Butterfly Solar Farm

on behalf of RWE Renewables UK Ltd

Technical Appendix 5.1: Habitats and Vegetation Baseline Report





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1 INTRODUCTION

1.1 Background and Scope

- 1.1.1 Avian Ecology were commissioned by Axis on Behalf of RWE Renewables UK to undertake baseline ecological surveys in relation to a proposed solar energy generating station and an associated on-site Battery Energy Storage System (BESS) (the 'Proposed Development) located on land to the north of the B5426, Wrexham (the 'Site'). The Proposed Development also includes the associated infrastructure and connection to the Legacy National Grid substation.
- 1.1.2 The Proposed Development would enable the export of up to 99.9 megawatts (MW) of electricity, as well as the storage of electricity in the BESS. The solar array is divided into three principal areas referred to as the Western, Central and Eastern Array Areas (the WAA, CAA and EAA respectively and together the Array Areas). In addition, cabling is proposed between the EAA and CAA and between the CAA and WAA, and also between the proposed on-Site substation and the Legacy National Grid Substation. Together, proposed cabling locations are termed the Cable Route.
- 1.1.3 This report presents detailed methodologies and results of desk study and field surveys completed to establish baseline habitat conditions of the Site.
- 1.1.4 The objectives of this report are to:
 - provide baseline information on the current habitats within the Site;
 - identify the proximity of any designated sites for nature conservation interest with habitats and/or botanical interests; and,
 - record the presence of any protected or non-native plant species listed on Schedule 8 and 9 of the Wildlife and Countryside Act 1981 (as amended), respectively.
- 1.1.5 The report has been informed by a desk-based review of relevant ecological information and extended habitat survey. Reference is made to relevant legislation, planning policy and guidance, as appropriate.
- 1.1.6 The desk-based review included a review of a Western Ecology Preliminary Ecological Appraisal (PEA) report written for this Proposed Development (provided as **Annex 1**). The PEA undertaken by Western Ecology was based on a Preliminary Site Boundary and did not include grid connection routes
- 1.1.7 Consideration has been given to the potential presence of rare, protected, or notable habitats, and the location of nearby features including designated sites for nature conservation.
- 1.1.8 Throughout this report, common names for species are favoured over scientific names unless there is potential for confusion, in which case scientific names are also presented.

2 METHODOLOGY

2.1 Desk Study

- 2.1.1 A desk study was undertaken to identify existing information on the presence of designated sites for nature conservation, protected and notable species and habitats within proximity to the Site as follows:
 - Non-statutory designated sites for nature conservation within 2km of the Site.
 - Statutory designated sites for nature conservation, within 5km of the Site, extending to 10km for internationally protected sites with mobile qualifying species.
 - Existing records of priority habitats, protected and notable faunal species, within 2km of the Site.
- 2.1.2 The following key sources were consulted:
 - Natural Resources Wales and Joint Nature Conservation Committee (JNCC) websites1.
 - The Multi Agency Geographic Information for the Countryside (MAGIC) website².
 - District Level Licencing Data³.
 - Ancient Tree Inventory.
 - Cofnod (Local Environmental Records Centre for North Wales).
- 2.1.3 Reference was also made to Ordnance Survey (OS) maps of the wider area and online aerial images (www.google.co.uk/maps) in order to determine any features of nature conservation interest in the wider area, including potential ponds and watercourses.

2.2 Field Survey

Habitat Survey

- 2.2.1 An extended Habitat Survey of the Array Areas was undertaken between the 21^s and 23rd May 2025 by J. Stevens *BSc (Hons)*, C. Dean PhD, and K. Love Msc, all of whom are suitably experienced ecologists. The survey followed UK industry standard UKHab Methodology V2.0⁴ with reference to the CIEEM, guidance (2017)⁵. A desk-based translation to align with JNCC Phase 1 Habitat Survey⁶ types was also undertaken.
- 2.2.2 Habitats were mapped and described to the highest level of UK habitat classification as possible, with each habitat feature being assigned to a primary habitat and then described with secondary codes if applicable. The survey was extended to include the additional recording of specific features indicating

¹ http://jncc.defra.gov.uk/

² https://magic.defra.gov.uk/MagicMap.aspx

³ https://naturalengland-defra.opendata.arcgis.com/datasets/great-crested-newts-edna-pond-surveys-for-district-level-licensing-england?geometry=-1.451%2C51.749%2C-1.002%2C51.823

⁴ http://www.ukhab.org [Accessed 15/07/2024]

⁵ CIEEM. (2017). *Guidelines for Preliminary Ecological Appraisal (2nd edition)*. Chartered Institute of Ecology and Environmental Management, Winchester.

the presence, or likely presence, of protected species, invasive species and other species of conservation significance using a series of 'target notes' (TNs).

Bat Roosting Assessment of Trees

- 2.2.3 Where identified as part of the extended habitat survey, trees within the Survey Area (**Figure 1**), were assessed for their suitability to support roosting bats in accordance with Bat Conservation Trust guidance (Collins, 2023⁷).
- 2.2.4 The suitability of trees relative to roosting bats was initially classified according to the following categories adapted from Tables 4.2 of BCT guidance:
 - None: Either no Potential Roost Features (PRFs) in the tree or highly unlikely to be any.
 - FAR: Further assessment required to establish if PRFs are present in the tree.
 - PRF: A tree with at least one PRF present.
- 2.2.5 While trees may be assigned FAR, following Figure 6.1 within Collins (2023), only trees subject to impacts are required to have a detailed Ground Level Tree Assessment (GLTA) to assess the suitability of individual PRFs. However, in instances where a PRF was identified and readily visible, features were further assessed on their potential to support bats based on Table 6.2 of BCT guidelines (Collins, 2023), as follows:
 - PRF- I: PRF is only suitable for individual bats or very small numbers of bats due to size or lack of suitable surrounding habitats.
 - PRF- M: PRF is suitable for multiple bats and may therefore be used by a maternity colony.
- 2.2.6 PRF designations are preliminary and based on a ground-level perspective, and subject to review following additional surveys (e.g., PRF Inspection Surveys at height).

Limitations

Extended Habitat Survey

- 2.2.7 The survey does not constitute a detailed botanical survey or faunal species list or provide a full protected species survey but, enables competent ecologists to ascertain an understanding of the ecology of the Site in order to:
 - Broadly identify the nature conservation value of a site and assess the significance of any potential impacts on habitat/species recorded; and/or,
 - Confirm the need and extent of any additional specific ecological surveys that are required to identify the true nature conservation value of a site (if any).
- 2.2.8 Access was not available to the Cable Route on health and safety grounds due to its use as active highway. These habitats have been assessed from publicly accessible aerial imagery and surveys from moving vehicles, where safe to be undertaken. All other areas of the Site, including the Array Areas, were fully accessible.

⁷ Collins, J. (ed.) (2023) Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn). The Bat Conservation Trust, London.

Bat Roosting Assessment of Trees

2.2.9 Trees within the survey area were not subject to a detailed or methodical survey for PRFs, but where features were readily visible on a tree these were recorded via target notes. As such, this survey should not be considered a comprehensive account of all trees with PRFs within the Site.

3 RESULTS

3.1 Desk Study

3.1.1 This section provides details of existing habitat information and existing records of protected and notable plant species identified within and in proximity to the Site from desk study sources listed in Section 2.1.

Statutory Designated Sites for Nature Conservation

3.1.2 A summary of statutory designated sites with qualifying habitat and/or botanical interest located within 2 km of the Site is presented in **Table 3-1** and locations are presented in Figure 7-1.

Table 3-1: Statutory Designated Sites

(SAC: Special Area of Conservation; SSSI: Site of Special Scientific Interest)

Designated Site	Distance and Direction from the Site	Botanical and/or Habitat Qualifying Features
Johnstown Newt Sites SAC	Immediately adjacent to Cable Route	Designated for the presence of Annex II species great crested newt.
Stryt Las a'r Hafod SSSI	Immediately adjacent to Cable Route	Of special interest for amphibians, particularly great crested newt but also supports significant populations of commoner amphibian species including smooth newt, palmate newt, common frog, and common toad.
River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid SAC	635m south of EAA	Designated for the presence of Annex I habitat water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation. Designated for the presence of Annex II species Atlantic salmon, floating water plantain, sea lamprey, brook lamprey, river lamprey, bullhead and otter.
Afon Dyfrdwy (River Dee) SSSI	635m south of EAA	Afon Dyfrdwy (River Dee) is of special interest for its fluvial geomorphology, Carboniferous geology, range of river habitat types, saltmarsh transition habitats, populations of floating water plantain, slender hare's-ear, sea barley, hard-grass, otter, salmon, bullhead, brook lamprey, river lamprey, sea lamprey, club-tailed dragonfly and other aquatic invertebrates.
Sontley Marsh SSSI	1.35km north of the CAA.	One of the best wetland examples in Clwyd of the "southern mesotrophic mire" and also designated for botanical interest.

Non-statutory Designated Sites

- 3.1.3 The desk study identified 19 Wildlife Sites for Wrexham (WSW), four Wild Ground Reserves (WGR) and three Country Parks within 2km of the Site as described in Table 3-2 and shown on Figure 7-2.
- 3.1.4 Of these, Yorke's Dingles and Well Wood WSW and Oak Wood WSW are located partially within the CAA, whilst Hopyard Wood WSW is located adjacent to the EAA. Crematorium WSW, Legacy substation WSW, Gefeiliau Brook WSW, Aberderfryn WGR and Bonc yr Hafod Country Park are all located immediately adjacent to the Cable Route.

Table 3-2: Non-statutory Designated Sites

(WSW: Wildlife Sites for Wrexham; WGR: Wild Ground Reserve)

Designated Site	Distance and Direction from the Main Development Area	Description of Botanical and/or Habitat Qualifying Features	
York Dingles and Well Wood WSW	Within the Site (CAA)	Ancient woodland along two narrow valley strips. Much of the woodland is regenerating due to felling within the last 20 years. The tree species present include ash, sycamore, hazel, guelder rose and wild cherry with oak dominating the mature canopy.	
Oak Wood WSW	Within the Site (CAA)	A small unfenced woodland dominated by mature oaks. The understorey consists of holly, hawthorn and field maple. The woodland is grazed and this has lead to a grassy and impoverished ground flora. However several woodland herbs remain.	
Hopyard Wood WSW	Adjacent EAA	Two woods which have been planted up with hybrid poplars and conifers. Other canopy trees are sycamore and ash. The understorey has elder, hawthorn and snowberry. The field layer is poor, mostly nettle, ivy, bramble and dog's mercury.	
Aberderfryn WGR	Immediately adjacent Cable Route	No data provided	
Bonc yr Hafod Country Park	Immediately adjacent Cable Route	No data provided	
Legacy substation WSW	Immediately adjacent Cable Route	Dense/continuous scrub, Semi-improved neutral grassland, Semi-natural broad-leaved woodland.	
Crematorium WSW	Immediately adjacent Cable Route	Mixed parkland/scattered trees, Semi-improved neutral grassland, Semi-natural broad-leaved woodland	
Gefeiliau Brook	Immediately adjacent Cable Route	A series of woods, marshes and neutral grasslands along the Gefeiliau Brook. The northern woods are wet with alder dominant canopies with occasional ash, sycamore and white willow.	
Stryt Las WGR	115m west of Cable Route	No data provided	
Stryt Las Country Park	115m west of Cable Route	No data provided	
Morgan Ceramics WGR	280m south of Cable Route	No data provided	
Brandie Brook WGR	350m south of Cable Route	No data provided	
Erddig Estate	300m north of WAA	National Trust estate with woodlands, semi-improved neutral grasslands and marshes. The woodlands have a lot of planted beech but there is also much oak, sycamore and ash. Hafod and Lewis Wood have areas of wet alder woodland	
Bronwylfa Wood WSW	570m west of Cable Route	Semi-natural broad-leaved woodland along Pentre Bychan Brook. Sycamore is the most dominant tree in the canopy with some ash and oak. Holly, hazel and elm form the understorey. Ramsons, male fern and soft grass are frequent in the ground flora.	
Sall's Wood WSW	840m south of CAA	An estate woodland which has a mixed canopy composition. The wood is ancient with a good broad-leaved	

Designated Site	Distance and Direction from the Main Development Area	Description of Botanical and/or Habitat Qualifying Features	
		content. Several ancient woodland species remain in the ground flora including false oxslip.	
Garden Fort Wood WSW	930m south of Cable Route	This woodland is on the steep sides of an ancient fort. It is dominated by beech with an understorey of holly. The ground flora is sparse but bluebell and ferns occur throughout.	
Caldecott's Wood	1.13 km south of CAA	This site is an area of semi-natural, broad-leaved woodland. The dominant tree species is ash with locally dominant oak, wych elm and sycamore. Also present in the canopy are birch, English elm, alder and wild cherry.	
Nant Mill - Grasslands	1.17 km north of Cable Route	No data provided	
Big Wood	1.24 km north of Cable Route	The wood along the River Clywedog is a mixture of conifer plantation, beech plantation and patches of semi-natural broad-leaved woodland. The broad-leaved canopy is dominated by sycamore and beech and there is a variable ground flora	
Bangor On Dee Meadows	1.01km west of EAA	No data provided	
Long Wood and Grassland, Erbistock	1.36km south of CAA	An ancient broad-leaved woodland. It is of one of only two ash/wych elm woods in North Wales. Other canopy species are sessile oak, beech, sycamore and conifers. The understorey includes hazel, hawthorn, holly, field maple and wild privet.	
Eyton Hall Wood	1.37km south of Cable Route	An L-shaped woodland along a brook leading to the River Dee and then southwards along the river. The canopy is mainly ash with some oak, sycamore and wild cherry. The understorey has much wych elm and some hazel, elder and wild privet.	
Marchwiel Marsh	1.38km north of EAA	Marshy field between school and disused railway line. Past improvement has lead to it being dominated by rushes; hard rush, soft rush and jointed rush are all abundant. Grasses are also prevalent with timothy and Yorkshire fog the most common.	
Gardden Wood/Rocky Wood	1.48km south of Cable Route	Semi-natural broad-leaved woodland with large boulders and cliffs due to parts being disused quarries. The canopy is dominated by sessile oak, but there are a few beech trees and saplings are frequent in the understorey with rowan and elm.	
Nant Mill Bat Sites	1.89km north of Cable Route	No data provided	

Priority Habitats – Existing Records

- 3.1.5 Information on Habitats of Principal Importance (HPI) (also known as Priority Habitats), as listed under Section 7 of the Environment (Wales) Act 2016 within 2 km of the Main Development Area is presented in **Table 3-3.**
- 3.1.6 Where numerous records of a particular habitat were identified, only the closest record to the Site boundary has been provided, to provide context for the Site and surrounding area.

Table 3-3: Priority Habitats

Delegate habited	Danisan adian	Approximate distance of nearest habitat	
Priority habitat	Designation	from the Site	
Coastal and Floodplain Grazing Marsh	S7	Within the EAA	
Wood Pasture and Parkland	S7	Immediately adjacent Cable Route	
Traditional Orchards	S7	Immediately adjacent Cable Route	
Open Mosaic Habitat on Previously Developed Land	S7	Immediately adjacent Cable Route	
Purple Moor Grass and Rush Pastures	S7	200m (note appears an incorrect record from review of aerial imagery)	
Lowland Fens and Reedbeds	S7	480m west of CAA	
Lowland Meadows	S7	770m south-west of Cable Route	

Ancient and Irreplaceable Habitats – Existing Records

- 3.1.7 No areas of Ancient Woodland are located within the Site, but areas of Ancient Woodland are located immediately adjacent to the CAA, EAA and proposed Cable Route.
- 3.1.8 Cofnod returned no records of ancient or veteran trees within the Site, however 11 ancient trees and 74 veteran trees were identified within 2km of the Site.
- 3.1.9 No areas of peatland are located within the Site with the nearest being located 1.08km north of the Cable Route.

3.2 Field Survey

UK Habitat Classification Survey

- 3.2.1 This section should be read in conjunction with the Habitat Plan as presented in **Figure 7-3 Habitat Plan**; descriptions are provided in **Table 3-4**, target notes are presented in **Table 3-5** and photographs are presented in **Annex 1**.
- 3.2.2 The Site is dominated by agricultural habitats, principally modified grassland within the WAA and CAA and arable land within the EAA. Other habitats present include mixed and broadleaved woodland, ponds, scrub and urban habitats comprising farm tracks and roads. Fields are typically bounded by hedgerows which are principally species-poor, and tree lines. Within the EAA in particular, several mature individual trees are present. Habitats are described in detail in **Table 3-4** below.

Table 3-4: UKHab habitats Summary

Habitat Code	JNCC Phase 1 Habitat	Descriptions	Photo No
c1	J1	Cropland Fallow field with agricultural weeds within the CAA	1
c1c (including c1c7)	J1	Cereal crop Maize crop within the CAA and EAA	2, 3

Habitat Code	JNCC Phase 1 Habitat	Descriptions	Photo No
c1d	J1	Non-cereal crops seen within the CAA	
g3c	B2.2	Other neutral grassland Localised patches of other neutral grassland, typically field margins. See Target Notes 18,20, 42 and XX	
g4	B4	Modified grassland Modified grassland with species indicative of agricultural use. This was typically utilised as with grazing, silage or possibly as a ley. Typically dominated by perennial rye grass and meadow grass sp with cocksfoot, meadow foxtail and Yorkshire fog. Forbs limited but where present white clover and creeping buttercup dominated with occasional ribwort plantain, speedwell, dandelion, creeping thistle and broadleaved dock dependent on local conditions.	9, 10, 11, 12 13 14, 15, 16, 17
h2a5	J2.1.1	Species-rich native hedgerow Species rich hedgerows forming field boundaries across the Site with minimum five species per 30m length. These are only irregularly found within the Site. Typically dominated by hawthorn and/ or blackthorn variously in conjunction with hazel, oak, ash, elder and dog rose. Some hedgerows also including cherry, sycamore, holly, beech and horse chestnut.	18, 19, 20
h2a6	J2.1.2	Other native hedgerow Hedgerows forming field boundaries around the Site typically dominated by hawthorn and/ or blackthorn. Other species present variously included hazel, field maple, oak, elder, dog rose, ash, sycamore.	21, 22, 23, 24, 25
h3d	A2.1	Bramble scrub Area of bramble dominated scrub that makes up woodland edge	26
h3h	A2.1 Mixed scrub Dense scrub / saplings on steep sided gully that is immediately beyond the Site boundary. Species including ash, blackthorn, hawthorn, hazel and cherry		27
r1a (including r1a6)	G1.1	Eutrophic standing waters Ponds within the array areas Also includes field boundary ditches	28, 29, 30, 31
r1g	G1.1	Other standing water Field boundary ditches within the Array Areas. Most of these were dry or near dry at time of survey but may hold water at other times of year.	32, 33, 34, 35, 36
u1c	J4	Artificial, unvegetated, unsealed surface Comprises farm access tracks and roads dominated by bare ground	37, 38

Habitat Code	JNCC Phase 1 Habitat	Descriptions	Photo No
u1e	u1e Built linear features Comprises farm access tracks and roads		39, 40, 41
w1f (including w1f7)	A1.1.1	Lowland mixed deciduous woodland Woodland within a stream valley with limited access. Evidence of some tree works/ felling locally. Canopy layer ash and oak dominated, with occasional birch and Scots pine. Shrub layer of hawthorn and elder and an understory dominated by bramble with few other woodland indicator species present.	42, 43
	J2.3.2	Lowland mixed deciduous woodland (line of trees) Typically lines of mature oak, but also including ash and willow.	44, 45
	A1.1.2	Other broadleaved woodland Aspen plantation with large section of goat willow. Approx. 10m tall. Dry depression under willow likely to be seasonally wet.	46
w1g	J2.3.2	Other broadleaved woodland (line of trees) Lines of trees typically dominated by mature oak but also with hawthorn, willow, ash, elder, willow, cherry, sycamore, field maple, alder.	47, 48, 49, 50
w1h5	A1.2.2	Other woodland; mixed; mainly broadleaved Plantation woodland, blocks of which are present on embankments in the WAA and also within the EAA as game cover plantation. Within the WAA woodland is dominated by semi mature trees including cherry, field maple, larch, poplar, apple, ash, hawthorn, dogwood, blackthorn, oak, pine and birch Within the EAA woodland comprises mostly semi mature trees with some mature . Species present include beech, oak, hawthorn, ash, Scots pine, blackthorn, cherry, and sweet chestnut. Ground flora is nettle and bramble dominated. Game birds feeders are present with a dry ditch present along the woodland edge.	51, 52
	J2.3.2	Other woodland; mixed; mainly broadleaved (line of trees) Two lines of trees with the Site, one at edge of wooded gully comprised of mostly mature oak with ash and scattered pine. The other mature cherry, oak, Scots pine, horse chestnut, ash and understory of hawthorn, blackthorn, elm and field maple.	53, 54
w2c	Other coniferous woodland (line of trees) Line of cypress trees along woodland edge. Outside of Site		55
Individual trees A3.1 Mature individual trees predominantly located within fields comprising the EAA and being oak		56, 57, 58, 59 60	

Table 3-5: Target Notes

Target Note	Description	Photo Reference
1	Mature ash tree with broken trunk, cracks and a large cavity. PRF	61
2	Mature ash tree with possible rot holes from where branches have been lost. FAR	62
3	Mature ash tree with potential cavities in main branches and trunk. PRF	63
4	Mature oak tree with ivy on trunk. Several cracks along trunk. PRF	64
5	No pond here, although shown on OS maps	65
6	Pond basin. Entirety dried and surrounded by willow	66
7	Freshly machine dug channel	67
8	Cleared area on this stretch of boundary Few spindly ash hawthorn remaining but on other side of boundary	68
9	Standing deadwood with holes and hollow cavity BRP – FAR	69
10	Barn owl box on dead tree. No evidence of occupation. Tree PRF-M from preliminary assessment. Multiple cracks, rot holes and lifting bark	70
11	Unmown patch dominated by meadow buttercup with occasional dock, plantain, nettle, cow parsley, alongside grasses of Yorkshire fog, smooth stalked meadow grass, soft rush, perennial rye	71
12	Rubble pile offering potential refugia	72
13	Log pile offering potential refugia	73
14	Japanese knotweed around pond edge	74
15	Standing deadwood. Negligible BRP as all features exposed	75
16	Japanese knotweed. No pond present as shown on OS basemap	76
17	Mammal hole at tree base. Cobwebbed and disused but old corn remains indicating possible badger outlier	
18	No pond present here as shown on basemap. Possibly seasonally wet but grassland not standing water. Low cover of grass and lots of bare ground. Species present: dock, scentless mayweed, hedge woundwort, creeping thistle, scarlet pimpernel Cocksfoot, perennial rye, Yorkshire fog, smooth stalked meadow grass	-
19	Area of likely felled woodland dominated by nettle, wood avens, willowherb and buttercup alongside regeneration of hawthorn, willow and sycamore	77
20	Rubble pile offering potential refugia aast edge of grassland field margin between field and woodland. Creeping and meadow buttercup, horsetail, ragged Robin, meadow foxtail, nettle and hogweed. Encroaching scrub of alder and bramble present.	78
21	Tree felling and rubble piles offering potential refugia	79
22	View of wooded gully beyond Spindly ash sycamore and larch Can see wood avens red campion + ferns in ground layer	80
23	Pond here, water muddy but possibly deep Duck seen. No aquatic veg visible. Some reedmace.	81
24	Large mounds of earth left by clearance activities	82
25	Large cleared area here, recent tree felling indicated by branches Trench soil debris piled along margin	83

Target Note	Description	Photo Reference
26	Steep sided gully beyond Site boundary Dense scrub / saplings of ash, blackthorn, hawthorn, hazel and cherry	84
27	Almost entire wood cleared east of this point but regenerating naturally	85
28	Photo of woodland, plus log pile and sounds like rookery present	86
29	Big mature ash tree here but signs of dieback. Dieback in most ash trees seen	87
30	Piled brash and deadwood along hedge line, natural refugia	88
31	No sign of pond being here as shown on OS basemap	89
32	Behind is area of dense bramble scrub Some oak birch saplings	90
33	Some standing deadwood / dying ash remain in margin	91
34	Golf course adjacent to site here	92
35	Dense snowberry here S. albus Non native / garden escape	93
36	Wooded gully mature oak holly hazel	94
37	Dead tree outside Site boundary . Large cavity suitable for raptors and potentially bats. Possibly exposed at top of broken trunk. PRF	95
38	Building foundations lower in the ground	96
39	Mature oak with PRFs. Dead branches with cracks	97
40	Narrow strip of grassland present either side of track. All less than 2m width	98
41	Mature oak with PRFs. Broken branches with cracks	99
42	Area of other neutral grassland at base of overhead line tower. Not accessed to avoid crop damage.	100
43	Oak with potentially veteran features here	101
44	Standing dead oak with likely cavities BRP – FAR	102
45	Track here just sparse grassy strip on field margin	103
46	Standing deadwood with cavity BRP – FAR	104
47	Standing deadwood BRP – FAR	105
48	Large pond seen other side of hedgerow boundary	106
49	Area of grassland around overhead line tower not accessed due to crops	107
50	Mature oak with several cavities. FAR	108
51	The Foss watercourse. Shallow at c. 20cm depth and 2.5 wide. Sluggish flow. Suitable for otter. Bank tops relatively undisturbed and densely vegetated	109

Priority Habitats

- 3.2.3 The UKHab survey identified the following habitats which constitute an HPI, or which may constitute a HPI:
 - Hedgerows;
 - Lowland mixed deciduous woodland; and,

- Ponds (subject to further assessment).
- 3.2.4 Ponds may fit the definition of HPI if they meet one of several criteria. Given not all criteria can be fully assessed without detailed survey, following a precautionary approach it has been assumed that all ponds within the Site may achieve priority status.

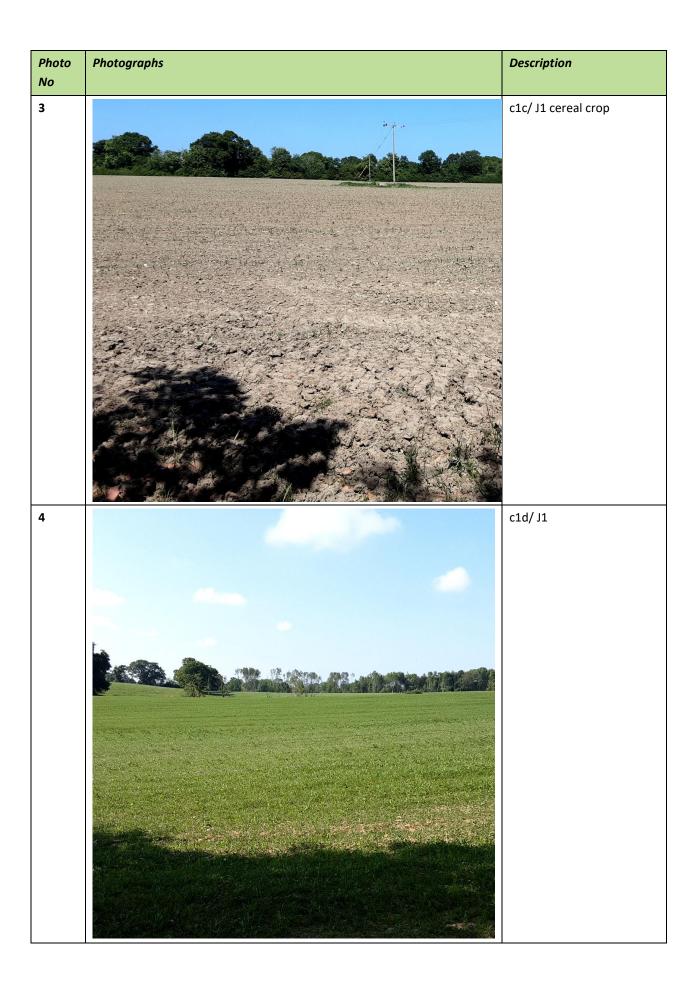
3.3 Invasive non-native species

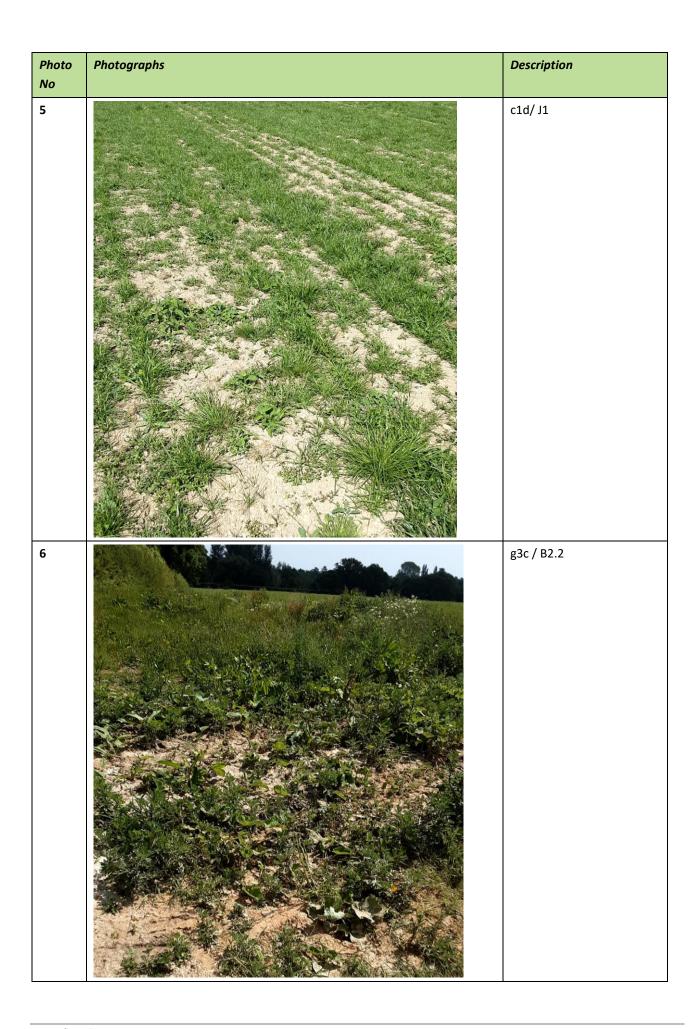
3.3.1 Japanese knotweed was identified within the Site at TN14 and TN16. No other evidence of invasive non-native species was identified.

Annex 1

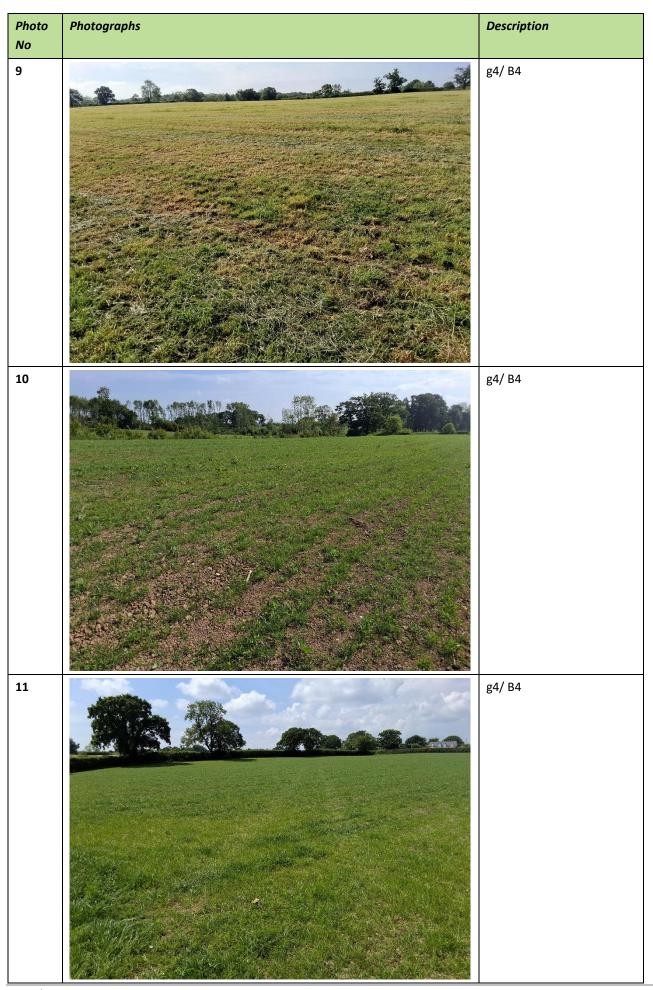
Photographs

Photo No	Photographs	Description
1		c1 / J1 - cropland
2		c1c/ J1 cereal crop





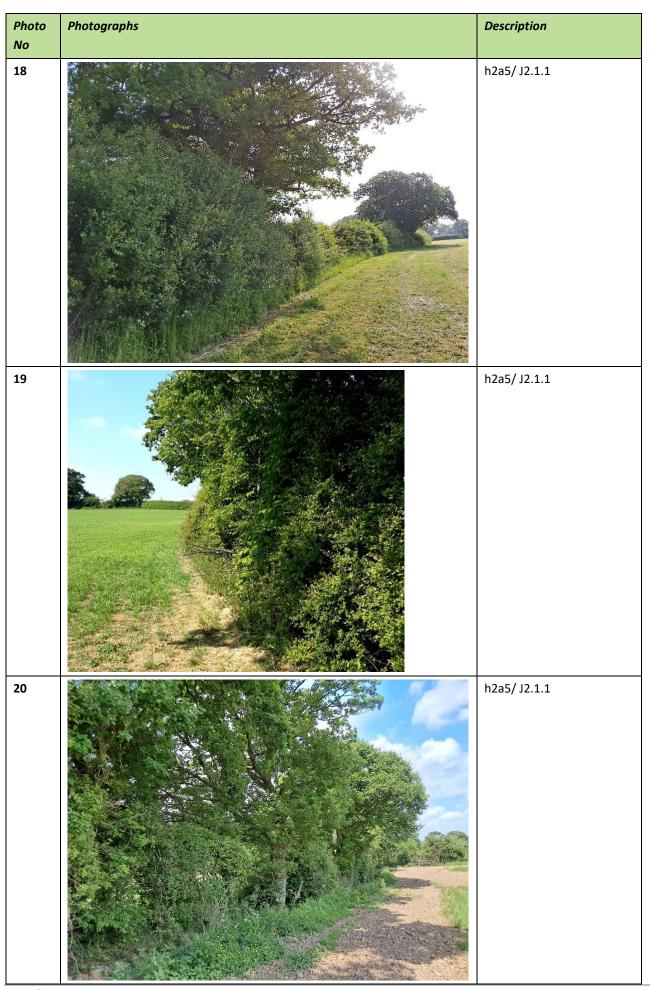




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Photo No	Photographs	Description
14		g4/ B4
15		g4/B4
16		g4/ B4
17		g4/ B4



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Photo No	Photographs	Description
21		h2a6/ J2.1.2
22		h2a6/ J2.1.2

Photo No	Photographs	Description
23		h2a6/ J2.1.2
24		h2a6/ J2.1.2

Photo No	Photographs	Description
25		h2a6/ J2.1.2
26		h3d/ A2.1
27		h3h/ A2.1

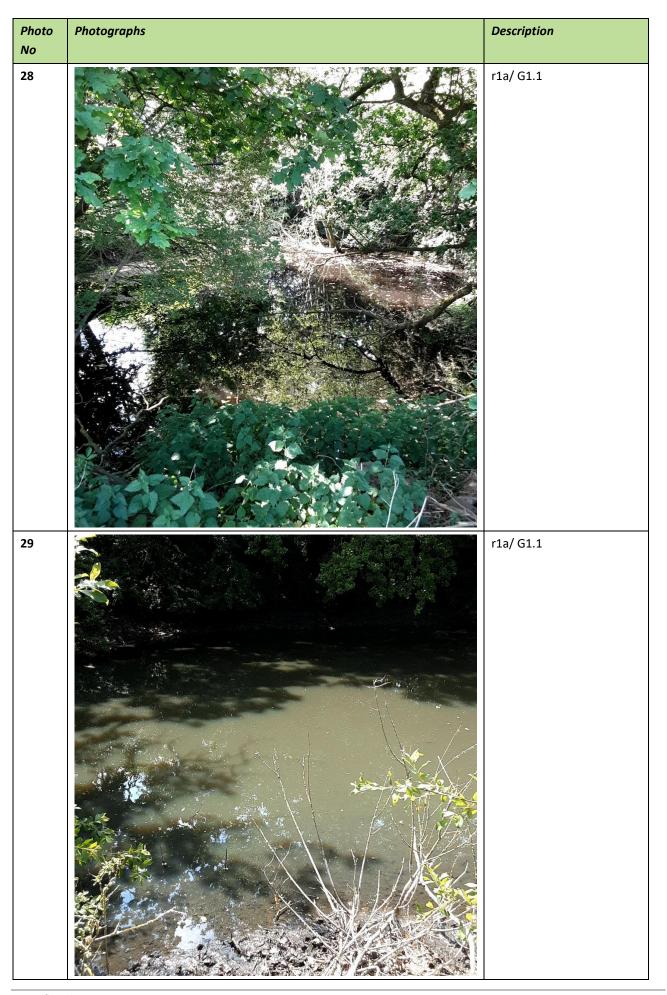




Photo No	Photographs	Description
32		r1g/ G1.1
33		r1g/ G1.1
34		r1g/ G1.1

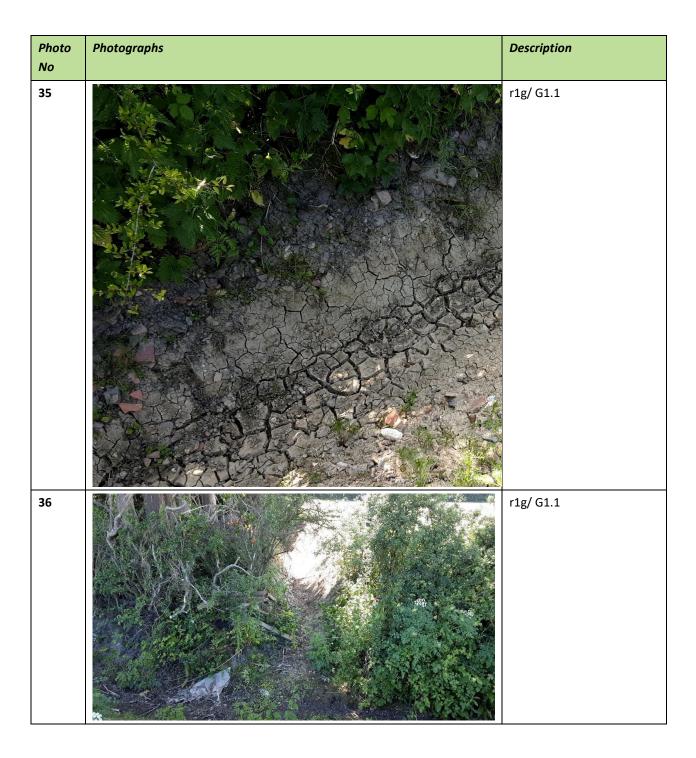


Photo No	Photographs	Description
37		u1c/ J4
38		u1c/ J4

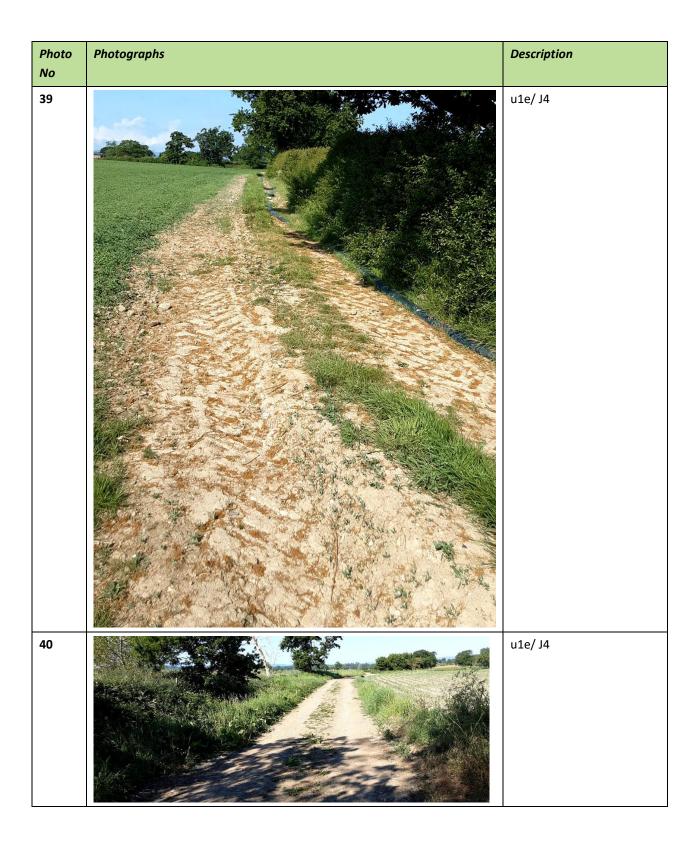


Photo No	Photographs	Description
41		u1e/ J4
42		w1f/ A1.1.1
43		w1f/ A1.1.1

Photo No	Photographs	Description
44		w1f/ J2.3.2
45		w1f/ J2.3.2
46		w1g/ A1.2.2

Photo No	Photographs	Description
47		w1g/ J2.3.2
48		w1g/ J2.3.2



Photo No	Photographs	Description
51		w1h5/ A1.2.2
52		w1h5/ A1.2.2
53		w1h5/ J2.3.2

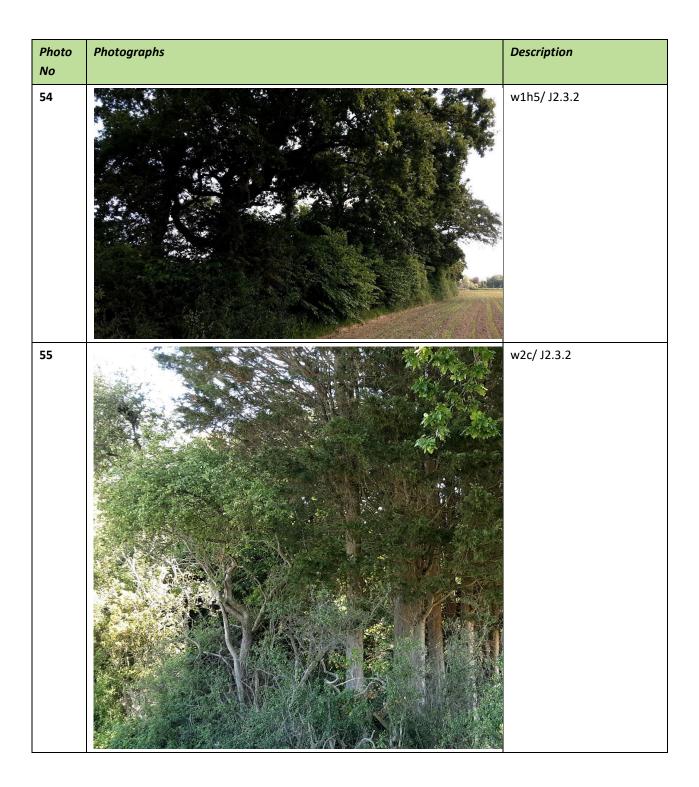


Photo No	Photographs	Description
56		Individual tree/ A3.1
57		Individual tree/ A3.1

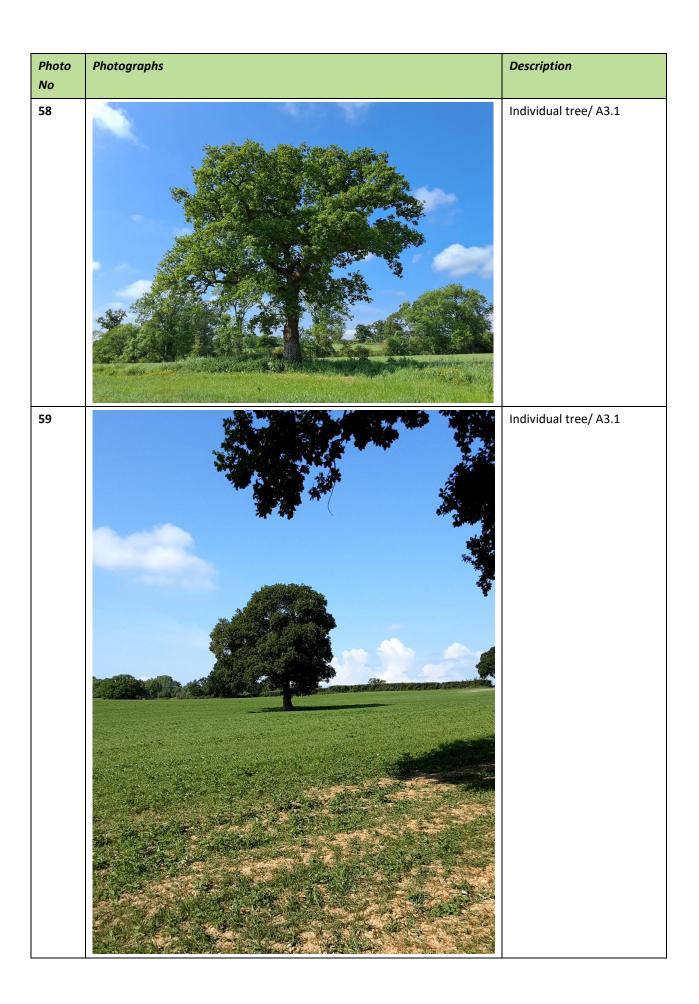


Photo No	Photographs	Description
60		Individual tree/ A3.1
61		TN1

Photo No	Photographs	Description
62		TN2
63		TN3

Photo	Photographs	Description
No		
64		TN4
65		TN5

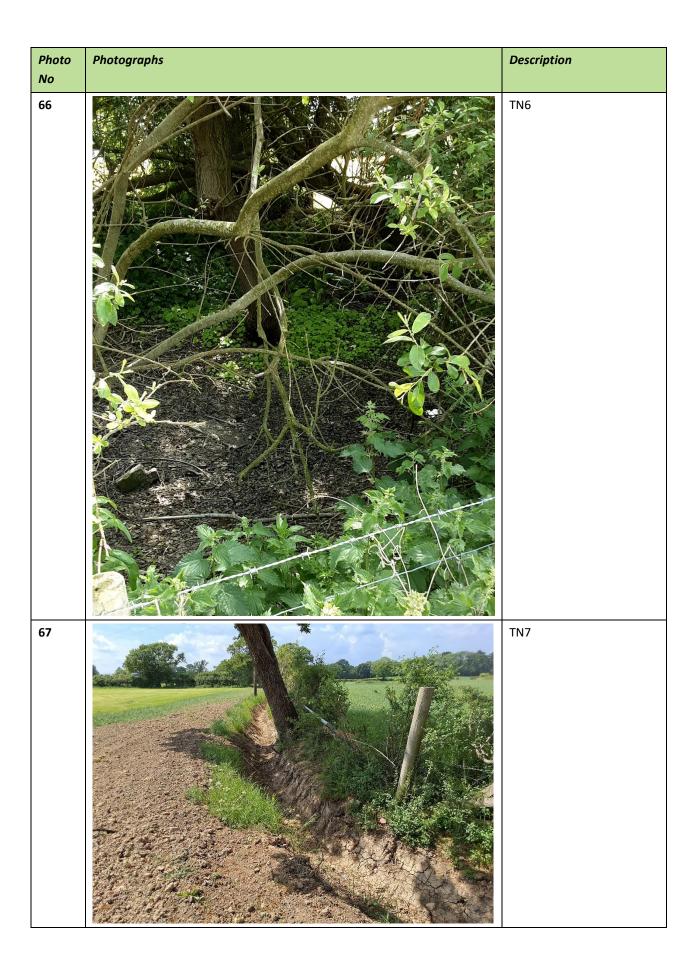


Photo No	Photographs	Description
68		TN8
69		TN9

	Photographs	Description
No 70		TN10



Photo No	Photographs	Description
73		TN13
74		TN14

Photo No	Photographs	Description
75		TN15
76		TN16

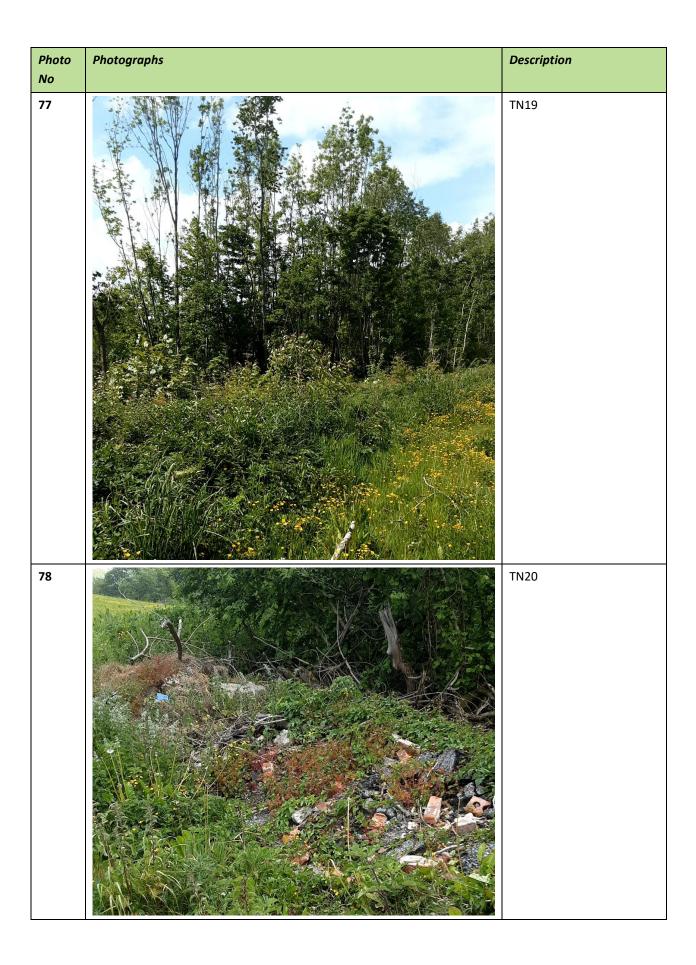
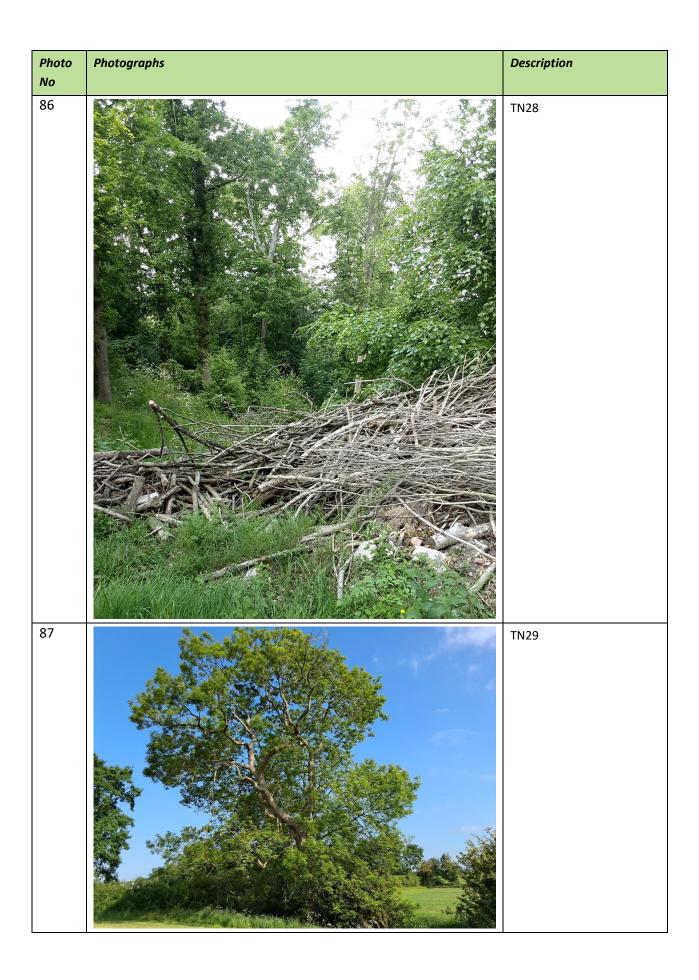


Photo	Photographs	Description
No		
79		TN21
80		TN22
81		TN23

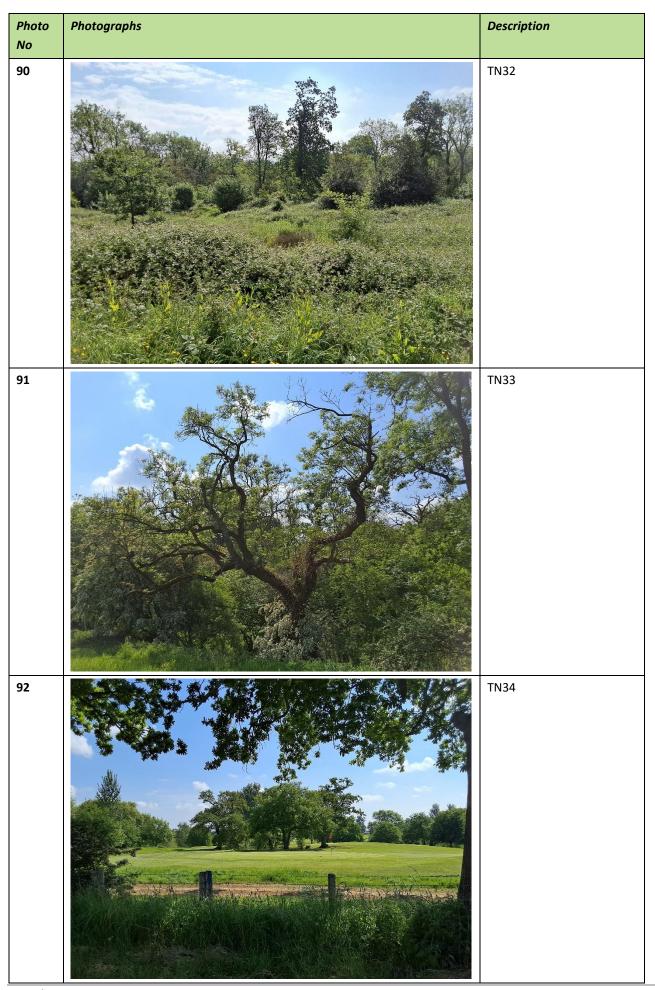
Photo No	Photographs	Description
82		TN24
83		TN25



54







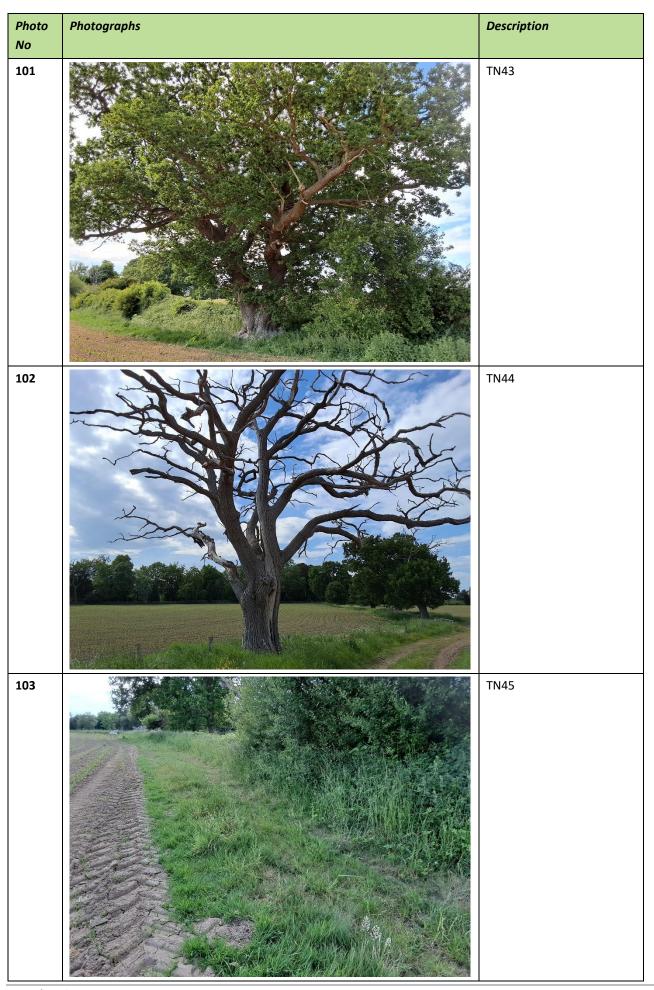
Butterfly Solar Technical Appendix 5.1: Habitats and Vegetation Baseline Report

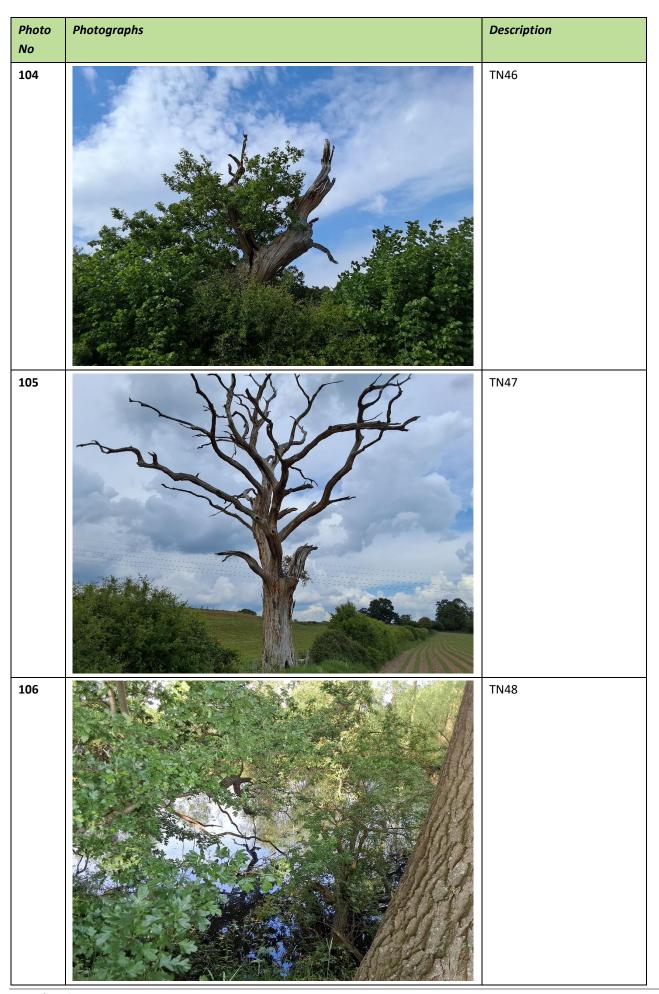


Photo No	Photographs	Description
95		TN37
96		TN38

Photo	Photographs	Description
No		
97		TN39
98		TN40

Photo No	Photographs	Description
99		TN41
100		TN42





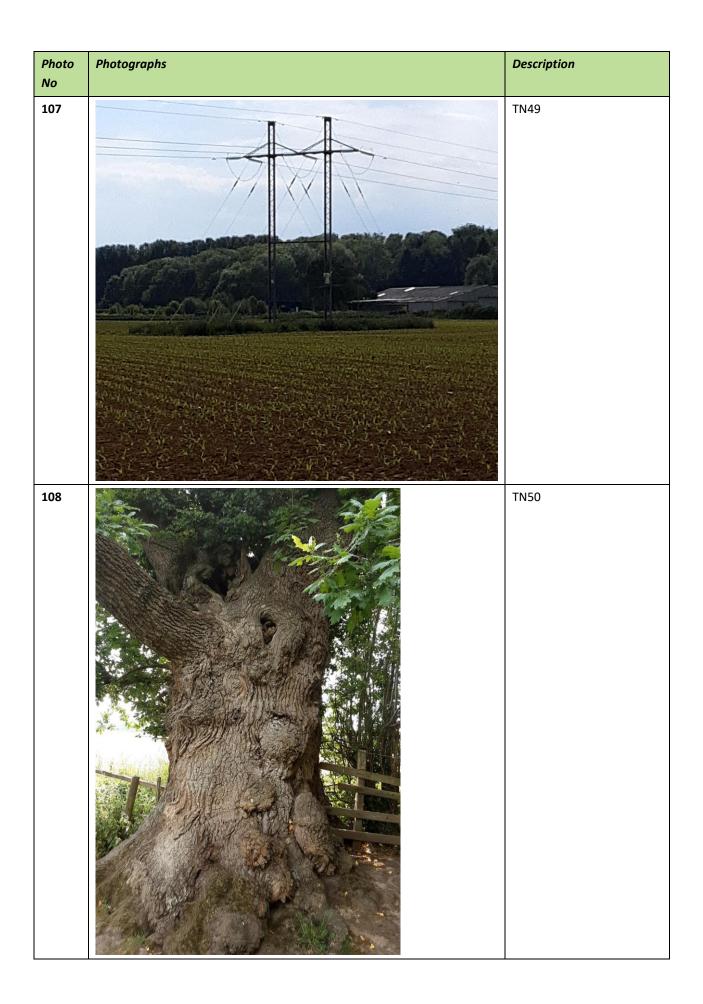


Photo	Photographs	Description
109	Printographs	TN51

Annex 2 Legacy So

Legacy Solar Preliminary Ecological Appraisal Report (Western Ecology, 2023) (provided separately)