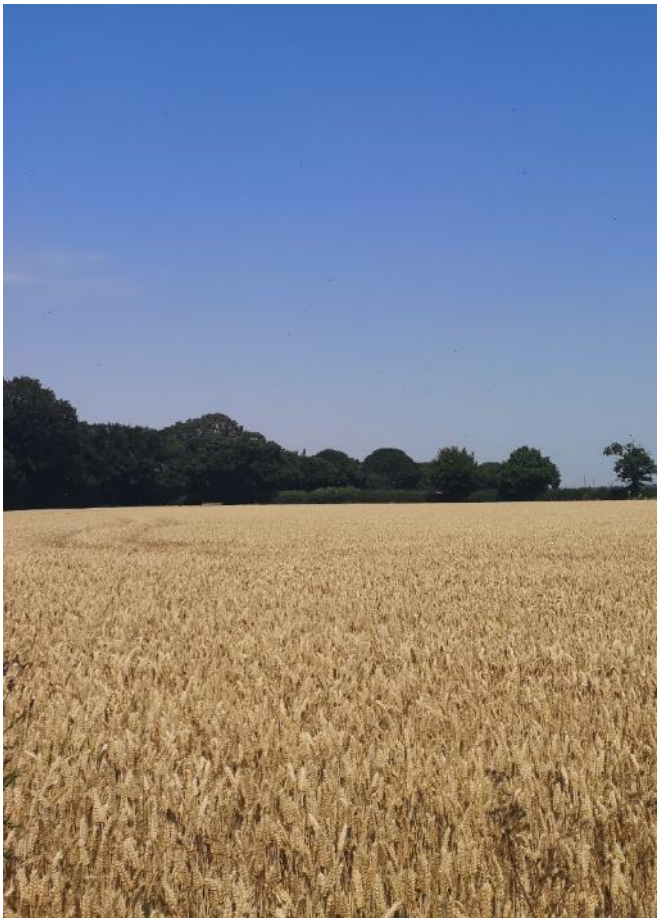

Land Southwest of Levedale Road
Penkridge, Staffordshire

Ecological Impact Assessment (EcIA)

Prepared For: Anglo ES Levedale Limited

Document Reference: 9562.007

March 2023

Version 1.0

TEP
Genesis Centre
Birchwood Science Park
Warrington
WA3 7BH

Tel: 01925 844004
Email: tep@tep.uk.com

Offices in Warrington, Market Harborough, Gateshead, London and Cornwall

Project Name:	Land Southwest of Levedale Road
Location:	Penkridge, Staffordshire
Document Title:	Ecological Impact Assessment
Client:	Anglo ES Levedale Limited
Year of Surveys:	2022
Report Prepared:	March 2023
Prepared by:	The Environment Partnership Ltd
Office:	Warrington
Document Ref:	9562.007

Document history and status:

Version	Date	Description of Issue	Author	Checked	Approved
1.0	13.03.2023	First issue	AF	AE	AE

The content of this document has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Code of Professional Conduct and is compliant with British Standard BS42020:2013 Biodiversity Code of Practice for Planning and Development.

The conclusions and recommendations contained in this document are based upon information gathered by TEP and provided by third parties. Information provided by third parties and referred to herein has not been independently verified by TEP, unless otherwise expressly stated in the document.

Nothing in this report constitutes legal opinion. If legal opinion is required, the advice of a qualified legal professional should be secured.

TEP
Genesis Centre
Birchwood Science Park
Warrington
WA3 7BH

Tel: 01925 844004
Email: tep@tep.uk.com

Offices in Warrington, Market Harborough, Gateshead, London and Cornwall

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Executive Summary

Site Details	The Site is located to the southwest of Levedale Road, Penkridge. Central OS grid reference: SJ 90046 15842. The site measures approximately 3.8ha.
Proposals	The development proposals are for a battery storage facility comprising 42 battery cabinets, 36 inverter/transformers, with associated access and landscaping. The footprint of the development, excluding landscaping, is 1.6ha.
Designated wildlife sites	■ No designated wildlife sites will be directly impacted by the proposals.
Important Ecological Features present within or adjacent to the Site	■ There are several species-rich hedgerows with mature trees with bat potential. ■ There are nine ponds within 250m of the Site. Some of which could support great crested newt and other amphibians, as indicated by records within the area and the site being within a red impact risk zone for GCN.
Recommendations	The following recommendations are made or are in place to ensure that delivery of the project remains compliant with relevant legislation and policy: ■ Potential impacts to GCN will be addressed through District Level Licensing. ■ A Biodiversity Net Gain assessment with metric 3.1 has been submitted to ensure the development provides a net gain to comply with the NPPF. ■ A pre-commencement badger walkover survey is recommended prior to works commencing. ■ A nesting bird check will be required if hedgerow or vegetation clearance works take place March – August. ■ A pre-commencement check for hobby will be required if construction works take place May – September due to the risk of disturbance to this species if present. This can be combined with the badger walkover or nesting bird check if required. ■ A Construction Environmental Management Plan (CEMP) will be required to mitigate for indirect impacts to statutory and non-statutory designated wildlife sites. ■ It is recommended that an ecological precautionary working method statement (PWMS) for the protection of habitats and species is drafted to inform ecological input into the contractors CEMP. ■ Root Protection Zones will be in place for all retained trees and hedgerows following guidance set out in BS5837:2012. ■ A hazel dormouse feeding remains survey is awaiting completion. Results will be added as an addendum and inform the PWMS.
Conclusions	No ecological impact arising from the proposals is likely to be significant at more than the Site level, providing mitigation is in place. All impacts arising from the proposals are anticipated to be temporary and reversible in the short term. With implementation of the recommended precautionary working methods and compensatory habitats, no residual significant ecological effects are expected to impact upon notable habitats or protected species, or statutory or non-statutory wildlife sites. Full impact assessment is shown within section 4 of this report. Full recommendations are set out in section 5 of this report.

This Executive Summary is not a substitute for the full report. Refer to the full text of this report for further detail.

1.0 Introduction

1.1 The Environment Partnership (TEP) was commissioned by DLP Planning Limited on behalf of Anglo ES Levedale Limited in July 2022 to undertake a Preliminary Ecological Appraisal (PEA) to inform a pre application submission for the proposed development of a battery storage facility at Land Southwest of Levedale Road, Penkridge (hereafter referred to as 'the Site'). TEP were commissioned to update the PEA to an Ecological Impact Assessment (EcIA) to support the full planning application submitted in March 2023.

1.2 An Ecological Desk Study has been produced to support this EcIA, reported under separate cover (TEP Ref: 9562.002) and included within Appendix A. This EcIA report should read in conjunction with the Desk Study.

1.3 This EcIA report includes details of the methods employed and any limitations of the surveys undertaken. Results are provided with supporting maps, together with an evaluation of the ecological features within the Site, an assessment of the potential impacts associated with the development proposals and requirements for mitigation. The assessment has been undertaken with due consideration for current best practice guidelines (CIEEM 2017a[1], 2018[2]).

Site Location

1.4 The Site is located within a parcel of land to the southwest of Levedale Road, just beyond the south-eastern outskirts of the village of Levedale, approximately 2.5km to the north-west of the town of Penkridge.

1.5 The Site is within a rural location. It is immediately surrounded by cow pasture to the west, arable land to the south and east, and bounded by Levedale Road on the north with further pasture beyond. The nature of the surrounding landscape being predominantly agricultural with associated trees, hedgerows, and ponds.

1.6 The wider area comprises further agricultural/pastureland, and farm buildings. A block of deciduous woodland 'The Whittamoors' Local Wildlife Site (LWS) is situated approximately 900m to the east of the Site. Whiston brook is situated approximately 1.2km to the south of the Site, beyond which is the village of Whiston. A network of hedgerows and ponds are evident throughout the landscape along with scattered remnants of woodland.

1.7 The location of the Site is depicted by the red line shown in Figure 1 below. The approximate central grid reference of the Site is SJ 90046 15842.

[1] CIEEM (2017a) Guidelines for Ecological Report Writing, 2nd Edition. Chartered Institute of Ecology & Environmental Management

[2] CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester

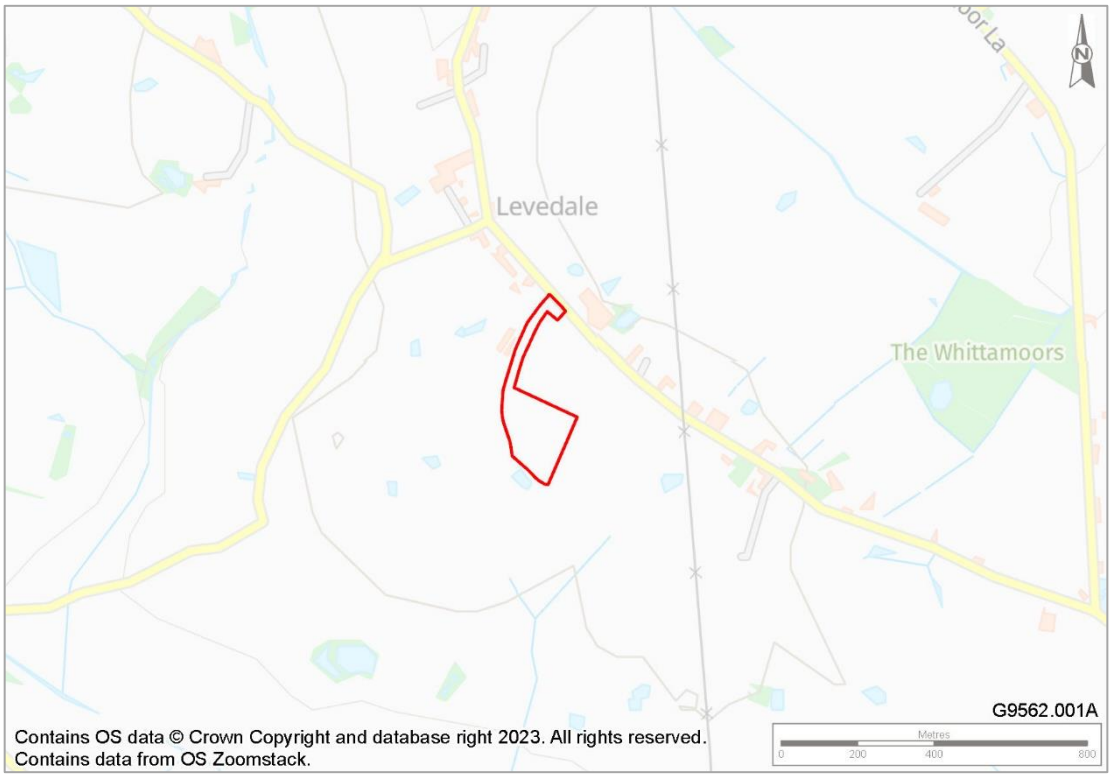

Figure 1: Site location

Proposals

1.8 The proposals are for a battery storage facility comprising 42 battery cabinets, alongside 36 inverter/transformers. Associated landscaping is to include grassland and additional hedgerow and tree planting. A sustainable drainage strategy comprising swales and an attenuation basin are also proposed. The general arrangement plan produced by enplan (drawing number 05-1095-301. Rev. P03, dated October 2022) has been used for this assessment.

Planning Context

1.9 Relevant information regarding local planning policy is provided in the Ecological Desk Study (TEP Ref 9562.002).

1.10 The following policies within the South Staffordshire Local Plan are of relevance to ecology and biodiversity:

- Policy OC1: Development in the Open Countryside Beyond the West Midlands Green Belt;
- Core Policy 2: Protecting and Enhancing the Natural and Historic Environment;
- Policy EQ1: Protecting, Expanding and Enhancing Natural Assets;
- Policy EQ4: Protecting and Enhancing the Character and Appearance of the Landscape;

- Core Policy 3: Sustainable Development and Climate Change;
- Policy EQ12: Landscaping;
- Policy EW2: Cannock Chase Special Area of Conservation; and
- Policy HWB2: Green Infrastructure.

1.11 Under the National Planning Policy Framework 2021 (NPPF), opportunities to achieve biodiversity net gain within developments should be pursued.

Consultation

1.12 A pre-application consultation was made by the applicant to South Staffordshire Council (22/00098/PREAPP) prior to submission of the full planning application. The comments received from Dr Sue Lawley, Council Ecologist (15th September 2022) have been used to inform this EcIA and inform some of the recommendations originally included within the PEA (TEP Ref. 9652.001).

Scope

1.13 This ecological assessment considers potential ecological effects upon any notable habitats or species which may be present or adjacent to the Site.

1.14 This report provides baseline information on the habitats and protected species present on site, gathered during a desktop study and extended phase 1 habitat survey undertaken in July 2022, and a great crested newt HSI survey undertaken in November 2022.

1.15 This report presents the findings of the EcIA, the objectives of which are to:

- Detail the methods and results of the aforementioned surveys;
- Identify features of ecological value within the application site such as legally protected species or habitats of importance to biodiversity;
- Identify any non-native invasive species on site and provide advice regarding removal or management;
- Advise on avoidance or mitigation requirements that may be needed prior to development commencing; and
- Provide outline recommendations for biodiversity enhancement within site proposals in accordance with the National Planning Policy Framework (NPPF).

2.0 Methods

Desk Study

2.1 In line with current best practice (CIEEM, 2016[3], 2017b[4]), information regarding designated sites, notable habitats, and existing protected and notable species records within the last 10 years, inside a 2km minimum radius of the Site were collated and reviewed to inform this ecological assessment. Further detail regarding ecological zones of influence (EZOI) applied for different ecological features and the sources of information included are presented in the Ecological Desk Study (TEP Ref 9562.002).

2.2 In brief, key data sources included Natural England (NE) (open source data), Environment Agency (EA) (open source data); South Staffordshire Council, South Staffordshire Local Plan and other relevant planning documentation such as the Sustainable development Supplementary Planning Document (SPD), Green Belt and Open Countryside (SPD), Staffordshire Ecological Records Centre and Staffordshire Biodiversity Action Plan (Staffordshire BAP) and a review of relevant (within the past twenty years) species records.

2.3 Statutory designated wildlife sites were searched for as follows (including EZOI range applied for):

- Ramsar sites - 10km;
- National Sites Network (NSN) - 10km, includes Special Areas of Conservation (SAC) and Special Protection Areas (SPA);
- Site of Special Scientific Interest (SSSI) - 5km;
- National Nature Reserve (NNR) - 5km);
- Local Nature Reserves (LNR) - 2km.

2.4 Non-statutory designated wildlife sites were searched for within 2km of the Site and, within Staffordshire, these may include:

- Local Wildlife Sites (LWS).

2.5 Regionally Important Geological Sites (RIGS) are also identified in the search results provided by Staffordshire Ecological Record, but assessment of RIGS and other geological features do not fall within the scope of this PEA and are not discussed further.

2.6 Notable habitats were searched for within 2km of the Site. Notable habitats may include those listed under any of the following:

- Ancient semi-natural woodland (ASNW);
- Main rivers;

[3] CIEEM (2016) Guidelines for Accessing and Using Biodiversity Data. Chartered Institute of Ecology & Environmental Management

[4] CIEEM (2017b) Guidelines for Preliminary Ecological Appraisal, 2nd Edition. Chartered Institute of Ecology & Environmental Management

- Habitats of Principal Importance (HPI) as listed by the requirements of Section 41 (S41) of the Natural Environment and Rural Communities (NERC) Act 2006[5]; and
- Local Biodiversity Action Plan Habitats (LBAP Hab).

2.7 Pre-existing records for notable species were reviewed from the combined data sources, where found from within approximately 2km of the Site. Notable species include those listed under any of the following:

- Protected animal species under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (EPS);
- Protected bird species under Schedule 1 of the Wildlife and Countryside Act 1981, as amended (WCA1);
- Protected animal species under Schedule 5 of the Wildlife and Countryside Act 1981, as amended (WCA5);
- Protected plant species under Schedule 8 of the Wildlife and Countryside Act 1981, as amended (WCA8);
- Invasive non-native plant species under Schedule 9 of the Wildlife and Countryside Act 1981, as amended (WCA9);
- Invasive non-native species under the Invasive Alien Species (Enforcement and Permitting) Order 2019 (IAS);
- Species of principal importance (SPI) as listed by the requirements of S41 of NERC;
- Protection of Badgers Act 1992 (PBA);
- Red and Amber listed Birds of Conservation Concern (BRd/BAm); and
- Staffordshire Biodiversity Action Plan Species (SBAP).

Limitations

2.8 Species records can provide a useful indication of the species present within the search area, although the absence of a given species from the dataset cannot be taken to represent actual absence.

Habitats and Flora

Habitat Survey

2.9 An extended Phase 1 habitat survey was completed by TEP Ecologist Alex Fitzroy, certified to Level 4 under the Field Identification Skills Certification[6]. on 19th July 2022. The survey was carried out in accordance with the Phase 1 habitat assessment methods (JNCC, 2010[7]) and Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017b[4]). The method records the habitat types present, within the survey area, based on the JNCC descriptions. Plant species were identified in accordance with the New

[5] Section 41 of the Natural Environment and Rural Communities Act requires the Secretary of State to publish a list of habitats and species which are of principal importance for the conservation of biodiversity in England.

[6] A national skills certification scheme operated by Botanical Society of Britain and Ireland. FISC 4 is the competency level recommended for Biodiversity Net Gain (BNG) field assessments.

[7] JNCC (2010) Handbook for Phase 1 Habitat Survey – a technique for environmental audit

Flora of the British Isles (Stace, 2019[8]) and recorded as target notes using the DAFOR[9] scale, where relevant.

2.10 Habitats within the Site are displayed on Drawing G9562.007.

Limitations

2.11 Any ecological survey represents a snapshot of ecological conditions at the time of survey; ecological conditions may change over time. Efforts to identify dominant plant species for the purposes of characterising broad habitat types do not constitute a detailed botanical survey.

2.12 The survey was undertaken during the optimal window for Phase 1 surveys.

Habitat Change – Biodiversity Net Gain Assessment

2.13 The Natural England Biodiversity Metric 3.1 calculator[10] was used to determine net habitat value change between existing habitats pre-development and proposed habitats post-development. Details of the methods, results and recommendations of the BNG Assessment are presented under separate cover at TEP Ref 9562.006. The development aims to achieve a minimum 10% net gain on site.

Fauna

2.14 Ordnance Survey maps and aerials were reviewed to identify potentially suitable habitats offsite within influence (e.g., dispersal distances for mobile species) of the Site. The Ecological Desk Study identified any pre-existing records for protected and notable species within at least 2km of the Site.

2.15 The habitat survey included an extended assessment of the habitats present for their potential to support notable or protected wildlife species. Any signs indicating the presence of these species were recorded.

2.16 In combination, this data informed the ecological evaluation of the application site and impact assessment for the proposed development.

Amphibians

2.17 Habitat Suitability Index (HSI) assessment[11] surveys were undertaken at all ponds within 500m where access had been granted and ponds were not dried out (13 out of 22 ponds). HSI surveys were undertaken on 7th and 8th November 2022.

2.18 HSI is a standard measure of calculating the suitability of a pond to support breeding great crested newts, based on an assessment of 10 characteristics (indices), including size, shading, depth and vegetation profile. The assessment generates a number between 0 and 1 for each of the indices which are combined to provide an

[8] Clive Stace (2019) New Flora of the British Isles

[9] DAFOR = Dominant, Abundant, Frequent, Occasional & Rare

[10] Metric 3.1

[11] ARG UK Advice Note 5 (May 2010) Great Crested Newt Habitat Suitability Index

overall assessment of a pond's suitability to support GCN on a categorical scale (See Table 1). The assessment has not been designed for or tested on other waterbodies such as ditches.

Table 1: Pond HSI Suitability Scores

HSI Score	Suitability	Predicted GCN Occupancy of Ponds in each Category
< 0.5	Poor	3%
0.5 to 0.59	Below average	20%
0.6 to 0.69	Average	55%
0.7 to 0.79	Good	79%
0.7 to 0.79	Good	79%
> 0.8	Excellent	93%

Limitations

2.19 The assessment was undertaken in November which is sub-optimal, however, a precautionary approach was taken when assigning scores to ensure the time of year was factored in.

Bats

Ground Level Tree Assessment

2.20 A Ground Level Tree Assessment (GLTA) of trees within the site was carried during the Phase 1 survey out to determine their suitability to provide bat roost habitat. The habitats on site and the surrounding area were also assessed for potential to support foraging and commuting bats. The GLTA was undertaken at the same time as the Phase 1 Habitat Survey.

2.21 The GLTA involved the surveyor using close focussing binoculars to search from the ground for any Potential Roost Features (PRFs), which may be used by bats. Most tree roosts are created by one or a combination of the following:

- Old woodpecker holes;
- Splits in trunk, bough or large branches;
- Rot holes in trunk, bough or large branches;
- Holes formed by two boughs or branches growing in contact;
- Loose or lifting bark; and
- Underneath a covering of dense latticed creeper, usually ivy (Hedera helix).

2.22 Following the GLTA, trees within the site were categorised in accordance with the criteria for roost habitat assessments identified in the Bat Conservation Trust (BCT) 2016 Good Practice Guidelines (Collins)[12]. Bat roost habitat suitability categorisation details are described in Table 2. Roost habitat suitability categorisation takes into

[12] Collins, J. (ed.) (2016). Bat Surveys for Professional Ecologists: Good Practice Guidelines. (3rd edn). The Bat Conservation Trust, London.

consideration parameters such as location, habitat connectivity, materials, condition and aspect of trees.

Table 2: Roost assessment criteria (from Table 4.1 of BCT Guidelines 2016)

Roost Suitability	Description of roosting habitat	Commuting and foraging habitats
Negligible	Negligible habitat features on site to be used by roosting bats.	Negligible habitat features on site to be used by commuting and foraging bats.
Low	A tree of sufficient size and age to contain potential roost features (PRFs) but with none seen from the ground or features seen with only very limited roosting potential.	Habitat that could be used by small numbers of commuting bats (e.g. a gappy hedgerow or an un-vegetated stream) or foraging bats (e.g. a lone tree or small patch of scrub) but which is isolated from the surrounding countryside by other habitat.
Moderate	A tree with one or more potential roost features that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat, but which is unlikely to support a roost of high conservation status (maternity or hibernation).	Continuous habitat connected to the wider landscape that could be used by bats for commuting (e.g. lines of trees or scrub or linked back gardens), or foraging bats (e.g. trees, scrub, water, grassland).
High Potential	A tree with one or more potential roost features that are suitable for use by larger numbers of bats on a regular basis and potentially for longer periods of time, due to their size, shelter, protection, conditions and surrounding habitat.	Continuous high-quality habitat that is strongly connected with the wider landscape that is likely to be used regularly by commuting bats (e.g. river valley, vegetated stream, woodland edge, hedgerows with trees) or foraging bats (e.g. broadleaved woodland, grazed parkland, tree-lined watercourses or ponds).

Limitations

2.23 There are no seasonal constraints for undertaking preliminary bat roost assessments of trees. However, the optimal period to undertake this survey of trees is between December and March when trees are out of leaf. This survey was undertaken outside of the optimal period, in July when trees are in full leaf. Where visibility was obscured, a precautionary assessment was made.

Ecological Assessment Process

2.24 This EcIA follows the published guidelines (CIEEM, 2018[2]) and accepted best practice approach (BS42020:2013[13]) of the mitigation hierarchy whereby impacts are first avoided or, where this is not possible, reduced or mitigated or, as a last resort, compensated.

[13] British Standards Institution (2013) BS 42020:2013: Biodiversity — Code of practice for planning and development. BSI Standards Limited, London

2.25 In summary, the following procedure was undertaken during this EcIA:

- Describe the baseline and identify important ecological features;
- Describe important ecological features and identify those which may potentially be affected by the proposed development;
- Identify potential impacts upon important ecological features and characterise the effect of such impacts (in respect of biophysical changes and taking account of relevant aspects of ecosystem structure or function);
- Incorporate measures to avoid or reduce these effects;
- Determine whether residual ecological effects are considered significant after avoidance or mitigation;
- Identify appropriate compensation measures to offset significant residual effects; and
- Identify opportunities for ecological enhancement.

2.26 Important ecological features are identified and valued, ecological impacts are characterised and assessed, and recommendations for appropriate mitigation, compensation and enhancement are made, in accordance with CIEEM guidance[2].

2.27 BS42020:2013 defines a significant effect as one *"which is important, notable, or of consequence, having regard to its context*". CIEEM describes significance as "*a concept related to the weight that should be attached to effects when decisions are made*". CIEEM defines an ecological effect as significant if it is "*sufficiently important to require assessment and reporting so that the decision maker is adequately informed of the environmental consequences of permitting a project*".

2.28 BS42020:2013 sets out a practical approach to determining the significance of an ecological effect, applicable at all levels of decision making in legal and policy terms, as follows:

- will the effect on biodiversity influence the balance of planning considerations and therefore the decision as to whether planning permission is likely to be refused or granted; and
- if planning permission is granted, is the effect important enough to warrant the use of planning conditions and/or obligations to guarantee proposed measures or to impose restrictions, or to seek further requirements (e.g. for mitigation, compensation, enhancement, monitoring or site management).

2.29 Significance is therefore assessed on a case-specific basis according to the importance of the ecological feature (site, habitat or species) within the conservation hierarchy, and the effect upon it.

Assumptions

2.30 Information provided by third parties, including publicly available information, is assumed to be correct at the time of publication.

3.0 Results

Planning Context

3.1 The NPPF at *Chapter 11: Conserving and Enhancing the Natural Environment* requires that development delivers net gains in biodiversity in addition to minimising the impacts on biodiversity. The chapter highlights the need to protect and enhance valued landscapes, geological conservation interests and soils, as well as recognising the wider benefits of ecosystems.

3.2 The South Staffordshire Local Plan was adopted by South Staffordshire Council in 2012. Relevant extracts of local planning policy are provided in the Ecological Desk Study (TEP Ref 9562.002). The following policies relate to biodiversity and nature conservation:

- Core Policy 2: Protecting and Enhancing the Natural and Historic Environment;
- Policy EQ1: Protecting, Expanding and Enhancing Natural Assets;
- Core Policy 3: Sustainable Development and Climate Change;
- Policy EW2: Cannock Chase Special Area of Conservation; and
- Policy HWB2: Green Infrastructure.

Designated Sites

Statutory Wildlife Sites

3.3 Full details regarding designated sites are provided within the Ecological Desk Study (TEP Ref 9562.002).

3.4 There are two statutory designated sites of international importance within 10km of the Site, none of national importance within 5km and none of regional or local importance within 2km. These are:

- Motley Meadows SAC, situated approximately 6km southwest of the Site. Designated due to its lowland hay meadows and associated rare species; and
- Cannock Chase SAC, situated approximately 7.6km east of the Site. Designated for its lowland heathland and associated rare species.

3.5 SSSI Impact Risk Zones (IRZ) highlight the potential for effects on a SSSI if certain types of development are planned within a specified radius of it. The Site falls within two Impact Risk Zone (IRZ). These are for Cannock Chase SAC/SSSI, and Baswich Meadows SSSI. The proposals do not meet any of the risk parameters identified for these IRZ.

Non-Statutory Wildlife Sites

3.6 There are five non-statutory wildlife sites identified within 2km of the Site. Details are presented in the Ecological Desk Study. Of most relevance due to their proximity to the Site are the following:

- The Whittamoors LWS – 0.8km to the east – designated for its large woodland; and
- Levedale Marshes LWS – 1km to the northwest – designated for its species-rich purple moor grass and rush pastures.

3.7 Other non-statutory wildlife sites identified by the Ecological Desk Study (TEP Ref 9562.002) are located at least 1.45km from the proposed works and have no impact pathways relevant to the Site or the proposed nature of the works. Given this and the small scale and nature of the proposals and distances concerned, no significant effect would be anticipated to arise upon these other non-statutory wildlife sites (LWS) are therefore scoped out from further assessment.

Habitats and Flora

Pre-existing Data

3.8 The Desk Study identified priority habitats in the form of nine ponds within 250m of the Site, and a further eleven ponds within 500m.

3.9 No protected, notable, or non-native invasive flora records were returned within 1km of the Site.

Phase 1 Habitat Survey

3.10 Habitats of ecological value present in and around the Site are described below and illustrated in Drawing G9562.007. Target notes (TNs) are provided in Appendix B.

3.11 The design stage BNG assessment (TEP Ref. 9562.006) and accompanying metric list the baseline habitats present on site, including total areas and conditions.

Hedgerows and Trees

3.12 All boundary habitats are comprised of hedgerows except for the eastern boundary which cuts across the open arable field rather than following any natural features. All hedgerows on site are native and meet the criteria of UK Priority Habitat – Hedgerows. Native hedgerows are also listed within the Staffordshire Biodiversity Action Plan (SBAP), under the Central Farmland Ecosystem Action Plan (EAP) 2015 – 2026.

3.13 The western boundary is comprised of native species-rich intact hedgerows with mature trees (H2 and H4) (Figure 2). Woody species recorded included abundant hawthorn *Crataegus monogyna*, frequent bramble *Rubus fruticosus agg.* and ivy *Hedera helix*, occasional alder *Alnus glutinosa*, hazel *Corylus avellana*, ash *Fraxinus excelsior*, blackthorn *Prunus spinosa*, oak *Quercus robur*, raspberry *Rubus idaeus*, goat willow *Salix caprea*, apple *Malus* sp., and rarely field maple *Acer campestre*, holly *Illex aquifolium*, dog rose *Rosa canina*, and elder *Sambucus nigra*. Several of the trees were noted to have features that have the potential to support bat roosts, this is discussed later.

3.14 The southern boundary is comprised of a species-rich intact hedgerow, separated from H2 by several gaps. No trees are present within this feature. An overgrown access track is present adjacent to this boundary (Figure 3), beyond which is a pond

with associated scattered trees, tall ruderal, and scrub. Woody hedgerow species included abundant blackthorn, occasional hawthorn, hazel, bramble, and elder.

3.15 A species-poor intact hedgerow with trees (H2) is present across the centre of the Site, separating the two fields. The hedgerow is more species-rich where it meets H4 at the western end, however, species diversity is generally poor throughout its extent where hawthorn dominates with frequent blackthorn and occasional tree. Species near the western end of the hedgerow includes occasional field maple, English oak, bramble, elder, and rarely hazel, honeysuckle *Lonicera periclumenum*, cherry *Prunus* sp., and dog rose.

3.16 The northern boundary is comprised of a species-poor intact hedgerow (H5) (Figure 4) with obvious signs of more frequent management due to being present along the roadside. The hedgerow is much shorter and thinner than the other hedgerows on site, with several gaps being present. Species included abundant hawthorn and blackthorn, with frequent ivy, very occasional hazel and elder, and rarely raspberry.

Figure 2: View of species-rich hedgerow with trees along western boundary

Figure 3: Southern boundary hedgerow visible right (H1), with overgrown access track and scattered trees adjacent to the Site

Arable

3.17 The fields on site are entirely comprised of arable crops (Figure 6) with very narrow (generally 0.5m or less) improved grassland field margins adjacent the hedgerows. Species along the margins included abundant false-oat grass *Arrhenatherum elatius*, cleavers *Galium aparine*, frequent cock's foot *Dactylis glomerata*, nettle *Urtica dioica*, occasional sterile brome *Anisanthera sterilis*, creeping thistle *Cirsium arvense*, spear thistle *Cirsium vulgare*, hogweed *Heracleum sphondylium*, Italian ryegrass *Lolium multiflorum*, broad-leaved dock *Rumex obtusifolius*, and rarely nipplewort *Lapsana communis*. The field margin species assemblage is poor being typical of nutrient enriched habitats and are not considered to meet the criteria for UK Priority Habitat – Arable Field Margins.

Figure 4: Species-poor hedgerow along the northern boundary of the Site

Figure 5: Typical view of arable habitat across the Site facing north.

Flora

3.18 No notable (Schedule 8) or non-native invasive flora (Schedule 9) were recorded during the survey.

Habitat Connectivity

3.19 The hedgerows on site offer habitat connectivity across the Site and throughout the landscape. The western boundary hedgerow offers additional connectivity as it runs parallel to another hedgerow on the opposite side of the access track, thus offering additional cover and increasing its value. There are numerous ponds within 250m of the site and beyond, forming a potential network of habitats for amphibians and other species.

Fauna

3.20 The potential for the Site to support legally protected and notable species has been assessed using the results of the desk study and observations made during survey of habitats within and immediately surrounding the Site. Habitats present within the Site are suitable for the following species; further consideration is given below to the likelihood for these species to be present within the Site:

- Amphibians;
- Bats;
- Badger;
- Birds;
- Hazel Dormouse;
- Brown Hare, and
- Hedgehog.

3.21 The Site does not provide suitable habitat for other protected or notable species beyond those listed above. These other species will not be considered further within this report.

Amphibians

3.22 One record for great crested newt *Triturus cristatus* (EPS, WCA5, S41, LBAP) was returned within approximately 0.6km of the Site, associated with the pond to the east/northeast. A class licence return was also revealed, which confirmed the presence of great crested newts in a pond located approximately 1.92km north of the site (grid reference SJ 920 152) on the 1st April 2017.

3.23 No other amphibian records were recorded within 1km, although common toad *Bufo bufo* (WCA5, S41) records were returned within 2km of the Site.

3.24 The field margins and hedgerows on Site offer potential terrestrial habitat for amphibians, including great crested newt if present in the area. These features offer

connectivity to the surrounding ponds, particularly those within 250m. No ponds were present on the Site.

3.25 Nine ponds within 250m of the Site have been identified. The nearest pond is located approximately 15m to the southwest of the site, situated beyond the access track which bounds the western and southern boundaries. Due to the record of great crested newt within 0.6km of the site and a lack of barriers to movement between the record, surrounding ponds and the Site there is potential for this species to be present within these ponds, and on site during their terrestrial phase.

Great Crested Newt HSI and DLL

3.26 TEP were commissioned to conduct a great crested newt (GCN) Habitat Suitability Index (HSI) survey of all accessible ponds within 500m of the Site to inform a District Level Licensing (DLL) application to Nature Space. These results will inform the report to be produced by Nature Space once the planning application has been validated. A summary is provided in Table 1 below with a full breakdown of HSI results included in Appendix C. A pond map has been included at the end of this report (drawing ref. G9562.013A). A separate report to be produced by Nature Space will be commissioned to assess impacts on GCN once the planning application has been validated by South Staffordshire Council.

Table 3: Summary of HSI scores for all accessible ponds within 500m of the Site.

Pond ref.	Grid ref.	HSI score	Habitat Suitability
P1	SJ 90043 16550	No access	N/A
P2	SJ 89738 16424	No access	N/A
P3	SJ 90014 16412	No access	N/A
P4	SJ 90181 16232	0.50	Below Average
P5	SJ 90569 16203	0.25	Poor
P6	SJ 90273 16190	0.46	Poor
P7	SJ 90311 16098	0.60	Average
P8	SJ 90430 15957	No access	N/A
P9	SJ 90628 15867	0.82	Excellent
P10	SJ 89926 16089	0.58	Below Average
P11	SJ 89881 16065	0.57	Below Average
P12	SJ 89766 16026	0.55	Below Average
P13	SJ 89561 15788	Dry	N/A
P14	SJ 89618 15736	Dry	N/A
P15	SJ 89670 15628	0.42	Poor
P16	SJ 89703 15658	0.73	Good
P17	SJ 89809 15727	0.67	Average
P18	SJ 90039 15684	0.70	Good
P19	SJ 90434 15683	0.60	Average
P20	SJ 90548 15437	No access	N/A
P21	SJ 89831 15242	Dry	N/A
P22	SJ 89811 15256	Dry	N/A

Bats

3.27 Several records of common pipistrelle *Pipistrellus pipistrellus* (EPS, WCA5, LBAP) were returned approximately 2km from the Site.

3.28 TEP were not commissioned to undertake a comprehensive ground-based tree assessment for bats, however, during the Phase 1 survey several trees within the hedgerows on site were noted to have the potential to support bat roosts, with several recorded as having high, moderate, or low potential. Tree high potential, three moderate potential, and two low potential trees were recorded during the survey (Table 4 below). The assessment of the trees was limited by poor visibility from ground level due to the trees being in leaf, thus the assessment was considered to be undertaken outside the optimal period.

Table 4: Ground level tree assessment of trees T1 to T8.

Tree ID and grid reference (approximate)	Species and description	Suitability	Photograph
T1 SJ 89987 15893	A mature oak tree located within H2 with a large hazard beam in upper north leading branch.	Moderate	
T2 SJ 90009 15912	A mature oak tree located within H3 with deadwood and associated cavities.	Moderate	
T3 SJ 90012 15912	A mature oak tree located within H3 with significant deadwood and associated cavities. Large pruning cut present with associated cavity at 2m on southwestern aspect.	High	

T4 SJ 90079 15880	A smaller oak tree located within H3 with several dead branches and smaller cavities.	Moderate	
T5 SJ 90101 15871	A smaller ash tree located within H3. Shallow knothole present on southern aspect.	Low	
T6 SJ 89999 15935	A large ash with considerable dead wood and failed stems, leaving several large cavities.	High	
T7 SJ 90101 16152	A large mature oak tree with several large cavities.	High	

T8 SJ 90110 16165	A mature ash tree situated within the corner of the site where H4 and H5 adjoin.	Low	

3.29 The hedgerows, particularly that of the western boundary associated with the access track, offer good foraging and commuting habitat for bats. There are limited foraging opportunities offered within the fields on site beyond the hedgerows, due to the arable land coming right up to the hedgerow base in most places, limiting potential invertebrate habitat.

3.30 The habitats on and adjacent to site are well connected within the wider landscape via the network of hedgerows and trees.

3.31 There are presently no lighting impacts affecting potential foraging and commuting habitat on and around the Site.

Badger

3.32 Several badger records were returned within 2km of the Site identifying this species as active within the wider area. Most of the records were from reported road traffic collisions with one record being a field observation. No records of setts were revealed.

3.33 No badger field signs, or setts were recorded on site or within 30m of the Site boundaries where visible. However, potential habitat does exist adjacent to the Site, particularly associated with the hedgerows. Potential foraging and commuting habitat exist throughout the Site and adjacent land.

Birds

3.34 Numerous species records of note were returned within 1km of the Site, including barn owl *Tyto alba* (WCA1, LBAP), cuckoo *Cuculus canorus* (S41, BRd), curlew *Numenius arquata* (S41, BRd), fieldfare *Turdus pilaris* (WCA1, BRd), green sandpiper *Tringa ochropus*, (WCA1, BAm) grey partridge *Perdix perdix* (S41, BRd, LBAP), hobby *Falco Subbuteo* (WCA1), lapwing *Vanellus vanellus* (S41, BRd, LBAP), red kite *Milvus milvus* (WCA1), redwing *Turdus iliacus* (WCA1, BAm), skylark *Alauda arvensis* (S41, BRd, LBAP), snipe *Gallinago gallinago* (BAm, LBAP), spotted flycatcher *Muscicapa striata* (S41, BRd), tree sparrow *Passer montanus* (S41, BRd, LBAP), and yellowhammer *Emberiza citronella* (S41, BRd).

3.35 The nearest record to the Site was of lapwing, recorded approximately 0.5km away to the southwest. Grey partridge, skylark, and yellowhammer were next closest, approximately 0.6km away.

3.36 The arable habitat and boundary hedgerows and trees have the potential to support a variety of farmland bird species, including priority and protected species, as indicated by the records within the desk study.

Hazel Dormouse

3.37 A single record for hazel dormouse *Muscardinus avellanarius* (EPS, WCA5) was revealed during the desk study within the last 20 years. This was located approximately 1.5km to the southeast of the site in 2009 in the Preston Vale Lane/Whiston Brook area. There is connectivity between the area and the Site via the network of hedgerows and lack of barriers to movement such as roads.

3.38 A separate planning application for a solar site (23/00009/FUL) was identified on the South Staffordshire Planning portal approximately 500m to the southeast of the Site. The ecology surveys included a hazel dormouse feeding remains survey undertaken in 2022 which did not find any evidence of hazel dormouse (Report Ref.: WYC001/001/001/001/002).

3.39 The better connected hedgerows on site are along the western and southern boundary. H3 and H5 have reduced connectivity due to large gaps over 100m being present (if following the hedgerows to the east, outside of the site boundary). This is visible using *Google Street View*[14] (dated June 2022), with this view showing the large gap in H5 along Levedale Road and the large gap in H3 visible in the background, to the right of the pylon. Despite this, although this reduced connectivity to these hedgerows to the east, they are still connected to the west to hedgerows H2 and H4.

3.40 The denser and undisturbed hedgerows on site offer the most suitable habitat (H1, H2, H4). The roadside hedge is less suitable due to the regular disturbance from the roadside and regular flailing. The presence of hazel within some of the hedgerows on site provides a potential food source over winter with the species-rich hedgerows offering a potential food source throughout the year.

Other Relevant Species

3.41 Several records for brown hare *Lepus europaeus* (S41, LBAP) were returned within 2km of the Site, however, all of these from the past 20 years were over 1km from the Site. There is potential for brown hare to utilise the site.

3.42 Records for hedgehog *Erinaceus europaeus* (S41) were also returned. The nearest record being approximately 500m away on Levedale Road. The Site has the potential to support commuting and foraging hedgehogs, particularly along the hedgerows.

[14] Google Street View June 2022 (Accessed 9th March 2023).

4.0 Assessment of Potential Impacts

4.1 This section assesses the potential impacts on ecological features associated with the proposed development of a battery storage facility as described in Section 1.0 Proposals.

4.2 Consideration is given to the 'mitigation hierarchy', i.e. that impacts are first avoided or where this is not practicable, mitigated and as a final resort, compensated (off-set).

Wildlife Sites

4.3 Due to the distance between the Site and any designated sites, impacts from the proposals are assessed as highly unlikely.

Habitats and Flora

Notable Habitats

4.4 The ponds nearest to the Site could be impacted by pollution during construction works, such as via run-off, dust, and spillages.

Hedgerows and Trees

4.5 The hedgerows and trees on site could be impacted during construction by accidental damage. There may also be pressure to prune some of the larger trees due to overhanging branches. However, the proposals do not include extensive removal of these features. The proposed access will result in a small loss of priority habitat hedgerows H3 and H5 totalling 10m and 50m respectively to facilitate the new access road, with 26m being replanted with native species-rich hedgerow planting post-construction. Additional native species-rich hedgerow planting with trees is included within the landscaping plans which mitigate for the small losses, a total of 488m of new native species-rich hedgerow planting is proposed. A habitat management plan has been produced as part of the BNG requirements (TEP Ref. 9562.01.001) which will ensure these achieve the desired condition. Grassland creation is also proposed throughout the landscaped areas on site, including along new and existing hedgerows, which will reduce the current management pressures on the hedgerows which includes crops planted up to the hedgerow base with very limited field margin cover present. Other Habitats

Arable and field margins

4.6 The field margin habitats on site are species poor and of low ecological value due to their limited size, level of disturbance and lack of botanical diversity. These habitats will be lost as part of the development but replaced with higher distinctiveness grassland which will provide a net gain on site.

Fauna

Amphibians

4.7 There is a high risk of direct impacts to great crested newt (injury and killing) due to the proximity of ponds to the development, and a record returned within 0.6km of the Site. There is potential for great crested newt to be present within suitable terrestrial habitat such as hedgerow bases onsite whilst taking cover, foraging, and travelling through the Site; particularly if the ponds within 250m of the Site support this species.

4.8 Records indicate that common toad could also be present in the area and could be impacted if present within the terrestrial habitat on site and along its boundaries.

4.9 No ponds will be impacted directly, and indirect impacts on ponds can be mitigated for, so direct impacts to breeding habitats are unlikely.

Great crested newt District Level Licensing (DLL)

4.10 The site falls within a red impact risk zone for great crested newt. A separate report to be produced by Nature Space will be commissioned by the applicant to assess impacts on great crested newt based on the HSI results (Table 1 above) and other factors. The report will make any further recommendations, inform the District Level Licensing certificate for the site, and inform any required planning conditions relating to GCN. Due to the applicant opting for the DLL route instead of traditional survey and licensing methods, GCN are not discussed further within this report as any GCN impacts will be dealt with separately.

Badger

4.11 Given that no field signs were present within the Site, or within 30m where visible, impacts to badger are likely to be low. However, there is a possibility that setts could be dug within 30m of the proposals, in which case direct impacts could occur if any sett is dug between now and works commencing.

4.12 Habitat fragmentation and connectivity could occur if fencing is proposed and particularly if future developments take place on adjacent land.

Bats

4.13 Indications are that all trees will be retained. However, should this change, any trees that have bat roost potential will require further survey prior to removal or pruning. There is a potential for trees with bat roost potential to be disturbed or damaged during construction works, even if these features are being retained. Small sections of hedgerows H3 and H5 will be lost, however, the new hedgerow planting will compensate for this, and it is not considered that these losses will have a detrimental impact on foraging or commuting habitat.

4.14 There is a risk that lighting, if proposed, could fragment commuting and foraging habitat and impact on bat roosts if present within any of the trees.

4.15 Given that all boundary features will be predominantly retained, no foraging and commuting habitat will be directly impacted by the proposals. The proposed hedgerow, tree and grassland planting will provide additional habitat for these species ensuring the development has a positive impact.

Birds

4.16 The arable habitat on site has the potential to support a variety of farmland birds of conservation concern (BoCC), as indicated by their presence within records returned for the desk study.

4.17 The pre-application consultation response included comments made by the council ecologist relating to breeding bird survey requirements. Due to this, a breeding bird survey was not undertaken:

"*The site appears from aerial photographs and the PEA conclusion to be fairly restricted with narrow margins. For farmland birds it may therefore be possible to assume a typical assemblage is present and to mitigate by enhancing habitat within the blue line boundary, rather than expending survey effort.*"

4.18 The mature trees within the hedgerows along the boundaries, particularly the western boundary which includes larger trees, have the potential to support Schedule 1 species such as hobby, as indicated by records within the area. However, this habitat is not considered to be optimal. Despite this, there is a risk of disturbance and displacement during the construction phase in the unlikely event this species is present, despite these boundary features being retained in full.

4.19 There is a risk of damage or destroying a nest if vegetation clearance including removal of sections of hedgerow is carried out in the nesting period (generally considered to be between March to August inclusive, although good periods of whether can extend this and some species also commonly nest outside this period.

Hazel Dormouse

4.20 The potential impacts to hazel dormouse are considered to be low given the loss of two section of species-poor hedgerow (H3 and H5) totalling 60m. A proportion of that lost for H5 will be replaced with native-species rich hedgerow. H5 is located along the roadside which is used regularly by farm traffic and frequently managed through flailing. There is also no buffer between the crop and hedgerow base on the opposite side, which also leads to regular disturbance. H5 is species-poor and generally lacking in adequate food sources to support hazel dormouse. Further along H5 to the east offsite, a large gap of over 100m is present which limits connectivity to the east.

4.21 H3 is surrounded on both sides by crop, with a lack of adequate buffer between the crop and hedgerow base which increases disturbance. H3 is also species-poor and generally lacking in adequate food sources. H3 is not connected to any habitats to the east, due to a gap of over 100m which limits connectivity.

4.22 The other hedgerows present on site (H1, H2, and H4) offer much more cover given their size, less frequent disturbance, provide adequate food sources including hazel, and are better connected to habitats in the wider area. These hedgerows are being retained in full.

4.23 Given this, potential impacts are likely to be limited to the potential for disturbance to boundary hedgerows (H1, H2, and H4) and losses of approximately 60m of lower suitability hedgerows (H3 and H5). Additional native species-rich hedgerow planting is proposed along the new access track and eastern boundary of the site, which will enhance connectivity and ensure the new access does not fragment habitats, particularly for hedgerow H3 which currently lacks connectivity to the east. Given that new hedgerow planting will be native and species-rich these will also provide additional food sources.

4.24 This assessment will need to be confirmed by further survey. A hazel dormouse feeding remains survey has been commissioned and is scheduled for the 17th March 2023. The results and an update to this impact assessment will be included as an addendum to this report.

Other species

4.25 If brown hare were present within the Site, there would be a potential for hare mortality to occur during initial site clearance works. Leverets would be particularly susceptible due to being left by their mothers during the day and may not disperse as readily as adults when disturbed.

4.26 There is a potential for hedgehog mortality to occur during preliminary site clearance works where these impact on any tall vegetation and hedgerows where hedgehogs may shelter.

4.27 There is also the potential for mammals to become trapped and injured or killed in any holes, trenches dug into the ground, or pipes and drains. There is also the risk of injury and death from entanglement in mesh and other construction materials associated with the construction phase of the development.

5.0 Mitigation and Enhancement

5.1 This section describes appropriate and proportionate measures for impact avoidance, mitigation and enhancement required or recommended to address the potential ecological effects described in Section 4.0.

Habitats and Flora

5.2 Standard pollution prevention and dust control measures should be set out in a Construction Environmental Management Plan (CEMP) and implemented during site clearance and construction works. The CEMP will identify measures to ensure the potential for indirect impacts on retained habitats within and adjacent to the Site.

5.3 It is recommended that an ecological precautionary working method statement (PWMS) for the protection of habitats and species is drafted to inform ecological input into the contractors CEMP. The PWMS will also identify any further measures to ensure that impacts on habitats are reduced to a reasonable minimum such that the qualifying features of such designations are not negatively affected by the proposed development.

5.4 A Root Protection Zone (RPZ) should be implemented around retained hedgerows and trees in accordance with BS5837:2012.

5.5 Biodiversity net gain (BNG) in development is defined as “development that leaves biodiversity in a better state than before”. Paragraph 174(d) of the revised NPPF (2021) states that "Planning polices and decisions should contribute to and enhance the natural and local environment by… minimising impacts on and providing net gains for biodiversity…" The Government 25-year Environment Plan states that government will "embed environmental net gain principle for development".

5.6 A separate BNG design stage assessment has been submitted (TEP Ref. 9562.006) along with a habitat management plan (TEP Ref. 9562.01.001) in line with recommended guidelines. The proposals as detailed in the BNG assessment will result in a net gain of 1 habitat unit (+13.10%) and a net gain of 4.65 hedgerow units (+36.11%). The trading rules were satisfied for all habitats; ensuring any habitats lost are replaced by those with the same or higher distinctiveness. The net gain aims are achievable on site without the need for offsetting.

Fauna

Amphibians

5.7 General impacts to amphibians, including common toad, will be covered under the precautionary working method statement (PWMS) for the site.

5.8 Impacts to GCN are being dealt with separately under the District Level Licensing (DLL) scheme ran by Nature Space. Please refer to their separate report which will be produces once the planning application has been validated.

Bats

5.9 All British bats are European protected species, afforded full protection under the Habitats Regulations and the Wildlife & Countryside Act 1981 (as amended). Bats are protected from killing or injury, and from disturbance at the place of rest. Bat roosts are also protected from obstruction, damage or destruction (whether or not a bat is in occupation at the time).

5.10 Root protection areas will be implemented around all retained trees including those identified as having bat roost potential, therefore, no impacts are anticipated with no further measures being required at this time.

5.11 No additional lighting is proposed. Should this change, a sensitive lighting scheme retaining dark habitat corridors will be required to ensure commuting and foraging habitat is not fragmented and to ensure any potential roosts are not illuminated.

Badger

5.12 Badgers are protected under the Protection of Badgers Act 1992 from killing, injury and certain acts of cruelty. Their setts are also protected from damage, obstruction or destruction.

5.13 A pre-commencement badger survey is recommended at least 6 weeks prior to works commencing to ensure no sett creation has taken place within 30m of the development boundary.

Birds

5.14 To ensure compliance with the Wildlife and Countryside Act 1981 (as amended), any planned vegetation clearance should be undertaken outside of the bird nesting season (March to August inclusive), to avoid damage and fragmentation to nesting birds and their habitat, especially ground nesting species. Any works that will impact potential nesting habitat should be localised and kept to a minimum during the breeding bird season.

5.15 Advice should be gained from an appointed ecologist prior to any works undertaken during the breeding season which will impact potential nesting habitat. Which will require a nesting bird check to be carried out immediately prior to any clearance works commencing. If evidence of nesting is observed, a buffer zone will need to be set up around the nest, the size of which will be dependent upon the species nesting. The ecologist will monitor the nest to confirm when any young have fledged, following which vegetation clearance or demolition works can proceed.

5.16 Hobby is protected under Schedule 1 of the Wildlife and Countryside Act 1981, as amended. This strict protection makes it an offence to disturb hobbies at the nest or the dependant young of this species. Potential disturbance to hobby could occur during the construction phase if to be undertaken during their nesting season (May – September). This risk will be mitigated under the precautionary working method statement (PWMS) and pre-commencement checks. As no breeding bird surveys have been requested by the LPA ecologist, it is anticipated that a check for this

species can be undertaken at the same time as the pre-commencement badger walkover survey or as part of the nesting bird check, if construction works coincide with their nesting season (May to September). If works take place outside of this period, this will not be required.

5.17 Habitat creation on site includes native species-rich hedgerow and tree planting, tussocky grassland creation, and meadow creation, all of which will provide additional habitat for a variety of bird species. All trees are being retained.

Hazel Dormouse

5.18 The pre-application consultation response included comments made by the council ecologist requesting further details on how potential impacts to hazel dormouse will be addressed:

"The PEA noted a record of Hazel Dormouse within the search area. However, further surveys for this species were ruled out. This would usually be reasonable, given the nature of the site. However, the record is for very similar habitat (hedges), with linking similar habitat between that location and the application site. The record is from a reliable source (County Mammal Recorder) and the species tends not to behave typically in the county. The application is not likely to have an adverse effect, except for disturbance to edge habitat and hedges. The applicant's ecologists should consider how they will either survey or adopt precautionary measures."

5.19 Due to the risk of impacts being low resulting from the loss of up to 60m of hedgerow, potential disturbance during construction, and the main habitats being impacted being suboptimal it is considered that a full nest tube survey would be disproportionate to the scale and impact of the proposals. Due to this, it is considered that a feeding remains survey undertaken within the survey window of October – March would be sufficient to determine likely presence or absence, assess impacts, and inform precautionary working methods to ensure impacts to hazel dormouse are avoided. This is considered to be proportionate to the level and risk of potential impacts.

5.20 If absence can be confirmed to a reasonable confidence level following the survey, hazel dormouse will be included within the precautionary working method statement (PWMS). These methods will follow guidance set out in the Dormouse Conservation Handbook[15]. An addendum to this report will be issued upon completion of the survey to include survey results and next steps.

Other species

5.21 Brown hares are protected from intentional or reckless injury or killing under Schedule 5A of the Wildlife and Countryside Act 1981 during their breeding season of February to September inclusive.

5.22 Hedgehogs are protected from being taken or killed under Schedule 6 of the Wildlife and Countryside Act 1981.

[15] Paul Bright, Pat Morris and Tony Mitchell-Jones. The Dormouse Conservation Handbook second edition. English Nature.

5.23 Precautionary methods included within the PWMS to protect both brown hare and hedgehog should include:

- Staged vegetation clearance measures and checking of potential refugia and tall vegetation will ensure no harm to hedgehog or other mammals if present during site clearance works.
- Vegetation clearance if required should take place starting from the northern point of the Site adjacent to Levedale Road and moving south, to encourage any species utilising the fields to move towards adjacent habitats to the south.
- If any vulnerable animals are encountered, such as leverets/young, then clearance works must cease, and the advice of an ecologist be sought.
- Any holes, drains or trenches dug into the ground must be covered or have ramps placed within to allow trapped animals to escape. All pipework must be capped overnight to prevent small mammals entering and becoming trapped. All mesh, wiring, and other materials that could risk entanglement must be stored off the ground.
- Protective fencing installed as part of the root protection areas of retained trees and hedgerows will double as a protective buffer for any species present within the hedgerows.
- Any long-term boundary fencing must include gaps big enough for hedgehogs to pass (13cm x 13cm) through the Site. Habitat enhancements, such as grassland buffers along boundary features, could be implemented to provide a net gain and maintain foraging and commuting habitat. This will ensure connectivity is maintained through the Site post-development.

6.0 Conclusions

6.1 The ecological value of the site is mainly limited to the native hedgerows along its boundaries, particularly those that are species-rich and contain mature trees. The arable habitat and narrow margins are of low value. The majority footprint of the project comprises arable crop. The design of the project aims to avoid tree or hedgerow removal where possible, with minor impacts anticipated.

6.2 Semi-natural habitats to be affected by the proposals are not complex and are readily recreated within the short term. Impacts upon protected or notable species that may utilise the habitats will be avoidable by the implemented of precautionary measures including timing vegetation removal to avoid sensitive periods, adopting sensitive construction methods, and under the certificate that will be sought from the District Level Licensing scheme for great crested newts.

6.3 All impacts are therefore anticipated to temporary and reversible in the short term. With implementation of the recommended precautionary working methods and DLL requirements as advised by Nature Space no significant ecological effects are expected on notable habitats or protected or notable species. The development will also provide ecological benefits to the site and local area by providing a biodiversity net gain on site, offering additional habitat of higher botanical diversity and managed for biodiversity net gain.

Appendix A

Desktop Study

Land on the South West Side of Levedale Road Penkridge, Staffordshire

Ecological Desk Study

Prepared For: Anglo ES Levedale Limited

Document Reference: 9562.002

August 2022

Version 1.0

TEP
Genesis Centre
Birchwood Science Park
Warrington
WA3 7BH

Tel: 01925 844004
Email: tep@tep.uk.com

Offices in Warrington, Market Harborough, Gateshead, London and Cornwall

Project Name:	Land on the South West Side of Levedale Road
Location:	Penkridge, Staffordshire
Document Title:	Ecological Desk Study
Client:	Anglo ES Levedale Limited
Year of Surveys:	2022
Report Prepared:	August 2022
Prepared by:	The Environment Partnership Ltd
Office:	Genesis Centre, Birchwood Science Park, Warrington, WA3 7BH
Document Ref:	9562.002

Document history and status:

Version	Date	Description of Issue	Author	Checked	Approved
1.0	01/08/2022	First issue	PP	PJB	PJB

The content of this document has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) Code of Professional Conduct and is compliant with British Standard BS42020:2013 Biodiversity Code of Practice for Planning and Development.

The conclusions and recommendations contained in this document are based upon information gathered by TEP and provided by third parties. Information provided by third parties and referred to herein has not been independently verified by TEP, unless otherwise expressly stated in the document.

Nothing in this report constitutes legal opinion. If legal opinion is required, the advice of a qualified legal professional should be secured.

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Figures

Tables

1.0 Introduction

1.1 The Environment Partnership (TEP) was commissioned by Anglo ES Levedale in July 2022 to complete an Ecological Desk Study to inform and support a Preliminary Ecology Appraisal (PEA) for land known as Land on the South West Side of Levedale Road (hereafter referred to as 'the site').

Site Location

1.2 The location of the site is illustrated in Figure 1. The approximate central grid reference of the site is SJ 90105 15891.

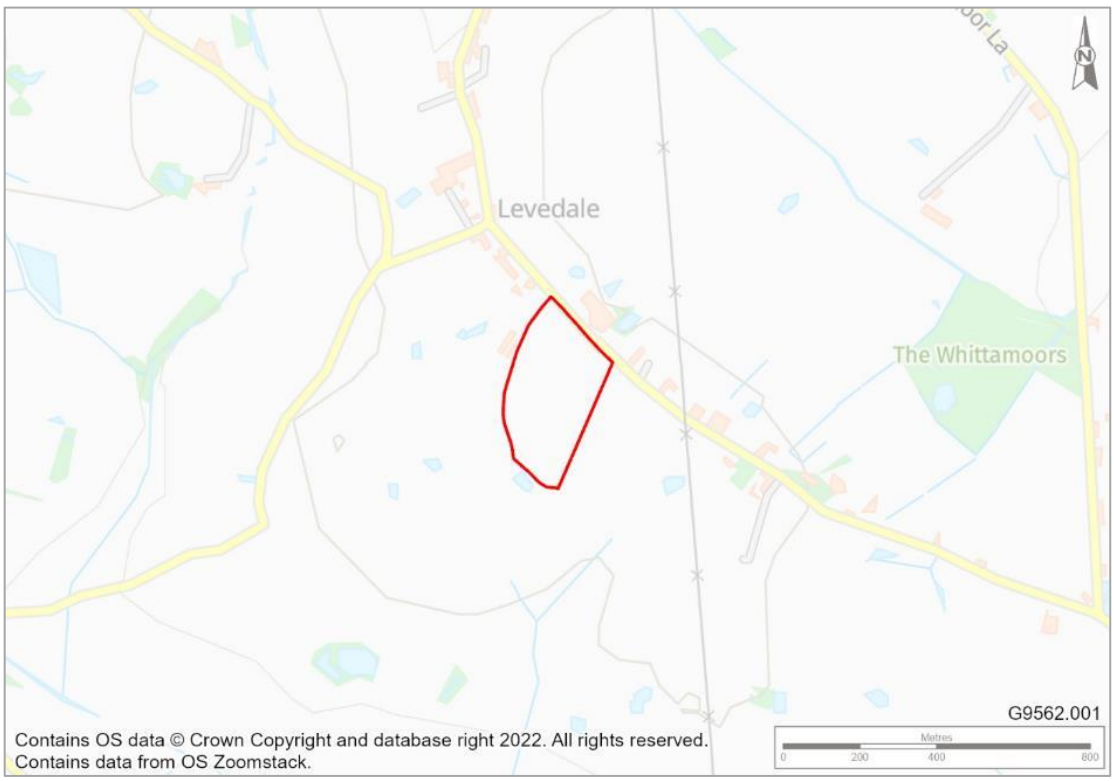


Figure 1: Site location

Context

1.3 The site is within the administrative area of South Staffordshire Council and allocated as Open Countryside (Policy OC1) in the South Staffordshire Local Plan (adopted December 2012).

1.4 This assessment is required to inform a pre-application advice request for the proposed 49.9MW Battery Storage Scheme at the site.

2.0 Methods

Scope and Data Sources

2.1 The ecological Zone of Influence (ZOI) is an area defined by the ecological assessment within which valued ecological features may be subject to significant biophysical changes as a consequence of the proposed development under assessment.

2.2 For the purposes of this assessment, the preliminary ZOIs within which ecological features were searched for as part of this desk study were varied according to the geo-spatial and/or legal significance of the feature.

2.3 Table 1 summarises the scope and the preliminary ZOIs applied for this desk study. The preliminary ZOIs were applied by extending search radii of the respective distances from the site boundary.

Table 1: Scope and preliminary ecological Zones of Influence (ZOI)

Feature	Scope	Key Source(s)	ZOI
Statutory wildlife sites:	Ramsar sites Proposed Ramsar sites Special Areas of Conservation (SAC) Possible SAC SAC with marine components Special Protection Areas (SPA) Potential SPA Marine Conservation Zones	Natural England (public sector information)	10km
	Sites of Special Scientific Interest (SSSI) National Parks National Nature Reserves (NNR) Marine Nature Reserves (MNR)	Natural England (public sector information)	5km
	Local Nature Reserves (LNR) Country Parks	Natural England (public sector information)	2km
Non-statutory wildlife sites:	Local Wildlife Sites (LWS) Green Link Network Green Wedges	Staffordshire Ecological Record South Staffordshire Local Plan (adopted December 2012)[1] South Staffordshire Site Allocations Document (SAD) (adopted September 2018) [2] South Staffordshire Interactive Local Plan Map[3]	2km

[1] *https://www.sstaffs.gov.uk/doc/179760/name/Core%20Strategy%202012%20Corporate%20Version%20.pdf/* (accessed 21st July 2022)

[2] *https://www.sstaffs.gov.uk/doc/179829/name/APP2%20SAD%20September%202018%20FINAL.pdf/* (accessed 21st July 2022)

[3] *https://sstaffs.maps.arcgis.com/apps/webappviewer/index.html?id=83d5e4f365a14dcbbbed3b8766521567* (accessed 21st July 2022)

Feature	Scope	Key Source(s)	ZOI
Notable habitats:	Ancient Woodland Habitats of principal importance Main rivers Habitat Network / Nature Recovery Network	Natural England (public sector information) Environment Agency (public sector information)	2km
Protected or notable species:	Pre-existing records for protected or notable species[4], non-native invasive species	Staffordshire Ecological Record	2km
Species licences:	Protected species licences granted by Natural England	Natural England (public sector information)	2km
	Great crested newt survey pond records (2017 – 2019) held by Natural England	Natural England (public sector information)	2km
Policy and Related Guidance	Land allocations and relevant environment / biodiversity policy Local biodiversity priority habitats and species	South Staffordshire Planning Policy and Interactive Local Plan Map Staffordshire Biodiversity Action Plan[5]	2km

2.4 An absence of records does not indicate the absence of protected species from the search area.

[4] Notable and protected species records may include those listed under any of the following:
- Protected species listed under Schedule 2 (animals) or Schedule 5 (plants) under the Conservation of Habitats and Species Regulations 2017 (EPS);
- Protected bird species under Schedule 1 of the Wildlife and Countryside Act 1981, as amended (WCA1);
- Protected animal species under Schedule 5 of the Wildlife and Countryside Act 1981, as amended (WCA5);
- Protected plant species under Schedule 8 of the Wildlife and Countryside Act 1981, as amended (WCA8);
- Invasive non-native plant species under Schedule 9 of the Wildlife and Countryside Act 1981, as amended (WCA9);
- Invasive Alien Species (Enforcement and Permitting) Order 2019 (IAS);
- Protection of Badgers Act 1992 (PBA);
- Species of principal importance (SPI) listed by requirements under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006;
- Red and Amber listed Birds of Conservation Concern (BRd/BAm); and
- Local Biodiversity Action Plan Species (LBAP).

[5] *http://sbap.org.uk/actionplan/index.php* (accessed 21st July 2022)

3.0 Legislation and Policy

3.1 This section details legislation and planning policy which may have relevance to the site. Only legislation and policy of key relevance to biodiversity are included.

Relevant Legislation

International Conventions

3.2 The UK is a Contracting Party to numerous environmental conventions, the commonest form of international agreements to encourage a coordinated response to managing the environment. Key environmental conventions ratified in the UK include:

- The Convention on Wetlands of International Importance especially as Waterfowl Habitat ('Ramsar Convention'[6] or 'Wetlands Convention') - provides the only international mechanism for protecting sites of global importance;
- The Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention[7]) - imposes legal obligations on contracting parties, protecting over 500 wild plant species and more than 1,000 wild animal species;
- The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention[8] or CMS) - provides strict protection for endangered migratory species. The UK has currently ratified four legally binding Agreements under the convention relating to bats (EUROBATS), African-Eurasian migratory birds (AEWA), small cetaceans in the Baltic, Irish and North Seas (ASCOBANS) and albatrosses and petrels (ACAP) in addition to five Memorandum of Understanding (MoU) and is non-party range state to a further Agreement and a further MoU;
- The Convention Concerning the Protection of the World Cultural and Natural Heritage (UNESCO World Heritage Convention) - seeks to protect both cultural and natural heritage;
- The Convention on Biological Diversity (Biodiversity Convention[9] or CBD) - provides a legal framework for biodiversity conservation. Within the UK, delivery of the CBD and the Strategic Plan for Biodiversity 2011-2020[10] is guided by the UK Post-2010 Biodiversity Framework[11].

[6] Convention on Wetlands of International Importance especially as Waterfowl Habitat, Ramsar, 2.2.1971 *https://www.ramsar.org/*

[7] Convention on the Conservation of European Wildlife and Natural Habitats. Bern, 1979 *https://www.coe.int/*

[8] Convention on the Conservation of Migratory Species of Wild Animals, Bonn, June 1979 *https://www.cms.int/*

[9] Convention on Biological Diversity, Rio de Janeiro, June 1992*https://www.cbd.int/*

[10] In October 2010, at the 10th Conference of the Parties to the CBD in Nagoya, Japan, the Parties adopted a new 'Strategic Plan for Biodiversity 2011–2020' along with its 20 'Aichi targets'. *https://www.cbd.int/sp/*

[11] The framework is overseen by the Environment Departments of the four UK governments working through the Four Countries' Biodiversity Group. It demonstrates how the UK, through each of the four countries, contributes to achieving the 'Aichi targets', and identifies the activities required to complement the individual country biodiversity strategies *https://jncc.gov.uk/our-work/uk-post-2010-biodiversity-framework/*

3.3 The legal obligations of the multiple Conventions to which the UK is a Contracting Party are enacted through a suite of national environmental legislation. The most relevant are described in the following paragraphs.

Conservation of Habitats and Species Regulations

3.4 The Conservation of Habitats and Species Regulations 2017[12] (2017 Regulations) transposed the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Wild Birds Directive (Directive 2009/147/EC) (known as the Nature Directives) into domestic law.

3.5 The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019[13] (2019 Regulations) amends the 2017 Regulations to make them operable following the withdrawal of the United Kingdom from the European Union (EU). Most of the changes involve transferral of functions from European Commission to the appropriate authorities in England and Wales, also extending to Scotland and Northern Ireland and applies to Scotland and Northern Ireland (including the adjacent territorial sea to a limited degree), as regards reserved and excepted matters respectively. It also amends Section 27 of the Wildlife and Countryside Act 1981 to maintain existing protections and enforcement for species of wild birds.

3.6 All other processes or terms in the 2017 Regulations remain unchanged and existing guidance and obligations (of a competent authority) remain relevant.

National Site Network

3.7 Under the 2019 Regulations, Special Areas of Conservation (SAC) and Special Protection Areas (SPA) in the UK no longer form part of the EU's 'Natura 2000' ecological network, but instead (along with new SACs and SPAs designated under the 2019 Regulations) form the new National Site Network (NSN). Ramsar sites[6] do not form part of the NSN but remain protected in the same way as SACs and SPAs.

3.8 Proposals which may significantly affect a site belonging to the NSN and which are not connected with or necessary to the management of that site require (by Regulations 63 and 64 of the 2017 Regulations, as amended by Regulations 24 and 25 of the 2019 Regulations, respectively) competent authorities to undertake an Appropriate Assessment of the implications of the plan or project in view of that site's conservation objectives. This process is commonly referred to as a 'Habitats Regulations Assessment' (HRA). The assessment must consider the potential effects both of the plan/project itself and in combination with other plans or projects. Where an adverse effect on the site's integrity cannot be ruled out, and where there are no alternative solutions, the plan or project can only proceed if there are imperative reasons of over-riding public interest (IROPI) and if the necessary compensatory measures can be secured.

[12] Conservation of Habitats and Species Regulations 2017 (SI 2017/1012) *https://www.legislation.gov.uk/uksi/2017/1012/*

[13] Conservation of Habitats and Species Regulations 2019 (SI 2019/579) *https://www.legislation.gov.uk/uksi/2019/579/*

Protected Species

3.9 Certain animals and their breeding sites or resting places are protected under Regulation 43 of the 2017 Regulations, which makes it illegal to:

- Deliberately capture, injure or kill any such animal or to deliberately take or destroy the eggs of such an animal;
- Deliberately disturb such an animal; and
- Damage or destroy a breeding site or resting place of such an animal.

3.10 Disturbance is defined in the 2017 Regulations as an activity which is likely to impair a species' ability to survive, to breed or reproduce, to rear or nurture young or, in the case of animals hibernating or migratory species, to hibernate, migrate or which may affect significantly the local distribution or abundance; of the species.

3.11 A bat's resting place is known as a roost site. Because bats tend to be faithful to roost sites but their biology is such that different roost site characteristics are preferred at different times of the year by different species for different functions, a bat roost is considered to be afforded protection even when it is not occupied.

3.12 Certain plant species are protected under Regulation 47 of the 2017 Regulations against deliberate picking, collecting, cutting, uprooting or destruction. It is also an offence to be in possession or control and to transport any live or dead plant or part of a plant of such a species which has been taken in the wild.

3.13 The 2017 Regulations (Regulation 55) enables a relevant licensing body to grant a licence for certain activities that may affect animal or plant species protected by the above provisions. The purpose must conform to one of those listed under Regulation 55(2). For most development related activities, the purpose normally relates to Regulation 55(2)(e) 'preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequence of primary importance for the environment' – commonly known as the IROPI test. Regulation 55(9) introduces two further tests that the licensing body must consider:

- There is no satisfactory alternative; and
- The favourable conservation status of the species concerned will be maintained and/or enhanced.

3.14 Under Regulation 9(1) of the 2017 Regulations (as amended), competent authorities "must exercise their functions which are relevant to nature conservation… so as to secure compliance with the requirements of the Directives". Regulation 9(3) requires a competent authority, in exercising any of its function, to "have regard to the requirements of the Directives so far as they be affected by the exercise of those functions." Local planning authorities must therefore consider the above three 'tests' when determining if planning permission should be granted for developments likely to cause an offence under the Regulations.

Wildlife and Countryside Act 1981

3.15 The Wildlife and Countryside Act 1981 (as amended)[14] (WCA) is a major legal instrument for wildlife protection in the UK. In respect of habitats and flora, the WCA protects important habitats and/or species as Sites of Special Scientific Interest (SSSI). The designation of UK Ramsar sites[6] has usually been underpinned through prior notification of these areas as SSSI and accordingly they receive statutory protection under the WCA.

3.16 The obligations of the Bern Convention[7] (the protection of wild plant and animal species and their natural habitats) are transposed into law for England and Wales[15] by the WCA. The legal requirement for the protection of migratory species listed by the Bonn Convention[8] is also provided by the WCA.

3.17 All wild birds (as defined by the WCA and with exception to species listed in Schedule 2) are protected under the WCA, which makes it illegal to:

- Intentionally kill, injure or take any wild bird;
- Take, damage or destroy the nest (whilst being built or in use) of any wild bird; or
- Take or destroy the eggs of any wild bird.

3.18 Special penalties are available for offences related to birds listed in Schedule 1, for which there are additional offences of disturbing these birds at their nests, or their dependent young. The Secretary of State may also designate Areas of Special Protection (subject to exceptions) to provide further protection to birds. The WCA also prohibits certain methods of killing, injuring, or taking birds, restricts the sale and possession of captive bred birds, and sets standards for keeping birds in captivity.

3.19 Certain animal species (listed under Schedule 5) of the WCA receive protection which makes it illegal (with certain exceptions) to:

- Intentionally kill, injure or take any such animal;
- Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any such animal;
- Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.

3.20 Plant species listed under Schedule 8 of the WCA are protected from unauthorised intentional picking, uprooting and destruction. It is an offence to plant or otherwise cause to grow in the wild any plant that is included in Schedule 9.

[14] Wildlife and Countryside Act 1981 c. 69 *https://www.legislation.gov.uk/ukpga/1981/69/*

[15] In Scotland by the Nature Conservation (Scotland) Act 2004 (as amended) and in Northern Ireland by Wildlife (Northern Ireland) Order 1985 and the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985.

Countryside and Rights of Way Act 2000

3.21 Part III of the Countryside and Rights of Way Act 2000[16] (CROW) deals specifically with wildlife protection and nature conservation. It requires that Government Departments have regard for the conservation of biodiversity, in accordance with the CBD. In addition, it requires that The Secretary of State publishes a list of living organisms and habitat types that are considered to be of principal importance in conserving biodiversity.

3.22 CROW also amends the WCA, expanding the terms of offences to include reckless activity. It increases the legal protection of threatened species, by also making it an offence to "recklessly" obstruct access to a sheltering place used by an animal listed in Schedule 5 of the WCA or "recklessly" disturb an animal occupying such a structure or place.

Natural Environment and Rural Communities (NERC) Act 2006

3.23 Section 40 of the Natural Environment and Rural Communities Act 2006 (NERC)[17] places a duty to conserve biodiversity on public authorities in England. It requires local authorities and government departments to have regard to the purposes of conserving biodiversity in a manner that is consistent with the exercise of their normal functions such as policy and decision-making. 'Conserving biodiversity' may include enhancing, restoring or protecting a population or a habitat.

3.24 Section 41 requires the Secretary of State to publish and maintain lists of species and types of habitats which are regarded by Natural England to be of "principal importance" for the purposes of conserving biodiversity in England.

3.25 These habitats and species of principal importance (HPI and SPI) are drawn from earlier lists of United Kingdom Biodiversity Action Plan Priority Species and Habitats. The Section 41 (S41) lists of HPI and SPI are needed by decision-makers in local and regional authorities when carrying out their duties under Section 40 of the Act.

Environment Act 2021

3.26 The Environment Act 2021[18] was passed into law in November 2021. The Act applies only to England, although many of its measures are designed to be operable across the UK with the consent of devolved administrations. The Act requires statutory long-term (15+ years) targets to be set (and monitored, reported and reviewed) in the four priority areas of waste reduction, air quality, water resources and biodiversity as well as additional targets relating to species abundance and fine particulates by 2030.

[16] Countryside and Rights of Way Act 2000 c. 37 *https://www.legislation.gov.uk/ukpga/2000/37/*

[17] Natural Environment and Rural Communities Act 2006 c. 16 *https://www.legislation.gov.uk/ukpga/2006/16/*

[18] Environment Act 2001 c.30 *https://www.legislation.gov.uk/ukpga/2021/30/*

3.27 The Environment Act amends the Town and Country Planning Act 1990[19] in that planning permissions granted after the provisions come into force[20] are deemed to be subject to a condition prohibiting the start of development before a biodiversity gain plan has been submitted to and approved by the Local Planning Authority (LPA).

3.28 The biodiversity gain plan must demonstrate a net gain of at least 10% in the biodiversity value of the development site "as at the time the development is completed". Biodiversity net gain must be demonstrated by calculations using the biodiversity metric (currently version 3.1 published by Natural England)

3.29 The Environment Act introduces Local Nature Recovery Strategies (LNRS), a new system of spatial strategies for nature, covering the whole of England. LNRS are to be prepared and published by the 'responsible authority', namely the local authority, mayoral authority or National Park authority whose area is, or is within, the strategy area, the Broads Authority or Natural England. Section 40 of the NERC Act (duty to conserve biodiversity) makes provision about the duties of public authorities in relation to LNRS.

3.30 A 'responsible authority' is to be appointed to lead each LNRS area, which could include LPAs and which in mayoral combined authorities is highly likely to be the mayor. The responsible Authority must map the most valuable existing natural habitat in its area and develop a biodiversity strategy, including specific proposals for creating or improving habitats and priorities for nature recovery.

3.31 In addition to the above, the Environment Act Part 6 (Nature and biodiversity) will also:

- Strengthen the biodiversity duty through amendments to Section 40 of the NERC Act.
- Impose a duty upon Local Authorities to consult on street tree felling;
- Strengthen woodland protection enforcement measures;
- Introduce Conservation Covenants (agreements between a landowner and a responsible body);
- Protected Site Strategies (prepared and published by Natural England) to improve the conservation and management of a protected site (including SACs, SPAs listed before exit day, Sites of Community Importance (SCI)[21] listed before exit day and those sites proposed before exit day as SACs).
- Species Conservation Strategies (prepared and published by Natural England) to improve the conservation status of any species of flora or fauna, with which a LPA in England and any prescribed authority must have regard so far as relevant to its functions, including when discharging its duties under the 2017 Regulations (as amended);
- Prohibit larger UK businesses from using commodities associated with wide-scale deforestation (where 'forest' is defined as "*an area of land of more than 0.5 hectares*

[19] Town and Country Planning Act 1990 c. 8 *https://www.legislation.gov.uk/ukpga/1990/8/*

[20] The Biodiversity Gain provision of the Environment Act requires the Secretary of State to first publish detailed regulations (see s147(3) of the Act). These are anticipated in November 2023.

[21] SCIs are established under the European Union Habitats Directive (92/43/EEC) and are (under the Habitats Directive) the pre-requisite step for establishing SACs and SPAs.

with a tree canopy cover of at least 10% (excluding trees planted for the purpose of producing timber or other commodities)", which includes "*land that is wholly or partly submerged in water whether temporarily or permanently*");

- Require regulated businesses to establish a system of due diligence for each regulated commodity used in their supply chain, requires regulated businesses to report on their due diligence, introduces a due diligence enforcement system.

Hedgerow Regulations 1997

3.32 Important hedgerows are protected from removal by the Hedgerows Regulations[22] (as amended). Regulation 3 defines the hedgerows to which the Regulations apply. Regulation 4 sets out the criteria for identifying "important hedgerows" including ecological, landscape or historical/cultural reasons. Under the Hedgerow Regulations it is against the law to remove or destroy certain hedgerows without permission from the local planning authority. Works to "important hedgerows" are exempt under the Hedgerow Regulations if planning consent is granted which allows their removal.

3.33 The identification of important hedgerows also provides an additional means to value hedgerows aside from their botanical value (e.g. species richness) as the assessment of importance also includes characteristics relating to maturity and structure (e.g. associated features, connectivity, integrity) which will affect the functional value of the hedgerow.

Protection of Badgers Act 1992

3.34 Badgers and their setts receive statutory protection under the Protection of Badgers Act 1992 (PBA)[23]. This makes it an offence to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or to intentionally or recklessly interfere with a sett.

3.35 Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it. A badger sett is defined in the legislation as "any structure or place, which displays signs indicating current use by a badger."

Relevant Policy

National Planning Policy Framework

3.36 The National Planning Policy Framework (NPPF21)[24] sets out the Government's planning policies for England and how these are expected to be applied at a local level in development plans and how developers should address them. The Framework places great emphasis on plans and developments contributing to sustainable development.

[22] The Hedgerow Regulations 1997 (SI 1997/1167) *https://www.legislation.gov.uk/uksi/1997/1160/*

[23] Protection of Badgers Act 1992 c. 51 *https://www.legislation.gov.uk/ukpga/1992/51/*

[24] National Planning Policy Framework (2021) Ministry of Housing, Communities and Local Government *www.gov.uk/government/publications*

3.37 Paragraph 174 states: Planning policies and decisions should contribute to and enhance the natural and local environment by:

- protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
- preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

3.38 Paragraph 180 states: When determining planning applications, local planning authorities should apply the following principles:

- if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- 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;
- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless are wholly exceptional reasons and a suitable compensation strategy exists; and;
- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate."

3.39 Paragraph 181 stipulates that the following should be given the same protection as habitats sites[25]:

- potential Special Protection Areas and possible Special Areas of Conservation;
- listed or proposed Ramsar sites; and
- sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

3.40 Paragraph 182 confirms: The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

Government Circular 06/2005

3.41 Government Circular 06/2005[26] remains pertinent in national policy even though PPS9, which it originally supported, was revoked by the NPPF.

3.42 The Circular outlines the legislative provisions relating to biodiversity and geological conservation which affect planning and development. The Circular provides guidance on the protection of designated international and national nature conservation sites, non-designated sites, the conservation of species, and advice on the related issues and statutory powers.

3.43 Paragraphs 123 and 124 of Part IV of Circular 06/2005 state that "the likelihood of disturbing a badger sett, or adversely affecting badgers' foraging territory, or links between them, or significantly increasing the likelihood of road or rail casualties amongst badger populations, are capable of being material considerations in planning decisions. Although consideration of the case for granting a licence is separate from the process of applying for planning permission, a planning authority should advise anyone submitting an application for development in an area where there are known to be badger setts that they must comply with the provisions of the Act".

[25] Defined by NPPF21 as "Any site which would be included within the definition at regulation 8 of the Conservation of Habitats and Species Regulations 2017 for the purpose of those regulations, including candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation, Special Protection Areas and any relevant Marine Sites".

[26] Office of the Deputy Prime Minister (2005) 'Government Circular: Geological and Biological Conservation – Statutory obligations and their implications within the planning system' ODPM circular 06/2005, DEFRA circular 01/2005 *https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/147570.pdf*

South Staffordshire Local Plan (adopted 2012)

1.1 The South Staffordshire Local Plan provides the planning framework for all new development in South Staffordshire. It contains a range of policies and land allocations and is made up of two documents: the Core Strategy[27] (adopted December 2012) and the Site Allocations document[28], or SAD (adopted September 2018). These two plans replace the 1996 Local Plan and together deliver the local planning strategy for South Staffordshire

3.44 For Development Control purposes, the policies in the South Staffordshire Local Plan of relevance to biodiversity and/or the site's allocation include:

- Policy OC1: Development in the Open Countryside Beyond the West Midlands Green Belt;
- Core Policy 2: Protecting and Enhancing the Natural and Historic Environment;
- Policy EQ1: Protecting, Expanding and Enhancing Natural Assets;
- Policy EQ4: Protecting and Enhancing the Character and Appearance of the Landscape;
- Core Policy 3: Sustainable Development and Climate Change;
- Policy EQ12: Landscaping;
- Policy EW2: Cannock Chase Special Area of Conservation; and
- Policy HWB2: Green Infrastructure.

3.45 South Staffordshire Council have also prepared Supplementary Planning Documents (SPDs), which support the policies in the Local Plan by setting out more details on how the policy requirements will apply. The following SPDs relate to biodiversity and/or the site's allocation:

- Sustainable Development SPD[29] (Adopted 2018); and
- Green Belt and Open Countryside SPD[30] (Adopted 2014).

Biodiversity Initiatives and Strategies

Local Biodiversity Action Plans (LBAP)

3.46 The LBAP for Staffordshire[31] covers the local authority areas of Cannock Chase, East Staffordshire, Lichfield, Newcastle-under-Lyme, South Staffordshire, Stafford,

[27] *https://www.sstaffs.gov.uk/doc/179760/name/Core%20Strategy%202012%20Corporate%20Version%20.pdf/* (accessed 21st July 2022)
[28] *https://www.sstaffs.gov.uk/doc/179829/name/APP2%20SAD%20September%202018%20FINAL.pdf/* (accessed 21st July 2022)
[29] *https://www.sstaffs.gov.uk/doc/179611/name/2%20Final%20Sustainable%20Dev%20SPD%20Incl%20Appendix%20May%202018.pdf/* (accessed 27th July 2022)
[30] *https://www.sstaffs.gov.uk/doc/171665/name/GB%20OC%20SPD%20FINAL%20ADOPTED%20April%202014.pdf/* (accessed 27th July 2022)
[31] *http://sbap.org.uk/actionplan/index.php* (accessed 27th July 2022)

Staffordshire Moorlands, Stoke-on-Trent and Tamworth. Consequently, as a joint BAP, not all local priority habitats or species may be of direct relevance to each local authority.

3.47 The LBAP priority habitats for Staffordshire include:

- Lowland wood-pasture and parkland
- Native woodland
- Wet woodland
- Ancient/diverse hedgerows
- Arable field margins
- Lowland acid grassland
- Lowland calcareous grassland
- Lowland heathland
- Lowland wet grassland
- Unimproved neutral grassland
- Inland saltmarsh
- Mosses
- Ponds, lakes and canals
- Reedbeds
- Rivers and streams.

3.48 The LBAP priority species for Staffordshire include:

- Brown hare
- Noctule bat
- Otter
- Pipistrelle bat
- Water vole
- Barn owl
- Farmland seed-eating birds
- Grey partridge
- Lapwing
- Nightjar
- Skylark
- Snipe
- Woodlark
- Atlantic salmon
- Grass snake
- Great crested newt
- Natter jack toad
- Bog bush-cricket
- Ground nesting solitary bees and wasps
- Small pearl-bordered fritillary
- White-faced darter
- White-clawed crayfish
- Dyers greenweed
- Hybrid bilberry
- Floating water plantain
- Grass wrack pondweed
- Native black poplar
- Pink meadow cap

Nature Recovery Network

3.49 Habitat Network maps are produced by Natural England in response to the Lawton report (Making Space for Nature, A review of England's Wildlife Sites and Ecological Network[32]).

3.50 These maps provide a useful baseline for the development of a Nature Recovery Network (NRN) as required within the 25 Year Environment Plan and for LRNS proposed within the Environment Act.

3.51 The Habitat Network maps in conjunction with other datasets and local knowledge can identify opportunities for biodiversity action. The Habitat Network comprises (a) Existing Habitats (HPI and associated habitats) and (b) Network Enhancement and Expansion Zones. These latter zones include:

- Network Enhancement Zone 1: Land connecting existing habitats which is likely to be suitable for habitat creation. Action in this zone to expand and join up existing habitat patches and improve the connections between them can be targeted here.

[32] Lawton, J.H., Brotherton, P.N.M., Brown, V.K., Elphick, C., Fitter, A.H., Forshaw, J., Haddow, R.W., Hilborne, S., Leafe, R.N., Mace, G.M., Southgate, M.P., Sutherland, W.A., Tew, T.E., Varley, J., & Wynne, G.R. (2010) *Making Space for Nature*: a review of England's wildlife sites and ecological network. Report to Defra

- Network Enhancement Zone 2: Land connecting existing habitats which is less likely to be suitable for habitat creation. Action in this zone that improves the biodiversity value through land management changes and/or green infrastructure provision can be targeted here.
- Fragmentation Action Zone: Land within Enhancement Zone 1 that connects existing habitats patches which are currently highly fragmented and where fragmentation could be reduced by habitat creation.
- Network Expansion Zone: Land beyond the Network Enhancement Zones with potential for expanding, linking/joining networks across the landscape.

4.0 Wildlife Sites

Statutory Sites

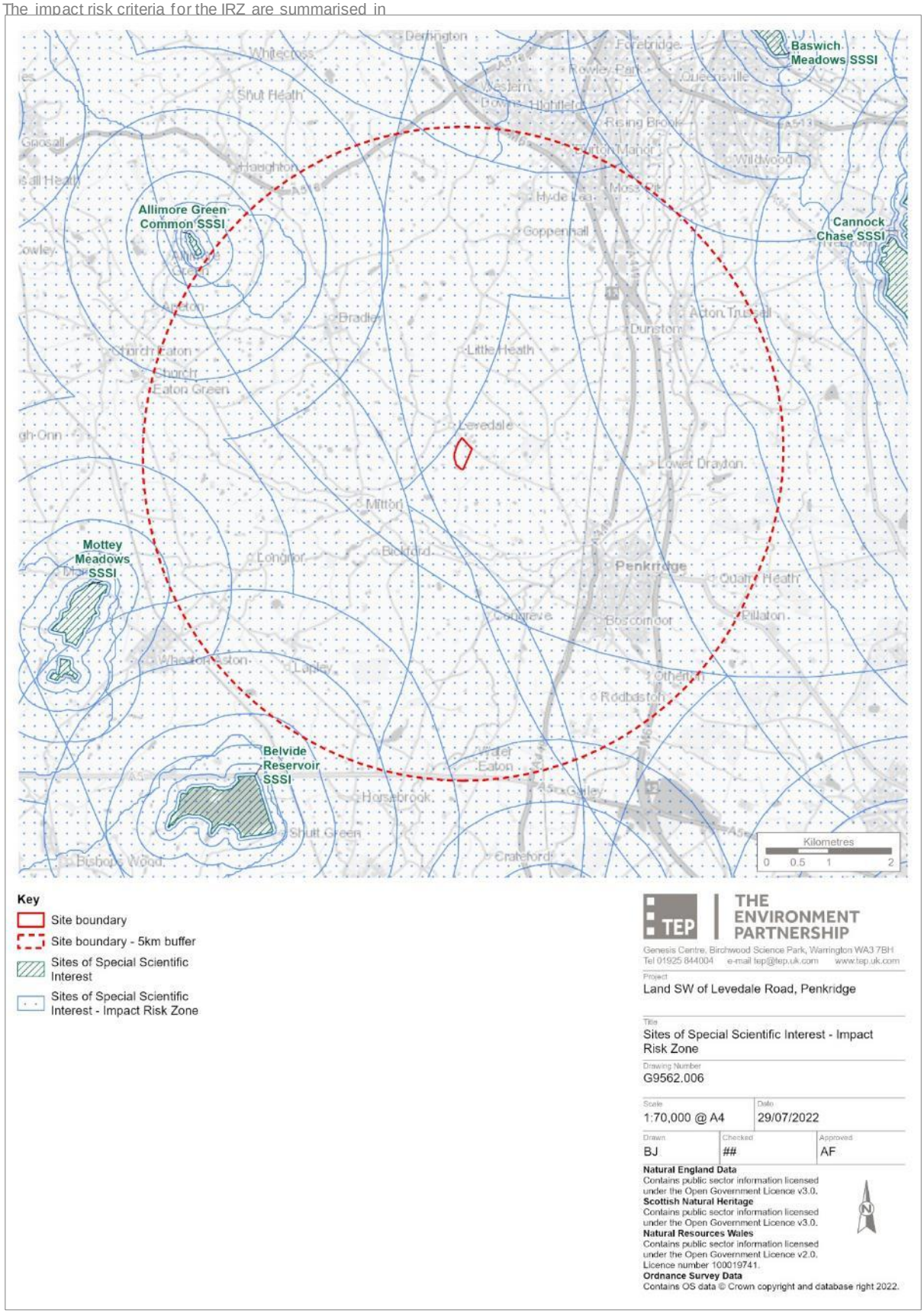
4.1 There are two internationally significant statutory wildlife designations within 10km of the site (Figure 2) and no nationally significant statutory wildlife sites within 5km of the site (Figure 3). These are detailed in Table 2 below. Links to citations are also provided.

Table 2: Statutory wildlife sites

Site Name	Designation & Citation Link	Location Relevant to Site	Reason for Site Designation
Statutory wildlife sites of international significance within 10km of the site (Figure 2)			
Mottey Meadows	SAC – *JNCC Data*	6.0km southwest	The Mottey Meadows SAC represents lowland hay meadows in the English Midlands and holds a relatively large area of the habitat (approximately 40 ha). The site contains grassland with limited influence of agricultural intensification and so demonstrates good conservation of structure and function. There are transitions to other dry and wet grassland types. The site is important for a range of rare meadow species, including fritillary *Fritillaria meleagris* at its most northerly native locality.
Cannock Chase	SAC – *JNCC Data*	7.6km east, beyond the M6, the A449 and the A34	The area of lowland heathland at Cannock Chase is the most extensive in the Midlands. The character of the vegetation is intermediate between the upland or northern heaths of England and Wales and those of southern counties. Dry heathland communities belong to NVC types H8 *Calluna vulgaris – Ulex gallii* and H9 *Calluna vulgaris – Deschampsia flexuosa* heaths. Within the heathland, species of northern latitudes occur, such as cowberry *Vaccinium vitis-idaea* and crowberry *Empetrum nigrum*. Cannock Chase has the main British population of the hybrid bilberry *Vaccinium intermedium*, a plant of restricted occurrence. There are important populations of butterflies and beetles, as well as European nightjar *Caprimulgus europaeus* and five species of bats.
Statutory wildlife sites of national significance within 5km of the site (Figure 3)			
None			

4.2 The site lies within a single SSSI Impact Risk Zone (IRZ) (Figure 4), as determined by Natural England to identify likely impacts upon SSSIs, SACs, SPAs or Ramsar sites that may result from planned development.

The impact risk criteria for the IRZ are summarised in



4.3 This impact risk relates to the zone of influence of Cannock Chase SAC and increased recreational pressure from new residential and tourist accommodation. Local Plan policy EQ2 applies. Development will only be permitted where it can be demonstrated that it will not be likely to lead directly or indirectly to an adverse effect upon the integrity of the Cannock Chase Special Area of Conservation (SAC)

4.4 Table 3. The zones in which the site is situated identifies aviation proposals, residential development, air pollution, combustion and water or liquid waste discharges as likely to result in impacts upon the statutory sites Cannock Chase SAC and SSSI, and Baswich Meadows SSSI. The nature of project does not match any of the potential risk criteria.

Figure 2: Statutory wildlife sites of international significance within 10km of the site

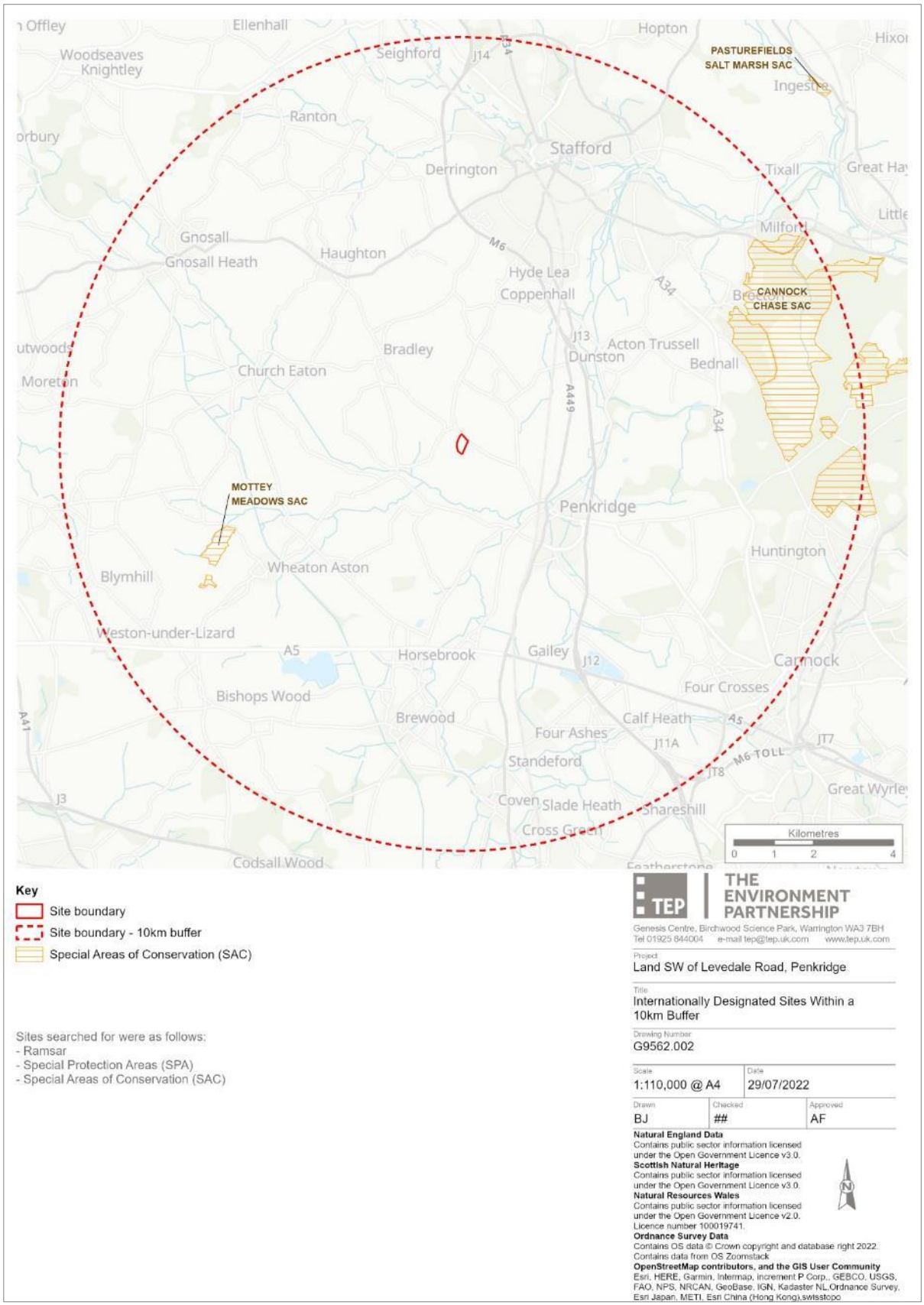


Figure 3: Statutory wildlife sites of national significance within 5km of the site

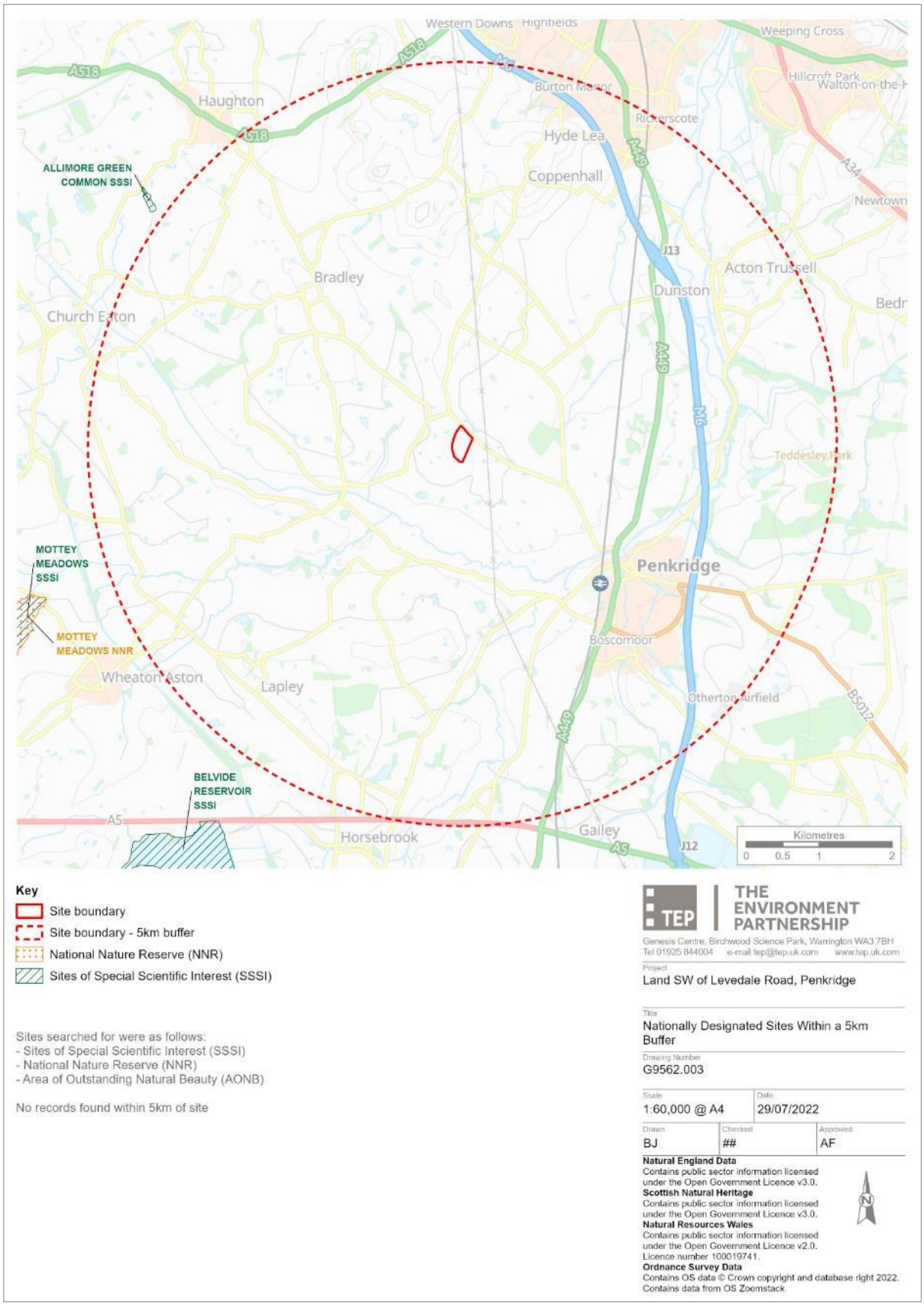
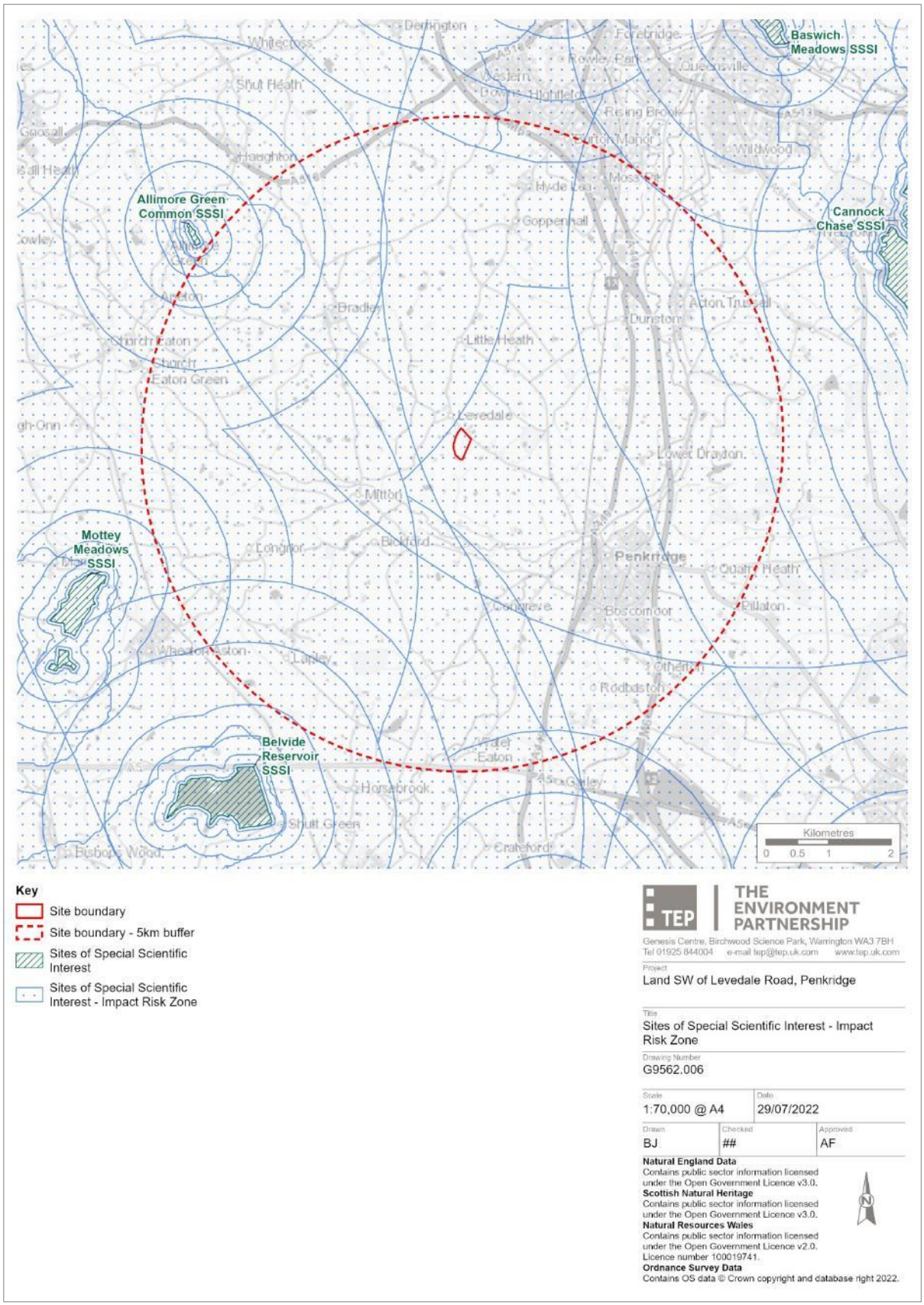


Figure 4: SSSI Impact Risk Zones crossed by the site



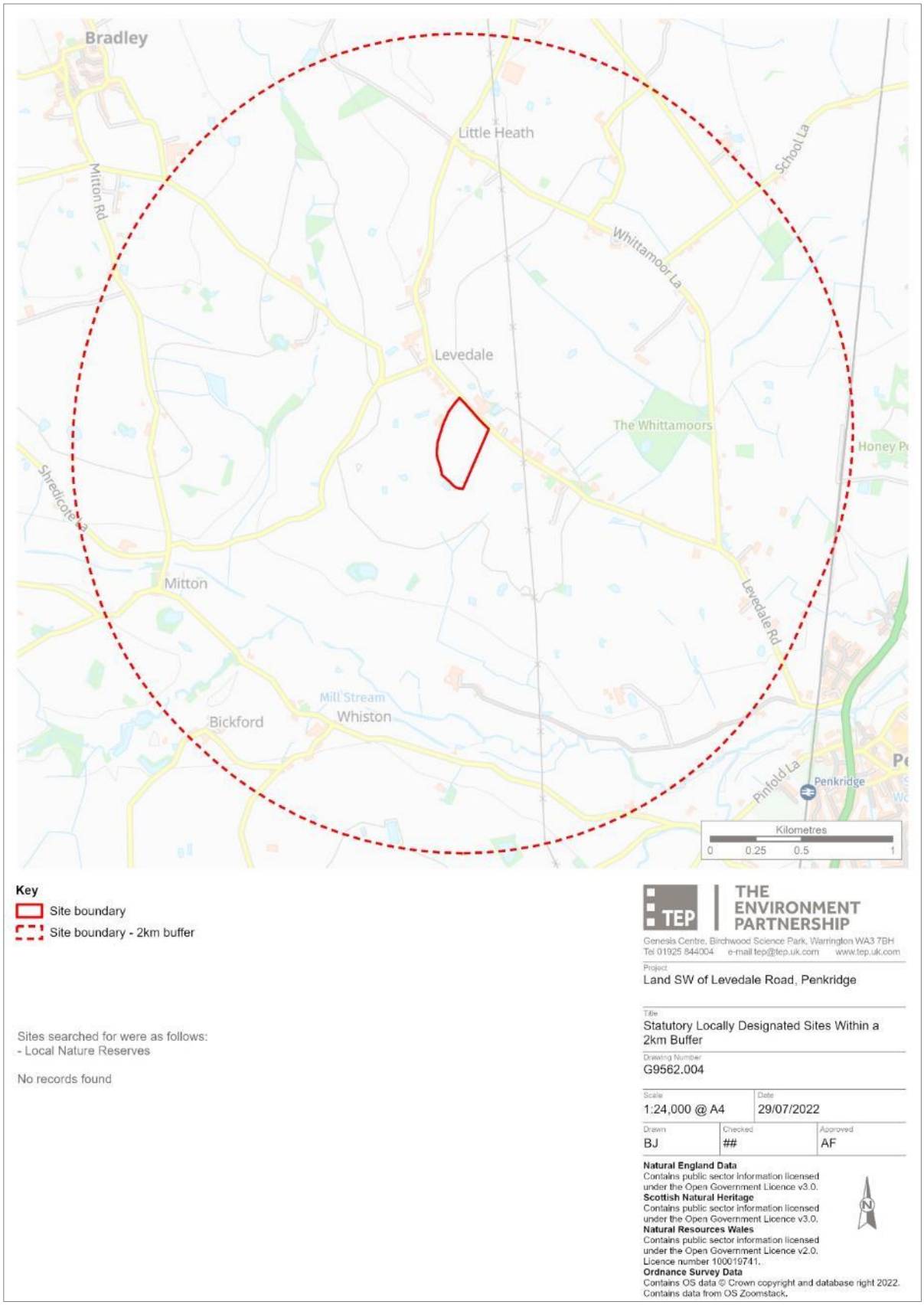
4.5 This impact risk relates to the zone of influence of Cannock Chase SAC and increased recreational pressure from new residential and tourist accommodation. Local Plan policy EQ2 applies. Development will only be permitted where it can be demonstrated that it will not be likely to lead directly or indirectly to an adverse effect upon the integrity of the Cannock Chase Special Area of Conservation (SAC)

Table 3: SSSI Impact Risk Zones crossed by the site

Proposal	Plan / project which may impact SSSI
All Planning Applications	
Infrastructure	Airports, helipads and other aviation proposals.
Wind & Solar Energy	
Minerals, Oil & Gas	
Rural Non Residential	
Residential	Residential development of 50 units or more.
Rural Residential	Any residential development of 50 or more houses outside existing settlements/urban areas.
Air Pollution	Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 4000m².
Combustion	General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.
Waste	
Composting	
Discharges	Any discharge of water or liquid waste of more than 20m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.
Water Supply	
Notes	New residential/tourist accommodation in this area requires an HRA and financial contributions to mitigate increased recreational disturbance on Cannock Chase. Check with Local Planning Authority.

4.6 There are no statutory wildlife sites of regional / local significance within 2km of the site (Figure 5).

Figure 5: Statutory wildlife sites of regional/local significance within 2km of the site



Non-Statutory Wildlife Sites

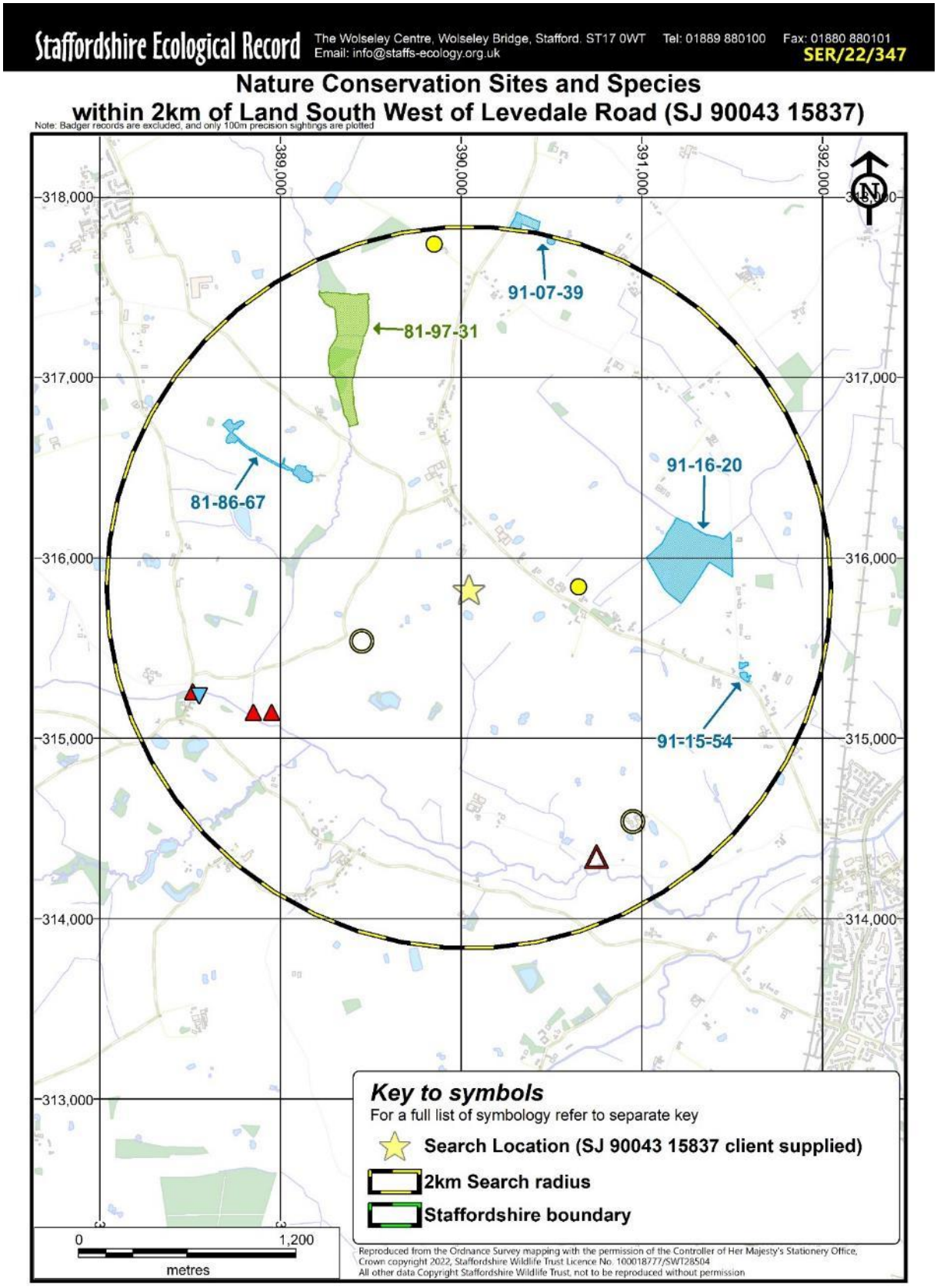
4.7 There are five non statutory locally designated wildlife sites within 2km of the site. These are summarised in Table 4 below.

4.8 There are no regionally important geological site (RIGS) within 2km of the site.

Table 4: Non-statutory local wildlife sites within 2km of the site

Site Name	Designation	Location Relevant to Site	Key Interest Feature(s)
The Whittamoors	LWS	0.8km East	A large woodland dominated by ash with an understorey of frequent sapling sycamores, blackthorn, hazel, hawthorn and elder. Brambles are abundant.
Levedale Marshes	LWS	1km Northwest	Species-rich Purple moor grass and rush pasture surrounded by species-poor hedges.
Down House Pools	LWS	1.45km Northwest	A collection of small pools situated along a hedgerow.
Grasmere Farm (ponds north of)	LWS	1.5km East	Two ponds surrounded by a dense hawthorn hedge.
Little Heath (land north of)	LWS	1.7km North	Two pools with fringing trees; oak, hawthorn and goat willow with some grassy areas of common bent and Yorkshire fog.

Figure 6: Non-statutory wildlife sites within 2km of the site (map provided by SER)



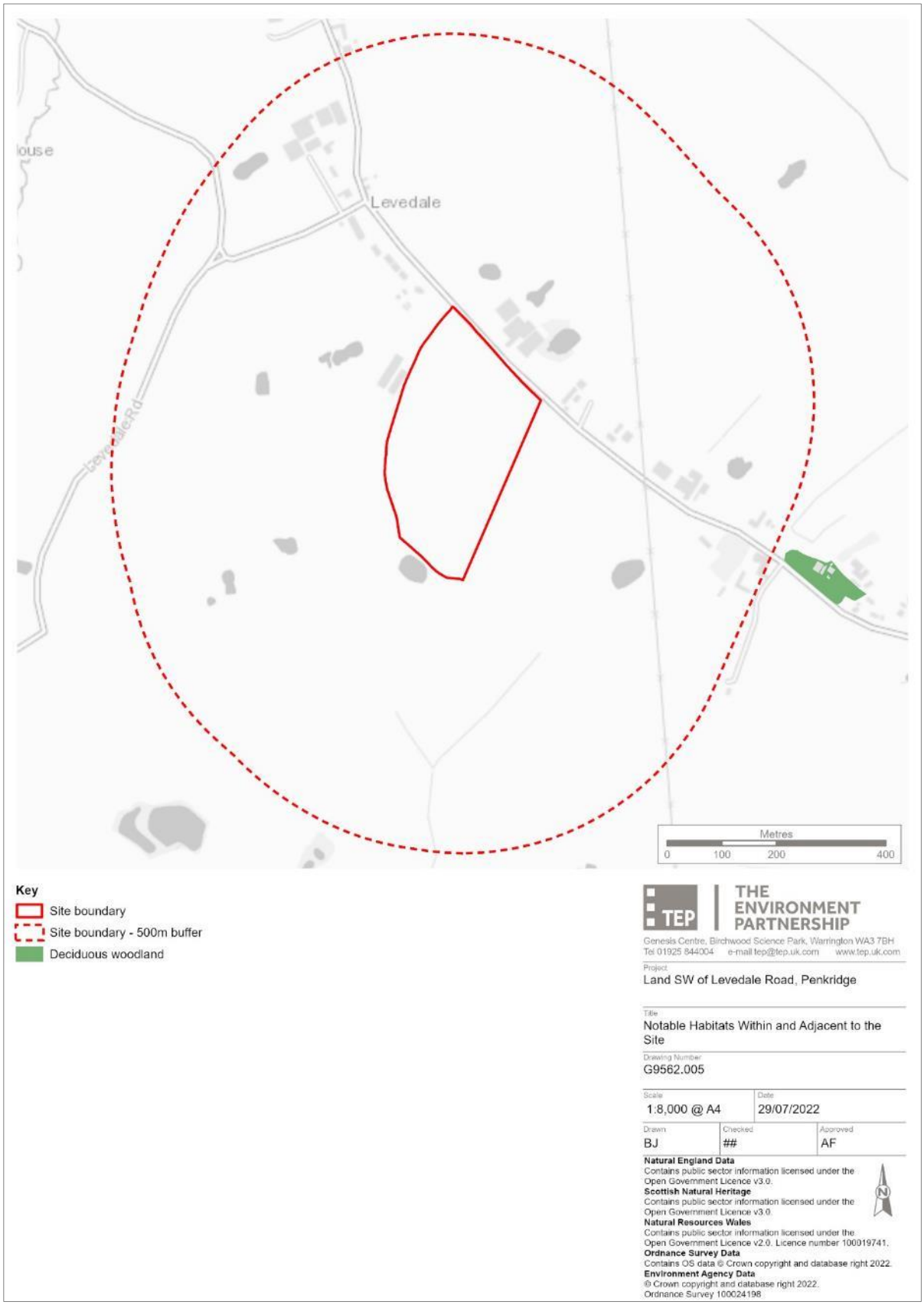
5.0 Notable Habitats

Habitats of Principal Importance (HPI)

5.1 There are no notable habitat types identified on Natural England's priority habitat inventories within or adjacent to the site (Figure 7).

5.2 The site comprises predominantly arable habitat with field boundaries comprising hedgerows interspersed with scattered broadleaved trees. An offsite pond is also present immediately to the southwest of the site, with a further 8 ponds within 250m, Arable field margins and ponds are all local priority habitats listed under the LBAPs identified by Staffordshire County Council and Staffordshire Wildlife Trust (paragraph 3.47).

Figure 7: Notable habitats



6.0 Protected and Notable Species

Protected Species Licences

6.1 A review of Natural England's open datasets for granted protected species licences confirmed the presence of great crested newts between 2017 and 2019 within 2km of the site. A class licence return confirmed the presence of great crested newts in a pond located approximately 1.92km north of the site (grid reference SJ920152) on 1st April 2017.

6.2 No Natural England mitigation licences have been identified within 2km of the site.

Pre-existing Species Records

6.3 Numerous protected and notable species records were returned from Staffordshire Ecological Record (SER) for within 2km of the site. These are summarised in **Error! Reference source not found.**.

Table 5: Summary of pre-existing species records returned by SER

Name of Species	Relevant Legislation / Status	Number of records within 2km
Amphibians		**3**
Common Toad *Bufo bufo*	WCA5, S41	2
Great Crested Newt *Triturus cristatus*	EPS, WCA5, S41, LBAP	1
Bats		**3**
Common pipistrelle *Pipistrellus pipistrellus*	EPS, WCA5, LBAP	**3**
Birds		**694**
Barn owl *Tyto alba*	WCA1, LBAP	14
Black Redstart *Phoenicurus ochruros*	WCA1, BAm	2
Black-tailed Godwit *Limosa limosa*	WCA1, S41, BRd	1
Brambling *Fringilla montifringilla*	WCA1	1
Bullfinch *Pyrrhula pyrrhula*	S41, BAm, LBAP	2
Cuckoo *Cuculus canorus*	S41, BRd	7
Curlew *Numenius arquata*	S41, BRd	6
Dunnock *Prunella modularis*	S41, BAm	45
Fieldfare *Turdus pilaris*	WCA1, BRd	4
Goldeneye *Bucephala clangula*	WCA1, BRd	1
Green Sandpiper *Tringa ochropus*	WCA1, BAm	29
Greenshank *Tringa nebularia*	WCA1, BAm	1
Grey Partridge *Perdix perdix*	S41, BRd, LBAP	34
Greylag Goose *Anser anser*	WCA1, BAm	9
Hawfinch *Coccothraustes coccothraustes*	S41, BRd	1
Herring Gull *Larus argentatus*	S41, BRd	1
Hobby *Falco subbuteo*	WCA1	14
Hoopoe *Upupa epops*	WCA1	1
House Sparrow *Passer domesticus*	S41, BRd, LBAP	52

Name of Species	Relevant Legislation / Status	Number of records within 2km
Kingfisher *Alcedo atthis*	WCA1, BAm	4
Lapwing *Vanellus vanellus*	S41, BRd, LBAP	131
Lesser Redpoll *Acanthis cabaret*	S41, BRd	2
Linnet *Linaria cannabina*	S41, BRd, LBAP	46
Little Ringed Plover *Charadrius dubius*	WCA1	14
Merlin *Falco columbarius*	WCA1, BRd	2
Peregrine *Falco peregrinus*	WCA1	14
Pintail *Anas acuta*	WCA1, BAm	1
Quail *Coturnix coturnix*	WCA1, BAm	6
Red Kite *Milvus milvus*	WCA1	14
Redwing *Turdus iliacus*	WCA1, BAm	3
Reed Bunting *Emberiza schoeniclus*	S41, BAm, LBAP	5
Ruff *Calidris pugnax*	WCA1, BRd	1
Short-eared owl *Asio falmmeus*	BAm	1
Skylark *Alauda arvensis*	S41, BRd, LBAP	35
Snipe *Gallinago gallinago*	BAm, LBAP	13
Song Thrush *Turdus philomelos*	S41, BAm	37
Spotted Flycatcher *Muscicapa striata*	S41, BRd	12
Starling *Sturnus vulgaris*	S41, BRd	41
Tree Sparrow *Passer montanus*	S41, BRd, LBAP	62
Yellow Wagtail *Motacilla flava*	S41, BRd	8
Yellowhammer *Emberiza citrinella*	S41, BRd	10
Flowering plants		**2**
Black Poplar *Populus nigra subsp. betulifolia*	LBAP	1
Tubular Water-dropwort *Oenanthe fistulosa*	S41	1
Invertebrates		1
Cinnabar *Tyria jacobaeae*	S41	1
Terrestrial Mammals		**22**
Brown Hare *Lepus europaeus*	S41, LBAP	3
Eurasian Badger *Meles meles*	PBA	12
European Otter *Lutra lutra*	EPS, WCA5, S41, LBAP	3
Hazel Dormouse *Muscardinus avellanarius*	EPS, WCA5	1
West European Hedgehog *Erinaceus europaeus*	S41	2

Appendix B

Target Notes

Target Notes Report

Extended phase 1 survey conducted on 19th July 2022.

H1

Species-rich intact hedgerow situated along the southern boundary of the field and along overgrown access track bounding the site. Some gaps present separating this feature from H2, no trees present.

Prunus spinosa	Blackthorn	A
Corylus avellana	Hazel	O
Crataegus monogyna	Hawthorn	O
Rubus fruticosus agg.	Bramble	O
Sambucus nigra	Elder	O

H2

Hedgerow with trees, species-rich in places. Mature trees with bat potential noted.

Crataegus monogyna	Hawthorn	A
Rubus fruticosus agg.	Bramble	F
Alnus glutinosa	Alder	O
Corylus avellana	Hazel	O
Fraxinus excelsior	Ash	O
Prunus spinosa	Blackthorn	O
Quercus robur	English Oak	O
Rubus idaeus	Raspberry	O
Salix caprea	Goat Willow	O
Ilex aquifolium	Holly	R
Rosa canina agg.	Dog Rose	R
Sambucus nigra	Elder	R

H3

Species-poor hedgerow with trees which intersects the central portion of the site. More species-rich where it meets H2 and H4. Extends east across the entire red line boundary but does not extend across the entire field, with a large gap at the eastern extend outside of the red line boundary. Less species-rich than H2 and H4. Several mature trees with moderate and high bat potential.

Crataegus monogyna	Hawthorn	D
Prunus spinosa	Blackthorn	F
Acer campestre	Field Maple	O
Fraxinus excelsior	Ash	O
Quercus robur	English Oak	O
Rubus fruticosus agg.	Bramble	O
Sambucus nigra	Elder	O
Corylus avellana	Hazel	R
Hedera helix	Ivy	R
Lonicera periclymenum	Honeysuckle	R
Prunus sp.	Cherry species	R
Rosa canina agg.	Dog Rose	R

H4

Large hedgerow with mature trees along field boundary. Access lane and another hedgerow run parallel on the western side, forming a green lane. Several large trees with bat potential noted.

Crataegus monogyna	Hawthorn	A
Hedera helix	Ivy	F
Corylus avellana	Hazel	O
Fraxinus excelsior	Ash	O
Malus sp.	Apple Species	O
Prunus spinosa	Blackthorn	O
Quercus robur	English Oak	O
Acer campestre	Field Maple	R
Ilex aquifolium	Holly	R
Rosa canina agg.	Dog Rose	R

KEY - D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

H5

Northern field boundary hedgerow bounding Levedale Road. Species-poor with occasional gaps. Much smaller and more obviously managed than other hedgerows on site.

Crataegus monogyna	Hawthorn	A
Prunus spinosa	Blackthorn	A
Hedera helix	Ivy	F
Corylus avellana	Hazel	O
Sambucus nigra	Elder	O
Rubus idaeus	Raspberry	R

TN1

Site comprised of arable land with field boundary species-rich and species-poor hedgerows with trees. Very narrow field margins present, with crops extending to hedgerow base in places. Species-list refers to margin species where present. Habitat within the field margins is species-poor.

Arrhenatherum elatius	False Oat-grass	A
Galium aparine	Cleavers	A
Dactylis glomerata	Cock's-foot	F
Urtica dioica	Nettle	F
Anisanthera sterilis	Sterile Brome	O
Cirsium arvense	Creeping Thistle	O
Cirsium vulgare	Spear Thistle	O
Heracleum sphondylium	Hogweed	O
Lolium multiflorum	Italian Ryegrass	O
Rumex obtusifolius	Broad-leaved Dock	O
Lapsana communis	Nipplewort	R

KEY - D = Dominant, A = Abundant, F = Frequent, O = Occasional, R = Rare

Appendix C

HSI Table

Pond	Comment	GPS Location	Date	SI1 - Geographic Location		SI2 - Pond area m2 (TO NEAREST 50M^2)		SI3 - Pond drying		SI4 - Water quality		SI5 - Shading %		SI6 - Presence of waterfowl		SI7 - Presence of fish		SI8 - Ponds density (ponds/km2)		SI9 - Terrestrial habitat quality		SI10 - Macrophyte cover in pond		HSI	
				Measure	SI score	Measure	SI score	Measure	SI score	Measure	SI score	Measure	SI score	Measure	SI score	Measure	SI score	Measure	SI score	Measure	SI score	Measure	SI score	SUITABILITY	SI score
1	No access	SJ 90043 16550	N/A	A (optimal)	1	500	1		FALSE		FALSE		1		FALSE		FALSE		0.1		FALSE		0.3		0.00
2	No access	SJ 89738 16424	N/A	A (optimal)	1	1750	0.838461538		FALSE		FALSE		1		FALSE		FALSE		0.1		FALSE		0.3		0.00
3	No access	SJ 90014 16412	N/A	A (optimal)	1	100	0.2		FALSE		FALSE		1		FALSE		FALSE		0.1		FALSE		0.3		0.00
4	Large open field pond. Large manure pile situated to the south, upbank. Obvious polluted from runoff. Scummy water. Debris and discarded materials in pond. Hardly any vegetation.	SJ 90181 16232	08/11/2022	A (optimal)	1	1050	0.946153846	Rarely	1	Bad	0.01	20	1	Absent	1	Absent	1	15	1	Poor	0.33	0	0.3	Below Average	0.50
5	More of a muddy depression in field than a pond. Has been plowed and driven through. Would not count as a pond in BNG terms.	SJ 90569 16203	08/11/2022	A (optimal)	1	150	0.3	Annually	0.1	Bad	0.01	0	1	Absent	1	Absent	1	12	1	None	0.01	0	0.3	Poor	0.25
6	Large pond situated to the north downbank from cow shed. Extensive runoff pollution present. Banks trampled. No vegetation.	SJ 90273 16190	08/11/2022	A (optimal)	1	1150	0.930769231	Sometimes	0.5	Bad	0.01	5	1	Absent	1	Absent	1	14	1	Poor	0.33	0	0.3	Poor	0.46
7	Large pond surrounded by trees. Cow pasture on all sides but fenced off, runoff from cow pasture and shed to west evident. 15 mallard recorded. No macrophytes.	SJ 90311 16098	08/11/2022	A (optimal)	1	1950	0.807692308	Never	0.9	Poor	0.33	90	0.4	Minor	0.67	Absent	1	14	1	Poor	0.33	0	0.3	Average	0.60
8	No access	SJ 90430 15957	N/A	A (optimal)	1	<50	0.05		FALSE		FALSE		1		FALSE		FALSE		1		FALSE		0.3		0.00
9	Wildlife pond surrounded by trees and scrub. Cow pasture on all sides, but fenced off. Never dries - always at least 4 foot of water (landowner).	SJ 90628 15867	07/11/2022	A (optimal)	1	1300	0.907692308	Never	0.9	Moderate	0.67	80	0.6	Absent	1	Absent	1	14	1	Moderate	0.67	35	0.65	Excellent	0.82
10	Large pond situated in depression in field with steep banks. Surrounded by trees. Lacking in macrophyte cover. Banks trodden by cows.	SJ 89926 16089	08/11/2022	A (optimal)	1	1400	0.892307692	Sometimes	0.5	Poor	0.33	95	0.3	Absent	1	Absent	1	13	1	Poor	0.33	0	0.3	Below Average	0.58
11	Small pond. Banks trodden by cows.	SJ 89881 16065	08/11/2022	A (optimal)	1	400	0.8	Sometimes	0.5	Poor	0.33	95	0.3	Absent	1	Absent	1	13	1	Poor	0.33	0	0.3	Below Average	0.57
12	Large pond. Very low water level. Totally shaded and overgrown with scrub and trees. Silted up with leaf litter but water where present clear.	SJ 89766 16026	07/11/2022	A (optimal)	1	950	0.961538462	Annually	0.1	Moderate	0.67	100	0.2	Absent	1	Absent	1	14	1	Moderate	0.67	0	0.3	Below Average	0.55
13	Dry. Moderate to large pond set low down. Very steep banks. Dense vegetation (tall ruderal and scrub surrounding. Dry but vegetation at base suggests damp conditions (from distance). Almost totally shaded by scrub.	SJ 89561 15788	07/11/2022	A (optimal)	1	500	1	Annually	0.1		FALSE	95	0.3	Absent	1	Absent	1		1	Moderate	0.67	100	0.8		0.00

14	Dry. Large pond. Covered in vegetation suggesting dry for some time.	SJ 89618 15736	07/11/2022	A (optimal)	1	750	0.992307692	Annually	0.1		FALSE	70	0.8	Absent	1	Absent	1		1	Moderate	0.67	0	0.3		0.00
15	Medium sized pond. Steep banks. Dense scrub and tall ruderal surrounding. Turbid and scummy water. Signs of eutrophication.	SJ 89670 15628	07/11/2022	A (optimal)	1	200	0.4	Sometimes	0.5	Bad	0.01	90	0.4	Absent	1	Absent	1	13	1	Moderate	0.67	0	0.3	Poor	0.42
16	Large pond situated in arable field. Set low in, with steep banks. Rank grassland, tall ruderal, scrub and occasional trees surround.	SJ 89703 15658	07/11/2022	A (optimal)	1	850	0.976923077	Rarely	1	Poor	0.33	60	1	Minor	0.67	Absent	1	13	1	Moderate	0.67	0	0.3	Good	0.73
17	U-shaped pond. Appears recently reprofiled. Situated in cow pasture field 0 evidence of cow's - bare banks. Hedgerow on one side. Small island with oak and willow scrub. Muddy/turbid water.	SJ 89809 15727	07/11/2022	A (optimal)	1	950	0.961538462	Sometimes	0.5	Poor	0.33	50	1	Absent	1	Absent	1	12	1	Poor	0.33	5	0.35	Average	0.67
18	Large pond nearest to site. Surrounded by large veteran and mature oak trees, willow, and ash. Large pile of rubble and brash pile present. All offering hibernacula. Water has receded, leaving a large area dry.	SJ 90039 15684	07/11/2022	A (optimal)	1	1850	0.823076923	Rarely	1	Poor	0.33	85	0.5	Absent	1	Absent	1	15	1	Moderate	0.67	0	0.3	Good	0.70
19	Large pond with steep banks. Surrounded by mixed trees. Tall ruderal and bramble scrub also present. Drainage pipes outfall into water from surrounding land. No macrophytes.	SJ 90434 15683	07/11/2022	A (optimal)	1	2000	0.8	Never	0.9	Poor	0.33	95	0.3	Minor	0.67	Possible	0.67	18	1	Moderate	0.67	0	0.3	Average	0.60
20	No access	SJ 90548 15437	N/A	A (optimal)	1	150	0.3		FALSE		FALSE		1		FALSE		FALSE		1		FALSE		0.3		0.00
21	Dry (and has been for some time). Slightly larger than 22. Pond totally covered by woodland/trees.	SJ 89831 15242	07/11/2022	A (optimal)	1	350	0.7	Annually	0.1		FALSE	100	0.2	Absent	1	Absent	1		1	Moderate	0.67	0	0.3		0.00
22	Dry (and has been for some time). Small pond totally covered by woodland/trees.	SJ 89811 15256	07/11/2022	A (optimal)	1	100	0.2	Annually	0.1		FALSE	100	0.2	Absent	1	Absent	1		1	Moderate	0.67	0	0.3		0.00

Drawings

G9562.007 Phase 1 Habitat Survey

G9562.013A Pond Location Plan

KEY

- Site boundary
- Target note
- Broad-leaved tree with low bat suitability
- Broad-leaved tree with moderate bat suitability
- Broad-leaved tree with high bat suitability
- Native species-rich intact hedge
- Species-poor intact hedge
- Native species-rich hedge and trees
- Species-poor hedge and trees
- A A Arable

Note:
The locations of habitats and habitat features are indicative.

Site Map

Rev	Description	Drawn	Approved	Date

THE ENVIRONMENT PARTNERSHIP

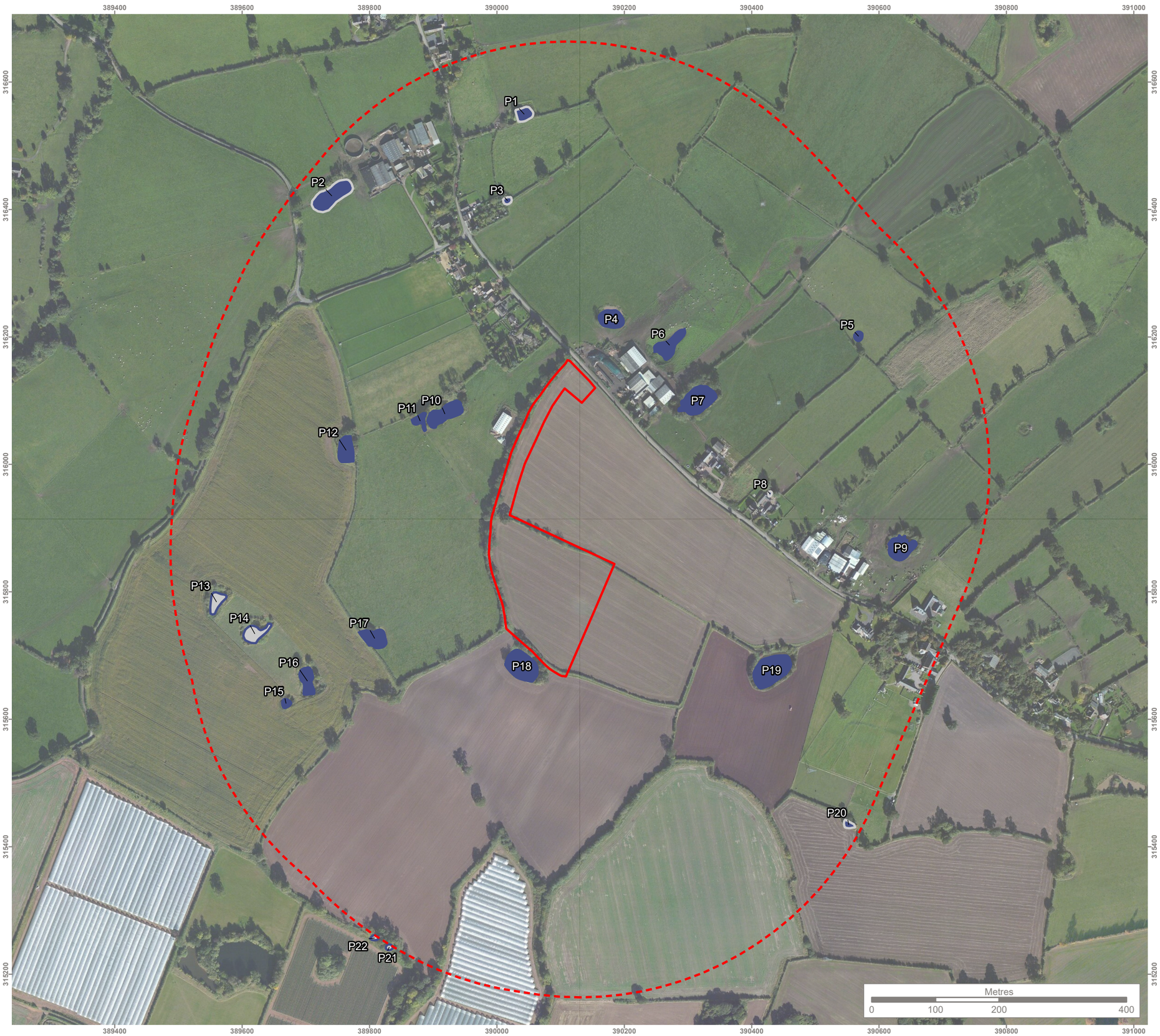
Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Land on the South West Side of Levedale Road, Penkridge

Title
Phase 1 Habitat Survey

Drawing Number
G9562.007

Drawn	Checked	Approved	Scale	Date
BJ	CW	AF	1:2,000 @ A3	07/11/2022

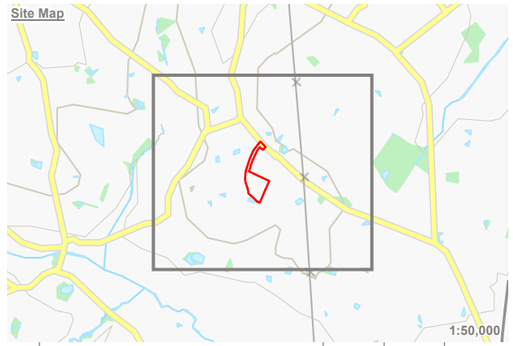


KEY

- Site boundary
- Site boundary - 500m buffer
- Pond
- Dry pond
- Pond with no access

Note:
The locations of habitats and habitat features are indicative.

Site Map



Rev	Description	Drawn	Approved	Date
A	Updated RLB and symbology	BJ	AF	23/11/2022

TEP THE ENVIRONMENT PARTNERSHIP

Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Land on the South West Side of Levedale Road, Penkridge

Title
Pond Location Plan

Drawing Number
G9562.013A

Drawn	Checked	Approved	Scale	Date
AR	MH	AF	1:6,000 @ A3	23/11/2022

THE ENVIRONMENT PARTNERSHIP

HEAD OFFICE

Genesis Centre,
Birchwood Science Park,
Warrington
WA3 7BH

Tel: 01925 844004
E-mail: tep@tep.uk.com

MARKET HARBOROUGH

The Reynard Suite,
Bowden Business Village,
Market Harborough,
Leicestershire,
LE16 7SA

Tel: 01858 383120
E-mail: mh@tep.uk.com

GATESHEAD

Office 26, Gateshead
International Business
Centre,
Mulgrave Terrace,
Gateshead
NE8 1AN

Tel: 0191 605 3340
E-mail: gateshead@tep.uk.com

LONDON

8 Trinity Street,
London
SE1 1DB

Tel: 020 3096 6050
E-mail: london@tep.uk.com

CORNWALL

4 Park Noweth,
Churchtown,
Cury,
Helston
Cornwall
TR12 7BW

Tel: 01326 240081
E-mail: cornwall@tep.uk.com