Our ref: 3352/GM/NH

21 April 2021

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Dear Sir or Madam,

RE: EIA Screening Request for a Proposed Solar PV park, Land at Westhide, Herefordshire

THE TOWN AND COUNTRY PLANNING ACT (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017

by email

On behalf of our client, Ersun (Westhide SPV) Ltd, I write to formally request an EIA Screening Opinion in relation to proposed solar PV development land at Westhide, Herefordshire (hereafter referred to as 'the site'). A request has also been made for pre-application advice (Ref: 211010/CE).

This request is submitted under Schedule 2, Description 3 (a), in that the proposed development is an Industrial installation for the production of electricity, steam and hot water (not included in Schedule 1).

In accordance with Regulation 6 ((1) and (2)) we provide the following information to support the request:

(a) A plan sufficient to identify the land (**Figure 1** refers);

(b) A description of the development, including in particular -

  (i) a description of the physical characteristics of the development and, where relevant, of demolition works;

  (ii) a description of the location of the development, with particular regard to the environmental sensitivity of geographical areas likely to be affected;

(c) A description of the aspects of the environment likely to be significantly affected by the development;

(d) To the extent the information is available, a description of any likely significant effects of the proposed development on the environment resulting from-

  (i) The expected residues and emissions and the production of waste, where relevant; and

  (ii) The use of natural resources, in particular soil, land, water and biodiversity; and

(e) Such other information or representations as the person making the request may wish to provide or make, including any features of the proposed development or any measures envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment.

The Site

Site context

The site is centred on Grid reference 357718 244466 and located to the north-west of the village of Westside. Westhide is approximately 8 km to the north east of the City of Hereford. The site is bound to the north-west, north and north-east by the Herefordshire and Gloucestershire Canal, separated from the site by a linear belt of trees and hedgerow. To the east lies further agricultural land, beyond which are several properties and the associated lane that serves the village of Westhide. Woodland forms its western boundary, with further agricultural land to the south beyond which is Withies Road that serves Dodmarsh and the village of Westhide respectively.

Site description

The site comprises of a network of nine arable fields (circa 50.6 ha / 125 acres in area) bounded by hedgerows and woodland. Several scattered mature trees are present within the fields, as well as three ponds. In terms of topography, the land is relatively level with a gentle rise towards the south-east. There are no Public Right of Ways (PRoWs) crossing the site. The Three Choirs Way is located beyond the site boundary to the north.

The Proposed Development

Project Description

The proposed development comprises *"the installation of ground mounted solar photovoltaic array and potential energy storage system, together with associated infrastructure; security fencing; CCTV; associated cable route and landscaping for a period of up to 30 years"*.

Solar Photovoltaic Panels

The electricity generated from the proposed solar photovoltaic array will be direct current, this requires conversion to alternating current prior to being fed into the National Grid. The proposed development would therefore utilise a number of central inverters, spaced across the site.

Electricity is then passed via two substations / switchgear rooms, one owned and operated by the developer / owner of the solar array and the other operated by the Distribution Network Operator (DNO), before final connection to the National Grid. Final design will be subject to consultation with the DNO and will be fully detailed in any future planning application.

Layout

The proposed development involves the installation of ground mounted solar modules, laid out in parallel rows (arrays) running in an east - west orientation and facing south. The arrays would generate renewable electricity during daylight hours. The maximum height of the arrays will be 3 m above ground level. Panels will be spaced to avoid shadowing from panel to panel (approximately 3m – 6m, depending on final layout). All panels will be sited a minimum distance of 5 m from the hedgerows, to safeguard the health of the hedgerows/trees and to provide enough distance to protect any ecological or conservation value along the boundaries.

Height

The panels will be ground mounted on angle racks with a front leading-edge of a minimum height of 0.4 m and a maximum trailing edge of 3 m. The angled nature of the panels ensures the best solar absorption and the height to the front leading edge will vary so that despite the undulation in the ground, the panels will all remain level with each other.

Energy Storage System (ESS)

It is possible that an energy storage system will be included within the proposed development. Ersun (Westhide SPV) Ltd intends to explore this option during the development process and within Distribution Network Operator (DNO) discussions. If this element is applied, the energy storage equipment is similar to the central inverters. The number of containers would be confirmed during the detail design stage and prior to a formal planning application submission. An area of hardstanding would be required in order to lift the equipment into location. DNO substation(s) would also be required, the number of which would be confirmed during the detailed design stage and prior to a formal planning application submission.

Fencing

A fence of an approximate height of 2.5 m will be installed around the perimeter of the site to provide security. It is currently envisaged that deer fencing would provide a suitable option, but final selection will depend on consultation feedback and will be fully detailed in the final planning application. The fence would be erected on the inside of the existing field boundaries and offset by at least 5 m from the existing perimeter hedgerows. Existing openings will be utilised to move from one field to another, to avoid the need to create new gaps in hedgerows. In addition, the security fence will not be dug into the ground and will, therefore, provide [redacted] small mammals with continued access to the site once constructed and operational.

As there is a requirement for a Distribution Network Operator (DNO) substation on site or in the vicinity of the site this will also require its own compound to ensure no unauthorised access is taken.

Internal Access Tracks

Internal access tracks would be required at the construction and potentially the operational phases of the development. The access tracks would comprise a permeable material, such as compacted gravel, for example. Access tracks would also be set away from field boundaries to protect tree and hedge roots and to protect any ecological or conservation value along the boundaries.

Security Cameras

Standalone security cameras would be placed around the site perimeter to provide sufficient security across the entire site. Security cameras are likely to be mounted on a slimline pole with a height of 3 m. Final locations will be indicated in the final design of the site and full details will be submitted as part of the final planning application.

Access to the Site

One access point has been identified for the construction and operation phases of the proposed development, via Withies Road, to the south of the site. An additional access point, also via Withies Road and using existing farm track to the south of the site, will be used for the construction and operational access of the DNO compound. A temporary construction compound will be set up to enable deliveries to exit the highway turn and leave the construction compound in a forward gear. Smaller vehicles such as Bobcats/Skidsteers will be utilised to move equipment / materials around the site.

Construction methods / maintenance

It is anticipated that PV module rows will be mounted using a galvanised steel profile, driven into the ground, the exact depth will be dependent on ground conditions. Underground concrete will only be required for the central inverters, substation buildings, welfare unit and spares container.

Cables associated with the development will be concealed in trenches which will run along the side of the tables connecting all rows of tables with each other and linking from one central inverter to the next. The cabling will have a minimal impact on the ground surface and would be fully removable at the decommissioning stage together with the framing system, solar panels, inverters, substations and fencing.

Once the solar park is constructed and commissioned, there is minimal onsite activity required, with routine maintenance visits undertaken once or twice a month.

Grid Connection

The Point of Connection in this instance is on site and as the site will be connecting to the 66kV network, this warrants the construction of a High Voltage Compound.

Environmental Impacts

Preliminary assessment of the key potential environmental effects of the proposed development has been undertaken and has been used to optimise site layout, a copy of the Screening Matrix that has been completed is supplied at **Annex 1**. Potential impacts are set out in the EIA screening matrix, identifying, where appropriate, scheme design and mitigation measures that are proposed to be embedded within and undertaken as part of the project. The following preliminary technical assessment work has been undertaken to date and has informed the emerging design of the site and the description, below, of possible effects on the environment:

- Landscape and Visual Appraisal viewpoint collection (refer to **Annex 2**);
- Heritage desk based 'rapid assessment' (refer to **Annex 3**); and
- Preliminary Ecological Appraisal (refer to **Annex 4**).

The tasks listed above and an online desk study have been used to inform this request. Where mitigation measures/further work is required to avoid adverse effects these are identified in **green bold** text for easy reference):

Natural Resources and Waste

Although non-renewable natural resources will be required, construction will be undertaken using standard materials and methods. **A Construction Environmental Management Plan will be prepared that will include a Construction Compound Plan, identifying an area specifically designated for recycling.** Waste will be disposed of in an appropriate manner and in compliance legislation and industry guidance. On decommissioning, the panels and infrastructure would be removed from site. The panels, metal racking, fencing etc. are all recyclable at the end of the solar park's lifespan. Significant effects on natural resources and from generation of waste are therefore considered to be unlikely to occur.

Although there will be some limited vegetation removal, the proposed development will not affect the overall land use of the site. The proposed development would be installed on agricultural (arable) land of Agricultural Land Class 3, which is 'good to moderate'. This is a typical land class type of the Herefordshire area. An Agricultural Land Classification Report will accompany any forthcoming planning application, to identify whether the land is within Grade 3a or 3b. Furthermore, the site can continue to be utilised as agricultural land during the lifetime of the park, for sheep grazing and returned to unrestricted agricultural use on decommissioning. Therefore temporary restriction of agricultural activities is unlikely to generate significant effects that will require assessment under the EIA Regulations.

Pollution and Nuisances

Contamination of land or water

A number of ditches/drains and ponds are present within and on the boundary of the site. The groundwater in the general area is shown as high/medium-high vulnerability, however no existing sources of potential contamination have been identified. The use of plant on the site during construction may cause the topsoil to be disrupted which can pose a sedimentation risk to local watercourses. No creation of additional phosphate levels are predicted from the construction, operation or decommissioning of the proposed development (no staff welfare facilities are proposed that would involve foul water flows).

Construction effects will be mitigated by deployment of a **Construction Environmental Management Plan (CEMP), including measures in accordance with CIRIA document C532: Control of water pollution from construction sites. The use of silt fences during the construction phase would intercept silt laden runoff, if construction traffic or adverse weather is likely to cause damage to the topsoil.** Similar measures would be proposed to be undertaken during decommissioning with removal of site infrastructure (refer to *Natural Resources and Waste* above).

To avoid pollution incidents during operation, a **Surface Water Drainage Strategy will be prepared for the site** and submitted as part of the planning application. There are therefore no likely significant impacts from contamination of land or water during construction, operation or decommissioning.

Air pollutants

The site does not lie within an Air Quality Management Area (AQMA). Vegetation clearance/is likely to be limited during construction and dust is therefore unlikely to be generated (this will be similar for decommissioning). The operational PV solar park would not release pollutants or any hazardous, toxic or noxious substances to the air. No significant effects from air pollutants are anticipated.

Noise

The proposed construction works may generate some noise and vibration effects, this will however be a localised and short-term in nature. **Operations that may emit noise will be controlled via working hours attached to any forthcoming approval and included within the CEMP.** The operational solar array will be passive and noise from inverters/substations will be minimal. No significant effects from noise are anticipated.

Population and Human Heath

The site lies within a rural context (i.e. is not densely populated) but nonetheless, consideration has been made of potential effects of receptors on site (workers during construction and staff during operation) and within the surrounding area (local residents, businesses and users of PRoWs).

Flooding

The site is mainly in an area of very low flood risk from rivers or the sea, with some areas that are closest to the river reaching low/medium flood risk. Construction and decommissioning activities are unlikely to affect the quantity of runoff from the site and will likely be less intensive, in terms of changes to ground conditions, than current agricultural uses. During operation, runoff could originate from the solar panel arrays, solar panel pile system and inverters but the runoff from this infrastructure panels poses a low environmental risk. The majority of the site area will remain permeable (with permeable materials selected for the access tracks) and infiltration capacity is therefore unlikely to be significantly affected.

A Flood Risk Assessment and **Surface Water Drainage Strategy will be prepared** to ensure that the proposed development does not increase flood risk in the area/downstream and therefore negligible operational impact on surface waters is anticipated, as a result of the proposed development. Solar PV development at the site can be designed to be resilient to the relatively limited flood risk at this site, with elements of infrastructure that would be at greatest risk from flooding, located within the areas of the site that are low risk.

A Flood Warning and Evacuation Plan will be prepared.

Human Health

The proposed development would present no unusual risk to construction workers than would typically be expected from a construction site and construction will be undertaken using standard materials and methods. Off-site impacts are not anticipated to occur during either construction, operation or decommissioning phases of development therefore the proposed development will not present a risk to the nearby population/human health (refer to *Pollution and Nuisances*, above).

Water Resources

Potential effects on water quality of water resources during construction will be mitigated by deployment of a CEMP and it is anticipated that decommissioning effects will be managed in a similar way (refer to *Pollution and Nuisances*, above). A **Surface Water Drainage Strategy will be prepared** to address potential effects on nearby surface waters during operation and therefore negligible operational impact on surface waters is anticipated, as a result of the proposed development.

Biodiversity (Species and Habitats)

Habitats

A Phase 1 Habitat Survey and building inspection was undertaken in October 2020 and a Preliminary Ecological Appraisal Report has been prepared (TLP, February 20201, **Annex 4)**. The survey found that the site predominantly comprises 9 arable fields, hedgerows, ponds and two areas of plantation broadleaved woodland. No habitats of Principal Importance were identified within the site.

Species

Potential for protected species, as identified by the Phase 1 Habitat survey, is summarised below:

- **Bats:** The arable fields are of low suitability to bats but the linear boundary features and woodland edge are likely to support commuting/foraging activities and therefore bat activity surveys will be undertaken over the course of 2021. **During the construction phase of the proposed development, any temporary construction will be directed to avoid boundary features during the bat active season. This will prevent adverse impacts from lighting during the construction phase on foraging bats. Above measure to be included in the CEMP.**

[redacted]

- **Water vole and otter**: No evidence of water vole or otters was recorded during the Phase 1 Habitat Survey. These species could be using the streams and ditches north of the site, but it is considered highly unlikely that otters would access the site.
- **Nesting birds**: The proposed scheme will result in the loss of arable habitat some of which could be used by birds (birds may also be using other habitats present that are unlikely to be affected such as the trees, hedgerows and scrub). Nesting bird surveys will be undertaken

between March and June to inform any avoidance/mitigation/compensation/enhancement requirements.

- **Wintering birds:** The site was considered to have potential to provide suitable habitat for wintering birds. Monthly survey visits between November and February were undertaken to assess the wintering bird potential for the site and these found that the site provides little interest for wintering birds, with only common and widespread species recorded.
- **Reptiles**: The majority of the site which are arable fields are not deemed suitable for reptiles. **Prior to construction, the grassland vegetation should be cleared using a directional, phased approach during the reptile active period. Precautionary construction measures to avoid impacts on reptiles will be included in the CEMP.**
- **Great crested newt**: The majority of the site (arable fields) is highly sub-optimal for GCN. There is, however some suitable terrestrial habitat in marginal areas and the site contains suitable aquatic habitats. All accessible waterbodies within 250 m from the site will be subject to environmental DNA (eDNA) testing to identify whether GCN are present. If GCN are found to be present then further surveys, mitigation or compensation would be required.
- **Dormouse:** No records for dormouse from within the last 10 years were returned from the data search and the hedgerows and more mature woodland provided some potential suitable habitat for dormouse but lacked a high proportion of hazel. Should substantial amounts of hedgerow be required to be removed, then nest tube surveys will be required to confirm absence or presence of dormice at the site. If only a small amount of hedgerow needs to be removed (<5m per hedgerow stretch) a full suite of surveys is not considered to be required, but a fingertip search would be undertaken.
- **Invertebrates:** No rare or protected invertebrates were recorded during the Phase 1 Survey.
- **Flora:** The habitats on site were considered to be common and widespread, with no indication of rare species being present.
- **Hedgerows:** It is intended that existing hedges will be retained as a matter of course. Should any sections of hedgerow be required to be removed, these will be subject to an assessment under the Hedgerow Regulations (1997), with replacement/enhancement elsewhere provided as necessary.

Although there is some potential for protected species at the site, it is unlikely that presence (numbers and species) will be sufficiently significant to require assessment under the EIA Regulations. Further to the Preliminary Ecological Appraisal, an Ecological Appraisal Report will be prepared (in accordance with CIEEM Guidance and BS42020) that will include the results of the data search, the Phase 1 Habitat survey and results of any further survey work, advice on mitigation and enhancement measures and include an impact assessment of the proposals. This report will be suitable for submission as part of a planning application. A Biodiversity Net Gain assessment will also be undertaken (using the most up-to-date version of the Defra metric). In addition to those described above, mitigation measures that will be incorporated into site design include the following:

- **The security fencing will not be dug into the ground and will, therefore, provide [redacted] small mammals with continued access to the site.**
- **Existing boundary hedgerows and associated features will be retained as far as possible.**
- **The external security fence will be offset internally from the perimeter hedgerows by at least 5m to safeguard the health of the hedgerows/trees and to provide enough distance to protect any ecological or conservation value along the boundaries.**

Designated sites

A number of statutory (nearest, River Wye SAC/River Lugg SSSI is 3.6 km west) designated sites are located within 10 km of the site, however these will not be affected by the proposed development due to intervening distance and the nature of the proposed development.

There are three non-statutory designated sites within 2 km of the site including:

- Woodland on Shucknall Hill Special Wildlife Site (SWS);
- Ash Coppice Special Wildlife Site (SWS); and
- Old canal at Monkhide Special Wildlife Site (SWS).

Direct effects on these sites (e.g. habitat loss) will not occur. Indirect (disturbance) effects are considered unlikely to be significant as the sites in question are primarily designated for habitats. Potential indirect effects on the River Wye SAC/River Lugg SSSI catchment will be addressed as described under '*Water Resources*' above.

The Ecological Appraisal Report that will be prepared to inform the planning application will evaluate potential effects on protected sites and propose mitigation and enhancement measures as required. It is anticipated that effects are unlikely to be significant in the context of the EIA Regulations.

Landscape and Visual Impact

There are no areas or features on or around the site that have been designated for landscape value, the nearest is the Wye valley AONB which is circa 5 km to the south of the site.

As the development footprint is large, the proposed development would potentially be visible to a range of people, including local residents, road users and users of PRoW. The gently undulating and well vegetated nature of the site and environs acts to limit visibility of the site, particularly for short and long-distance views. There are some middle-distance views that offer views across several of the fields within which solar panels are proposed.

A Landscape and Visual Impact Assessment (LVIA – including assessment of cumulative effects with other identified nearby schemes) and Landscape Strategy plan will be prepared to accompany the planning application but it is considered that effects during construction, operation and decommissioning that are significant in the context of the EIA Regulations are unlikely to occur.

Archaeology and Cultural Heritage

There are several heritage assets in the vicinity of the site. A 'rapid appraisal' desk study of the site has been undertaken by Cotswold Archaeology (January 2021); **Annex 2** refers. This appraisal identified that the line of the former Hereford and Gloucester Canal runs along the northern edge of the site and a Romano-British settlement is recorded within the site. There are designated heritage assets in Westhide (8 Listed Buildings (LBs) and 2 Scheduled Monuments (SMs)), Dodmarsh (2 LBs) and Withington (13 LBs and 1 SM). The local topography, vegetation and built features means that most of these assets are hidden from the site, however this will need to be checked on site and where necessary a detailed settings assessment undertaken.

Archaeological Assessment will be undertaken which will review the available information relating to the archaeology of the site and its locality and assess the likely impact on any archaeology surviving on the site. Heritage Settings Assessment will consider the implications of the proposed development upon the significance of designated heritage assets within the surroundings of the site, through the alteration of their settings. **If required in specific locations, the posts of the solar PV tables can be engineered to sit above ground, secured in place with concrete ballast blocks, in order to avoid damaging sensitive underground features.** It is considered likely that any archaeological remains can

be managed by standard archaeological recording and, combined with the above mitigation measure, therefore effects that are significant in the context of the EIA Regulations are unlikely to occur.

Transport and access

Public access / Public rights of way (PRoW)

There is currently no public access to site, but there are a number of PRoW in the site's environs, including along the heavily vegetated northern boundary. The proposed development will not affect accessibility of the nearby footpaths. Effects on the amenity of footpath users will be addressed by the LVIA (refer to *Landscape and Visual Impact* above). Significant effects on public access/PRoW are therefore not anticipated to occur.

Transport and traffic

No particular issues have been identified for the local road network. The greatest effects will be experienced during the construction and decommissioning phases, within which traffic increases will be short term, for the duration of the construction/decommissioning period only (i.e. approximately 6 months). HGVs will be used to deliver all equipment and materials to the site. There is no requirement for abnormally long or wide loads. The preferred construction route to site will be indicated within a Transport Statement and Construction Traffic Management Plan (CTMP) which will to include number and size of vehicles, development timescale and proposed delivery route to site.

During operation, there will be minimal traffic generation, with four to six visits per year for maintenance purposes. It is anticipated that effects on transport and traffic will not be significant for any stage of the proposed development.

Land stability and climate

The site is not susceptible to subsidence or landslides or extreme adverse climactic conditions. The proposed development will provide a source of renewable electricity which will contribute towards targets to mitigate for climate change. No significant effects are predicted.

Land Use and Amenity

The site is near to the villages of Withington and Westhide and there are several other farms and dwelling houses in the wider area. No direct effects are anticipated during construction or operation. **Indirect effects during construction such as noise and artificial lighting are capable of being managed by measures to be included within a CEMP.** Potential effects on existing surrounding land uses and sensitive receptors will be addressed by the suite of environmental assessments and reports that are described above and listed below.

The 2017 EIA Regulations

Schedule 1 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the Regulations) identifies developments that require EIA. Schedule 2 identifies development types where, if the relevant criteria are exceeded, a formal consideration assessment must be given in accordance with Schedule 3 in order to determine if an EIA is required.

The proposal seeks to install ground mounted solar PV panels and associated infrastructure on land currently in agricultural use. The proposed development does not fall under Schedule 1. The proposal is considered to be Schedule 2 development in that it involves industrial installation for the production of electricity and the area exceeds 0.5 ha. In order to trigger an EIA potential Schedule projects must be examined in accordance with further specific tests, i.e. the characteristics of the potential impact, and whether the development will be whole or in part in a 'sensitive area'.

Examination of the information provided in the attached screening checklist (**Annex 1** and summarised above) confirms that the site is not located within or near to a 'sensitive area', within the meaning of the EIA Regulations and any potential effects are relatively confined to the site. The proposed development will incorporate measures to avoid, minimise and reduce potential environmental effects, and to ensure that temporary construction activities and ongoing operations are sympathetic to the sensitivities of the surrounding biodiversity, landscape, heritage, and amenity of the wider area. Transboundary impacts are not anticipated and there is no risk or major accidents and/or disasters in accordance with scientific knowledge. The proposed development will contribute towards renewable energy generation targets to reduce the effect of climate change. The magnitude and complexity of impacts is not considered to be significant, as impacts will be relatively confined to the site and within understood parameters.

It is, therefore, considered that the proposed development is not an EIA development and does not require an Environmental Statement to be submitted under the EIA Regulations 2017. A number of technical studies have been identified that would accompany an application for the proposed development, that would consider the potential minor effects in more detail. It is considered that any such effects can be adequately addressed within the context of the planning application process:

- Landscape and Visual Impact Assessment;
- Ecological Appraisal (including BNG calculation and further survey information for bats, [redacted] nesting and wintering birds, and great crested newt, as described above);
- Archaeological Assessment;
- Heritage Settings Assessment;
- Flood Risk Assessment and Surface Water Drainage Strategy;
- Transport Assessment/Statement and Travel Plan;
- Agricultural Land Class Assessment;
- Construction Environmental Management Plan.

I trust that the above information is sufficient to enable you to form an EIA screening opinion within three weeks of receipt of this request, in accordance with the timescales set out in the EIA Regulations. Please do not hesitate to contact me should you require any further information. I look forward to hearing from you.

Yours sincerely

[redacted]

Gemma Melvill
Director and Principal Environmental Planner

Encs. Figure 1: Site location and application red line boundary
Annex 1: Screening Matrix
Annex 2: Landscape and Visual Appraisal viewpoints
Annex 3: Heritage desk based 'rapid assessment'
Annex 4: Preliminary Ecological Appraisal

FIGURES

Site location and application red line boundary

S:\PROJECTS\3350 - 3399\3352 - Westhide Solar\3 GRAPHICS\CAD\DESIGN FILES

GENERAL NOTES:

1. ALL DIMENSIONS AND LEVELS SHALL BE CHECKED ON SITE PRIOR TO CONSTRUCTION WORK COMMENCING.
2. ALL LANDSCAPE DRAWINGS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEER'S AND ARCHITECT'S DRAWINGS AND SPECIFICATIONS.
3. ALL DRAWINGS TO BE READ IN CONJUNCTION WITH THE LANDSCAPE SPECIFICATION.
4. ANY DISCREPANCY CONCERNING THE DRAWINGS SHOULD BE REFERRED TO THE CA IMMEDIATELY.
5. ALL DIMENSIONS IN MILLIMETRES UNLESS NOTED OTHERWISE.
6. ALL LEVELS IN METRES.
7. DO NOT SCALE OFF THIS DRAWING.
8. EXISTING SERVICE ALIGNMENTS SHALL BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION WORK COMMENCING.

SITE BOUNDARY
(58.13 hectares)

N

0 25 50 100 200m
SCALE 1:2,500

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CLIENT:
TKESS ENERGY

PROJECT:
WESTHIDE SOLAR

TITLE:
SITE LOCATION PLAN

Status:	Drawn:	Checked:
PLANNING	GS	JH
Scale:	Date:	Approved:
1:5000@A3	25.02.21	GM

Drawing Number: 3352_L_X_LP_1 Rev:

ANNEX 1: Screening Matrix

TOWN AND COUNTRY PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017 SCREENING MATRIX

1. CASE DETAILS	
Case reference	p3352 (our ref)
Appellant	Ersun (Westhide SPV) Ltd
LPA	Herefordshire County Council (HCC)
Brief description of the project/development	The exact detail and quantum of the proposed development is not yet fixed, however, the development proposals will comprise a ground-mounted solar PV (photovoltaic) development. The solar park will be set out as solar arrays, with sufficient space between the arrays to avoid one array of PV modules overshadowing the next. It is expected that the PV modules will be mounted on metal frames on posts piled into the ground causing minimal impact on the ground surface and will be fully removable on decommissioning. The highest point of the modules will be circa 3m above ground. The solar park will also encompass central inverters and a Distribution Network Operator (DNO) substation. The potential for battery storage (whose infrastructure is very similar to the central inverters) will also be explored during the development process, depending on DNO discussions. The application site will be protected with a security fence of circa 2.5m. Once the solar park is established, the system will require minimal on-going maintenance. Experience has shown that PV modules are cleaned to a considerable degree by rainfall but will also be manually cleaned several times a year. Activity at the solar park will be limited to periodic repair and/or maintenance.
2. EIA DETAILS	
Is the project Schedule 1 development according to Schedule 1 of the EIA Regulations? If YES, which description of development	**No**
Is the project Schedule 2 development under the EIA Regulations? If YES, under which description of development in Column 1 and Column 2?	**Yes**, under 3 (a) Industrial installations for the production of electricity, steam and hot water (unless included in Schedule 1)
Is the development within, partly within, or near a 'sensitive area' as defined by Regulation 2 of the EIA Regulations? If YES, which area?	**No**
Are the applicable thresholds/criteria in Column 2 exceeded/met? If yes, which applicable threshold/criteria?	**Yes**, the area of the development exceeds 0.5 hectare.

3. LPA/SOS SCREENING	
Has the LPA or SoS issued a Screening Opinion (SO) or Screening Direction (SD)? (In the case of Enforcement appeals, has a Regulation 37 notice been issued)?	**No**
If yes, is the SO/SD positive?	**N/A**
4. ENVIRONMENTAL STATEMENT	
Has the appellant supplied an ES for the current or previous (if reserved matters or conditions) application?	**No**

[1] If the finding of no significant effect is reliant on specific features or measures of the project envisaged to avoid, or prevent what might otherwise have been, significant adverse effects on the environment these are identified in **green bold text**.

Question	Answer to the question and explanation of reasons	Is a significant effect likely?[1]
1. NATURAL RESOURCES		
1.1 Will construction, operation or decommissioning of the project involve actions which will cause physical changes in the topography of the area?	**No**. Although there may be some vegetation clearance to allow construction of access tracks, changes to topography are not anticipated.	**No**
1.2 Will construction or operation of the project use natural resources above or below ground such as land, soil, water, materials/minerals or energy which are non-renewable or in short supply?	**Yes**. Non-renewable natural resources will be required for construction.	**Unlikely:** Construction will be undertaken using standard materials and methods. There will be no abnormal use of natural resources.
1.3 Are there any areas on/around the location which contain important, high quality or scarce resources which could be affected by the project, e.g. forestry, agriculture, water/coastal, fisheries, minerals?	**Yes.** The proposed development would be installed on agricultural (arable) land of Agricultural Land Class 3, which is 'good to moderate' (via reference to Natural England's Agricultural Land Classification map).	**No.** This is a typical land class type of the Herefordshire area and no Class 1 or 2 land has been identified within the application site. Class 3a and above is typically considered to be Best Most Versatile (BMV) agricultural land. An Agricultural Land Classification Report will accompany any forthcoming planning application, to identify whether the land is within Grade 3a or 3b. Furthermore, the proposed development is temporary and easily reversed. The site can continue to be utilised as agricultural land during the lifetime of the park, for sheep grazing. Therefore temporary restriction of agricultural activities (albeit long-term) are unlikely to generate significant effects that will require assessment under the EIA Regulations.

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Question	Answer to the question and explanation of reasons	Is a significant effect likely?[1]
2. WASTE		
2.1 Will the project produce solid wastes during construction or operation or decommissioning?	**Yes**: There would be some waste by-products that would result from the construction of the proposed development. On completion of the lifespan of the proposed development, the panels and infrastructure would need to be removed from site.	**Unlikely: All waste will be sorted on site and recycled. A Construction Environmental Management Plan (CEMP) will be prepared that will include a Construction Compound Plan, identifying an area specifically designated for recycling. Waste will be disposed of in an appropriate manner and in compliance with legislation and industry guidance.** The solar panels and associated infrastructure would be designed to last for a lifespan of circa 30 years during which time there are no anticipated waste by-products arising from their usage. The panels, metal racking, fencing etc. are all recyclable at the end of the solar park's lifespan.
3. POLLUTION AND NUISANCES		
3.1 Will the project release pollutants or any hazardous, toxic or noxious substances to air?	**No.** Excavation is likely to be relatively limited during construction and dust is therefore unlikely to be generated. The PV solar park would not release pollutants or any hazardous, toxic or noxious substances to the air.	**No impact**
3.2 Will the project cause noise and vibration or release of light, heat, energy or electromagnetic radiation?	**Yes.** The proposed construction works may cause noise and vibration nuisance, this will however be a localised and short-term effect. The operational solar array will be passive and noise from inverters/substations will be minimal.	**Unlikely: Operations that may emit noise will be controlled via working hours attached to any forthcoming approval and included within the CEMP.**
3.3 Will the project lead to risks of contamination of land or water from releases of pollutants onto the ground or into surface	**Yes**. The groundwater in the general area is shown as high/medium-high vulnerability. The site is, however, currently under arable production and no	**Unlikely: The CEMP will include measures to ensure that construction of the proposed development does not lead to risks of contamination of land or**

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Question	Answer to the question and explanation of reasons	Is a significant effect likely?[1]
waters, groundwater, coastal waters or the sea?[2]	existing sources of potential contamination have been identified. The use of plant on the site during construction may cause the topsoil to be disrupted which in-turn can pose a sedimentation risk to local watercourses. No creation of additional phosphate levels are predicted from the construction, operation or decommissioning of the proposed development (no staff welfare facilities are proposed that would involve foul water flows).	**water from releases of pollutants onto the ground or into surface waters, groundwater. The use of silt fences during the construction phase would intercept silt laden runoff, if construction traffic or adverse weather is likely to cause damage to the topsoil.**
3.4 Are there any areas on or around the location which are already subject to pollution or environmental damage, e.g. where existing legal environmental standards are exceeded, which could be affected by the project?	**No.** None identified.	**No impact**
4. POPULATION AND HUMAN HEALTH		
4.1 Will there be any risk of major accidents (including those caused by climate change, in accordance with scientific knowledge) during construction, operation or decommissioning?	**Yes.** The site is mainly in an area of very low flood risk from rivers or the sea, with some areas that are closest to the river reaching low/medium flood risk.	**Unlikely**: Solar PV development at the site can be designed to be resilient to this relatively limited flood risk, with elements of infrastructure that would be at greatest risk from flooding, located within the areas of the site that are low risk. A Flood Warning and Evacuation Plan will be prepared.
4.2 Will the project present a risk to the population (having regard to population density) and their human health during	**No. Construction/decommissioning:** No unusual risk to construction workers than would typically be expected from a construction site; construction will	**Unlikely**: **The risk to human users will be controlled by design and implementation of a Safe System of Work during construction and operation, in**

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Question	Answer to the question and explanation of reasons	Is a significant effect likely?[1]
construction, operation or decommissioning? (for example due to water contamination or air pollution)	be undertaken using standard materials and methods. Off-site impacts are not anticipated to occur. **No: Operation**: The proposal will not present a risk to the population and their human health during operation of the proposal. Off-site impacts are not anticipated to occur.	**accordance with the Health and Safety at Work Act 1974.**
5. WATER RESOURCES		
5.1 Are there any water resources including surface waters, e.g. rivers, lakes/ponds, coastal or underground waters on or around the location which could be affected by the project, particularly in terms of their volume and flood risk?	**Yes.** A number of wet ditches/drains are present within and on the boundary of the site. Three ponds are also present on-site. The nature of development means that runoff could originate from the solar panel arrays, solar panel pile system and inverters. The runoff from the panels poses a low environmental risk.	**Unlikely:** Although there will be run-off from panels and on-site infrastructure, the majority of the site area will remain permeable (with permeable materials selected for the access tracks) and infiltration capacity is unlikely to be significantly affected. A Flood Risk and Surface Water Drainage Assessment will be prepared to address potential effects on nearby surface waters. Negligible operational impact on surface waters is anticipated, as a result of the proposed development.
6. BIODIVERSITY (SPECIES AND HABITATS)		
6.1 Are there any protected areas which are designated or classified for their terrestrial, avian and marine ecological value, or any non-designated / non-classified areas which are important or sensitive for reasons of their terrestrial, avian and marine ecological value, located on or around the location and which could be affected by the project? (e.g. wetlands, watercourses or other water-bodies,	**Yes**. A number of statutory (nearest, River Wye SAC/River Lugg SSSI is 3.6 km west) designated sites are located within 10 km of the site, however these will not be affected by the proposed development due to intervening distance and the nature of the proposed development. There are three non-statutory designated sites within 2 km of the application site including:	**Unlikely**: Direct effects on the nearby sites (e.g. habitat loss) will not occur. Indirect (disturbance) effects are considered unlikely to be significant as the sites in question are primarily designated for habitats. Potential indirect effects on the River Wye SAC/River Lugg SSSI catchment will be addressed as described at 5.1 above. An Ecological Assessment will be prepared to inform the planning application which will evaluate potential

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the coastal zone, mountains, forests or woodlands, undesignated nature reserves or parks. (Where designated indicate level of designation (international, national, regional or local)).	• Woodland on Shucknall Hill Special Wildlife Site (SWS); • Ash Coppice Special Wildlife Site (SWS); and • Old canal at Monkhide Special Wildlife Site (SWS). There are also a number of identified habitats of Principal Importance within 2 km of the site, but none identified within the site itself.	effects on ecology and protected sites and propose mitigation and enhancement measures as required.
6.2 Could any protected, important or sensitive species of flora or fauna which use areas on or around the site, e.g. for breeding, nesting, foraging, resting, over-wintering, or migration, be affected by the project?	**Yes**. A Phase 1 Habitat Survey and building inspection was undertaken in October 2020 (refer to **Annex 4**). The survey found that the site predominantly comprises 9 arable fields, hedgerows, ponds and two areas of plantation broadleaved woodland. Potential for protected species, as identified by the Phase 1 Habitat survey, summarised below: • **Bats:** The linear boundary features (network of hedgerows, mature trees, ponds and drainage ditches) are likely to support a variety of bat species. The nine arable fields are of lower suitability. In addition, the presence of woodland edge is key habitat for foraging bats. [redacted]	**Unlikely**: Although there is some potential for protected species at the application site, it is unlikely that presence (numbers and species) will be sufficiently significant to require assessment under the EIA Regulations. The following measures are proposed to ensure that protected species considerations at the site are addressed fully: • **Bats**: Given that the only habitats to be affected by the proposed development are the arable fields, survey level for a low suitability site is proposed (three walked transects spring, summer, autumn and static deployments). **During the construction phase of the proposed development, no temporary construction lighting should be allowed to fall on boundary features during the bat active season (April – October inclusive). This will prevent adverse impacts from lighting during the construction phase on foraging bats. Above measure to be included in the CEMP. No operational lighting is proposed.**

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	• **Water vole and otter**: No evidence of water vole or otters was recorded during the survey. These species could be using the streams and ditches north of the site, but it is considered highly unlikely that otters would access the site. • **Nesting birds**: The proposed scheme will result in the loss of arable habitat some of which could be used by birds (birds may also be using other habitats present that are unlikely to be affected such as the trees, hedgerows and scrub). • **Wintering birds:** The site was considered to potentially provide suitable habitat for wintering birds which could be displaced by conversion to grassland. • **Reptiles**: There is suitable habitat present (e.g., hedgerows, pond margins and woodland) that is likely to provide some foraging and sheltering opportunities for common and widespread reptile species. The majority of the site which are arable fields are not deemed suitable for reptiles. • **Great crested newt**: The majority of the site (arable fields) is highly sub-optimal for GCN. The boundary hedgerows, woodland and the scrub and grassland habitats do provide some suitable terrestrial habitat for GCN. The site contains suitable terrestrial and aquatic habitats for great crested newts. • **Dormouse:** No records for dormouse from within the last 10 years were returned from the data search. The hedgerows and more mature	[redacted] • **Nesting birds**: Four survey visits, based on the British Trust for Ornithology (BTO) Common Bird Census (CBC) method (Marchant, 1983), should be undertaken between March and June. • **Wintering birds**: 4 x monthly visits: Nov – Feb have been undertaken to assess the wintering bird potential for the site. • **Reptiles: Prior to construction, the grassland vegetation should be cleared using a directional, phased approach (during the reptile active period - April to early October inclusive). Any building materials such as bricks, stone etc. should be stored on pallets to discourage reptiles from using them as shelter.** • **Great crested newt**: all accessible waterbodies within 250 m from the site will be subject to environmental DNA (eDNA) testing to identify whether GCN are present. The eDNA samples must be undertaken between mid-April and the end of June. If GCN are found to be present then further surveys, mitigation or compensation would be required. • **Dormouse**: It is intended that existing hedges will be retained wherever possible. Should, however, substantial areas of hedgerow be required to be removed, then nest tube surveys will be required (April to November inclusive) to confirm absence or presence of dormice at the site. If only a small amount of hedgerow needs to be removed (<5m

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	woodland provided some potential suitable habitat for dormouse but lacked a high proportion of hazel. This was also the case of the woodland adjacent to the site. • **Invertebrates:** No rare or protected invertebrates were recorded during the Phase 1 Habitat Survey. • **Flora:** No rare or protected plants were recorded during the Phase 1 Habitat Survey. The habitats on site were considered to be common and widespread, with no indication of rare species being present. • **Hedgerows:** It is intended that existing hedges will be retained as a matter of course. It is possible, however, that some small sections may be required to be removed to facilitate access/infrastructure.	per hedgerow stretch) a full suite of surveys is not considered to be required, but a fingertip search would be undertaken which would also include a visual search for nests and opened nuts prior to commencement of works. • **Hedgerows:** Any sections of hedgerow that are to be removed will be subject to an assessment under the Hedgerow Regulations (1997), with replacement/enhancement elsewhere provided as necessary. An Ecological Appraisal Report will be prepared (in accordance with CIEEM Guidance and BS42020) that will include the results of the data search and Preliminary Ecological Appraisal, the Phase 1 survey and results the Phase 2 ecology survey work, advice on mitigation and enhancement measures and include an impact assessment of the proposals. A Biodiversity Net Gain assessment will also be undertaken (using the most up-to-date version of the Defra metric). **Mitigation measures will include the following:** • **The security fencing will not be dug into the ground and will, therefore, provide [redacted] small mammals with continued access to the site.** • **Existing boundary hedgerows and associated features will be retained as far as possible.** • **The external security fence will be offset internally from the perimeter hedgerows by at least 5m to safeguard the health of the**

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Question	Answer to the question and explanation of reasons	Is a significant effect likely?[1]
		hedgerows/trees and to provide enough distance to protect any ecological or conservation value along the boundaries.
7. LANDSCAPE AND VISUAL		
7.1 Are there any areas or features on or around the location which are protected for their landscape and scenic value, and/or any non-designated / non-classified areas or features of high landscape or scenic value on or around the location which could be affected by the project? Where designated indicate level of designation (international, national, regional or local).	**No**. There are no areas or features on or around the site that have been designated for landscape value. The Wye valley Area of Outstanding Natural Beauty (AONB) – circa 5 km to the south of the site.	**No impact**

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Question	Answer to the question and explanation of reasons	Is a significant effect likely?[1]
7.2 Is the project in a location where it is likely to be highly visible to many people? (If so, from where, what direction, and what distance?)	**Yes.** As the development footprint is large, the proposed development would potentially be visible to a range of people, including local residents, road users and users of Public Rights of Way (PRoW).	**Unlikely:** The gently undulating nature of the site and propensity for areas of copse and tree'd hedgerows in the area acts to limit visibility of the site, particularly for short and long-distance views. There are some middle-distance views that offer views across several of the fields within which solar panels are proposed. Effects that are significant in the context of the EIA Regulations are unlikely to occur. A Landscape and Visual Impact Assessment will be prepared to accompany the planning application and will be supported by a Landscape Strategy plan. The winter view collection to inform the Landscape and Visual Impact Assessment (LVIA) has been completed and viewpoints are supplied at **Annex 2**.

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Question	Answer to the question and explanation of reasons	Is a significant effect likely?[1]
8. CULTURAL HERITAGE/ARCHAEOLOGY		
8.1 Are there any areas or features which are protected for their cultural heritage or archaeological value, or any non-designated / classified areas and/or features of cultural heritage or archaeological importance on or around the location which could be affected by the project (including potential impacts on setting, and views to, from and within)? Where designated indicate level of designation (international, national, regional or local).	**Yes.** There are several heritage assets in the vicinity of the site. A 'rapid appraisal' desk study of the site has been undertaken by Cotswold Archaeology (January 2021); **Annex 3** refers. There are approximately 160 HER entries within 2km of the centre point of the site. The large majority of these relate to post-medieval/modern era buildings and farmsteads and have little bearing on the potential of the site. The line of the former Hereford and Gloucester Canal runs along the northern edge of the site. A Romano-British settlement is recorded within the site. There are designated heritage assets in Westhide (8 Listed Buildings (LBs) and 2 Scheduled Monuments (SMs)), Dodmarsh (2 LBs) and Withington (13 LBs and 1 SM).	**Unlikely:** The local topography, vegetation and built features means that most of these assets are hidden from the proposal site, however this will need to be checked on site and where necessary a detailed settings assessment undertaken. Archaeological Assessment will be undertaken which will review the available information relating to the archaeology of the site and its locality and assesses the likely impact on any industrial archaeology surviving on the site. Settings Assessment will consider the implications of the development upon the significance of designated heritage assets within the surroundings of the site, through the alteration of their settings. **If required in specific locations, the posts of the solar PV tables can be engineered to sit above ground, secured in place with concrete ballast blocks, in order to avoid damaging sensitive underground features.** It is considered likely that any archaeological remains can be managed by standard archaeological recording and, combined with the above mitigation measure, therefore effects that are significant in the context of the EIA Regulations are unlikely to occur.

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Question	Answer to the question and explanation of reasons	Is a significant effect likely?[1]
9. TRANSPORT AND ACCESS		
9.1 Are there any routes on or around the location which are used by the public for access to recreation or other facilities, which could be affected by the project?	**Yes**. There are a number of public rights of way in the site's environs, including running along the application site's northern boundary. There is currently no public access to the site.	**Unlikely:** The proposed development will not affect accessibility of the nearby footpaths. Effects on the amenity of footpath users will be considered by the LVIA that will be undertaken refer to 7.2.
9.2 Are there any transport routes on or around the location which are susceptible to congestion or which cause environmental problems, which could be affected by the project?	**No**. No particular issues identified for the local road network. Construction traffic will be short term, for the duration of the construction period only (i.e. approximately 6 months). HGVs will be used to deliver all equipment and materials to the site. There is no requirement for abnormally long or wide loads. There will be minimal operational traffic, with four to six visit per year for maintenance purposes.	**Unlikely:** nonetheless, the preferred construction route to site will be indicated within a Transport Statement and Construction Traffic Management Plan (CTMP) which will include: • The proposed delivery route to site; • Construction access points and visibility splays; • Measures for highway cleanliness; • Number and size/type of construction vehicles; • Construction phasing; • Swept paths (as required for abnormal loads); and • Operational access points and visibility splays.
10. LAND USE		
10.1 Are there existing land uses or community facilities on or around the location which could be affected by the project? E.g. housing, densely populated areas, industry / commerce, farm/ agricultural holdings, forestry, tourism, mining, quarrying, facilities relating to health, education, places of worship, leisure /sports / recreation.	**Yes**. The site is near to the villages of Withington and Westhide and there are several other farms and dwelling houses in the wider area. No direct effects are anticipated during construction or operation. Indirect effects during construction such as noise and artificial lighting are capable of being managed by measures to be included within a CEMP. There may be effects on visual amenity of residents.	**Unlikely:** Effects that are significant in the context of the EIA Regulations are unlikely to occur. A Landscape and Visual Appraisal will nonetheless be prepared to accompany the planning application.

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10.2 Are there any plans for future land uses on or around the location which could be affected by the project?	**No**. None identified.	**No impact**
11. LAND STABILITY AND CLIMATE		
11.1 Is the location susceptible to earthquakes, subsidence, landslides, erosion, or extreme /adverse climatic conditions, e.g. temperature inversions, fogs, severe winds, which could cause the project to present environmental problems?	**No**. The application site is not susceptible to subsidence or landslides or extreme adverse climactic conditions. The proposed development will provide a source of renewable electricity which will contribute towards targets to mitigate for climate change.	**No impact**
12. CUMULATIVE EFFECTS		
12.1 Could this project together with existing and/or approved development result in cumulation of impacts together during the construction/operation phase?	**No**. Several solar PV schemes have been approved in the landscape to the west of the proposed development.	**Unlikely:** The potential for cumulative and in-combination impacts will be considered as appropriate in the supporting assessments (including consideration of cumulative landscape/visual effects with the consented polytunnel development to the north). Although cumulative effects are possible, it is considered unlikely that these will be sufficiently significant to require assessment under the EIA Regulations.
13. TRANSBOUNDARY EFFECTS		
13.1 Is the project likely to lead to transboundary effects?	**No**. Transboundary impacts are not anticipated. The magnitude and complexity of impact is not considered to be significant, as impacts will be relatively confined to the site and within understood parameters. The proposed	**No impact**

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Question	Answer to the question and explanation of reasons	Is a significant effect likely?[1]
	development will not introduce any hazardous process, generation of waste, pollution or nuisance.	

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5. CONCLUSIONS – ACCORDING TO EIA REGULATIONS SCHEDULE 3	
6. SCREENING DECISION	
If a SO/SD has been provided do you agree with it?	n/a
Is it necessary to issue a SD?	n/a
Is an ES required?	No

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ANNEX 2: Landscape and Visual Appraisal viewpoints

THE Landmark PRACTICE

WESTHIDE SOLAR
ZTV AND VIEWPOINT PHOTOGRAPHS

DECEMBER 2020

LANDMARK REF: 3352

**This document contains panoramic photographs which should be read in 'Two page view' when viewing as a pdf*

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1.0 VISUAL BASELINE

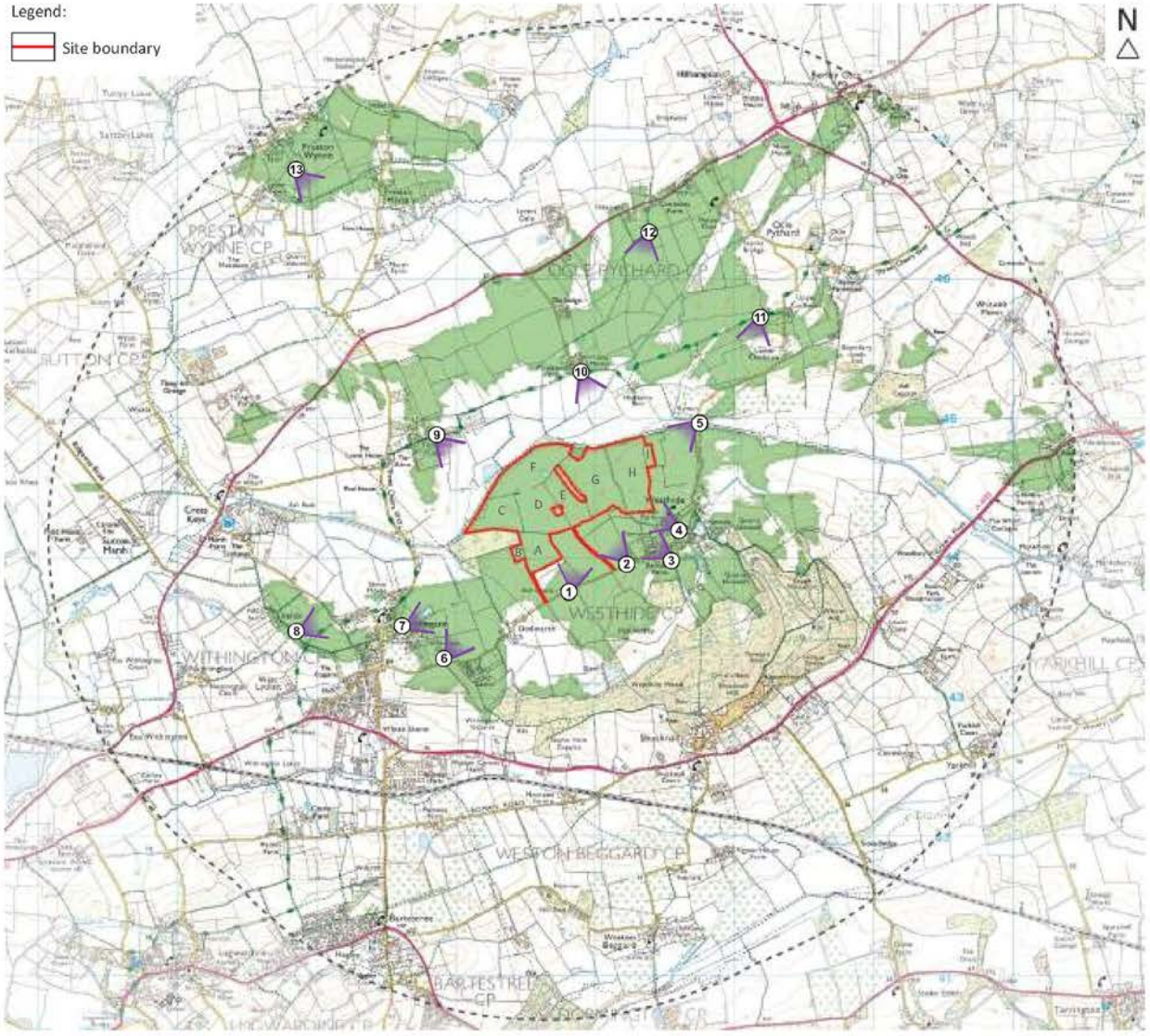


Figure 1 Zone of Theoretical Visibility (ZTV)

Extent of visibility

1.1. **Figure 1** shows the theoretical extent to which development on the site is likely to be visible. The ZTV is generated from an observer height of 1.7 m (average eye level) and an average target height of 3 m. Multiple targets were placed throughout the site. The ZTV was generated using a computer calculation which cannot take account of all intervening surface features such as trees or hedges. It therefore represents a worse case or precautionary assessment. The ZTV was validated for this appraisal by field survey carried out in December 2020 which confirmed that the zones as calculated provide a good match with topography, but a precautionary view of inter-visibility.

1.2. For the purposes of orientation within the viewpoints we have identified the individual fields within the site boundary, referred to as Field A - I as shown on **Figure 1**. Fields which are visible in each viewpoint have been labelled accordingly.

Viewpoint No. and Location
1. From road to Westhide, adjacent to Ash Grove, looking north-east Distance from site: 150 m

Photo continues on page 5

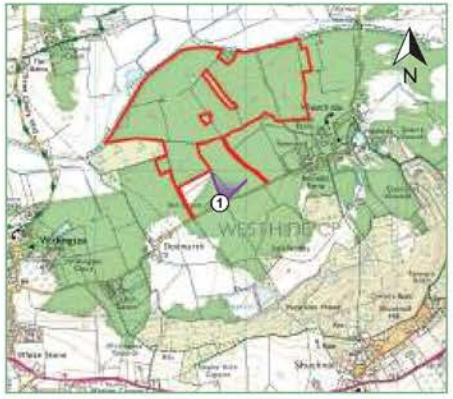
Properties at Hilbrey End

Field G

Field H

Upper Castleton (Grade II)

Photo continues on page 4



Viewpoint No. and Location
2. From lane to Westhide, looking north-west Distance from site: 44 m

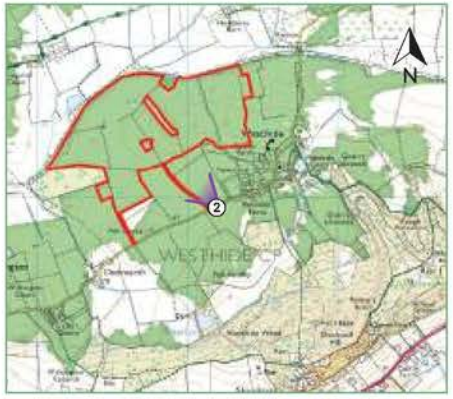
Photo continues on page 7

Field E

Field G

Old Monkton Farm

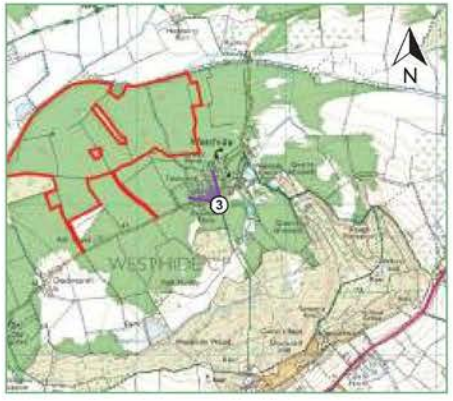
Photo continues on page 6



Viewpoint No. and Location
3. From PRoW WS1, looking north-west. Distance from site: 385 m

Photo continues on page 9

Photo continues on page 8



Viewpoint No. and Location
4. From St Bartholomew's Church, looking north-west Distance from site: 255 m

Photo continues on page 11

Field G

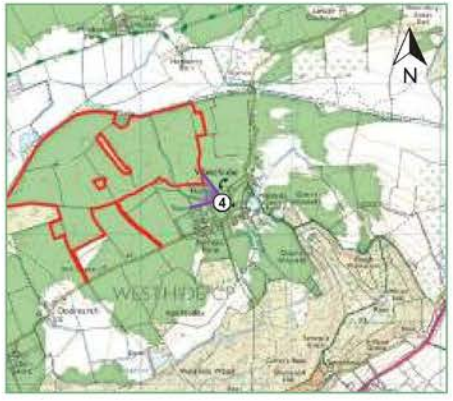


Photo continues on page 10

Viewpoint No. and Location
5. From lane to Westhide, near Canal House, looking south-west. Distance from site: 385 m

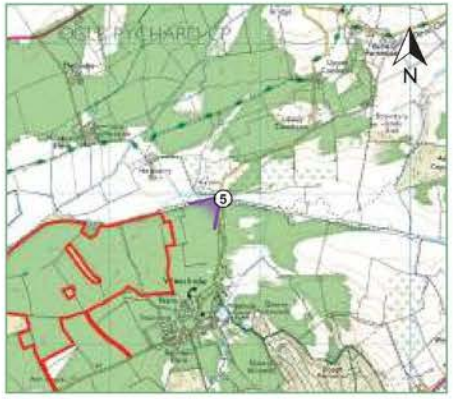
Photo continues on page 13

Approximate extent of the site

Field H

Field G

Photo continues on page 12



Viewpoint No. and Location
6. From PRoW WT31 , near Withington Court, looking north-east. Distance from site: 815 m

Photo continues on page 15

Field E

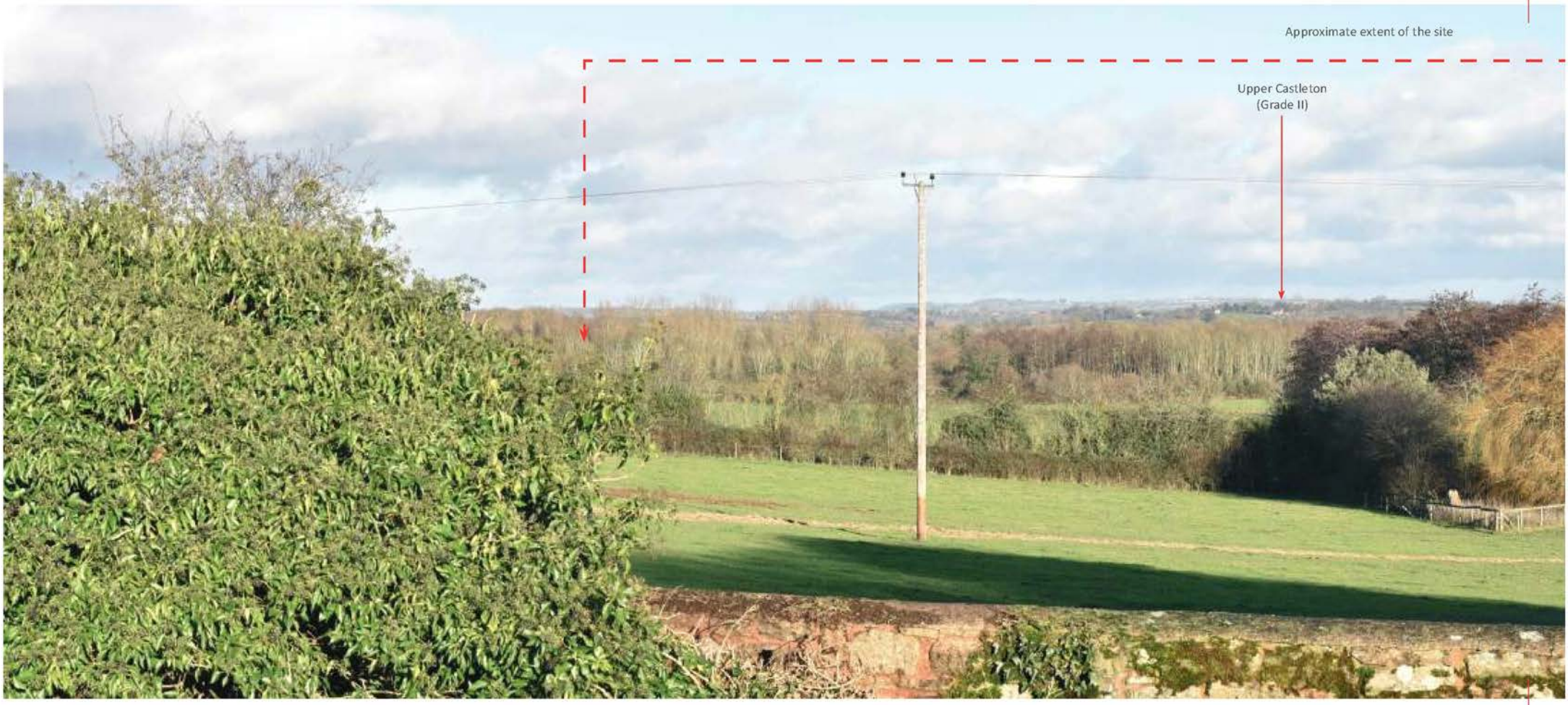
Upper Castleton (Grade II)

Field G

Field H

Westhide

Photo continues on page 14



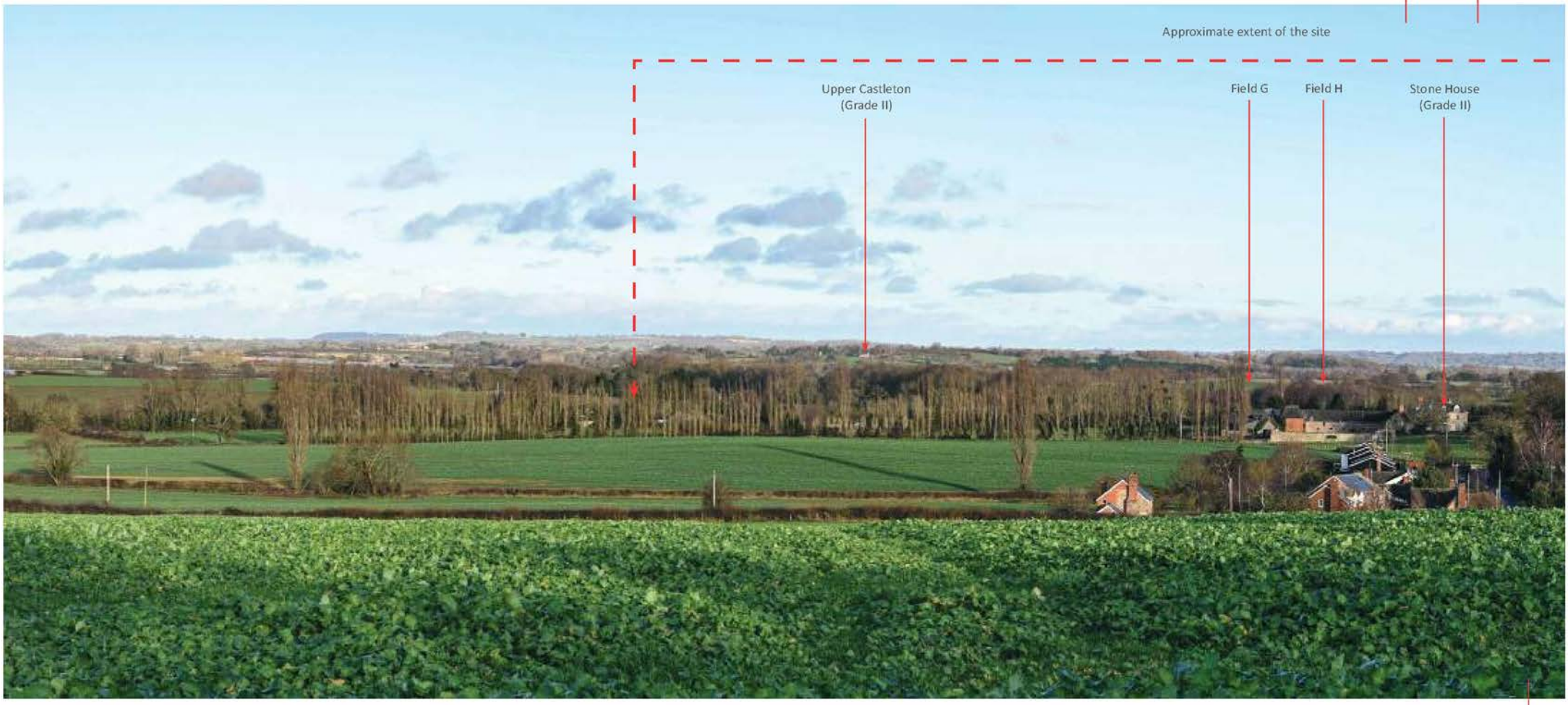
Viewpoint No. and Location
7. From PRoW WT31, by Church of St Peter, looking north-east Distance from site: 970 m

Photo continues on page 17

Field H

Westhide

Photo continues on page 16



Viewpoint No. and Location
8. From PRoW WT10, looking north-east. Distance from site: 1440 m

Photo continues on page 19

Withington

Church of St Peter
(Grade II*)

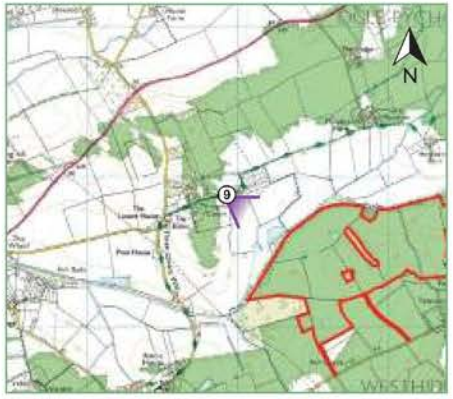
Photo continues on page 18

Viewpoint No. and Location
9. From Three Choirs Way (PRoW WT21), looking south-east. Distance from site: 615 m

Photo continues on page 21

Field D

Photo continues on page 20

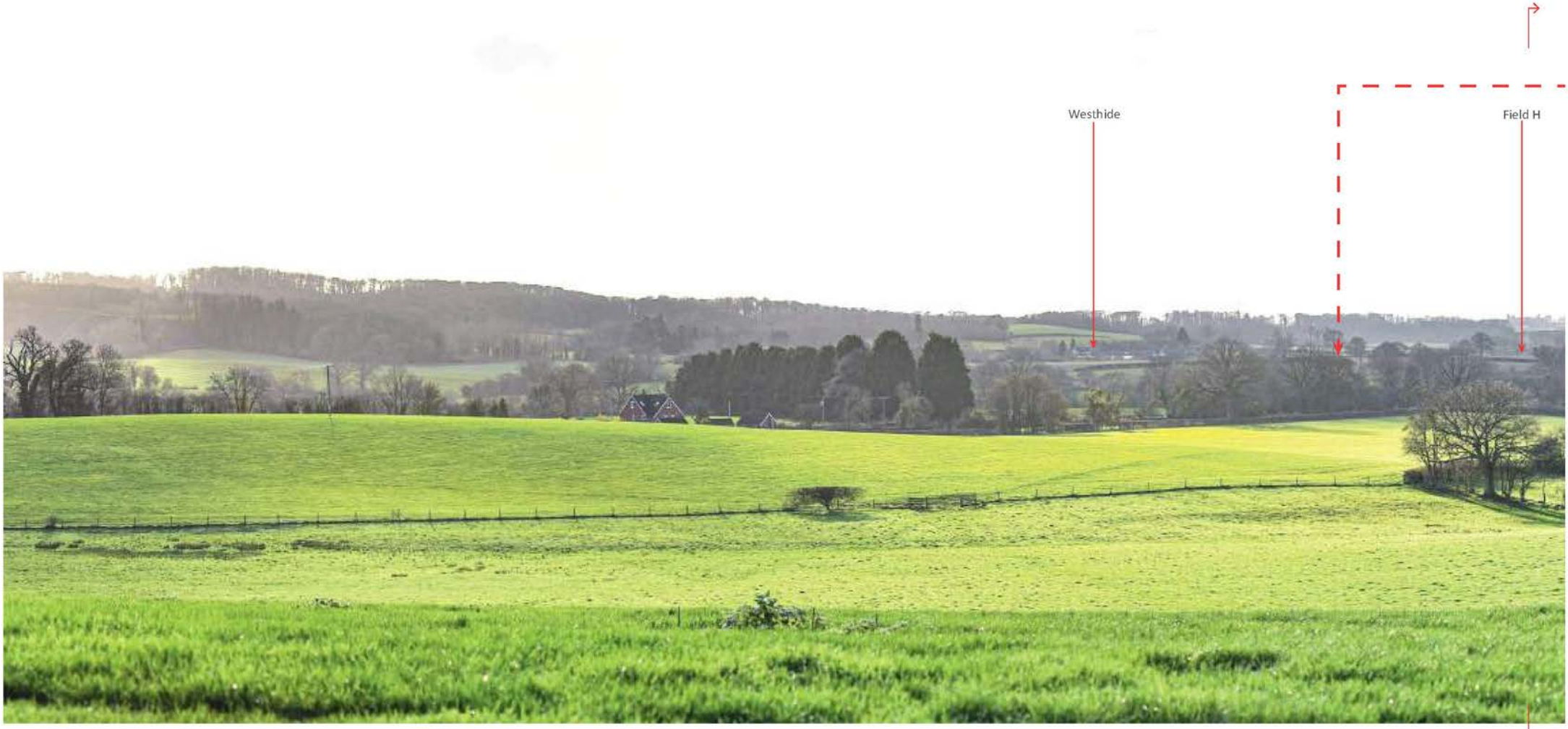


Viewpoint No. and Location
10. From Three Choirs Way (PRoW OP10), by Old Monkton, looking south. Distance from site: 550 m

Photo continues on page 23

Field G

Photo continues on page 22



Viewpoint No. and Location
11. From Three Choirs Way (PRoW OP12), looking south-west. Distance from site: 1230 m

Photo continues on page 25

Approximate extent of the site

Field H

Field G

Photo continues on page 24

Viewpoint No. and Location
12. From PRoW OP8#1, looking south. Distance from site: 1510 m

Photo continues on page 27

Approximate extent of the site

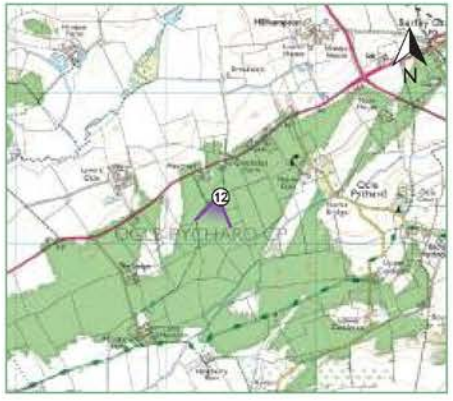


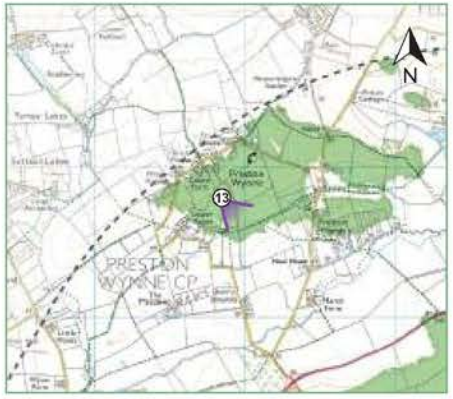
Photo continues on page 26

Viewpoint No. and Location
13. From PRoW PW9, looking south-east. Distance from site: 2630 m

Photo continues on page 29

Approximate extent of the site
(Obscured by landform and vegetation)

Photo continues on page 28



ANNEX 3: Heritage desk based 'rapid assessment'

PROPOSED SOLAR FARM WESTHIDE, NR HERFORD

HERITAGE APPRAISAL

Introduction

A proposal to construct a new Solar Farm close to the hamlet of Westhide (Grid Ref: 357718 244466), approximately 8km north east of the City of Hereford is at an early stage of planning. In consideration of the potential constraints at the site a rapid appraisal of the heritage issues (archaeology and built heritage) has been undertaken. This appraisal is not a full assessment, it has been undertaken utilising freely available data, particularly from online sources such as the Historic England National Heritage List, the Heritage Gateway (including the Hereford HER), Google maps and aerial imagery and historic OS mapping. It is not intended to replace the need for a full and detailed assessment, which if the scheme progresses will be required and, as set out below, would be undertaken in accordance within industry standards.

Background

There are approximately 160 HER entries within 2km of the centre point of the site. The large majority of these relate to post-medieval/modern era buildings and farmsteads, quarrying, agricultural features, etc. and have little bearing on the potential of the site. The line of the former Hereford and Gloucester Canal runs along the northern edge of the site.

A Romano-British settlement is recorded within the site. This was found in the 1920s during the laying of a sewer pipe when large amounts of Romano- British pottery, box flue tiles and in-situ foundations was recorded.

In 2001 the site was subject to limited re-investigation as part of a wider project examining agricultural impacts on archaeological sites (White, P. '*The Impact of Potato Growing on Archaeological Sites: A Preliminary Study*' - Herefordshire Archaeology Report No. 44.). The 2001 investigations involved field walking (surface artefact collection), the opening up of 4 trial trenches and a geophysical (resistivity) survey. Whilst the result clearly indicated the presence of Romano-British material, including a possible furnace, evidence for surviving structures was not located and the geophysical survey results were poor, possibly due to heavy rain, poor definition between the fills of features and the surrounding natural and possibly due to truncation of archaeological features through agricultural processes. Whilst 'no direct evidence of the location or form of buildings was recovered' was recovered the presence of a substantial Romano-British settlement of the 2nd-4th centuries AD was confirmed.

There are designated heritage assets in Westhide (8 Listed Buildings (LBs) and 2 Scheduled Monuments (SMs)), Dodmarsh (2 LBs) and Withington (13 LBs and 1 SM). The local topography, vegetation and built features means that most of these assets are hidden from the proposal site, however this will need to be checked on site and where necessary a detailed settings assessment undertaken.

Data gathering

Should the scheme progress further detailed assessment would be required. The assessment will be informed by a minimum 1km study area from the boundary of the site

and will be produced in accordance with professional guidance including the Chartered Institute for Archaeologists' Standard and Guidance for Archaeological Desk-Based Assessment (some limitations as a result of Covid-19 restrictions may be necessary, but these will be determined based on the situation at the time of assessment and would be agreed with heritage advisors). Data gathering will focus on accessing the information held on (or at):

- Historic England's National Heritage List, for statutory designated heritage assets (including scheduled monuments, registered parks and gardens, battlefields and world heritage sites);
- The Herefordshire Historic Environment Record, for details of previously completed archaeological works and known heritage assets in the study area, as well as data on historic landscape character;
- Documentary sources and historic mapping to identify any previously unrecorded assets and demonstrate previous land-uses;
- Online sources, including British geological survey data, local planning policy, previous reports and assessments, Archaeological Data Service, The Genealogist, Google Earth/Street View (and other aerial imagery as available);
- Environment Agency Lidar data, as available;
- Site information (if available and provided by the client) including proposal plans, site survey, geotechnical data; and
- A site visit, to assess potential for archaeological survival and carry out the settings assessment (from public rights of way).

Archaeological Assessment
The archaeological assessment will seek to understand the origin, extent and significance of any recorded or potential remains which may be present within the site.

In accordance with The National Planning Policy Framework, the desk-based assessment will seek to identify any archaeological remains within and in proximity to the proposed development site and will attempt to determine, where possible based on the information available, the significance of any such assets. If sufficient design detail is available, an assessment of the impact of the proposed development will be included within the desk-based assessment.

The assessment will include a detailed map regression of the site drawing on maps available online, which may include earlier surveys and estate plans, Ordnance Survey and Tithe/Inclosure mapping where relevant. Historical aerial photographs will be reviewed where available via online sources.

Settings Assessment
The assessment will consider the implications of the development upon the significance of designated heritage assets within the surroundings of the site, through the alteration of their settings. This will primarily focus on the abovementioned Listed Buildings, but other assets may be included if considered necessary following the site visit.

The settings assessment will be carried out in accordance with the approach outlined in the relevant Historic England guidance (*Historic Environment Good Practice Advice in Planning Note 3: the Setting of Heritage Assets*; Second Edition 2017). Each asset will be visited in the field (as accessible from public rights of way) and the potential impact of the proposed development upon its significance will be assessed.

Reporting and timetable
The assessments detailed above will be incorporated within a Desk-Based Assessment (DBA) report, which will present a detailed appraisal of the character and appearance of the area along with a narrative of the history of the site, its significance and archaeological potential.

Further works
Given the known archaeological potential of the site it is expected that should the scheme proceed further archaeological fieldwork will be required to inform the determination of the planning application or as mitigation. It is considered that a geophysical survey (magnetometry) would be appropriate in the first instance, with trial trench evaluation to follow to test the result of the geophysics.

Duncan Coe HND, BA (Hons), MCIfA, FSA
Principal Heritage Consultant
Cotswold Archaeology

December 2020

ANNEX 4: Preliminary Ecological Appraisal

WESTHIDE SOLAR

Preliminary Ecological Appraisal

for

Ersun (Westhide SPV) Ltd

February 2021

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**D denotes a Draft version*

The information which we have prepared and provided is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Tel: 0117 923 0455

EXECUTIVE SUMMARY

The Landmark Practice was commissioned by Ersun (Westhide SPV) Ltd in October 2020, to prepare a Preliminary Ecological Appraisal to inform the submission of a pre-planning advice application for Solar Park at Land at Westhide, Herefordshire. This report describes ecological survey work undertaken, considers the impacts of the proposed development on the ecology of the site and environs and describes suitable avoidance, mitigation and enhancement measures to address predicted impacts.

A desk study was undertaken to find details of designated sites and legally protected and notable species records within the zone of influence of the site. A Phase 1 habitat survey and protected species assessment was conducted of the application site in October 2020 to map the habitats present and highlight potential for protected species to occur. This Preliminary Ecological Appraisal Report assesses the potential impacts of a solar development at this site on biodiversity.

The site comprises of a network of nine arable fields bounded by hedgerows and woodland. Several scattered mature trees are present within the fields, as well as three ponds.

The site was considered to offer potential to support the following protected species: badger, bats, breeding birds, wintering birds, reptiles, great crested newts and dormouse.

Summary of Further Survey Work Required

[redacted]

- Aerial tree roost assessments for bats;
- Bat activity surveys;
- Breeding bird surveys;
- Wintering bird scoping surveys; and
- Great crested newt eDNA survey.

Summary of Enhancement and precautionary methods of works recommended

- Biodiversity Net Gain assessment, to result in no less than 10% enhancement of baseline habitat value;
- Preparation of a Construction Environmental Management Plan (CEMP) (to include specifications for fencing to protect the hedgerows within the site and woodland adjacent to the site; precautionary working methods to protect [redacted] hedgehogs and reptiles and sensitively timed works to protect nesting birds);
- Soft landscaping scheme to include native species of local provenance that are nut and seed bearing;
- Permeability of the site for wildlife during operation (gaps in fencing); and
- Adherence to general good working practice.

Subject to informed scheme design, including retention of features of greatest ecological interest, future development of the site can be achieved without significant negative ecological impact. The potential presence of any European Protected Species or notable species is unlikely to preclude or significantly limit the capacity of the site to deliver a solar scheme.

CONTENTS

1.0 INTRODUCTION

1.1 The Landmark Practice (TLP) is an award winning multi-disciplinary consultancy offering bespoke and integrated services in ecology, environmental planning, landscape architecture and architectural graphics. We are a CIEEM Registered Practice and are independent and respected, working on a large range of development projects for our clients throughout the UK. Full details of the practice can be found at http://thelandmarkpractice.com/.

1.2 In October 2020 TLP was commissioned by Ersun (Westhide SPV) Ltd to assess the potential ecological impacts associated with a proposed solar farm at Westhide, Hereford, Herefordshire, hereafter referred to as the 'application site.'

Site Location and Description

1.3 The application site, which measures approximately 125 acres, is located 9 km north-east from Hereford (approximate central grid reference SO 577 443, **Figure 1** refers). The local planning authority (LPA) is Herefordshire County Council.

1.4 The habitats which comprise the site were for the most part typical of Herefordshire, comprising arable farmland. The site itself comprises a network of nine fields (approximately 125 acres in total), which are all arable with an extensive network of mature hedgerows with trees, with drainage ditches at their bases.

1.5 The arable fields comprised a mixture of turf and crops. Two areas of plantation woodland were present within the site (one of which was recently planted, whilst the other was considerably more mature). Scattered mature trees are also found within some of the fields.

1.6 The hedgerows which bound and bisect the site are a mixture between species-poor and species-rich in terms of species composition. Hedgerows are also for the most part intact, with few gaps and are of good quality in terms of size, structure and connectivity. Some hedgerows contained a scattering of mature trees. The northern boundary comprises a row of trees (which have probably developed from an un-managed hedgerow) which leads onto woodland outside of the site.

Development Proposals

1.7 The proposed development is for a ground-mounted solar PV (photovoltaic) development. The proposals are to be the subject of a pre-planning advice application.

1.8 The solar park will be set out as solar arrays, with sufficient space between the arrays to avoid one array of PV modules overshadowing the next.

1.9 It is expected that the PV modules will be mounted on metal frames on posts piled into the ground causing minimal impact on the ground surface and will be fully removable on decommissioning. The highest point of the modules will be circa 3m above ground.

1.10 The solar park will also encompass central inverters and a Distribution Network Operator (DNO) substation. The potential for battery storage (whose infrastructure is very similar to the central inverters) will also be explored during the development process, depending on DNO discussions.

1.11 The application site will be protected with a security fence of circa 2.5m. The security fencing will not be dug into the ground and will, therefore, provide [redacted] small mammals with continued access to the site. There would also be scope for installing small mammal gates. The application site will not be artificially lit.

1.12 All existing boundary hedgerows and associated features will be retained. The external security fence will be offset internally from the perimeter hedgerows by at least 5m. Once the solar park is established, the system will require minimal on-going maintenance. Experience has shown that PV modules are cleaned to a considerable degree by rainfall but will also be manually cleaned several times a year. Activity at the solar park will be limited to periodic repair and/or maintenance. Grassland will be managed over the likely 30-year life of the installation by a sensitive ecological management plan.

Scope of Assessment

1.13 This Preliminary Ecological Appraisal sets out the findings of the desk based and field-based ecological assessment, undertaken by TLP during 2020. The report considers the potential for ecological impacts to occur and outlines opportunities for avoidance, mitigation and enhancement measures based upon the development proposals in the context of relevant legislation and planning policy.

1.14 The aims of this report are to:

- Define the ecological baseline, identifying important ecological features that are of relevance to the proposals;
- Detail avoidance, mitigation and compensation measures where necessary; and
- Identify potential opportunities to enhance and add to the biodiversity resource within the application site and surrounding landscape in line with local and national planning policy.

2.0 LEGAL AND PLANNING CONTEXT

Legal Context

2.1 A range of habitats and species that may actually or potentially be present at the site are afforded legal protection under domestic and European legislation (**Appendix B**) refers).

Planning Policy Context

2.2 National and Local Planning Policy has been considered within the assessment. The relevant Development Plan policies are reproduced in (**Appendix B)**.

3.0 METHODS

3.1 The method for carrying out this assessment follows standard guidance published by the Chartered Institute of Ecology and Environmental Management (CIEEM, 2019). The assessment has been undertaken by appropriately qualified ecologists using recognised best practice methodologies wherever possible and where these exist. Reasons for any deviation from best practice methodologies are provided below, but usually relate to timing of instruction, access restrictions and/or application of professional judgement, as appropriate.

Desk Study

3.2 The desk study involved the collation and review of contextual information such as designated sites and past records of protected and priority species occurring within the potential zone of influence of the site.

3.3 The desk study involved collating information from the following sources:

- Herefordshire Biological Records Centre (HBRC);
- Multi-Agency Geographic Information for the Countryside (MAGIC);

3.4 The desk study was undertaken during December 2020. See **Table 1** for a summary of the information obtained:

Table 1: Desk Study Data Sources

Data	Search area	Source	Justification of search area
Species			
Protected & notable species	2 km	1	The works footprint/zone of influence is minimal in relation to retained habitats within the immediate landscape.
Extended search for bats	4 km	1	
European protected species licence applications EPSL	4 km	2	
S41 species	1 km	2	
Non-native invasive species	1 km	1	
Habitats			
S41 Habitats	2 km	2	As above
Ancient woodland	2 km	2	
Sites			
Statutory protected sites – impact zones	Within the site	2	As above
Non-Statutory protected sites (e.g., LWS)	2 km	1	
National statutory protected sites	5 km	2	
International statutory protected sites	10 km	2	
Notes 1= *Herefordshire Biological Records Centre. Received 09/11/2020.* 2= *MAGIC* (Multi-Agency Geographic Information Centre website (http://www.magic.gov.uk/). Accessed: 01/12/2020			

3.5 In light of the scope of the project, the above-mentioned search areas are considered sufficient to cover the potential zone of influence of the project in relation to designated sites, habitats and species. Geological designated sites have not been included as these are not relevant to the ecological assessment. Biological records that are no more than 10 years old have been included.

3.6 A desk based scoping exercise was undertaken using Ordnance Survey (OS) maps and aerial photographs to highlight any ponds within 500 m of the site that could potentially support great crested newts (GCN) (*Triturus cristatus*). The 500 m search parameter is based on the '*Great Crested Newt Mitigation Guidelines*' (English Nature, 2001), which

advise that ponds up to 500 m away from a development site should be surveyed if it is considered likely that great crested newt populations centred on those ponds could be affected by changes to the site.

Preliminary Ecological Appraisal – Field Surveys

Phase 1 Habitat Survey

3.7 The Phase 1 habitat survey (JNCC, 2010 & IEA, 1995) was conducted of the application site on 30th October 2020 by two suitably experienced ecologist from TLP to assess the ecological value of the site and record habitats present. The survey covered the site and its immediate surroundings. Conditions during the survey were 100% cloud cover, dry, 13°, Wind 2-3 (Beaufort).

3.8 The Phase 1 habitat survey followed standard methodology published by the Joint Nature Conservation Committee (2010). Each identifiable and definable land parcel was assigned a habitat (as defined by the JNCC). Dominant plant species present were recorded in accordance with plant species nomenclature in Stace (2010). This level of survey does not aim to compile a complete floral and faunal inventory for the application site.

3.9 The habitats recorded using the JNCC Phase 1 habitat descriptions were reviewed in relation to S41 Priority Habitats.

Protected Species Assessment

3.10 As part of the appraisal the application site was assessed for its potential to contain protected or notable species. The assessment was based on the habitats present on site and their suitability for protected species. Further information on the legal protection of these species is presented in **Appendix B**. Protected species assessed for, but not limited to, were:

- Badger (*Meles meles*);
- Bats;
- Dormouse (*Muscardinus avellanarius*);
- Birds (nesting, wintering and arable);
- Otter (*Lutra lutra*);
- Water vole (*Arvicola amphibius*);
- Amphibians (inc. Great crested newt (*Triturus cristatus*));
- Reptiles;
- Invertebrates; and
- White clawed crayfish (*Austropotamobius pallipes*).

3.11 In addition, a search was made for evidence of non-native, invasive species.

Badger Survey

3.12 A full badger survey was undertaken at the same time as the Phase 1 Habitat survey following the standard methodology (Harris, et al, 1989) and with regard to more recent reviews and comment on these methods, in the area to the south of the application site.

3.13 Where present, evidence indicative of badger presence was recorded, including:

- Setts;
- Latrines;
- Prints and paths or trackways;
- Hairs caught on rough wood or fencing; and
- Other evidence including snuffle holes, feeding remains and scratching posts.

3.14 Where setts were recorded, their status and level of activity was noted. Sett status is broadly categorised as follows:

- **Main**: generally, the largest sett within a badger social group home range, with a relatively large number of sett entrances with well-worn pathways between them, and conspicuous spoil mounds. This type of sett tends to be occupied throughout the year and is used for breeding;
- **Annex**: normally found within 150 m of the main sett and comprising multiple entrances, this type of sett may not be occupied throughout the year, and can be used for breeding if there is more than one breeding sow within the social group;
- **Subsidiary**: similar to an annex sett, but typically located further from the main sett. This type of sett will not be occupied throughout the year and lacks the well-worn paths associated with main and annex setts; and
- **Outlier**: normally consisting of one or two entrances, this type of sett will tend to be found furthest from the main sett and will only be used sporadically throughout the year.

3.15 Sett use or level of activity is broadly categorised as follows:

- **Well used sett/hole**: shows evidence of current use, such as fresh spoil or bedding, well-worn pathways between entrances and the presence of badger hair;
- **Partially used sett/hole**: no evidence present indicating current occupation (though hairs may be present, as these can persist for some time), but the sett cannot be categorically described as disused and could easily be re-occupied (for example, it may contain a some leaves or sticks in tunnel entrances, but these would not be blocked, and it would take little effort for a badger to reoccupy it); and
- **Disused sett/hole**: a badger sett that appears to have been abandoned by a badger social group is described as 'disused'; these differ from partially used setts which can be temporarily disused. Disused setts are often completely blocked with vegetation or have collapsed.

3.16 The overall suitability of the existing habitats within the site for badger breeding and foraging was also assessed during the field survey.

<u>Building Inspections</u>

3.17 A preliminary bat roost assessment was conducted at the same time as the Phase 1 Habitat Survey by an experienced and bat licensed ecologist. The inspection entailed systematically surveying the building on site, both externally and internally, looking for evidence of roosting bats and other protected species. As well as an inspection for live bats, other evidence searched for included droppings, urine stains and feeding remains.

Potential access and egress points for bats were also noted as well as crevice roosting potential.

3.18 The building was then placed in one of the following bat roost potential categories (**Table 2** refers), based on current best practice guidelines (Collins, 2016).

Table 2: Categorisation of Bat Roosting Potential of Buildings

Level of Bat Roosting Potential	Rationale
Confirmed Roost	Presence of bats or evidence of use by bats.
High	Building with features that are highly suitable for roosting bats and with good connectivity to quality foraging habitat, such as woodland or lakes. Building has no evidence of current use by bats.
Moderate	Building with features present that are suitable for roosting bats and with connectivity to foraging habitat. Building has no evidence of current use by bats.
Low	Building with a low number of roosting opportunities and with limited connectivity to foraging habitat. Building has no evidence of current use by bats.
Negligible	Building with no or very limited roosting opportunities for bats, no evidence of use of bats and where the structure is isolated from foraging habitat.

Categorisation of Habitat suitability for Bats

3.19 Following the Phase 1 habitat survey the habitat on site was categorised according to its likely value for bats (on a scale of negligible, low, moderate or high potential for commuting and foraging bats). The categories are based on the observations and information set out in **Table 3**, which is based on current best practice guidelines (Collins, 2016).

Table 3: Categorisation of Foraging Habitat

Suitability	Rationale
Negligible	Negligible habitat features on site likely to be used by commuting or foraging bats.
Low	Habitat that could be used by small numbers of commuting bats (such as a gappy hedgerow or un-vegetated stream), but isolated, i.e., not very well connected to the surrounding landscape by other habitat. Suitable, but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for commuting such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland, or water.
High	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by commuting bats such as river, valleys, streams, hedgerows, lines of trees and woodland edge.

Suitability	Rationale
	High-quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree lined watercourses and grazed parkland. Site is close to and connected to known roosts.

Ground Tree Roost Assessment

3.20 Ground tree bat roost assessment was conducted concurrently with the Phase 1 Habitat survey, by an experienced and bat licensed ecologist. The trees located within the application site were subject to ground level roost assessments to determine their suitability for supporting roosting bats.

3.21 The trees were then placed in one of the following bat roost potential categories (**Table 4** refers), based on current best practice guidelines (Collins, 2016).

Table 4: Categorisation of Bat Roosting Potential of Trees

Level of Bat Roosting Potential	Rationale
Confirmed Roost	Presence of bats or evidence of use by bats.
High	A tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.
Moderate	A 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.
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.
Negligible	Negligible habitat features likely to be used by roosting bats.

Amphibians: Habitat Suitability Index

3.22 Seventeen waterbodies were identified within 500 m of the application site. Of these, three were potentially present within the application site, with a further 11 accessible for further assessment. Where access allowed, these waterbodies were subject to Habitat Suitability Index (HSI) assessment concurrently with the Phase 1 Habitat Survey.

3.23 HSI is a tool to assess the likelihood of a water body to support GCN. It incorporates ten suitability indices (SI), all of which are factors thought to affect the suitability of a water body to support GCN, such as the quality of water and the presence/ absence of different predators (particularly fish and waterfowl). Each variable is assessed separately and then mathematically combined to provide a numerical index, between 0 and 1, as categorised within **Table 5** below. The following equation is used:

$$HSI = (SI1*SI2*SI3*SI4*SI5*SI6*SI7*SI8*SI9*SI10)1/10$$

Table 5: Categorisation of HSI Scores

HS Score	Pond Suitability
<0.5	Poor
0.5-059	Below Average
0.6-0.69	Average
0.7-0.79	Good
>0.8	Excellent

Notes and Limitations

Desk Study

3.24 The lack of records for a species within the search area does not necessarily indicate the absence of the species but could merely be the lack of recording within that area.

Phase 1 Habitat Survey

3.25 Phase 1 habitat surveys can be undertaken at any time of the year; however, the optimum time of year for these surveys to be undertaken is between April and September (inclusive). This survey was undertaken outside the optimal period (in October). However, given the limited diversity of habitats present, it is considered that this limitation has not constrained the results in this report.

3.26 The survey area was visited over the period of one day. As such seasonal variations could not be observed and it is likely that only a selection of all species that occur within the site will have been recorded. However, it is considered that the combination of historic records from the desk study and the site visit provides an accurate representation of the various habitat types present at the site and their potential to support protected species. It is therefore considered that this was not a limitation to the study.

Longevity of Baseline Data

3.27 The evidence set out in this report describes the characteristics of the application site at the time at which the survey was undertaken. Many species of wildlife are highly mobile by nature and will routinely take advantage of new opportunities, which arise within their home ranges (CIEEM, 2019). Over time this will alter the baseline conditions present at the application site. Should there be delays in the delivery of this project, it is possible that the baseline ecology will change. In the event of a significant delay (24 months) between the baseline survey and commencement of works at the application site, advice on the implications of potential changes at the application site should be sought from a suitably experienced ecologist.

Nomenclature

3.28 Plant species nomenclature follows New Flora of the British Isles 3rd Edition (Stace, 2010) and bird species nomenclature follows the British Ornithologists' Union (BOU) English vernacular names in The British List: A Checklist of Birds of Britain (9th edition, 2017). Mammal nomenclature follows Mammals of the British Isles: Handbook 4th Edition (Harris and Yalden, 2008).

4.0 RESULTS

4.1 This section details the baseline ecological conditions within the application site's potential zone of influence and assesses the value of important ecological features, which are relevant to the assessment in the context of the proposed development. Relevant Appendices and Figures to the rear of this report.

Designated Sites

Statutory Designated Sites

4.2 Statutory designations often represent the most significant ecological receptors, being of recognised importance at an international and/or national level. National Site Network designations include Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites. Whilst national designations include Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNRs) and Local Nature Reserves (LNR).

4.3 The application site is not covered by any such designation. There are, however, sites covered by such designations within the application site's potential zone of influence, described in **Table 6** below and shown in **Figure 2**.

Table 6: Statutory Designated Sites within the site's potential Zone of Influence.

Name of Site and Designation	Approximate Distance/Direction from Site	Feature(s) of interest.
International		
River Wye SAC	3.6 km west	Designated primarily for its water courses of plain to montane levels with the *Ranunclion fluitantis* and *Callitricho-Batrachion* vegetation. The upland reaches comprise characteristic bryophyte-dominated vegetation and extensive *Ranunculus* beds are present in the lower reaches. Characteristic species include stream water-crowfoot (*Ranunculus penicillatus ssp. Pseudofluitans*), river water-crowfoot (*R. fluitans*), include flowering-rush (*Butomus umbellatus*), lesser water-parsnip (*Berula erecta*) and curled pondweed (*Potamogeton crispus*). Significant areas of woodland are associated with the river. The river channel is largely unmodified and includes some excellent gorges. Annex I habitats present as a qualifying feature, but not a primary reason for selection includes transition mires and quaking bogs. Annex II species that are a primary reason for selection include: white-clawed crayfish (*Austropotamobius pallipes*), sea lamprey (*Petromyzon marinus*), brook lamprey (*Lampetra planeri*), river lamprey (*Lampetra fluviatilis*), twaite shad (*Alosa fallax*), Atlantic salmon (*Salmo salar*), bullhead (*Cottus gobio*), otter (*Lutra lutra*). In addition, the site supports allis shad (*Alosa alosa*), which is a qualifying feature.
National		
River Lugg SSSI	3.6 km west	The site comprises the River Lugg, its headwaters and adjacent habitats. The headwaters are characterised by a range of bryophytes in stony flushes and streamside rocks, while the riverbanks and surrounds support heather moorland, dry calcareous grassland, damp

Name of Site and Designation	Approximate Distance/Direction from Site	Feature(s) of interest.
International		
		pasture and base-rich flushes. Most of the middle and lower reaches support a species-rich flora characteristic calcareous lowland rivers, with some of the lower reaches home to vegetation communities more characteristic of southern clay rivers. The site supports a number of key species, including white-clawed crayfish (*Austropotamobius pallipes*), otter (*Lutra lutra*), Atlantic salmon (*Salmo salar*), bullhead (*Cottus gobio*) and Twaite shad (*Alosa fallax*).
Lugg and Hampton Meadows SSSI	4.1 km south-west	The site is designated for its species-rich neutral grassland, including the nationally scarce MG4 meadow foxtail *Alopecurus pratensis* – great burnet *Sanguisorba officinalis* and MG5 crested dog's-tail *Cynosurus cristatus* – common knapweed *Centaurea nigra* grasslands, and for its populations of narrow leaved water-dropwort *Oenanthe silaifolia* and mouse tail *Myosurus minimus*.
SAC: Special Area of Conservation SSSI: Site of Special Scientific Interest		

4.4 The site lies within the SSSI risk impact zones for River Wye and River Ugg SSSI.

Non-Statutory Designated Sites

4.5 Non-statutory designations are 'local sites' which are commonly of at least County level importance and which receive protection under local planning policy only. In Herefordshire these sites are referred to as Local Wildlife Sites (LWS) (formerly Special Wildlife Sites). Additional designated sites which should be considered at this level are Other Sites of Wildlife Interest (OSWI) and Unconfirmed Wildlife Sites (UWS) where these are not covered by other designations.

4.6 The site is not covered by any such designation. The desk study identified 3 non-statutory designated sites within 2 km of the site, and these are summarised in **Table 7** below.

Table 7: Non-Statutory Designated Sites within the site's potential Zone of Influence.

Name of Site and Designation	Approx. Distance/ Direction from the Site	Feature(s) of Interest)
Woodland on Shucknall Hill SWS	0.6 km south	An ancient woodland dominated by oak and hazel coppice with some larch sweet chestnut. The ground flora includes deadly nightshade and wild daffodil. The track up to the wood has a rich limestone flora.
Ash Coppice SWS	1.5 km east	An ancient wood with a belt of conifer. Oak and ash are dominant with a hawthorn and holly understorey.
Old canal at Monkhide SWS	1.6 km east	An area of open water with a wooded margin, including ash, elm, willow, hazel and hawthorn.

Habitats of Principal Importance and Ancient Woodland

4.7 The desk study identified no habitats of Principal Importance or Ancient Woodland present within the site. Several areas of these habitats are present within the 2 km search radius. Five areas categorised as '*No main habitat but additional habitat exists*' are present within the search radius, the closest being c.700 m to the north-west of the site. Three of these have traditional orchard as a main habitat and two have deciduous woodland. **Table 8** provides a summary of Habitats of Principal Importance within the 2 km search area.

Table 8: Habitats of Principal Importance

Habitat	Summary of Features	Distance from site of nearest feature
Deciduous woodland	Semi-natural deciduous woodland.	Adjacent to the north and west of the site
Traditional orchard	Open grown fruit and nut trees set in herbaceous vegetation.	0.3 km east
Ancient woodland	Areas of woodland that have persisted since 1600 or earlier, relatively undisturbed.	0.6 km south
Open mosaic	Habitat generally comprising primary successions similar to early/pioneer communities. Vegetation typically exists in small patches, with high spatial variation due to variation in both substrate and topography.	0.8 km south-east

Habitats

4.8 The principal habitats within and around the site, together with their dominant/characteristic plant species, were identified during the Extended Phase 1 habitat survey. The distribution of different habitat types within the site are mapped in **Figure 3**, illustrative photographs and target notes are also provided in **Appendix B**.

4.9 The site predominantly comprises 9 arable fields, hedgerows, ponds and two areas of plantation broadleaved woodland. See **Figure 4** for field numbers.

4.10 Habitats recorded within the footprint of the site were:

- Semi-natural broad-leaved woodland (A1.1.1)
- Plantation broadleaved woodland (A1.1.2)
- Dense/Continuous Scrub (A2.1)
- Scattered Scrub (A2.2)
- Scattered Broadleaved trees (A3.1)
- Poor semi-improved grassland (B6)
- Tall ruderal (C3.1)
- Standing water (G1)
- Running water (G2)

- Arable land (J1.1)
- Intact species-rich hedge (J2.1.1)
- Intact species-poor hedge (J2.1.2)
- Defunct species-poor hedge (J2.2.2)
- Species-rich hedge with trees (J2.3.1)
- Species-poor hedge and trees (J2.3.2)
- Dry ditch (J2.3.6)
- Buildings (J3.6)
- Bare ground (J4)

Semi-natural broad-leaved woodland (A1.1.1)

4.11 A patch of semi-natural broad woodland within the site is present on the southern side of field 8 (see **Figure 4, F8**). Species present included cherry specie (*Prunus sp.*), English oak (*Quercus robur*) and ash (*Fraxinus excelsior*). In addition, along the northern boundary of the site is strip mature woodland dominated by ash, other species present include, willow species (*Salix* sp.), field maple (*Acer campestre*), spindle (*Euonymus europaeus*), dogwood (*Cornus sanguinea*), horse chestnut (*Aesculus hippocastanum*) and English oak. The understorey comprises of bramble (*Rubus fruticosa* agg.), willowherb species (*Epilobium* sp.), stinging nettle (*Urtica dioica*), and cocks foot (*Dactylis glomerata*).

Plantation broadleaved woodland

4.12 Two areas of plantation broadleaved woodland are present in the approximate centre of the site. Trees present within these woodlands include silver birch (*Betula pendula*), field maple, beech (*Fagus sylvatica*), sycamore (*Acer pseudoplatanus*), ash, willow sp., bird cherry (*Prunus avium*) and English oak. Shrubs present within the woodland include elder (*Sambuca nigra*), common hawthorn (*Crataegus monogyna*) and dog rose (*Rosa canina*). Ground flora and grasses include common nettle, cow parsley (*Anthriscus sylvestris*), bracken (*Pteridium aquilinum*), bramble, common sorrel (*Rumex acetosa*), wood melick (*Melica uniflora*) and cock's-foot.

Dense/continuous scrub

4.13 A number of small areas of dense scrub are present within the site, which was dominated by bramble. Other species present within these areas included nettle, ivy (*Hedera helix*), common hawthorn, blackthorn and willow sp. saplings.

Scattered scrub

4.14 Several patches of scattered scrub are present within the site dominated by bramble.

Scattered broadleaved trees

4.15 A number of mature oak trees are present within the arable fields on-site. Scattered trees are present around the ponds in field 5 and lines of trees are also present on the field boundaries. Species include English oak, ash, hawthorn, willow sp. and poplar (*Populus* sp.) among others.

Poor semi-improved grassland

4.16 A number of small areas of poor semi-improved grassland are present on the edges of the arable fields. Species present within these areas include broad-leaved dock (*Rumex obtusifolius*), nettle, herb robert (*Geranium robertianum*), hogweed (*Heracleum sphondylium*), thistle sp., cleavers (*Galium aparine*), cranesbill sp. (*Geranium* sp.), common sorrel, field speedwell (*Veronica persica*) and corn camomile (*Anthemis arvensis*).

Tall ruderal

4.17 A number of areas of tall ruderal vegetation are present on the edges of some of the arable fields, around the ponds on-site and on the eastern access track. Species recorded within these areas include great burdock (*Arctium lappa*), nettle, thistle sp. (*Cirsium* sp.), cleavers, hogweed, white dead-nettle (*Lamium album*), broad-leaved dock, ivy (*Hedera helix*), wood avens (*Geum urbanum*) and herb robert.

Standing water

4.18 Three ponds are present on-site, two in field 5 and one in field 8 (see Figure 5).

Running water/wet ditch

4.19 A number of wet ditches/drains are present within and on the boundary of the site.

Arable land

4.20 Each of the nine fields which comprise the site are arable fields. One of these fields comprised lawn turf, whilst the others had been recently sown and therefore lacked vegetation. Species recorded growing on the edges of the arable field include groundsel (*Senecio vulgaris*), broad-leaved dock, field speedwell, cranesbill sp. and nettle. A strip of maize was present in on the eastern boundary of field 1 adjacent to the strip of plantation woodland. Species recorded within this area include corn camomile, thistle sp., common poppy (*Papaver rhoeas*) and field speedwell.

Dry ditch

4.21 Two dry ditches are present within the site; one on the eastern access track and another on the boundary between fields 2 and 3.

Buildings

4.22 A barn is present in the south-west corner of field 8, which is constructed from corrugated metal with a wooden frame.

Bare ground

4.23 Bare ground is present along the two access tracks on the southern side of the site, between field 1 and field 6 and between field 2 and field 3.

Hedgerows

4.24 A number of hedgerows bisect and are on the boundary of the site. A description of each hedgerow is in **Table 9** below and a plan showing the hedgerows can be found in **Figure 4.**

Table 9: Description of hedgerows on the application site

Hedge No	Description & Species	Species rich/poor	Intact/ defunct
H1	Defunct hedgerow on the northern boundary of field 1 comprising hawthorn, hazel, elder, bramble, ash, field maple and blackthorn (*Prunus spinosa*).	Rich	Defunct
H2	Defunct hedgerow on the eastern edge of the strip of plantation woodland in the centre of the site. Species include hawthorn, clematis (*Clematis vitalba*), hazel (*Corylus avellana*) and bramble.	Poor	Defunct
H3	Defunct hedgerow on the northern boundary of field 2 comprising field maple, hawthorn, blackthorn, ash, spindle (*Euonomys europeaus*), bramble, elder and hazel.	Rich	Defunct
H4	Hedgerow between fields 2 and 3. Species include hawthorn, blackthorn, elm and dog rose. Two significant gaps are present.	Poor	Defunct
H5	Hedgerow with trees in the north-eastern corner of field 3 comprising hazel, ash, hawthorn, elm and bramble	Poor	Intact
H6	Defunct hedgerow with trees on northern boundary of field 4 comprising field maple, hawthorn, willow sp., hazel. Lesser celandine (*Ficaria verna*) was present at the base of the hedgerow.	Poor	Defunct
H7	Hedgerow with trees on the eastern boundary of field 4 comprising common hawthorn, blackthorn, elder, willow sp, hazel, English elm, English oak and bramble.	Rich	Intact
H8	Hedgerow with trees on the eastern boundary of field 3 comprising oak, hawthorn, ivy and blackthorn. Gaps are present at the base of the hedgerow	Poor	Defunct
H9	Dense hedgerow with trees in the south-eastern corner of field 3 comprising hawthorn and bramble	Poor	Intact
H10	Hedgerow with a single tree on the southern boundary of field 3. Species include elder, hawthorn, bramble and field maple.	Poor	Defunct
H11	Blackthorn hedgerow with trees on the southern boundary of field 2. Some gaps are present.	Poor	Defunct
H12	Common hawthorn hedgerow	Poor	Intact
H13	Hedgerow with trees, species present included common hawthorn, blackthorn, bramble, dog rose, field maple. Willow sp, elder, ash, and English oak.	Rich	Intact
H14	Hedgerow with trees species present included common hawthorn, blackthorn, hazel, bramble, field maple. Willow sp, elder and English oak.	Rich	Intact
H15	Hedgerow with trees species present included common hawthorn, blackthorn, hazel, bramble, field maple, ash and poplar sp..	Rich	Intact
H16	Hedgerow with trees species present included common hawthorn, blackthorn, hazel, dog wood, bramble, field maple, and willow sp.	Rich	Intact
H17	Hedgerow with trees species present included blackthorn, common hawthorn, bramble, field maple, dog rose, hazel, dogwood and English oak.	Rich	Intact
H18	Hedgerow with trees species present common hawthorn, bramble and English oak.	Poor	Intact
H19	Hedgerow with trees species present common hawthorn, hazel, bramble and English oak.	Poor	Intact

H20	Hedgerow – common hawthorn, bramble, elder, dog rose, blackthorn and field maple.	Poor	Intact
H21	Hedgerow with trees species present common hawthorn, ash, field maple, rose sp, bramble and English elm.	Poor	Intact
H22	Hedgerow with trees species present blackthorn, common hawthorn, bramble, English oak, cherry sp., ash and willow sp..	Rich	Intact

Evaluation

4.25 Overall, the majority of habitats within the site are considered to be of low intrinsic ecological value (namely the arable fields) due to the limited quality, distinctiveness and extent of the habitats present. The habitats are common and widespread but do offer opportunities for a range of protected species across the site, as discussed below. The hedgerows, ponds and woodland are of higher ecological value.

Species

[redacted]

Bats

4.30 The data search returned over 300 records of bats from ten bat species within 4 km of the site in the past 10 years. These were:

- Common pipistrelle (*Pipistrellus pipistrellus*);
- Soprano pipistrelle (*Pipistrellus pygmaeus*);
- Serotine (*Eptesicus serotinus*);
- Noctule (*Nyctalus noctula*);
- Brandt's (*Myotis brandtii*);
- Whiskered (*Myotis mystacinus*);
- Natterer's (*Myotis nattereri*);
- Brown long-eared (*Plecotus auritus*);
- Lesser horseshoe (*Rhinolophus hipposideros*); and
- Western barbastelle (*Barbastella barbastellus*)

4.31 The majority of the records were for bats in flight with some roosts being recorded.

4.32 In addition, there are ten records of European Protected Species Licensing (EPSL) within 4 km of the site (**Table 10** refers).

Table 10: Granted EPSL Records Present Within 4 km Search Radius

Date of Granted Application	Species	Licensable Activity	Approximate Distance from Site
2009	C-PIP, S-PIP, BLE, BRAN, NATT, WHISK	Destruction of a breeding site and destruction of a resting place	0.03 km north
2013	BLE, L-HORSE	Destruction of a breeding site and destruction of a resting place	1.3 km south
2015	BLE, C-PIP	Destruction of a breeding site and destruction of a resting place	2.8 km south-west
2013	BLE, C-PIP, L-HORSE	Destruction of a breeding site and destruction of a resting place	3.3 km south-west
2009	C-PIP, BLE, NATT	Destruction of a breeding site and destruction of a resting place	3.5 km east
2013	BLE, L-HORSE, WHISK, NATT	Destruction of a breeding site and destruction of a resting place	3.5 km east
2016	BLE, L-HORSE, WHISK, NATT	Damage and destruction of a breeding site and damage and destruction of a resting place	3.5 km east
2012	C-PIP;S-PIP;BLE	Destruction of a resting place	3.8 km west
2015	C-PIP, BLE, NATT	Damage of a resting place and destruction of a resting place	3.9 km north
2016	BARB,BLE,C-PIP,L-HORSE,NATT,S-PIP	Destruction of a resting place	4 km north-east

KEY: C-PIP = Common pipistrelle, S-PIP = Soprano pipistrelle, BLE = Brown long-eared, NATT = Natterer's, WHISK = Whiskered, BRAN = Brandt's, BARB = Western barbastelle, L-HORSE = Lesser horseshoe

Assessment of Foraging Quality

4.33 The habitats within the site and surrounding landscape were evaluated for commuting and foraging bats within the criteria set out **Table 3** above. The linear boundary features (network of hedgerows, mature trees, ponds and drainage ditches) are likely to support a variety of bat species. The nine arable fields are of lower suitability. In addition, the presence of woodland edge is key habitat for foraging bats. Further consideration of foraging bats is required.

Roosting Bats

4.34 Large numbers of mature trees are present in the field boundaries, with many noted as offering features that could be exploited by roosting bats. The building within the site was deemed to have negligible potential for roosting bats due to its construction (corrugated metal) and open nature.

4.35 Trees with the field boundaries were assessed for their potential to contain bat roost (following best practice guidelines – see **Table 4)**. The location of the trees cans be seen on **Figure 6** and the roost categorisation is present in **Table 11**.

Table 11: Preliminary Ground Tree Roost Assessment Results

Tree No.	Species	Roost potential
T1	Ash	Mod
T2	Oak	Low
T3	Oak	High
T4	Oak	Mod
T5	Ash	Low
T6	Ash	High
T7	Ash	Mod
T8	Oak	Mod
T9	Oak	Mod
T10	Ash	Low
T11	Common hawthorn	Low
T12	Oak	High
T13	Oak	Moderate
T15	Oak	Moderate
T16	Oak	High
T17	Oak	Moderate
T18	Oak	Negligible

4.36 Further consideration of roosting bats is required.

Dormouse

4.37 No records for dormouse from within the last 10 years were returned from the data search and no records of granted EPSL for dormice were found on the MAGIC website [online].

4.38 The hedgerows and more mature woodland provided some potential suitable habitat for dormouse but lacked a high proportion of hazel. This was also the case of the woodland adjacent to the site. Further consideration of dormouse is required.

Otter

4.39 No records of otters were returned as part of the desk study.

4.40 No evidence of otters was recorded during the survey. Otters could be using the streams and ditches north of the site, but it is considered highly unlikely that otters would access the site. Therefore, otters have been scoped out.

Water Vole

4.41 No records of water vole were returned as part of the desk study.

4.42 No evidence of water voles was recorded during the survey. The waterbodies on site could provide suitable habitat for water voles. The waterbodies are planned for retention therefore water voles have been scoped out of any further assessment.

Other mammals

4.43 The data search returned records of polecat (2), hedgehog (2) and brown hare (1) within the search area within the past ten years. None of the records fall within the site boundary.

4.44 The site is considered to have potential for all three species.

Birds

4.45 The data search returned 14 records of bird species listed on Schedule 1 of the Wildlife and Countryside Act (1981, as amended) and/or Section 41 of the Natural Environment and Rural Communities Act (2006). Species include house sparrow (*Passer domesticus*), red kite (*Milvus milvus*), skylark (*Alauda arvensis*), fieldfare (*Turdus pilaris*), redwing (*Turdus iliacus*), reed bunting (*Emberiza schoeniclus*), cuckoo (*Cuculus canorus*), yellowhammer (*Emberiza citrinella*) and barn owl (*Tyto alba*).

4.46 The MAGIC website (online) search identified records of curlew (*Numenius arquata*) which indicates that this species is present either on-site or within 1 km of the site. The site also overlaps with priority areas for Countryside Stewardship measures addressing curlew and lapwing (*Vanellus vanellus*) habitat issues.

4.47 The proposed scheme will result in the loss of arable habitat some of which could be used by birds (bird may also be using other habitats present that are unlikely to be affected such as the trees, hedgerows and scrub). Therefore, further consideration for breeding birds is required.

4.48 The site is also considered to provide suitable habitat for wintering birds. It is considered likely that the fields could support flocks of wintering birds (such as yellowhammer, linnet, starling etc) which could be displaced by conversion to grassland. Therefore, further consideration for wintering birds is required.

Amphibians

4.49 The data search returned records of common frog (12), common toad (26), smooth newt (40), palmate newt (10) and great crested newt (GCN) (32) within 2 km of the site within the past ten years. None of the records are located within the site. The closest records of GCN for the last 10 years are located 1.1 km to the north-east of the site. There is a historical record from 1988 of GCN c.275m south-east of the site. There is one record of a European Protected Species Licence EPSL for great crested newts see **table 12**.

Table 12 Granted EPSL Records Present Within 4 km Search Radius

Date of Granted Application	Species	Licensable Activity	Approximate Distance from Site
2010	Great crested newt	Destruction of a resting place.	3 km south-east

4.50 There were three ponds P1, P2 and P3 (see **Figure 5** for locations) within the site boundary and a further 14 waterbodies within 500 m of the site.

Habitat Suitability Index (HSI) Survey

4.51 Fourteen waterbodies were subject to HSI assessment (see **Figure 5** for locations). Results of the HSI assessment are provided in **Table 13** below.

Table 13: Results of HSI Assessment

Waterbody Ref.	HSI Score	Suitability to Support GCN
Pond 1	0.59	Below Average
Pond 2	0.78	Good
Pond 3	0.57	Below Average
Pond 4	0.87	Excellent
Pond 5	0.31	Poor
Pond 6	0.57	Below Average
Pond 7	0.63	Average
Pond 8	No access	No access
Pond 9	No access	No access
Pond 10	No access	No access
Pond 11	0.73	Good
Pond 12	0.66	Average
Pond 13	0.67	Average
Pond 14	No access	No access
Pond 15	0.52	Below Average
Ditch 1	0.69	Average
Ditch 2	0.74	Good

4.52 The majority of the site (arable fields) is highly sub-optimal for GCN. The boundary hedgerows, woodland and the scrub and grassland habitats do provide some suitable terrestrial habitat for GCN.

4.53 The site contains suitable terrestrial and aquatic habitats for great crested newts, and therefore further consideration for great crested newts is required.

Reptiles

4.54 The data search returned one record of slow worm within the 2km search radius.

4.55 There is suitable habitat present (e.g., hedgerows, pond margins and woodland) that is likely to provide some foraging and sheltering opportunities for common and widespread reptile species. The majority of the site which are arable fields are not deemed suitable for reptiles. Further consideration to reptiles is required.

Invertebrates

4.56 The data search did not return any records of rare or notable invertebrate species within the 2 km radius.

4.57 No rare or protected invertebrates were recorded during the Phase 1 Habitat Survey. Due to the lack of habitat diversity, the site is unlikely to support invertebrates of conservation concern.

Flora

4.58 The data search returned records of spreading bellflower (*Campanula patula*) and bluebell (*Hyacynthoides non-scripta*). None of these records fall within the site boundary.

4.59 No rare or protected plants were recorded during the Phase 1 Habitat Survey. The habitats on site were considered to be common and widespread, with no indication of rare species being present.

Invasive species

4.60 The data search returned records of parrot's feather (*Myriophyllum auaticum*), rhododendron (*Rhododendron ponticum*) and turkey oak (*Quercus cerris*). None of the records fall within the site boundary.

4.61 No species listed on Schedule 9 of the Wildlife and Countryside Act (1981, as amended) were recorded during the Phase 1 Habitat Survey. Therefore, invasive plant species are considered absent from the site.

Other Species

4.62 No suitable habitat was present for white clawed crayfish and therefore these species are considered absent.

5.0 DISCUSSION AND RECOMMENDATIONS

5.1 This PEA Report assesses the value of, and predicts potential impacts on:

- Designated sites;
- Habitats and species of 'Principal Importance' (NERC Act 2006);
- Habitats and species listed on regional or local Biodiversity Action Plans; and
- Habitats and species afforded legal protection.

5.2 Where impacts cannot be avoided by inherent mitigation alone, additional mitigation or enhancement measures are included which would as a minimum enable the proposed development to meet legislative and/or planning policy requirements.

5.3 The assessment below considers potential impacts that could arise from the proposed solar scheme as outlined in **Section 1.7-1.12.** Solar schemes are typically a relatively low impact form of development with respect to wildlife. No night-time lighting is proposed and a reasonable buffer will be provided from the habitats on site with the highest ecological value (i.e., hedgerows, woodland edges and ponds). At this stage it is assumed that no large sections of hedgerows will be removed, however it is possible that some sections of hedgerows could be removed, and this will be reviewed as the site layout evolves. The proposed site layout is shown in **Appendix A.**

Designated Sites

5.4 As identified in **Section 4** there are three statutory designated sites within the potential zone of influence of the application site. The closest of these being River Wye SAC and River Lugg SSSI, which are both located 3.6 km west of the application site. Due to the substantial intervening distance, the nature of the development and lack of functional links no impacts area anticipated on any statutory site.

5.5 The application site lies within the SSSI Impact Risk Zone of River Wye and River Ugg. Developments of a certain size and nature that fall within SSSI Impact Risk Zones, require the LPA to consult with Natural England (NE) to determine whether the proposed

development is likely to impact upon the SSSI. In this instance, the proposed development is not of a size and nature which requires the LPA to consult with NE.

5.6 There are 3 non-statutory designated sites within the potential zone of influence of the site. The nearest is Woodland on Shucknall Hill which lies 600 m from the application site's southern boundary. Due to the intervening distance no direct effects are anticipated to this site. Indirect effects from construction works are capable of being managed via implementation of a Construction Environmental Management Plan (CEMP) – the site is designated for habitats not fauna and so disturbance effects are not a concern.

Habitats

5.7 There are Habitats of Principal Importance within the site, these are the hedgerows, ponds and woodland. The woodland and ponds will be retained and protected by an appropriate buffer. At this stage it is not known whether small sections of hedgerows will need to be removed to facilitate access, the site layout is not yet fixed. If hedgerows are required to be removed, then these will be replaced on a like for like basis. It is recommended that the hedgerows and woodland are protected from development impacts as there is potential for accidental damage to tree roots during construction activities. To avoid such impacts, Root Protection Areas (RPAs) will be identified and suitable protective fencing (such as Heras fencing to BS5837:2012) installed around the site's boundaries.

5.8 The arable fields are considered to be of low ecological value habitats. The higher quality habitats are those surrounding the site, namely the broadleaved woodland and hedgerows.

Protected and/or Notable Species

5.9 Certain species receive legal protection in the United Kingdom and are commonly known as 'protected species'. In reality, the level of protection for different species varies considerably, from protection solely against 'killing and injury' to full protection of the species and their places of refuge. Details of legal protection afforded to species/species-groups on the legislation can be found in **Appendix B**.

[redacted]

Bats

5.12 The site provides suitable foraging habitat for bats and is considered to provide moderate foraging potential[1].

5.13 Consultation in the form a pre-application advice request is being undertaken and it is suggested that, given that the only habitats to be affected by the proposed development

[1] Survey methodology for moderate value habitat (Collins J, 2016): one survey per month between April to October (one of which should be a dusk and dawn). In addition, automated detectors should be deployed at two locations for five consecutive nights each month between April and October.

are the arable fields, that a reduced scope for bats surveys could be acceptable in the form of the survey level for a low suitability site (three walked transects spring, summer, autumn and static deployments).

5.14 There are trees present within the hedgerows and woodland edge around the site, which may offer potential for roosting bats. Once the final layout is decided, any trees to be removed should be assessed from the ground level for their roosting potential. Depending on the outcome of ground inspections, further (emergence) surveys could be required.

5.15 A total of 18 trees within field boundaries have been assessed for their potential for roosting bats. It is recommended that if these trees are being removed then further surveys works would be required. In the form of aerial tree climbing and/or emergence/re-entry surveys.

5.16 During the construction phase of the proposed development, no temporary construction lighting should be allowed to fall on boundary features during the bat active season (April – October inclusive). This will prevent adverse impacts from lighting during the construction phase on foraging bats. Above measure to be included in the CEMP.

Dormouse

5.17 Currently it is not known whether any of the hedgerows will need to be removed as part of the proposed development. Should substantial amounts of hedgerow be required to be removed, then nest tube surveys will be required (April to November inclusive) to confirm absence or presence of dormice at the site. If only a small amount of hedgerow needs to be removed (<5m per hedgerow stretch) a full suite of surveys is not considered to be required, but a fingertip search would be undertaken which would also include a visual search for nests and opened nuts prior to commencement of works.

Other mammals

5.18 The proposed development will result in the loss of hedgehog and hare foraging and refuge habitat afforded by the site.

5.19 If clearance works are undertaken over the winter period, care should be taken to ensure that any hedgehogs present within the site are not harmed as this species hibernates over winter and is vulnerable to disturbance. Suitable measures to be included in the CEMP.

Breeding Birds

5.20 Further surveys for breeding birds will need to be undertaken to determine the extent of use and species assemblage is present, to ensure adequate mitigation is put in place.

5.21 Four survey visits, based on the British Trust for Ornithology (BTO) Common Bird Census (CBC) method (Marchant, 1983), should be undertaken between March and June. The CBC method is used rather than the Breeding Bird Survey now employed by the BTO, as it gives a spatial distribution of species across a site, rather than just the number of adult birds in a given area. The surveys should be conducted during the early morning or the late afternoon when the birds are displaying and singing (evening visits are better for thrushes). Details of birds occurring within the site along with their activity would be recorded.

5.22 The site is considered suitable for wintering birds. The fields could support flocks of wintering birds (such as yellowhammer, linnet, starling etc) which could be displaced by conversion to grassland. It is recommended that 4 x monthly visits: Nov – Feb are

undertaken to assess the wintering bird potential for the site. TLP is currently progressing with the wintering bird surveys as scoped above.

5.23 Given the potential presence of both breeding and wintering birds, the time frame for construction should be carefully considered following completion of further bird surveys.

Great Crested Newts

5.24 Great crested newts have been recorded within the local area and three waterbodies are present within the site. A further eleven accessible water bodies are present within 500 m to the site are present. There is some suitable terrestrial habitat within the site. The waterbodies were subject to HSI surveys which give an indication of suitability of GCN. **Note:** poor score does not conclusively confirm GCN absence.

5.25 The main habitat to be affected by the proposed development is arable which is highly sub-optimal for GCN. Due to the large number of waterbodies within 500m buffer zone, it is considered that waterbodies within 250 m (core zone for GCN) of the site are carried forward for further survey works.

5.26 It is recommended that all accessible waterbodies within 250 m from the site are subject to environmental DNA (eDNA) testing to identify whether GCN are present. The eDNA samples must be undertaken between mid-April and the end of June. If GCN are found to be present then further surveys, mitigation or compensation would be required.

Reptiles

5.27 Due to the relatively small area of the site that is suitable for reptiles, it is not deemed proportionate to undertake a reptile absence/presence survey.

5.28 Instead, prior to construction, the grassland vegetation should be cleared using a directional, phased approach (during the reptile active period - April to early October inclusive). During the first stage, vegetation should be cut to a height of 150 mm using hand tools, with arisings removed. The second stage (at least 24 hours after the first cut, thereby allowing time for reptiles to disperse) should involve vegetation being cut to ground level, and arisings removed. These cuts should be directional, working towards adjacent habitat to the north of the site.

5.29 To avoid injuring any reptiles during the construction phase any building materials such as bricks, stone etc. should be stored on pallets to discourage reptiles from using them as shelter, at least 5 m from the retained habitats.

5.30 Above measure to be included in the CEMP.

General Good Working Practices

5.31 The construction works footprint (including material storage) should be kept to a minimum.

5.32 Should any materials require storing on-site during the construction phase, materials should not be stored within 5 m of any boundary trees. They should be stored off ground (i.e., on pallets) to avoid creating sheltering habitat for animals, and waste materials should be placed into skips and removed from site. No piles of waste material should be created that could provide nesting, sheltering or hibernation habitat for protected species.

5.33 Pollution prevention methods should be adhered to, similar to the currently withdrawn Pollution Prevention Guidelines (PPG), in particular PPG1 Basic good environmental practices; PPG3 Use and design of oil separators in surface water drainage systems; and PPG6 construction and demolition sites.

5.34 In addition, noise, light and vibrations should be kept to a minimum.

5.35 Above measures to be included in the CEMP.

Summary of Recommended Mitigation/Compensation Measures

- Preparation of a Construction Environmental Management Plan (CEMP) (to include specifications for fencing to protect the hedgerows within the site and woodland adjacent to the site; precautionary working methods to protect [redacted] hedgehogs and reptiles and sensitively timed works to protect nesting birds);
- The soft landscaping scheme should include native species of local provenance that are nut and seed bearing;
- Permeability of the site for wildlife during operation (gaps in fencing);
- General good working practice should be adhered to.

Summary of Further Survey Work Required:

[redacted]

- Aerial tree roost assessments for bats and possible emergence/re-entry surveys;
- Bat activity surveys (survey level for a low suitability site);
- Breeding bird surveys;
- Wintering bird scoping surveys;
- Great crested newt eDNA survey.

6.0 ECOLOGICAL ENHANCEMENTS

6.1 The site has potential to deliver biodiversity net gain. It is recognised that the proposed development will result in a net loss of arable/improved grassland habitat. An initial calculation using the Defra Biodiversity Metric 2.0 shows that the loss of 1 ha of arable land within the interior of the site equates to 2 units.

6.2 This loss could be mitigated for with a 10 % net gain by provision of 0.4 ha of moderate quality neutral grassland with wildflowers. Other options for net gain provision will be available and we propose to refine this subject via discussions with the design team, taking into consideration the emerging site layout and other design requirements.

6.3 A detailed Biodiversity Net Gain assessment (using the most up-to-date available Defra metric) should be undertaken to inform the emerging site design.

7.0 CONCLUSION

7.1 A Phase 1 habitat survey was conducted of the site in October 2020 to map the habitats present, highlight potential for protected species to occur and inform the proposed development. The site predominantly supports arable farmland, with a low diversity of common and widespread plant species, which is currently utilised for the cultivation of crops. Areas of greater diversity and biodiversity value within the site are found associated with the boundary features, although no notable plant species were identified.

7.2 Based on the variety of habitats within the site, there is the potential for a range of legally protected and notable species to occur. However, due to the dominant habitat types (arable) providing a paucity of floristic diversity and habitat structure, there are limited opportunities for foraging and sheltering. Protected species interest is therefore likely to be primarily restricted to boundary habitats and adjacent higher quality habitats, which may limit the size of the populations present.

7.3 The results of the survey and this assessment demonstrate that the habitat types present, their area and quality, and therefore potential presence of legally protected or notable species, is unlikely to preclude or significantly limit the capacity of the site to deliver future solar development. Consideration should be given, however, to the retention of higher value habitat features, such as hedgerows and mature and semi-mature trees, wherever possible due to their intrinsic ecological value and their potential to support legally protected or notable species.

7.4 Retained and created habitats should be subject to a regime of management, designed to meet the principles of Green Infrastructure and biodiversity gain, to further realise their ecological potential and accord with planning policy.

7.5 Enhancement of the biodiversity value of the proposed development would demonstrate a positive contribution to the aims and objectives of:

- NPPF/NPPG – by incorporation of biodiversity in and around developments and safeguarding of aged or veteran trees; and
- Local planning policy – through protecting, enhancing, developing and integrating Green Infrastructure and ecological features.

7.6 Subject to informed scheme design, including retention of features of greatest ecological interest, it is likely that future development of the site can be achieved without significant negative ecological impact. The potential presence of any European Protected Species or notable species is highly unlikely to preclude or significantly limit the capacity of the site to deliver solar PV development.

7.7 Further Phase II ecological surveys are recommended to comprehensively inform detailed scheme design. A robust Ecological Impact Assessment (EcIA) will be required to support a future planning application for the site.

8.0 REFERENCES

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APPENDIX A: LEGAL AND PLANNING CONTEXT

APPENDIX A: LEGAL AND PLANNING CONTEXT

Protected Sites (European)	
Special Areas of Conservation (SACs)	SACs are designated under The Conservation of Habitats and Species Regulations 2017 as amended, which implements The European Community Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora 92/43/EEC (the 'Habitats Directive', EEC, 1992). Lists of candidate SACs (cSACs) have been submitted to the European Commission for approval. Both possible SACs (pSACs) and cSACs are treated by the planning system as if fully designated.
SPA	SPAs are classified in accordance with the European Community Directive on the Conservation of Wild Birds (79/409/EEC) (the 'Birds Directive', EEC, 1979). Under this Directive, the UK Government must also take special measures to conserve the habitat of species listed in Annex I of the Directive and all migratory species. The provisions of the Birds Directive are implemented in England through the Wildlife and Countryside Act 1981 (as amended) and the Habitats Regulations (2010).
Ramsar Sites	The Ramsar Convention (UNESCO, 1987) requires signatory states to protect wetlands that are of international importance, particularly as waterfowl habitats.
Protected Sites (National)	
Local Nature Reserves	Local Nature Reserves are designated under Section 21 of The National Parks and Access to the Countryside Act 1949 (HMSO, 1949) by principal local authorities. The declaring local authority must have a legal interest in the land concerned. Local Nature reserves are designated for people and wildlife. They are places with wildlife or geological features of special interest locally and that give people special opportunities to study and learn about them or simply enjoy them and have contact with nature.
National Nature Reserves	National Nature Reserves are designated under Section 21 of the **National Parks and Access to the Countryside Act 1949** (HMSO, 1949) by the statutory authority. They are usually owned and manged by the statutory authority. National Nature Reserves are designated for the habitats that they support.
Sites of Special Scientific Interest (SSSIs)	The Wildlife and Countryside Act 1981 (as amended 1991 and varied 1998) (HMSO, 1981, 1991, 1998) requires Natural England, the Government body with authority for nature conservation in England, to designate areas which make a significant contribution to a national network of sites of nature conservation value as SSSIs. The Countryside and Rights of Way Act 2000 (HMSO, 2000) came into force in full on 30 January 2001. The Act is in five parts. Part III relates to Nature Conservation and amends existing legislation (i.e., the Wildlife and Countryside Act 1981) through improved protection and management of SSSIs, improved legal protection for threatened species and the provision of a statutory basis for biodiversity conservation.
Non-Statutory Sites	
Local Wildlife Sites; County Wildlife Sites;	The majority of Local Authorities have a system of 'second tier' sites which do not wholly fulfil SSSI designation criteria, but which are, nonetheless, of local or regional value. The policies, encouraged by

Sites of Nature Conservation Interest	Government advice, recognise that protection should be extended beyond the statutory sites to include the best examples of wildlife habitats, populations of rare species and geological features remaining in the area and are particularly valuable in supplementing and supporting the national framework for SSSIs.
Protected Species (European)	
Bats	All British bats and their roosts are fully protected under international wildlife law against adverse effects including disturbance. Under the terms of the Bonn Convention, which encompasses the Agreement of the Conservation of Bats in Europe, there is a fundamental obligation to protect from damage or disturbance, sites which are important for the conservation status of bats. Such sites include those bats use for shelter or protection and important foraging areas.
Birds	In Britain all wild birds are granted legal protection under the EC Birds Directive and the Wildlife & Countryside Act 1981 (as amended). This legislation protects the birds, their eggs and nests whilst being built or in use. Under the Bern Convention 1979, Contracting Parties are required to take appropriate and necessary legislative and administrative measures to ensure the special protection of the wild fauna species specified in Appendix II. In the UK this is implemented through various national wildlife protection policies.
Dormouse	The dormouse is protected under Schedule 2 of The Conservation of Habitats and Species Regulations 2017 as amended and Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Taken together, the Regulations and Act make it illegal to intentionally or deliberately kill, injure or capture dormice; deliberately disturb dormice and damage or destroy dormouse breeding sites or resting places.
Great Crested Newt	The great crested newt is fully protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) and The Conservation of Habitats and Species Regulations 2017 as amended. The legislation protects the newts and their places of shelter or protection, which may extend 500m from the breeding pond.
Invertebrates	Under The Conservation of Habitats and Species Regulations 2017 as amended, invertebrate species listed on Schedule 2 it is an offence to deliberately capture or kill, disturb, take or destroy eggs of such a species or to damage or destroy the breeding site or resting place of such an animal.
Plants	Certain plant species are listed under Annex IVb of the Habitats Directive under which it is an offence to deliberately pick, collect, cut, uproot or destroy such a plant. Under the Bern Convention 1979, Contracting Parties are required to take appropriate and necessary legislative and administrative measures to ensure the special protection of the wild flora species specified in Appendix 1. In the UK this is implemented through various national wildlife protection policies.
Protected Species (National)	
Badger	Badgers are protected under the Protection of Badgers Act 1992. This Act makes it illegal to wilfully kill, injure or take any badger, or attempt to do so and it is an offence to intentionally or recklessly

	damage, destroy or obstruct access to any part of a badger sett or disturb a badger when it is occupying a sett.
Wild Mammals	Under the Wild Mammals (Protection) Act 1996 it is an offence to mutilate, kick, beat, nail or otherwise impale, stab, burn, stone, crush, drown, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.
Reptiles	The slow-worm (*Anguis fragilis*), grass snake (*Natrix natrix*), adder (*Vipera berus*) and common lizard (*Lacerta vivipara*) are protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) in respect of section 9(1) and 9(5) only. Under section 9(1) it is an offence to knowingly kill or injure a reptile. Section 9(5) refers to sale and trade.
Birds	In Britain all wild birds are granted legal protection under the Wildlife & Countryside Act 1981 (as amended) and the EC Birds Directive. This legislation protects the birds, their eggs and nests whilst being built or in use. Legal protection makes it an offence to intentionally kill, injure, take or have in possession any wild bird or egg. It is also an offence to intentionally damage or destroy the nest of any wild bird whilst it is being built or in use. Birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) are subject to special penalties and are also protected from disturbance while nesting including the disturbance of dependent young.
Water vole	The water vole (Arvicola amphibius) receives protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under the Act it is an offence to intentionally kill, injure or take water voles and intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection or obstruct access to any structure or place used by water voles for shelter or protection or to disturb water voles while they are using such a place.
Invertebrates	Statutory protection in Great Britain is provided by the Wildlife and Countryside Act 1981. The invertebrates which have special protection are listed on Schedule 5 under which it is an offence to intentionally kill, injure or take these invertebrates and intentionally or recklessly damage or destroy, or obstruct access to, any structure or place used for shelter or protection or disturb any such animal while occupying such a structure or place.
Plants	Statutory protection in Great Britain is provided by the Wildlife and Countryside Act 1981. The plants and fungi which have special protection are listed on Schedule 8 under which it is an offence to intentionally pick, uproot or destroy any plant on Schedule 8. Five plant species are listed on the Weeds Act 1959 as injurious: common ragwort (*Senecio jacobaea*), broad-leaved dock (*Rumex obtusifolius*), curled dock (*Rumex crispus*), creeping thistle (*Cirsium arvense*) and spear thistle (*Cirsium vulgare*). The Act requires landowners to eliminate scheduled weeds to prevent their seeds contaminating neighbouring land. The Ragwort Control Act 2003 amends the Weed Act with respect to common ragwort. Thirty-eight species plus all species of *Elodea* (of which there are currently three species known to have been introduced) are listed on Schedule 9 of the Wildlife and Countryside Act 1981 under which it is an offence to plant or otherwise cause to grow in the wild the scheduled species. Two are marine, thirteen aquatic and the remainder terrestrial.

Biodiversity Conservation	
Natural Environment and Rural Communities Act	Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006 requires the Secretary of State to publish a list (in consultation with Natural England) of habitats and species which are of principal importance for the conservation of biodiversity in England. The Government has a duty to take reasonably practicable steps to further the conservation of the species and habitats that are included in lists published under Section 41. Biodiversity 2020: A strategy for England's wildlife and ecosystem services sets out the means by which the Government will comply with its duty under Section 41 of the NERC Act to take or promote the taking by others of steps to further the conservation of listed habitats and species, including through the continued implementation of Action Plans.

Local Planning Policy

Hereford Local Plan - Core Strategy 2015-2031

Policy LD2 – Biodiversity and geodiversity

Development proposals should conserve, restore and enhance the biodiversity and geodiversity assets of Herefordshire, through the:

1. retention and protection of nature conservation sites and habitats, and important species in accordance with their status as follows:

> *a) Development that is likely to harm sites and species of European Importance will not be permitted;*
>
> *b) Development that would be liable to harm Sites of Special Scientific Interest or nationally protected species will only be permitted if the conservation status of their habitat or important physical features can be protected by conditions or other material considerations are sufficient to outweigh nature conservation considerations;*
>
> *c) Development that would be liable to harm the nature conservation value of a site or species of local nature conservation interest will only be permitted if the importance of the development outweighs the local value of the site, habitat or physical feature that supports important species.*
>
> *d) Development that will potentially reduce the coherence and effectiveness of the ecological network of sites will only be permitted where adequate compensatory measures are brought forward. 2. restoration and enhancement of existing biodiversity and geodiversity features on site and connectivity to wider ecological networks; and 3. creation of new biodiversity features and wildlife habitats. Where appropriate the council will work with developers to agree a management strategy to ensure the protection of, and prevention of adverse impacts on, biodiversity and geodiversity features.*

The Core Strategy objectives will be delivered through supporting development proposals that add to Herefordshire's biodiversity. During the plan period Herefordshire Council will review its Biodiversity Supplementary Planning Guidance utilising in particular the principles, opportunities and constraints detailed within the ***Building Biodiversity into***

***Herefordshire Council's Local Development Framework 2009**. Further areas of local Herefordshire Local Plan – Core Strategy 2011-2031 biodiversity or geodiversity importance may be designated or extended during the plan period.*

*Details of the county's biodiversity and geodiversity assets and features, some of which traverse the local authority's administrative boundaries, are listed in Appendices 8e-k and further information is held at the Herefordshire Biological Records Centre. Core areas have been identified where there are clusters of biodiversity and geodiversity features of high conservation value as detailed in the **Herefordshire Ecological Network Map 2012**. Development within and adjacent to these core areas and associated buffer zones will need to be sympathetically designed to ensure there are no adverse impacts upon them. Alongside this, Herefordshire Council will seek contributions to enhance and link such core areas.*

Policy LD3 – Green infrastructure

Development proposals should protect, manage and plan for the preservation of existing and delivery of new green infrastructure, and should achieve the following objectives:

1. identification and retention of existing green infrastructure corridors and linkages; including the protection of valued landscapes, trees, hedgerows, woodlands, water courses and adjoining flood plain;

2. provision of on-site green infrastructure; in particular proposals will be supported where this enhances the network; and

3. integration with, and connection to, the surrounding green infrastructure network.

National Planning Policy Framework (NPPF)

The NPPF (MHCLG, 2019) emphasises that planning decisions should contribute to and enhance the natural and local environment by protecting and enhancing sites of biodiversity value (in a manner commensurate with their statutory status or identified quality in the development plan) and *"minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures"* (paragraph 170 refers).

The NPPF advises that when determining planning applications, local planning authorities should aim to protect and enhance biodiversity by applying the following principles (paragraph 175 refers):

"*a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons58 and a suitable compensation strategy exists; 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."

National Planning Policy Guidance (NPPG)

NPPG (DCLG, 2014) will be updated in due course, where necessary, to reflect the NPPF. Current NPPG advises that information on biodiversity impacts and opportunities should inform all stages of development, from site selection and design, to include any pre-application consultation as well as the application itself. The guidance notes that:

"*An ecological survey will be necessary in advance of a planning application if the type and location of development are such that the impact on biodiversity may be significant and existing information is lacking or inadequate. Pre-application discussion can help scope whether this is the case and, if so, the survey work required*" (Paragraph 016).

The guidance also notes that:

"*Local planning authorities should only require ecological surveys where clearly justified, for example if they consider there is a reasonable likelihood of a protected species being present and affected by development. Assessments should be proportionate to the nature and scale of development proposed and the likely impact on biodiversity*" (Paragraph 016).

APPENDIX B: PHOTOGRAPHS

APPENDIX B: PHOTOGRAPHS AND TARGET NOTES

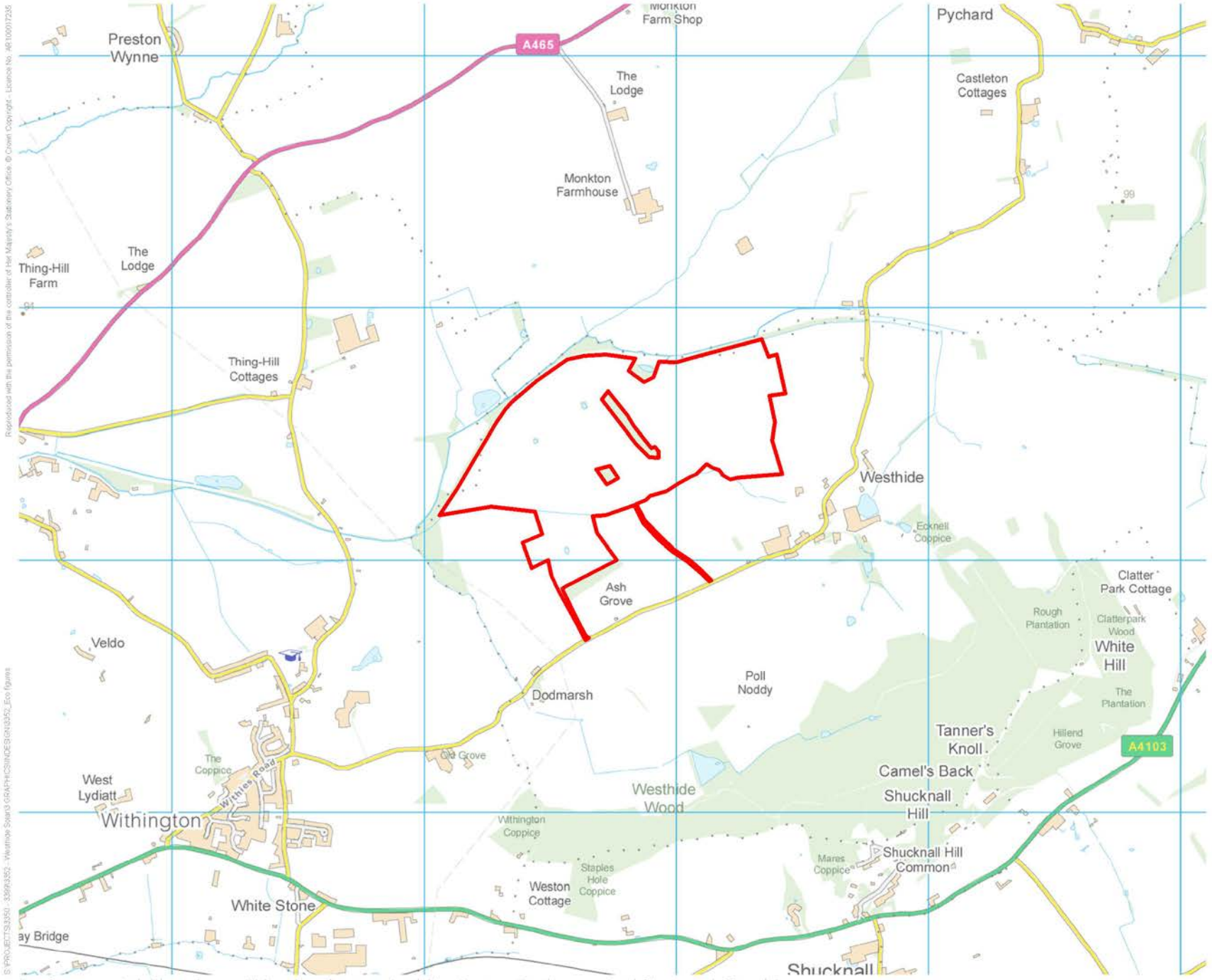
No.	Photograph	Description
1		Arable field
2		Proposed access track
3		Pond 2

4		Arable field
5		Second proposed access track
6		Pond 3

Target notes	Description
TN 1	Confidential
TN 2	Log and grass cuttings piles
[redacted]	

TN 4	Confidential
TN 5	Confidential
TN6	Mammal tracks
[redacted]	
TN8	Breeze blocks surrounded by rabbit holes
TN9	One likely rabbit hole and a possible foxhole at the base of a mature willow. A pheasant carcass was present at the entrance of the potential foxhole.
TN10	Rabbit holes
TN11	Bird nest
TN12	Eaten maize cobs
TN13	Three bird nests
TN14	Rabbit warren
TN15	Piles of deadwood
TN16	Confidential
TN17	Confidential
TN18	Pile of manure
TN19	Confidential
TN20	Confidential
TN21	Confidential
TN22	Confidential
TN23	Pile of woodchips
TN24	Confidential
TN25	Confidential

FIGURES



Legend:

Site boundary

0 310 620 m

Scale 1 : 15,000 @A3

N

WESTHIDE SOLAR

FIGURE 1
Site location

THE Landmark PRACTICE

Hope Chapel House Hope Chapel Hill Hotwells Bristol BS8 4ND
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www.thelandmarkpractice.com

Drawn: EL Checked: SA Date: 16 Feb 21

Environmental Planning • EIA • Landscape Architecture • Ecology • Architectural Graphics

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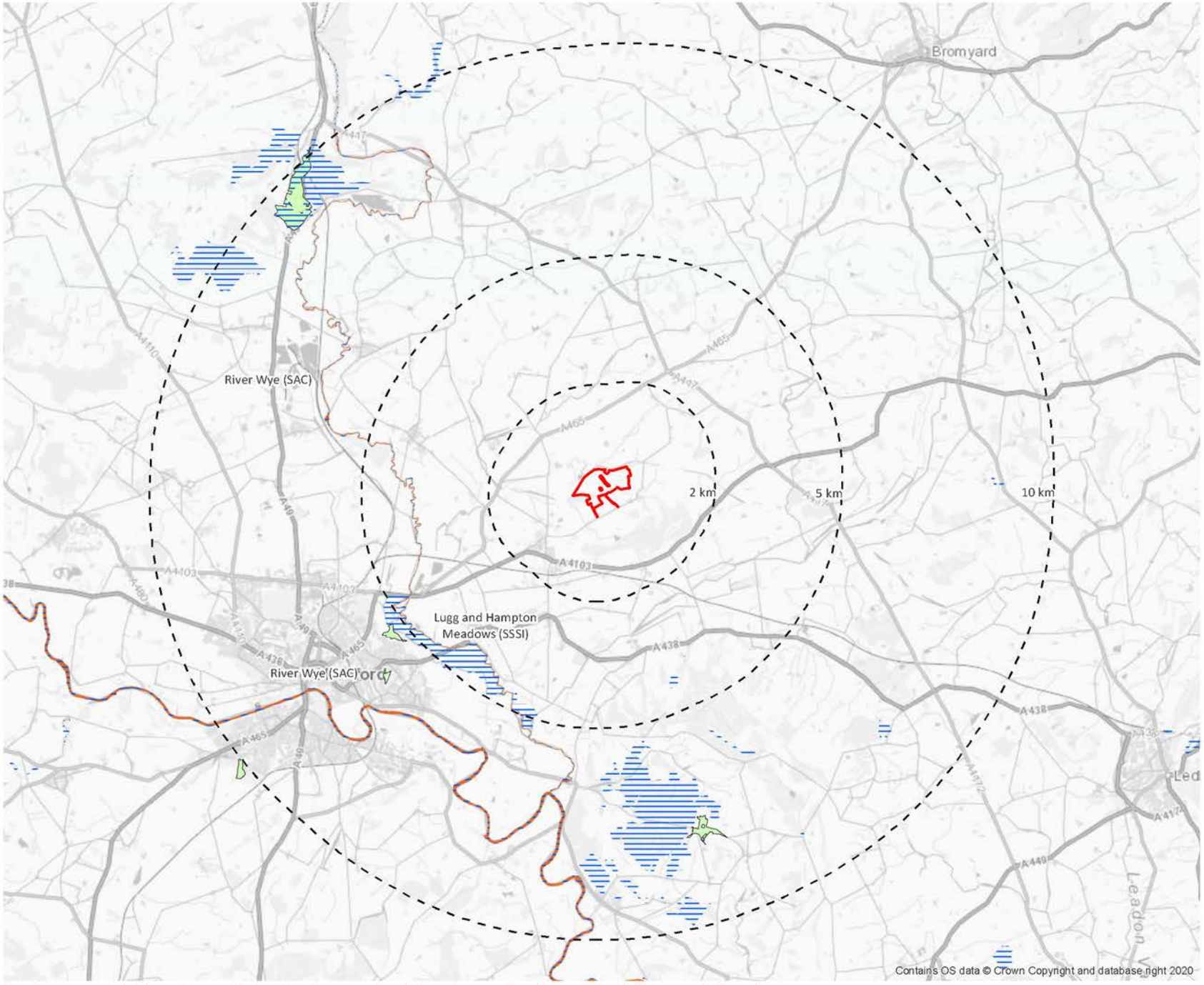

Legend:

- Site boundary
- 2km, 5km and 10km radial extents
- Special Area of Conservation (SAC)
- Site of Special Scientific Interest (SSSI)
- Local Nature Reserve (LNR)

0 2 4 km

Scale 1 : 90,000 @A3

N

WESTHIDE SOLAR

FIGURE 2
Statutory Designated Wildlife Sites

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Legend:

- Site boundary
- Building
- Scattered broadleaved trees
- Scattered scrub
- SI — Poor semi-improved grassland
- Semi-natural broadleaved woodland
- Broadleaved plantation woodland
- Dense continuous scrub
- Tall ruderal
- A A / A A — Arable
- Standing water
- Species-poor defunct hedge
- Species-poor intact hedge
- Species-rich defunct hedge
- Species-rich intact hedge
- Species-rich hedge with trees
- Species-poor hedge with trees
- Dry ditch
- Running water
- Target note (TN)

N

WESTHIDE SOLAR

FIGURE 3
Phase 1 Habitat Survey

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Drawn: EL Checked: SA Date: 16 Feb 21

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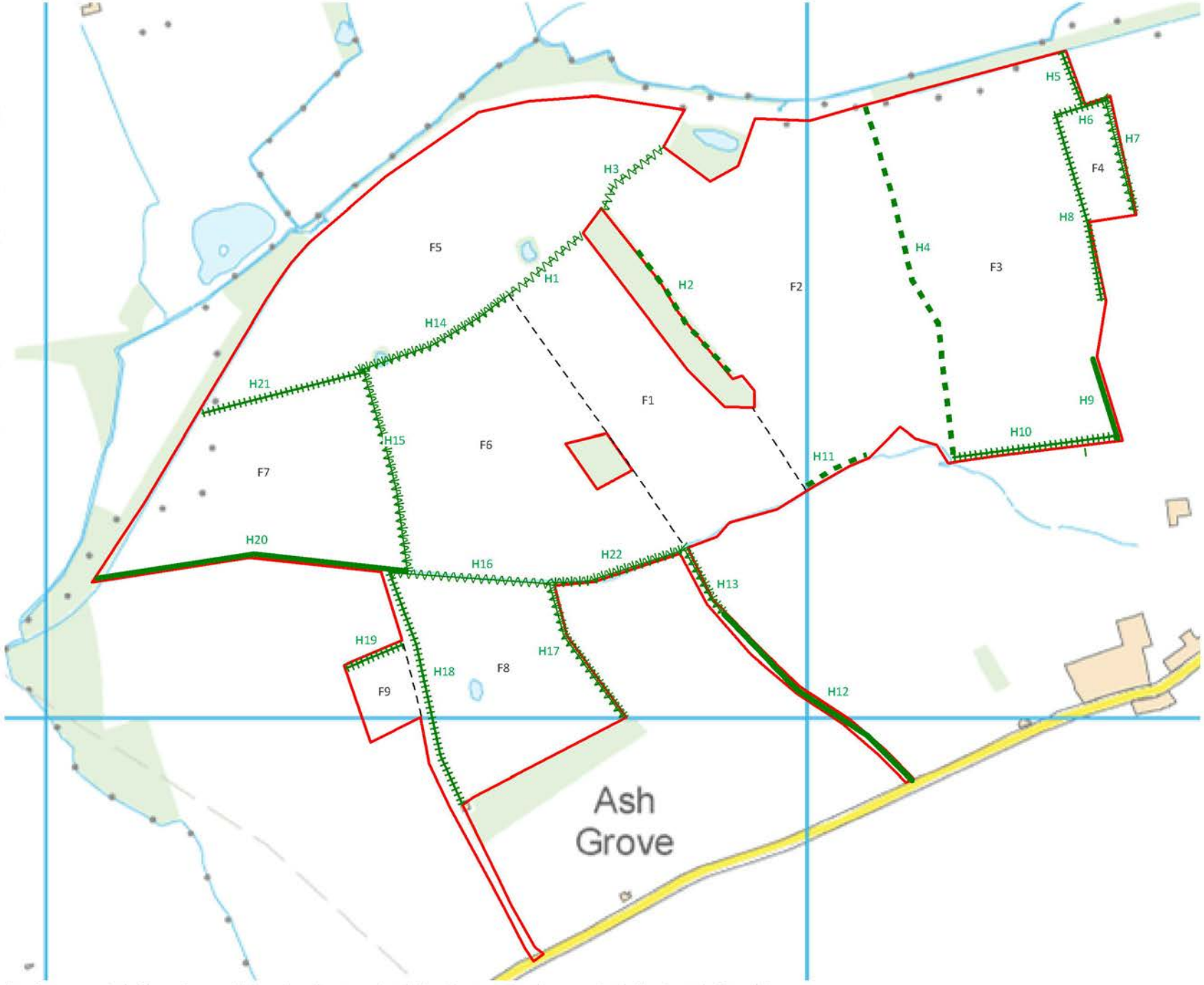

Legend:

- Site boundary
- F1 Field number
- H1 Hedgerow number
- Field boundary
- Species-poor defunct hedge
- Species-poor intact hedge
- Species-rich defunct hedge
- Species-rich intact hedge
- Species-rich hedge with trees
- Species-poor hedge with trees

0 100 200 m

Scale 1 : 5000 @A3

N

WESTHIDE SOLAR

FIGURE 4
Field and Hedgerow References

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www.thelandmarkpractice.com

Drawn: EL Checked: SA Date: 16 Feb 21

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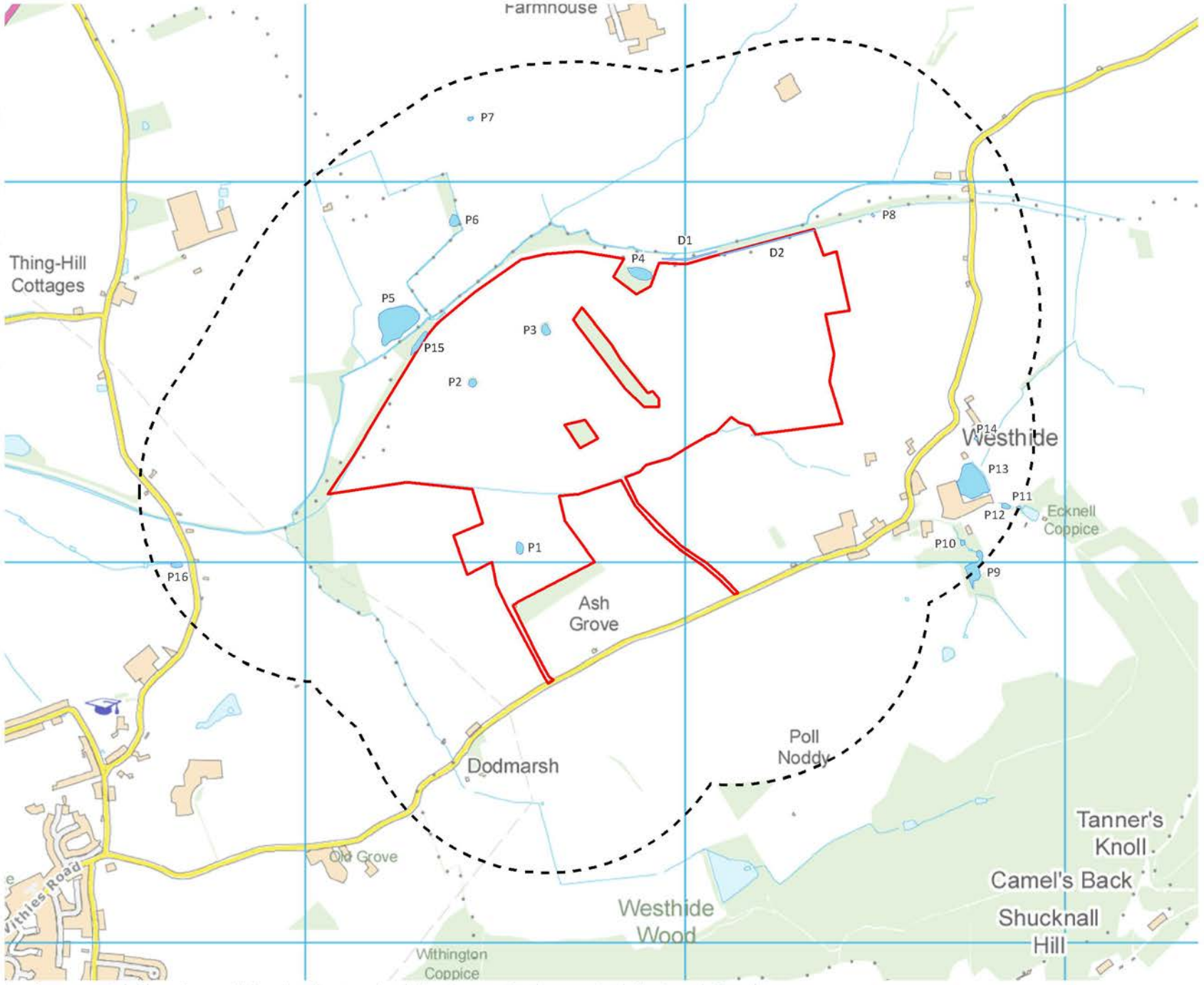

Legend:

- Site boundary
- Waterbody
- P1 — Pond number
- D1 — Ditch number

0 200 400 m

Scale 1 : 10,000 @A3

N

WESTHIDE SOLAR

FIGURE 5
Ponds within 500 m

THE Landmark PRACTICE

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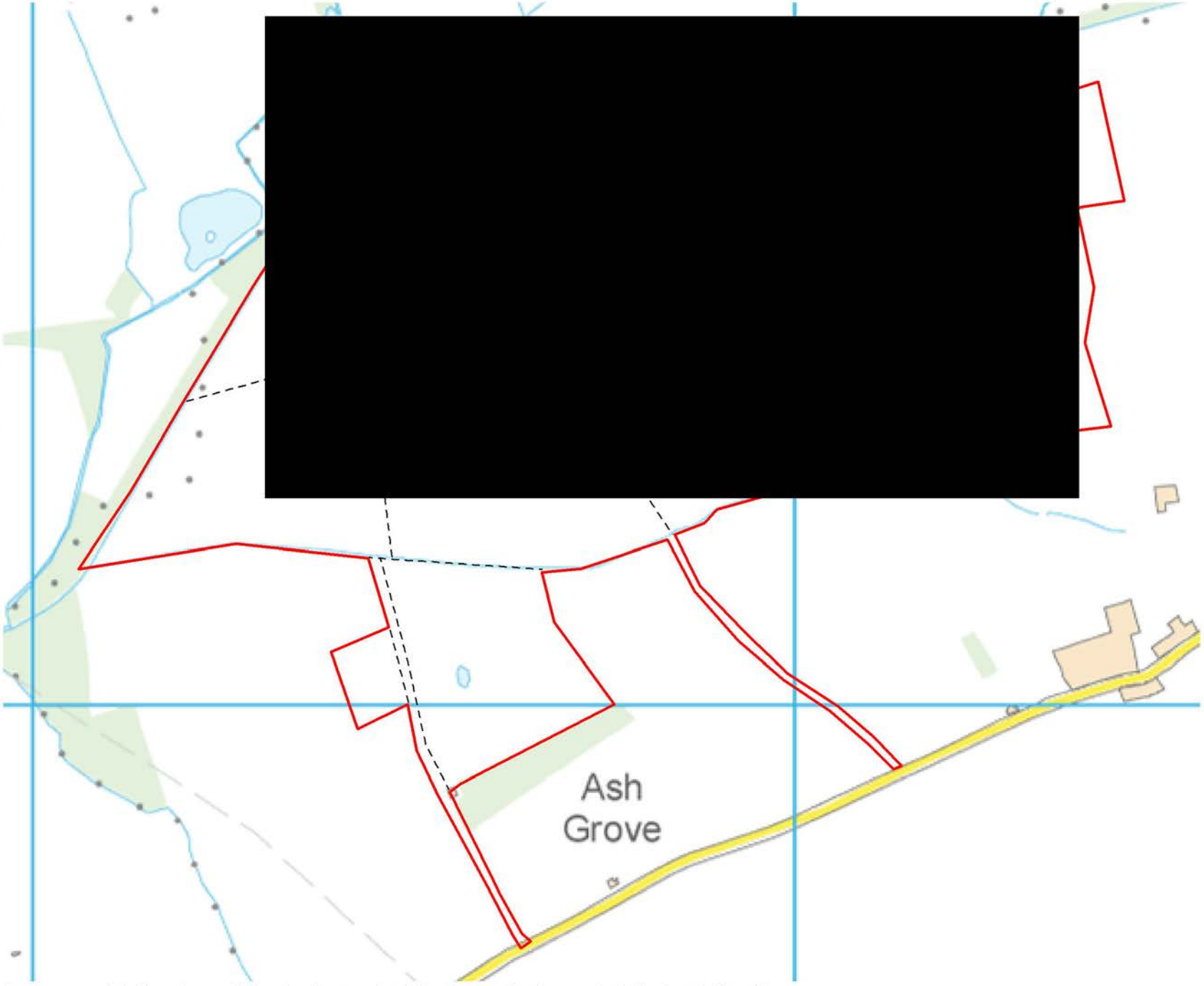
S:\PROJECTS\3352 - 3366\3352 - Westhide Solar\3 GRAPHICS\IN\DESIGN\3352_Eco figures



Legend:

- Site boundary
- T1 — Tree number
- Negligible potential
- Low potential
- Moderate potential
- High potential

0 100 200 m

Scale 1 : 5,000 @A3

N

WESTHIDE SOLAR

FIGURE 6
Preliminary Roost Assessment (Trees within fields)

THE Landmark PRACTICE

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