts of paragraph 175 apply (in part):

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; and

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.

3.0 METHODOLOGY

Ecological survey was required in accordance with Dorset Council (Planning Application Requirements. Adopted 18th March 2019. Pages 15-16) having due regard to the Chartered Institute of Ecology and Environmental Management (CIEEM) recommendations and guidance, and best practice guidance from appropriate statutory and non-statutory bodies e.g. Natural England.

3.1 Desk Study

Relevant biodiversity record data was requested in December 2019 from Dorset Environmental Records Centre (DERC). A 2 km data search (2 km radius from the original 168 ha site boundary) was employed for standard species data[10]; and local, national, and international conservation sites[11].

3.2 Field Survey

Consideration of the potential impact of the proposed solar farm on protected and notable species (subsequent to a site walkover and examination of historic biodiversity data) concluded that further assessment should be undertaken for bat activity, wintering and breeding birds, and great crested newt *Triturus cristatus*, as these had potential to be impacted by the proposed solar farm (construction and operational phases for birds and bats; construction phase only for great crested newts).

Other species which may occur within the site and may be impacted by the proposed solar farm included brown hare *Lepus europaeus*, badger *Meles meles*, harvest mouse *Micromys minutus*, and hedgehog *Erinaceus europeaus*. There are no standard survey methods for these species in relation to development, however evidence of these species was sought during the habitat, bird, and bat surveys.

The hedgerows may be used by hazel dormouse *Muscardinus avellanarius*. As no hedgerows or scrub will be impacted by the proposal, survey for hazel dormouse was not warranted.

[10] This includes species protected under international and national legislation, as well as species included in the UK, Red Data Books, and Red or Amber lists of 'birds of conservation concern', and Species of Principle Importance (NERC 2006).

[11] Statutory designated sites include those protected under national or international legislation, such as Sites of Special Scientific Interest (SSSI). Non-statutory sites include Local Wildlife Sites (LWS) and County Wildlife Sites (CWS).

3.2.1 Habitat survey

A survey was conducted by Dr Holloway on the 4th and 5th December 2019. The weather at the time of survey was overcast and 10-12°C. The survey area consisted of all land within the original land holding boundary (Drawing 1).

An 'extended' Phase 1 Habitat Survey was conducted in line with CIEEM guidance (2017[12]). The field methodology was based on the Joint Nature Conservation Committee (2010[13]) advice. All habitats were mapped and the presence or potential for presence of protected and notable species noted. The survey included a search for signs of badger e.g. setts, latrines, and tracks. Where appropriate additional notes on habitat features were made during the subsequent bird surveys.

3.2.2 Bat activity survey

Through the iterative design process all trees with potential for roosting bats have been retained and appropriately buffered, therefore no survey for roosting bats was required.

Unlike wind farms there is no scientific reason to suppose that bats would collide with solar panels or infrastructure. The habitats within which the solar panels and infrastructure would be constructed are of low to negligible value to bats regarding foraging (intensive agriculture – arable and ley grass used for silage). The hedgerows, tree/shrub lines, drainage features would be retained – these would act as key foraging and commuting features. Given the proposed enhancement measures which include species-rich grasslands and grazing with sheep, both of which will encourage a greater diversity and biomass of invertebrate prey, it was concluded that there would be a net benefit for foraging bats. However, it was considered prudent to undertake a degree of bat survey of the site.

Bat activity surveys were conducted with due regard to Table 8.3 of the Bat Conservation Trust (2016)[14] guidance. Subsequent to completion of the site walkover, the site was classified as having 'Low to Moderate Suitability Habitat' for foraging, and 'Moderate Suitability Habitat' for commuting. Given the scale of potential impacts 3 no. bat survey sessions were conducted.

A combination of transect and static detector survey was undertaken.

[12] CIEEM 2017. *Guidelines for Preliminary Ecological Appraisal*. 2nd Edition. Technical Guidance Series.
[13] Joint Nature Conservation Committee. 2010. *Handbook for Phase 1 Habitat Survey. A Technique for Environmental Audit.*
[14] Collins, J. 2016. Bat Surveys for Professional Ecologists: Good Practice Guidelines. 3rd Edition. BCT.

Transect routes were walked as per Figure 2. The transects were walked on 20th April, 18th May, and 25th May 2020. The transect route was walked in the opposite direction on 25th May to increase variability. Transect surveys lasted for *c.* 2.5 hrs.

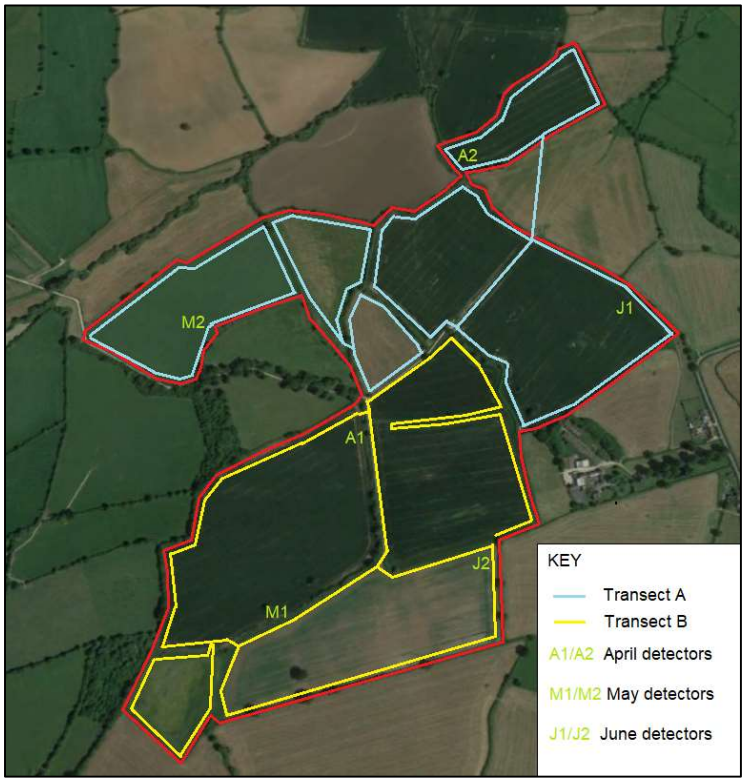
During each transect all bat calls were noted using Echo Meter Touch 2 Pro detectors. The weather conditions during the survey were also noted at the start and end of each survey (Table 1).

Table 1. Weather information (cloud cover in oktas[15]).

Visit	Date	Sunset times	Weather conditions start	Weather conditions - end
1	20.04.20	20:14	16°C, F1, 6 oktas	13°C, F0, 4 oktas
2	18.05.20	20:58	17°C, F0, 7 oktas	16°C, F1, 8 oktas
3	25.05.20	21:07	21°C, F0, 2 oktas	17°C, F0, 2 oktas

Two static Anabat Express detectors were left on site for five nights or more per survey session (see Figure 2 – A1/A2 were in April; M1/M2 were in May; and J1/J2 in June). All data was analysed using Anabat Insight software.

Figure 2. Bat transect route and static detector placement.



[15] An okta is a unit of measurement used to describe the amount of cloud cover. Sky conditions are estimated in terms of how many eighths of the sky are covered in cloud, ranging from 0 oktas (completely clear sky) through to 8 oktas (completely overcast).

3.2.3 Bird survey

Winter and breeding bird surveys were conducted within the site. The surveys concentrated on those species utilising the fields with notes made on those species seen along the hedgerows. Incidental fly overs of birds were not recorded. The route of the transect followed that for bats (both transects) as per Figure 2.

The winter and breeding bird survey involved four visits in each season employing territory mapping based on the Common Birds Census (CBC) technique devised by the British Trust for Ornithology (Marchant, 1983).

The dates of the winter bird surveys were 7th January, 23rd January, 6th February, and 3rd March 2020. Particular attention focussed on the presence of over wintering or passage waders and passerines.

The dates of the breeding bird surveys were 20th April, 8th May, 18th May, and 23rd May 2020. Three of the breeding bird surveys took place in the morning and one in the evening, the latter timed to detect species which are more active at that time of the day, such as song thrush. Standard BTO species codes and symbols for bird activities were used. Signs of likely breeding on site were established through presence of nests, adult birds feeding young, territorial calls, and the presence of recently fledged birds.

3.2.4 Great crested newt survey

There was one pond within the site (Drawing 1, T1). In addition, there were four ponds outside of the site to the southeast that were within 500 m:

Pond 1. 80 m east at Dairy House Farm.
Pond 2. 278 m east at Boywood Farm.
Pond 3. 369 m southeast in a field corner.
Pond 4. 459 m south at Parsonage Farm.

Pond 4 has been recorded as having great crested newt (pre 2005, DERC data).

The ponds outside of the site were within a different ownership and therefore could not be surveyed.

The pond within the site was assessed using the Habitat Suitability Index (HSI)[16] on 11th June 2020. Due to no water being present within the feature eDNA sampling was not possible. A search was made however of nearby features which may be used by great crested newts e.g. fallen branches and vegetation detritus.

3.3 Limitations

This report is based on the evidence recorded at the site at the time of the surveys.

In accordance with CIEEM (2017) guidance and Clause 6.7 of BS 42020:2013[17], section a.6, it is recognised that December is suboptimal for detailed assessment of flora. Nonetheless, adequate flora was present to be able to identify the main habitat types. Additional notes on habitats were made during subsequent bird surveys.

The scope of the habitat survey did not attempt to quantify the absolute number of plant species present within the site and did not include a survey for lower plants. This is in accordance with best practice guidance for Phase 1 Habitat Surveys.

Bats and birds are highly mobile species groups and therefore the findings and assessments provided should be regarded as a 'snapshot' of activity during part of the season.

The farm operations include the use of gas-powered bird scarers – these will have had an impact on local bird activity. However, such deterrents are likely to have been used for several years within the landholding and as such are assumed to be part of the working farm environment.

Access to the ponds outside of the site was not obtained. Given that there are records of great crested newt within the area, and that one pond has historic records of this species being present, it was assumed that the site could potentially harbour great crested newts.

[16] Oldham, R.S., Keeble, J., Swan, M.J.S. & Jeffcote, M. 2000. *Evaluating the suitability of habitat for great crested newt Triturus cristatus.* Herpetological Journal 10 (4), 143-155.
[17] *BS 42020:2013 Biodiversity. Code of practice for planning and development.* British Standards Institute, London.

4.0 RESULTS

4.1 Desk Study – designated sites

There were no designated sites within the site. There were designated sites within 2 km of the site and a brief description of these is provided in 4.1.1 to 4.1.3.

4.1.1 Designated Sites - international

Rooksmoor Special Area of Conservation (SAC)[18] is located *c*. 1.9 km northeast from the site boundary.

Annex I habitats present as a qualifying feature, but not a primary reason for selection of the SAC: Molinia meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)

Annex II species that are a primary reason for selection of the SAC: Marsh fritillary butterfly *Euphydryas (Eurodryas, Hypodryas) aurinia.* The SAC represents marsh fritillary in the southern part of its range in England. Rooksmoor has an exceptionally large population within a cluster of sites in the Dorset stronghold.

4.1.2 Designated sites – national

Blackmoor Vale Commons and Moors Site of Special Scientific Interest (SSSI)[19] is located *c*. 1.3 km northeast from the site. The SSSI supports a diverse mosaic of semi-natural habitats including nationally important species-rich neutral grasslands, fen-meadow, rush-pasture, ancient semi-natural woodland, wood-pasture, and parkland with veteran trees. The SSSI is also important for its diverse invertebrate assemblage including two Vulnerable butterfly species (marsh fritillary and brown hairstreak *Thecla betulae*).

Alners Gorse Butterfly Conservation Reserve[20] is located to the immediate southwest of the SSSI and is c. 1.1 km northeast of the site. The reserve is particularly important for its population of marsh fritillary butterfly.

[18] A SAC is the land designated under Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.

[19] A SSSI is land notified under the Wildlife and Countryside Act (1981), as amended.

[20] Sites owned/leased by Butterfly Conservation, a national charity, established to protect butterflies, moths and their habitats.

There is a Plantation on Ancient Woodland Site (PAWS)[21] adjacent to the west boundary of the site (Humber Wood). The woodland has been cleared in the past and at the time of survey was an improved grassland field with some retained oak trees along a farm track.

4.1.3 Designated sites – local

There are 6 Sites of Nature Conservation Interest (SNCI)[22] within 2 km of the site (Table 2). The SNCIs are designated for their habitats.

Table 2. designated sites – local.

SNCI name	Location	Reason for selection
Newlands Farm Meadow	ST694083	neutral grassland
Short Wood	ST726068	ancient woodland site
Brockhampton Coppice	ST713069	broadleaved woodland
Holwell Gorse	ST707099	broadleaved woodland
Pulham Churchyard	ST711084	neutral grassland
Peaceful Lane	ST716115	road verge

4.1.4 Species

Relevant species records within 2 km of the site are listed in Table 3. There were five species of bat, three of which are relatively commonplace with stable/ increasing populations: common pipistrelle, soprano pipistrelle, and brown long-eared bat[23]. The population of serotine is also considered to be stable, although there is a high level of uncertainty due to this species being infrequently recorded. Nathusius' pipistrelle has been found to be a migratory species which travels from northeast Europe. It is a rare but widespread species throughout Great Britain. All five of the bat species could occur within the site, along with the other mammal species included in the DERC data.

The eighteen bird species included in the DERC data could occur within the site.

The invertebrates were moths and butterflies (Lepidoptera) associated with the national and international designated sites to the northeast. Although some of the more common species may occur within the site, these would be restricted to marginal semi-natural habitat such as hedgerows, scrub, and tall ruderal/ grass and would not occur within arable or improved ley grass fields.

[21] During 2000 DERC updated the Provisional Dorset Atlas (NCC 1988) using recent survey work and aerial photographs.
[22] SNCIs are selected for their habitat or species interest by Dorset Wildlife Trust, Dorset Environmental Records Centre, Natural England and Dorset County Council.
[23] JNCC & Bat Conservation Trust. 2018. National Bat Monitoring Programme. Annual Report 2018.

Table 3. Species records.

Common name	*Species*	Protection	S41
Mammals			
Brown Hare	*Lepus europaeus*		NERC (2006)
Brown Long-eared Bat	*Plecotus auratus*	EPS, Hab (1992), HR (2010), W&C (1981)	NERC (2006)
Common Pipistrelle	*Pipistrellus pipistrellus*	EPS, Hab (1992), HR (2010), W&C (1981)	
Eurasian Badger	*Meles meles*	PBA (1992)	
European Otter	*Lutra lutra*	EPS, Hab (1992), HR (2010), W&C (1981)	NERC (2006)
European Water Vole	*Arvicola amphibius*	W&C (1981)	NERC (2006)
Harvest Mouse	*Micromys minutus*		NERC (2006)
Nathusius' Pipistrelle	*Pipistrellus nathusii*	EPS, Hab (1992), HR (2010), W&C (1981)	
Serotine	*Eptesicus serotinus*	EPS, Hab (1992), HR (2010), W&C (1981)	
Soprano Pipistrelle	*Pipistrellus pygmaeus*	EPS, Hab (1992), HR (2010), W&C (1981)	NERC (2006)
West European Hedgehog	*Erinaceus europaeus*		NERC (2006)
Birds			
Barn Owl	*Tyto alba*	W&C (1981)	
Black Redstart	*Phoenicurus ochruros*	W&C (1981)	
Bullfinch	*Pyrrhula pyrrhula*		NERC (2006)
Cuckoo	*Cuculus canorus*		NERC (2006)
Dunnock	*Prunella modularis*		NERC (2006)
Fieldfare	*Turdus pilaris*	W&C (1981)	
Hobby	*Falco subbuteo*	W&C (1981)	
House Sparrow	*Passer domesticus*		NERC (2006)
Marsh Tit	*Poecile palustris*		NERC (2006)
Merlin	*Falco columbarius*	EPS, Bird (1979), W&C (1981)	
Red Kite	*Milvus milvus*	EPS, Bird (1979), W&C (1981)	
Redwing	*Turdus iliacus*	W&C (1981)	
Reed Bunting	*Emberiza schoeniclus*		NERC (2006)
Skylark	*Alauda arvensis*		NERC (2006)
Song Thrush	*Turdus philomelos*		NERC (2006)
Spotted Flycatcher	*Muscicapa striata*		NERC (2006)
Starling	*Sturnus vulgaris*		NERC (2006)
Tree Pipit	*Anthus trivialis*		NERC (2006)
Amphibians			
Great Crested Newt	*Triturus cristatus*	EPS, Hab (1992), HR (2010), W&C (1981)	NERC (2006)
Invertebrates			

Common name	*Species*	Protection	S41
August Thorn	*Ennomos quercinaria*		NERC (2006)
Autumnal Rustic	*Eugnorisma glareosa*		NERC (2006)
Beaded Chestnut	*Agrochola lychnidis*		NERC (2006)
Blood-Vein	*Timandra comae*		NERC (2006)
Brindled Beauty	*Lycia hirtaria*		NERC (2006)
Brown Hairstreak	*Thecla betulae*	W&C (1981)	NERC (2006)
Buff Ermine	*Spilosoma lutea*		NERC (2006)
Centre-barred Sallow	*Atethmia centrago*		NERC (2006)
Cinnabar	*Tyria jacobaeae*		NERC (2006)
Deep-brown Dart	*Aporophyla lutulenta*		NERC (2006)
Dingy Mocha	*Cyclophora pendularia*		NERC (2006)
Dingy Skipper	*Erynnis tages*		NERC (2006)
Dot Moth	*Melanchra persicariae*		NERC (2006)
Dusky Brocade	*Apamea remissa*		NERC (2006)
Dusky Thorn	*Ennomos fuscantaria*		NERC (2006)
Ear Moth	*Amphipoea oculea*		NERC (2006)
Figure of Eight	*Diloba caeruleocephala*		NERC (2006)
Forester	*Adscita statices*		NERC (2006)
Garden Tiger	*Arctia caja*		NERC (2006)
Ghost Moth	*Hepialus humuli*		NERC (2006)
Grass Rivulet	*Perizoma albulata subsp. albulata*		NERC (2006)
Green-brindled Crescent	*Allophyes oxyacanthae*		NERC (2006)
Grey Dagger	*Acronicta psi*		NERC (2006)
Grizzled Skipper	*Pyrgus malvae*		NERC (2006)
Heath Rustic	*Xestia agathina*		NERC (2006)
Knot Grass	*Acronicta rumicis*		NERC (2006)
Large Nutmeg	*Apamea anceps*		NERC (2006)
Large Wainscot	*Rhizedra lutosa*		NERC (2006)
Marsh Fritillary	*Euphydryas aurinia*	EPS, Hab (1992), W&C (1981)	NERC (2006)
Minor Shoulder-knot	*Brachylomia viminalis*		NERC (2006)
Mottled Rustic	*Caradrina morpheus*		NERC (2006)
Mouse Moth	*Amphipyra tragopoginis*		NERC (2006)
Oak Hook-tip	*Watsonalla binaria*		NERC (2006)
Oak Lutestring	*Cymatophorina diluta*		NERC (2006)
Pale Eggar	*Trichiura crataegi*		NERC (2006)
Powdered Quaker	*Orthosia gracilis*		NERC (2006)
Rosy Minor	*Litoligia literosa*		NERC (2006)
Rosy Rustic	*Hydraecia micacea*		NERC (2006)
Rustic	*Hoplodrina blanda*		NERC (2006)
Sallow	*Cirrhia icteritia*		NERC (2006)
September Thorn	*Ennomos erosaria*		NERC (2006)
Shaded Broad-bar	*Scotopteryx chenopodiata*		NERC (2006)
Shoulder-striped Wainscot	*Leucania comma*		NERC (2006)
Small Blue	*Cupido minimus*	W&C (1981)	NERC (2006)

Common name	*Species*	Protection	S41
Small Emerald	*Hemistola chrysoprasaria*		NERC (2006)
Small Heath	*Coenonympha pamphilus*		NERC (2006)
Small Phoenix	*Ecliptopera silaceata*		NERC (2006)
Small Square-spot	*Diarsia rubi*		NERC (2006)
Sprawler	*Asteroscopus sphinx*		NERC (2006)
Wall	*Lasiommata megera*		NERC (2006)
White Admiral	*Limenitis camilla*		NERC (2006)
White Ermine	*Spilosoma lubricipeda*		NERC (2006)

Protection levels

EPS	European Protected Species includes species from Bird (1979), Hab(1992) and HR(2010)
W&C (1981) or WCA	species included in the Wildlife and Countryside Act (1981) Schedules 1(birds), 5(animals) and 8(plants)
Hab (1992)	European Protected Species from Habitats and Species Directive II and IV
HR (2010) or Hab 2/4	Habitats Regulations (1994) includes those now covered by Conservation of Habitats and Species Regulations (2010)
PBA (1992)	species protected by the Protection of Badgers Act (1992)
S41	
NERC (2006)	Species of Principle Importance in England, NERC Act (2006), Section 41 list

4.2 Field Survey – Habitats

The habitats found within the North Dairy Farm landholding, and within the final selected site, are shown on Drawing 1. Drawing 1 also includes Target Notes of key interest features. The total landholding is not described within this report with key features such as the River Lydden (Target Note 2 [T2]), some streams/ditches (T4), and an avenue of oak trees (T3) having been avoided due to the site design process.

The final selected site consisted of the following Broad Habitats[24]:

Boundaries and Linear Features – hedgerows and ruderal/ grass margins. 'Wide linear features' are those greater than 5m width. Hedgerows are a Priority Habitat[25].

Arable and Horticultural – maize. No Priority Habitat was present within the site.

Improved grassland – ley. No Priority Habitat was present within the site.

[24] Maskell, L. C.; Norton, L. R.; Smart, S. M.; Carey, P. D.; Murphy, J.; Chamberlain, P. M.; Wood, C. M.; Bunce, R. G. H.; Barr, C. J.. 2008 *Countryside Survey. Field Mapping Handbook*. NERC/Centre for Ecology & Hydrology, 130pp. (CS Technical Report No.1/07, CEH Project Number: C03259).

[25] UK BAP Priority Habitats are a range of semi-natural habitat types identified by the UK Biodiversity Gropup as being the most threatened and requiring conservation action.

Rivers and Streams. Streams are defined as being less than 2.5 m wide. Streams are not a Priority Habitat.

Pond – a Priority Habitat (T1).

Broadly speaking the site was dominated by intensive agricultural land consisting of a mixed farming system of arable and ley grassland. The majority of fields were bounded by hedgerows. There was a stream running through the western part of the site flowing north, with a second smaller stream to the eastern boundary. Other habitats of interest consisted of tall ruderal/ grass margins alongside the stream and hedgerows, a pond, and four mature oak trees located within fields.

The habitats within the site are discussed in the following sections.

4.2.1 Arable and grass ley fields

The arable fields were used for maize and a cereal crop (possibly wheat), with stubble still in evidence (Figure 2). The arable fields did not include uncropped strips, wild bird seed cover, or other associated wildlife features. No associated flora was noted. There were perennial neutral grass margins between the cropped area and adjacent hedgerows/ streams – these are discussed in section 4.2.4.

Figure 2. Example of an arable field within the site with a narrow grass margin.

The ley grassland was of low botanical quality and characterised by a dominance of grasses such as rye grass *Lolium spp*.

4.2.2 Hedgerows

The hedgerows were uniformly tall and of good width. The shrubs primarily consisted of hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, field maple *Acer campestre*, with hazel *Corylus avellana*, dogwood *Cornus sanguinea*, privet *Ligustrum vulgare*, and elder *Sambucus nigra* occasionally recorded. In wetter areas goat willow *Salix caprea* was recorded.

Frequent dog rose *Rosa canina*, bramble *Rubus fruticosus*, and ivy *Hedera helix* was noted growing amongst the shrubs.

The hedgerows included occasional mature trees (Figure 3) primarily consisting of pedunculate oak *Quercus robur*, with occasional ash *Fraxinus excelsior* and crack willow *Salix fragilis.* The oaks frequently contained Potential Roost Features (PRFs) which could be used by roosting bats. Some of the hedgerows had shallow ditches most of which were dry or held little water.

Figure 3. Example of a typical hedgerow on the site with mature pedunculate oak.

4.2.3 Streams

The primary stream (T4) ran from the southwest corner of the site, flowing north (Figure 4). A second smaller stream was located to the eastern edge of the site, again flowing north. The streams converged within the site, flowing north towards the River Lydden (T2). The width of the streams varied between 0.5m to 1m width. The water had low turbidity and depth.

Figure 4. The primary stream, showing dense bankside vegetation and frequent goat willow.

The stream banks were heavily vegetated with grasses/ ruderals including cock's-foot *Dactylis glomerata*, false-oat grass *Arrhenatherum elatius*, reed sweet-grass *Glyceria maxima*, Yorkshire fog *Holcus lanatus*, pendulous sedge *Carex pendula*, reedmace *Typha latifolia*, willowherbs *Epilobium spp*., broad-leaved dock *Rumex obtusifolius*, common nettle *Urtica dioica*, teasel *Dipsacus fullonum*, hogweed *Heracleum sphondylium*, and spear thistle *Cirsium vulgare*. Sections of the stream, particularly towards the centre of the site, were overshadowed by a dense growth of shrubs and trees. Species included crack willow, field maple, blackthorn, hawthorn, goat willow, and black alder *Alnus glutinosa*.

4.2.4 Pond

A small pond (T1) was located next to a hedgerow within the northwest field (Figure 5). The pond was north-facing and shaded by the adjacent hedgerow to the south and willow *Salix* spp. trees. There was no aquatic vegetation in the pond with marginal vegetation dominated by floating sweet-grass *Glyceria fluitans*. The pond was heavily silted and shallow.

Figure 5. Pond in northwest field.

4.2.5 Ruderal and tall grass margins

A band of tall ruderal/ grass occurred to the margins of most of the fields. The margins varied in width but were usually between 1m and 1.5m with wider strips noted where vehicle access was required. The margins were typical of neutral semi-improved grassland. Species noted included false-oat grass, rye grass, broad-leaved dock, Yorkshire fog, common nettle, spear thistle, bramble, cock's-foot, hogweed, creeping thistle *Cirsium arvense*, ribwort plantain *Plantago lanceolata*, cow parsley *Anthriscus sylvestris*, cleavers *Galium aparine*, creeping buttercup *Ranunuculus repens*, great willowherb *Chamanerion angustifolium,* barren brome *Bromus sterilis* and rough meadow-grass *Poa trivialis*.

Where drainage was impeded the margins were dominated by field horsetail *Equisetum arvense*.

4.2.6 Field trees

In total six mature pedunculate oak trees were noted within the arable fields (T5). The trees contained PRFs which may be used by bats (Figure 6).

Figure 6. Pedunculate oak with a large split in the trunk which is classified as a PRF.

4.3 Field Survey – Bats

In total the registrations from nine bat species were recorded from within the site (Table 4). Activity, even of the more common bat species, was low.

Activity was concentrated along field boundaries, especially where there were drainage features (Figure 7) and around trees. Occasional flights over the fields were noted by the surveyor; these were predominantly pipistrelle bats foraging *c.* 5 to 10 m from field boundaries, or occasional noctule bats commuting at height.

Pipistrelle species dominated the bat activity recorded within the site, collectively representing 88% of all registrations recorded during the transect surveys (of those 73% of pipistrelle registrations were common pipistrelle; 11% soprano pipistrelle; with the remainder being unidentified pipistrelle). Species recorded at low levels of activity were noctule and serotine. Other species were rare, each representing less than 0.5% of total bat registrations.

The results of the remote detector surveys were broadly similar to the manual transect surveys, with the addition of two further species at very low activity levels - Nathusius' pipistrelle *Pipistrellus nathusii* and lesser horseshoe *Rhinolophus hipposideros* (Table 5).

Table 4. Bat species recorded within the site (transect and static detector recordings).

Common name	*Species*
Common Pipistrelle	*Pipistrellus pipistrellus*
Daubenton's	*Myotis daubentonii*
Lesser horseshoe	*Rhinolophus hipposideros*
Long-eared	*Plecotus Ssp.*
Myotis Ssp.	*Myotis Ssp.*
Nathusius' pipistrelle	*Pipistrellus nathusii*
Noctule	*Nyctalus noctula*
Serotine	*Eptesicus serotinus*
Soprano pipistrelle	*Pipistrellus pygmaeus*

Figure 7. Main locations of bats recorded within the site.

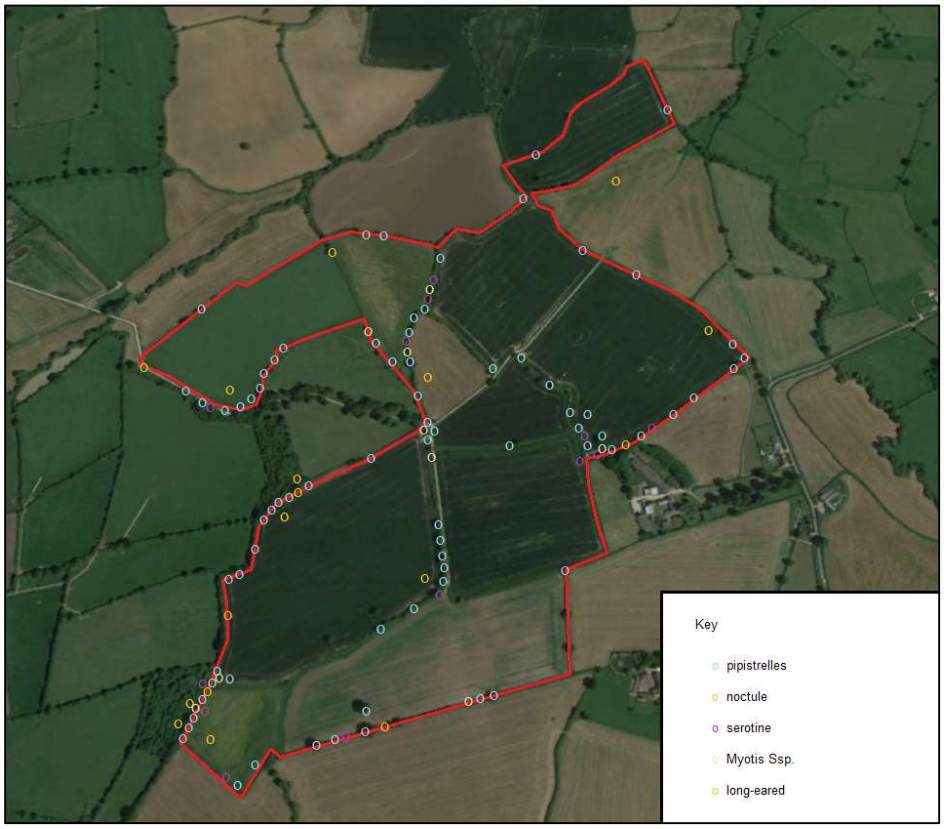


Table 5. Bat registrations per hour at static detector locations.

	Ppip	Pyg	Pnat	Nnoc	Eser	Plec	Msp	Rhip
A1	8.1	2.1	<0.01	2.0	0.1	<0.01	0.6	<0.01
A2	1.3	0.7	0	0.3	0	0	0.2	0
M1	3.3	2.0	0	0.2	0	0	0.1	0
M2	6.7	2.8	<0.01	1.8	0.9	<0.01	0.8	0
J1	2.9	0.6	0	0.2	0	<0.01	0.1	0
J2	2.7	1.1	0	0.1	0.3	0	0	0

Note: Rhip = lesser horseshoe, Nnoc = noctule, Eser = serotine, Ppip = common pipistrelle, Pyg = soprano pipistrelle, Pnat = Nathusius' pipistrelle, Plec = bat of Plecotus genus, Msp = bat of Myotis genus.

4.4 Field Survey - Birds

In total 36 species of bird were recorded within the site during the winter and breeding bird surveys (Table 6). Two species, pheasant and red-legged partridge are introduced species.

The majority of species that were recorded were associated with the field boundary habitats and mature trees.

Thirteen Red Listed and four Amber Listed species were recorded. The majority of these were associated with the field boundaries i.e. hedgerows, trees, scrub, drainage features, and grass margins.

The stubble fields were used by carrion crows, gulls, woodpigeon, game birds, and passerines throughout the winter period.

Flocks of between 10 and 30 corn bunting and linnet were noted over the site during the winter. The flocks were seen exclusively over the stubble fields to the southern and eastern parts of the site where they exhibited feeding behaviour. Smaller flocks of finches were noted to be foraging over the field margins.

Corn bunting and skylark were noted exhibiting breeding behaviour. Both species nest on the ground.

Table 6. Bird species recorded within the site and UK conservation status.

Common name	*Scientific name*	Winter	Spring (possible breeding in blue)	Listing*
Blackbird	*Turdus merula*	Y	Y	Green
Blue tit	*Cyanistes caeruleus*	Y	Y	Green
Brambling	*Fringilla montifringilla*	Y		Green
Bullfinch	*Pyrrhula pyrrhula*	Y	Y	Amber
Carrion crow	*Corvus corone*	Y	Y	Green
Chaffinch	*Fringilla coelebs*	Y	Y	Green
Chiffchaff	*Phylloscopus collybita*	Y	Y	Green
Common buzzard	*Buteo buteo*	Y	Y	Green
Corn bunting	*Emberiza calandra*	Y	Y	Red
Dunnock	*Prunella modularis*	Y	Y	Amber
Fieldfare	*Turdus pilaris*	Y		Red
Firecrest	*Regulus ignicapillus*	Y		Green
Goldfinch	*Carduelis carduelis*	Y	Y	Green

Common name	*Scientific name*	Winter	Spring (possible breeding in blue)	Listing*
Great tit	*Parus major*	Y		Green
Greenfinch	*Chloris chloris*	Y	Y	Green
Grey wagtail	*Motacilla cinerea*	Y		Red
Herring gull	*Larus argentatus*	Y	Y	Red
House sparrow	*Passer domesticus*	Y	Y	Red
Kestrel	*Falco tinnunculus*	Y	Y	Amber
Linnet	*Linaria cannabina*	Y	Y	Red
Long-tailed tit	*Aegithalos caudatus*	Y	Y	Green
Magpie	*Pica pica*	Y	Y	Green
Marsh tit	*Poecile palustris*	Y		Red
Mistle thrush	*Turdus viscivorus*	Y	Y	Red
Pheasant	*Phasianus colchicus*	Y	Y	Introduced
Red-legged partridge	*Alectoris rufa*	Y	Y	Introduced
Redwing	*Turdus iliacus*	Y		Red
Robin	*Erithacus rubecula*	Y	Y	Green
Skylark	*Alauda arvensis*	Y	Y	Red
Snipe	*Gallinago gallinago*	Y		Amber
Song thrush	*Turdus philomelos*	Y	Y	Red
Starling	*Sturnus vulgaris*	Y	Y	Red
Wheatear	*Oenanthe oenanthe*		Y	Green
Woodpigeon	*Columba palumbus*	Y	Y	Green
Wren	*Troglodytes troglodytes*	Y	Y	Green
Yellow hammer	*Emberiza cironella*	Y	Y	Red

*Birds of Conservation Concern 4.

4.4.1 Great crested newt

The onsite pond scored an HSI of < 0.5 which is poor (calculated figure 0.45). The proportion of ponds which are 'poor' that are occupied by great crested newts is 0.03 (3%). The pond had completely dried up in June (Figure 8) and discussion with the landowner confirmed that for most of the year this was always the case. It is therefore unlikely that great crested newts use the pond for breeding.

Figure 8. The pond in early June 2020.

4.4.2 Other species

Brown hare was recorded during the breeding bird surveys within the fields to the south. A maximum of 4 no. adults were seen on one occasion. Other mammal species observed during the surveys were mole *Talpa europaea*, grey squirrel *Sciurus carolinensis*, and roe deer *Capreolus capreolus*.

5.0 ASSESSMENT

The results of the desk study and field surveys were assessed in accordance with current legislation and policy. A proportionate approach was taken in relating the findings to the proposed development.

Through early site assessment and a subsequent iterative design process, features of elevated ecological interest have been avoided, and where necessary buffered. Therefore, all hedgerows, streams, the ephemeral pond, tall ruderal/ grass, and field trees will not be directly impacted by the proposed solar farm. The solar panels and associated compound will be located within arable and ley grass fields of low ecological interest. This approach of avoidance is in line with best practice[26].

A proportion of the land within the site will be seeded using a species-rich wildflower and/or bird seed mix, enhancing overall botanical diversity within the site and thus providing opportunities for a wide range of mammals, birds, amphibians, reptiles, and invertebrates. However, even where agricultural grass mixes are used on the arable fields the botanical diversity would be increased substantially. The limited use of biocides and artificial fertilisers would further enhance site biodiversity value.

5.1 Designated Sites

Given the location of the site, its habitats, and the proposed development, there would not be a direct or indirect impact on the integrity of any site designated for nature conservation. The iterative design process has avoided the PAWS site which contains mature pedunculate oak trees.

5.2 Habitats

Hedgerows are a Priority Habitat (under the Natural Environment and Rural Communities Act 2006, Section 41). As a result of the iterative design process, the hedgerows will be retained in their entirety and the root zone appropriately buffered (including that of the mature trees found along the hedgerows). No negative impacts on hedgerows are therefore anticipated regarding the proposed solar farm.

The pond is a Priority Habitat, albeit it a rather degraded example. As a result of the iterative design process, the pond will not be directly impacted by the proposed solar farm and will be

[26] CIEEM. 2019. Guidelines for Ecological Impact Assessment in the UK and Ireland. Version 1.1. September 2018.

appropriately buffered. No negative impacts on the pond are therefore anticipated regarding the proposed solar farm.

The ruderal and tall grass margins represented habitat which is ubiquitous throughout England and of relatively low ecological value. However, the habitat was associated with hedgerows and streams and as such had value in providing a buffer strip to these habitats, enhancing the margins biodiversity value. As a result of the iterative design process, the ruderal and tall grass habitat will not be directly impacted by the proposed solar farm. No negative impacts on ruderal and tall grass margins are therefore anticipated regarding the proposed solar farm.

As a result of the iterative design process, the field oak trees will be retained and appropriately buffered. No negative impacts on trees are therefore anticipated regarding the proposed solar farm.

The drainage features will not be directly impacted by the proposed solar farm and will be appropriately buffered. Care will need to be taken with regards to ensuring pollutants (chemical such as oil and fuels, and sediment such as silts) do not enter the stream during the construction phase of the development. Where measures are undertaken to ensure pollution control measures are in place there would not be a negative impact on the drainage features.

The arable and ley grass fields were of negligible botanical interest. Such habitat is ubiquitous throughout Dorset and the UK and its loss due to the proposed solar farm would not be deemed ecologically significant. Nonetheless the fields did provide habitat for foraging and nesting birds (see section 5.3.2).

5.3 Species

5.3.1 Bats

Nine bat species have been recorded within the site.

No potential roosting habitat i.e. the mature trees, would be impacted by the proposed solar farm.

The site provides a good foraging and commuting resource for bats, particularly along the hedgerows and drainage features. Although habitats used by bats are not protected unless under a specific designation, it is accepted protocol to ensure that bats are appropriately accounted for within development proposals.

In this instance the hedgerows, trees, scrub, and drainage features will be retained in their entirety and buffered accordingly. There would not be a significant change in the availability of foraging and commuting habitats within the site and as such bats would not be impacted.

5.3.2 Other mammals

The drainage features may be used occasionally by otter and water vole, although for both species the habitat is sub-optimum. Given that the drainage features will be retained and buffered, no impact on these species is predicted. Therefore, these species do not require specific mitigation and/or compensation measures.

The marginal habitats may be used by West European hedgehog. Given that the marginal habitats will be retained and buffered, no impact on this species is predicted. Therefore, this species does not require specific mitigation and/or compensation measures.

The site is used by brown hare and possibly by harvest mouse, both of which are NERC (2006) species.

There is a risk of direct mortality of hares during the construction phase where works are undertaken between February and September. The risk relates to leverets as these will remain within a 'form' even if threatened by vehicles. This risk can be significantly reduced through implementation of best practice, including the presence of an Ecological Clerk of Works (ECoW). The ECoW can check the development area prior to works commencing, to ensure no leverets are present. In addition, any excavations that are left overnight would need to either be covered or have mammal ramps positioned in them to allow animals to escape.

Large numbers of brown hare have been recorded within established solar farm sites in southern UK[27] and as such no long-term impacts are predicted on this species if suitable ingress is provided through security fencing.

Harvest mice habitat includes cornfields, hedgerows, brambles, and long grass. The latter three habitats will be retained within the site and as such, if this species is present, impacts would be negligible (the only loss being through reduced arable seed production). Therefore, this species does not require specific mitigation and/or compensation measures.

Although Dorset is known to contain common dormouse the hedgerow habitat within the site will be retained and as such no impacts on common dormouse, if they were to be present,

[27] H. Montag, G Parker & T. Clarkson. 2016. The Effects of Solar Farms on Local Biodiversity; A Comparative Study. Clarkson and Woods and Wychwood Biodiversity.

would occur. Therefore, this species did not require survey or specific mitigation and/or compensation measures.

5.3.3 Birds

The site is managed in part for shooting with feeders located in many of the field hedgerows. This will have impacted on the local biodiversity through supplementary feeding, elevated numbers of a non-indigenous species, the use of bird deterrents especially in the winter, and shooting disturbance. Nonetheless several birds were recorded within the site including those which are Red Listed.

Most of the Red and Amber list species which may breed within the site would utilise the hedgerows, trees, and scrub and these features will be retained. However, there are species which may utilise the fields for nesting, especially corn bunting and skylark.

As a precautionary measure no construction works which could affect ground nesting birds will take place between 1st March and 31st August inclusive, unless the ECoW has undertaken a careful, detailed check for active birds' nests immediately beforehand and provided written confirmation that no birds will be harmed and/or that there are appropriate measures in place to protect nesting bird interest (as per BS 42020:2013). Any birds nesting will be left to complete breeding (i.e. until all dependant juveniles have fledged).

Overall, when comparing the number of bird species found on solar plots compared with control plots in southern UK, there was no significant difference found[28]. There was, however, a significantly higher abundance of birds on solar plots.

The greater abundance and species of birds on solar sites suggests foraging opportunities are greater than on the adjacent undeveloped sites. This is likely to reflect the change from a homogenous arable environment to a diverse grassland habitat that also contains structures for cover or perching. Given that the proposed solar farm will retain the marginal habitats the positive impacts on birds demonstrated elsewhere would be expected to occur at North Dairy Farm i.e. no change in bird diversity, but an increase in bird numbers.

Nonetheless, open agricultural fields where stubbles are left overwinter, can provide a valuable habitat for some seed-eating farmland birds including skylark, linnet, yellowhammer,

[28] H. Montag, G Parker & T. Clarkson. 2016. The Effects of Solar Farms on Local Biodiversity; A Comparative Study. Clarkson and Woods and Wychwood Biodiversity.

and corn bunting. As these species were recorded within the site enhancement/compensation measures would be appropriate.

5.3.4 Great crested newt

There are records of great crested newt within 2 km of the site and the site is located within the Impact Risk Zone (IRZ) for the Holnest SSSI/SAC, a site designated for its internationally important population of great crested newts (the SSSI is over 2 km distant from the site). As such there is potential that the construction of the proposed solar farm could impact on the meta-population of great crested newt associated with the designated site (through injury/death of newts using the terrestrial habitat).

Appropriate and proportionate mitigation will be required. It is likely, if great crested newts do occur within the site, that they would primarily occur within the field boundary habitats. Nonetheless there is a possibility of newts crossing the fields. Given the size of the site and the relatively low-key development a trapping and translocation programme would not be proportionate to the potential risk. However, mitigation should be provided through an appropriately licenced ECoW. This would include a walkover of site construction areas prior to works commencing to check for great crested newts. Any newts found would be carefully moved to a site distant from the development works. As the ponds within 500 m of the site occur to the south and east it may be appropriate to erect a temporary herptile fence along the relevant site boundaries to reduce the possibility of newts entering the site. The fence would need to be a one-way barrier i.e. allowing newts within the site to move south and east.

5.4 Enhancement and Compensation

Opportunities will be sought to maximise biodiversity gain within the site, in accordance with best practice. Enhancement and compensation measures will focus on buffering and improving the retained habitats and will consider the needs of the species found within the site or which could occur within or be encouraged into the site. Where appropriate the enhancement and compensation measures will be developed through consultation with organisation such as the Dorset Wildlife Trust and the Stour Catchment Initiative e.g. regarding the creation of habitat for great crested newts.

Habitat enhancement/compensation will primarily focus on the sowing and appropriate management of wildflower meadow grassland and seed-rich wild bird cover crops. Opportunities for sowing within the site include beneath power lines and within the northern field margins where substantial areas will not be used for the solar panels. The seed mixtures

will be of local provenance and the grassland managed in a manner sympathetic to wildlife. The use of pesticides will be avoided.

The hedgerows within the site will be managed for wildlife. Hedgerows will be kept at a range of heights e.g. partridges and yellowhammers prefer short hedgerows of under 2 m, while song thrushes and bullfinches prefer wide tall hedges over 4 m height. The hedgerows will be trimmed in January or February to avoid the destruction of birds' nests (present from March to August) and to allow any berry crop to be used by wintering birds (September to December). The hedgerows will trimmed on a two- or three-year rotation, rather than annually, to ensure that thick nesting cover is available somewhere on the site every year, and to boost the berry crop that generally develops on second-year growth.

A range of wildlife boxes for bats and birds will be located on the trees within the site. Bat boxes will include the 2f Schwegler bat box (general purpose)[29], 11fd Schwegler bat box, and the 1fs Schwegler large colony bat box (or alternatives).

In addition, Schwegler bird boxes will be erected within the hedgerows and on trees. Two box types would be included to encourage a range of breeding birds:

2 GR - provides nesting birds with extra protection from predatory species and mammals e.g. magpies. The single oval entrance hole (30 mm x 45 mm) is suitable for coal-, marsh-, blue-, great- and crested-tits, redstart, nuthatch, collared and pied flycatcher, wryneck, tree and house sparrow.

1B - attracts a wide range of species and is available with different entrance sizes to prevent birds from competing for the boxes i.e. 32 mm entrance hole boxes (will attract great, blue, marsh, coal and crested tit, redstart, nuthatch, collared and pied flycatcher, tree and house sparrow); and 26 mm entrance hole suits blue, marsh, coal and crested tit and wren.

There are records of barn owl within 2 km of the site. The creation of permanent species-rich grassland habitat will encourage small mammals and thus enhance the site for owls. Therefore, two barn owl boxes will be erected within the site on mature trees.

Herptile hibernacula will be constructed within appropriate areas of the site e.g. adjacent to drainage features/tall grassland. The hibernacula will comprise partially buried log and rubble, to provide shelter and an over-wintering refuge for reptiles, amphibians, and invertebrates.

[29] Available at https://www.nhbs.com/ or other online retailers.

6.0 CLOSURE

This report has been prepared by SWE Limited with all reasonable skill, care and diligence, and taking account of the manpower and resources devoted to it by agreement with the client. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

The information presented in this report provides guidance to reduce the risk of offences under UK law. However, SWE is not a legal practice and disclaims any responsibility to the client and others for actions that lead to offences being caused, whether or not the guidance contained in this report is followed. Interpretation of UK legislation is presented in good faith; however, for the avoidance of doubt, we recommend that specialist legal advice is sought.

This report is for the exclusive use of Aardvark EM Ltd; no warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SWE. The conclusions drawn from this report remain valid for one year from the survey date.

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DRAWING 1. HABITAT MAP