



LAND SOUTHWEST OF LEVEDALE ROAD PENKRIDGE, STAFFORDSHIRE BIODIVERSITY NET GAIN DESIGN STAGE REPORT

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Executive Summary

- 1. The Environment Partnership (TEP) were commissioned by Anglo ES Levedale Limited to undertake a Biodiversity Net Gain (BNG) design stage assessment of Land on the Southwest Side of Levedale Road located in Levedale, Penkridge, Staffordshire; hereafter referred to as the "Site".
- 2. Habitat surveys and condition assessments were undertaken in July 2022 to inform this assessment. There are not considered to be any constraints to the surveys.
- 3. The development proposals within the general arrangement plan (drawing number 05-1095-301. Rev. P03, dated October 2022) have been used to inform this assessment and Biodiversity Metric 3.1 has been used as the tool to calculate the net gain output. The aim is to deliver a minimum 10% net gain on Site.
- 4. The development proposals will result in a net gain of 1 habitat unit (+13.10%) and a net gain of 4.65 hedgerow units (+ 36.11%).
- 5. The metric trading rules are satisfied for all habitats; ensuring any habitats lost are replaced by those with the same or higher distinctiveness.
- A habitat management plan specifically tailored to the proposed habitats and target conditions has been produced (TEP Ref: 9562.01.001) to ensure these figures are deliverable within the required 30-year timeframe.



1.0 Introduction

Background

- 1.1 The Environment Partnership (TEP) were commissioned by Anglo ES Levedale Limited to undertake a Biodiversity Net Gain (BNG) design stage assessment of Land on the Southwest Side of Levedale Road located in Levedale, Penkridge, Staffordshire; hereafter referred to as the "Site".
- 1.2 The purpose of this design stage report is to provide detailed assessment on the BNG delivered for the proposed development in support of the full planning application.
- 1.3 The development proposals within the general arrangement plan (drawing number 05-1095-301. Rev. P03, dated October 2022) have been used to inform this assessment and Biodiversity Metric 3.1 has been used as the tool to calculate the net gain output.

Site description

- 1.4 The central grid reference of the Site is SJ 9005 1582. The Site covers an approximate area of 3.81 ha and is located on the south-east outskirts of the village of Levedale and approximately 2.5 km to the north-west of Penkridge.
- 1.5 The Site is bound to the north by Levedale Road, beyond which are farm buildings and arable land. To the east are fields comprising arable crop and hedgerows. To the south is an access track and pond with associated trees and scrub, beyond which are additional arable fields. To the west the existing site access track with associated hedgerows and trees, beyond which is cattle shed and associated cow pasture. A pond and further arable land lie to the south. The habitats within the Site are entirely comprised of arable fields with hedgerows along the field boundaries.

Proposed development

1.6 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 to calculate the metric output.

Relevant Policy and Legislation

National Policies

- 1.7 Paragraph 174(d) of the revised NPPF (2021) states that "Planning policies 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".
- 1.8 In July 2019, the government issued revised planning practice guidance (NPPG) with details on how planners can implement "net environmental gain" requirements when assessing development proposals, including new advice on protecting wildlife.



- 1.9 Revised guidance recently published by the government says that net gain in planning describes an approach to development that leaves the natural environment in a measurably better state than it was beforehand. Net gain is an umbrella term for both biodiversity net gain and wider environmental net gain. It states: "Planning conditions or obligations can, in appropriate circumstances, be used to require that a planning permission provides for works that will measurably increase biodiversity".
- 1.10 In terms of measuring net gain, the guidance states that using a metric is a pragmatic way to calculate the impact of a development and the net gain that can be achieved. It goes on to state that "[...] tools such as the Defra biodiversity metric can be used to assess whether a biodiversity net gain outcome is expected to be achieved".
- 1.11 This report details the ecological surveys undertaken to establish a baseline position, and what the anticipated impacts are. To inform the biodiversity net gain assessment, the Biodiversity Metric 3.1 metric has been used.
- 1.12 The Environment Act 2021 received Royal Assent on 9th November 2021 and includes a mandatory 10% biodiversity net gain on all Town and Country Planning Act 1990 developments. The 10% requirement will not become mandated across England until statutory instruments and regulations have been agreed and the Town and Country Planning Act 1990 has been amended. Mandatory 10% net gain is currently anticipated to become law in Autumn 2023.

Local Policies

1.13 The South Staffordshire Local Plan comprises the Adopted Core Strategy dated December 2012 and the Site Allocations Document dated September 2018, neither made reference to biodiversity net gain at the time of writing. A new Local Plan Review – Publication is currently being drafted, for which a consultation exercise concluded on 23 December 2022. Although this document has not yet been adopted specific provision for biodiversity net gain is referenced. Under Policy NB2: Biodiversity which states:

'All new development will provide a minimum of 10% biodiversity net gain as part of the development. Proposals must meet all of the following criteria:

- a. Delivery of the biodiversity net gain on-site wherever possible, in a manner consistent with national requirements, ensuring that existing habitats on site are maintained and enhanced as a priority. Where it is demonstrated that this cannot be achived on site, the required level of off-site biodiversity net gain must be provided. As a last resort, statutory biodiversity credits may be acceptable.
- b. Measurement against the latest Natural England Biodiversiy Metric.
- c. Securing of the habitat in perpetuity. Where it is demonstrated that this is not possible, the habitat must be secured for at least 30 years. This will be achieved via a S106 agreement or planning conditions.'

Aims of this report

- 1.14 The aims of this report are to:
 - Set out the methods used to assess the habitat baseline of the Site;



- Set out the methods and assumptions used to assess the post development habitat scoring of the Site;
- Assess the BNG that is delivered as a result of the Site design and offsetting required;
- Demonstrate how the BNG good practice principals for development have been addressed; and
- Set out the requirement for a 30-year management and monitoring plan.



2.0 Methods

- 2.1 The existing habitat information was gathered for the Site by TEP in 2022. Full details are provided within the following technical reports:
 - Preliminary Ecological Appraisal 2022 (TEP ref. 9562.001)
 - Ecological Desk Study 2022 (TEP ref. 9562.002)

Survey Methods

Desk Study

A search of existing information relating to protected species, habitats of conservation priority and designated sites was undertaken in August 2022. Sources included Staffordshire Ecological Record (SER), Natural England and MAGIC Map websites. The search extended 2km from the Site boundary for non-statutory designated sites, protected species and priority species and habitats. Information regarding statutory protected sites within the wider area (up to 10km) was also collected. Relevant local planning policies were also identified to inform the assessment.

Phase 1 Habitat Survey

2.3 A Phase 1 habitat survey was undertaken by TEP ecologist Alex Fitzroy (FISC Level 4) in July 2022. The survey was carried out in accordance with the Phase 1 habitat survey assessment methods (JNCC, 2010)¹, and the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017)². Habitat types were mapped and dominant vegetation species noted. Any invasive species were also recorded.

UK Habitat Classification Conversion

2.4 Phase 1 habitats were converted to UK Habitat classification code with reference to the UK Habitat Classification - Habitat Definitions³ and the UK Habitat Classification Field Key⁴.

Condition Assessment

2.5 Condition assessment surveys of the area-based and linear habitats present predevelopment were undertaken by Alex Fitzroy (FISC Level 4) in July 2022. The condition assessments were undertaken using guidance presented in the Biodiversity Metric 3.1 - Technical Supplement⁵.

¹ JNCC 2010. Handbook for Phase 1 Habitat Survey: A technique for environmental audit.

² CIEEM 2017. Guidelines for Preliminary Ecological Appraisal.

³ Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). The UK Habitat Classification - Habitat Definitions V1.1 at http://www.ukhab.org/

⁴ UK Hab Field Key V2.1 September 2020

⁵ STEPHEN PANKS A, NICK WHITE A, AMANDA NEWSOME A, JACK POTTER A, MATT HEYDON A, EDWARD MAYHEW A, MARIA ALVAREZ A, TRUDY RUSSELL A, SARAH J. SCOTT B, MAX HEAVER C, SARAH H. SCOTT C, JO TREWEEK D, BILL BUTCHER E and DAVE STONE A 2022. Biodiversity metric 3.1: Auditing and accounting for biodiversity – Technical Supplement. Natural England.



BNG Assessment

- 2.6 The Site has been assessed using Biodiversity Metric 3.1 in line with the user guide⁶ and technical supplement provided, this was undertaken by TEP ecologist Alex Fitzroy in November 2022.
- 2.7 Biodiversity Metric 3.1 is a tool designed to enable developers to measure the change in biodiversity across their site. It determines if there will be net gain, net loss or no net loss of biodiversity following completion of their development and any subsequent management regime.
- 2.8 To calculate the change in biodiversity across the Site, a site survey is undertaken by a suitably qualified ecologist to determine the habitats present on site, their location, size, and condition. This information is then digitised and the resulting information fed into Biodiversity Metric 3.1.
- 2.9 The principles of biodiversity net gain as set out in the Biodiversity Net Gain Good Practice Guidelines⁷ have been considered throughout this process as discussed in Section 7.0.

<u>Determining Strategic Significance</u>

- 2.10 Strategic significance was determined through a thorough desktop review of local planning policy and other relevant documentation. The desk-based assessment (TEP Ref. 9562.002) provides full details of local policy and legislation covering the Site. This includes the South Staffordshire Local Plan (adopted 2012).
- 2.11 Local Nature Recovery Networks (LNRN) are included within the Environment Act 2021 and are strategies to be developed by Local Authorities to develop strategically significant areas for habitats within each Local Authority. At the time of writing an LNRN for South Staffordshire District Council has not yet been produced.
- 2.12 The habitats within the Site are not within a Local Wildlife Site and there is no LNRN which cover the Site. However, the hedgerows on site are identified within the Staffordshire Biodiversity Action Plan (SBAP), within which the Central Farmland Ecosystem Action Plan (EAP) 2015 2026 includes hedgerows as a priority habitat. Due to the SBAP being referenced within the Local Plan, native hedgerows present on site as part of the baseline or proposed habitats have been assigned 'High' strategic significance. All other habitats on site have been assigned as 'Low' strategic significance.

Post-Development Calculations

2.13 Post development calculations have been based on the general arrangement plan produced by enplan (drawing number 05-1095-301, revision P03). This includes details of planting and proposed habitats.

⁷ CIEEM, IEMA & CIRIA (2019). Biodiversity Net Gain. Good Practice Principles for Development. A Practical Guide.

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⁶ STEPHEN PANKS A, NICK WHITE A, AMANDA NEWSOME A, JACK POTTER A, MATT HEYDON A, EDWARD MAYHEW A, MARIA ALVAREZ A, TRUDY RUSSELL A, SARAH J. SCOTT B, MAX HEAVER C, SARAH H. SCOTT C, JO TREWEEK D, BILL BUTCHER E and DAVE STONE A 2022. Biodiversity metric 3.1: Auditing and accounting for biodiversity – User Guide. Natural England.



2.14 Target conditions of habitats have been allocated using a precautionary approach, ensuring these are realistically achievable within the 30-year BNG timeframe. This considers the inclusion of an adequate management plan and considers the current and proposed site usage, conditions, and any limitations this presents. Further justification for each habitat is provided within the assessor comments column within the completed metric (Appendix A).

Limitations

2.15 All areas of the Site were accessible for survey. Habitat surveys were undertaken within the optimal survey window. There are therefore no limitations to the baseline assessment.



3.0 Baseline conditions

Important Ecological Features

- 3.1 Neither the Site nor land immediately adjacent is allocated for biodiversity purposes. There are two statutory designated sites of international importance within 10km of the Site, no sites of national importance within 5km of the Site and no sites of regional or local importance within 2km of the Site. The nearest statutory site of international importance is Motley Meadows Special Area of Conservation (SAC), situated approximately 6km southwest of the Site. There are five non-statutory wildlife sites identified within 2km of the Site. The nearest sites are Whittamoors Local Wildlife Site (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.
- 3.2 No priority habitats were returned from within or immediately adjacent to the Site from the Desk Study. However, survey work undertaken at the Site identified that hedgerows meet the criteria as a S41 Habitat of Principal Importance. There are not considered to be any irreplaceable habitats present within the Site
- 3.3 The Site falls under the Central Farmland Ecosystem Action Plan (EAP) under the Staffordshire Biodiversity Action Plan (SBAP). This includes the native hedgerows which are present on site. This has been reflected in the metric by assigning them high strategic significance.

On-Site Baseline

- 3.4 The Site comprises Cropland Cereal crops and five field boundary hedgerows comprising Native species-rich hedgerow, Native species-rich hedgerows with trees, Native hedgerow with trees, and Native hedgerow.
- 3.5 Full details of the conversion from Phase 1 habitat to the UK Habitat Classification along with the results of the condition assessment are provided in the Assessor Comments column within the completed Biodiversity Metric 3.1 (Appendix A). The following drawings are provided in Appendix B:
 - Phase 1 Habitat Survey (G9562.007);
 - Baseline UK Habitats (G9562.008); and
 - Baseline Condition and Strategic Significance (G9562.009A).



4.0 Post Development Habitats

On-Site Proposed Design

- 4.1 Details regarding post-development habitats are provided in the following documents and are displayed in Drawing G9562.010B included in Appendix B:
 - General Arrangement Plan by enplan (05-1095-301 P03, December 2022)
- 4.2 The landscape design of the Site includes areas set aside for tussocky grassland (modified grassland) measuring 1.89ha, wildflower meadow (other neutral grassland) areas measuring 0.28ha, three additional native species-rich hedgerow with tree planting which will collectively measure 0.49km, and SuDS and swales that mimic natural drainage processes that will be seeded with a wetland meadow mix (other neutral grassland). All existing native species-rich hedgerows will be retained in full. Small sections of native species-poor hedgerow will be lost, but these will be compensated by the proposed additional native species-rich hedgerow with trees along the eastern side of the access track and eastern boundary of the main site. Tree planting has also been included within the landscaping both within the proposed hedgerows and around the Site. A total of 13 native trees (urban trees) not associated with the proposed hedgerows are included.
- 4.3 Full details of the conversion from the General Arrangement Plan to the UK Habitat classification along with the target condition are provided in the Assessor Comments within the completed Biodiversity Metric 3.1 (Appendix A). The following drawings are provided in Appendix B:
 - Proposed Development. UK Habitats (G9562.010B)
 - Proposed Development. Condition and Strategic Significance (G9562.011B); and
 - Habitat Impact (G9562.012A).



5.0 BNG Metric

5.1 A biodiversity assessment has been undertaken, using the Biodiversity Metric 3.1 calculator to quantify the change in biodiversity units for the planning application area between the pre-development baseline and post-development retained and created habitats.

Summary of Biodiversity Impact

5.2 Detailed results of the assessment are provided in the Biodiversity Metric 3.1 in Appendix A. The headline results, taken from the metric calculated based on recommended changes to the landscaping, are provided in Figure 1.

	Habitat units	7.62
On-site baseline	Hedgerow units	12.86
	River units	0.00
O:	Habitat units	8.62
On-site post-intervention	Hedgerow units	17.51
(Including habitat retention, creation & enhancement)	River units	0.00
0 4 10/1	Habitat units	13.10%
On-site net % change	Hedgerow units	36.11%
(Including habitat retention, creation & enhancement)	River units	0.00%
	Habitat units	0.00
Off-site baseline	Hedgerow units	0.00
	River units	0.00
0,500	Habitat units	0.00
Off-site post-intervention	Hedgerow units	0.00
(Including habitat retention, creation & enhancement)	River units	0.00
M-4-1	Habitat units	1.00
Total net unit change	Hedgerow units	4.65
(including all on-site & off-site habitat retention, creation & enhancement)	River units	0.00
TT + 1	Habitat units	13.10%
Total on-site net % change plus off-site surplus	Hedgerow units	36.11%
(including all on-site & off-site habitat retention, creation & enhancement)	River units	0.00%
Trading rules Satisfied?	Ye	es √

Figure 1: Headline Results from Biodiversity Metric 3.1.

5.3 The results indicate a net gain of +13.10% for habitat units and a net gain of +36.11% for hedgerow units. The trading rules for habitat types and distinctiveness are satisfied.



January 2023

6.0 Implementation, Management and Monitoring

- This BNG assessment has been undertaken for a full planning application and details of the landscape design have been provided by enplan. A habitat management plan (TEP ref: 9562.01.001) and landscape maintenance schedule (TEP ref: x9562.01.002) have been produced to ensure the proposed habitats and target conditions are deliverable for the required 30-year BNG timeframe.
- The habitat management plan should be read in conjunction with this report as it includes a summary of the factors influencing management and site analysis, management intentions and operations for each habitat to achieve target conditions, the long-term management aims and objectives and monitoring requirements.
- Roles and responsibilities, including financial and legal requirements have not yet been determined. However, Anglo ES Levedale Ltd, are responsible for employing a managing organisation and the responsibilities and requirements of that management organisation are fully set out within the habitat management plan.

Due to the areas proposed for medium distinctiveness grassland habitat creation currently being arable crop, there may be increased levels of nutrients within the soil. Therefore, it is recommended that soil testing is undertaken to determine the baseline nutrient levels and what additional measures may be required to meet the proposed condition level within the 30-year timeframe imposed by Metric 3.1. If required, these measures should be included within an updated version of the habitat management plan. Depending on soil nutrient levels, measures may comprise soil inversion, long term mowing of low-yielding grassland, or overseeding with yellow rattle *Rhinanthus minor* to reduce grass species coverage within the wet meadow areas (other neutral grassland). If required, these details would be required to amend the management plan.



7.0 BNG Good Practice Principles for Development

7.1 An appraisal of the scheme against the ten good practice principles is set out in Table 1 below.

Table 1: Appraisal against Good Practice Principles

Good Practice Principle	Commentary
Apply the mitigation hierarchy	The layout and landscaping proposals have ensured retention of S41 hedgerows and trees. Additional hedgerow planting will be included to replace the smaller sections of species-poor hedgerows to be lost. Development will be focused on low distinctiveness habitats and all habitat creation will take place on site, avoiding the need for offsite compensation.
2. Avoid losing biodiversity that cannot be offset by gains elsewhere	No irreplaceable habitats or designated sites are present on site and the proposed development will not impact on such habitats or sites that are present in the wider area.
3. Be inclusive and equitable	A pre-application enquiry was made by the client to South Staffordshire Council in 2022. The consultation response received comments from the Local Planning Authority have been considered and implemented within the design. This includes aiming for a net gain which exceeds the minimum requirement (1%) and inclusion of a long-term management plan.
4. Address risks	The red line boundary for the Site exceeds the proposed works area, to allow for retention of existing habitats and allow space for habitat creation. A precautionary approach has been taken when assigning proposed habitats and target conditions, based on the existing site conditions and proposed development. The proposed habitat creation and enhancement, and target conditions are all achievable within the 30-year timeframe with correct implementation of the management plan.



Good Practice Principle	Commentary	
5. Make a measurable Net Gain contribution	A 13.10% net gain in area habitats will be achieved and a 36.11% net gain in hedgerow habitats will be achieved.	
	The arable land will in part be replaced by grassland with a greater botanical and structural diversity than what currently exists on site to benefit a range of species. Additional mixed native tree planting will also be included.	
	Mitigation and compensation for impacts will take place within the Site without the need for offsetting, ensuring benefits are kept local.	
6. Achieve the best outcomes for biodiversity	The proposed hedgerow planting will enhance connectivity through the Site and to surrounding habitats for a variety of species.	
	The retention of hedgerows and additional hedgerow planting will contribute towards the Central Farmland EAP within the SBAP.	
	The proposed grassland areas and tree planting will ensure biodiversity benefits are delivered to a range of species.	
	The current site use and management does not include any management for biodiversity benefit. All habitat proposals and management are additional, ensuring benefits exceed what would occur currently.	
7. Be additional	Although the Environment Bill will mandate a minimum 10% net gain from Autumn 2023, there is currently no requirement for a specific percentage of net gain to be achieved in national or local planning policy. The National Planning Policy Framework only states that there is a requirement for net gain to be achieved. Policy NB2: Biodiversity within the emerging local plan states that all new developments must provide a 10% net gain, however, this local plan has not yet been adopted at the time of writing. The proposals will exceed a 10% net gain in both area-based habitats and linear habitats, thus going above and beyond current requirements.	



Good Practice Principle	Commentary
8. Create a Net Gain legacy	Discussions have been held between TEP and other parties involved with the development, ensuring BNG was a key consideration when developing the landscaping plan. The 30-year landscape management plan will ensue the legacy of the habitat creation measures set out within the metric.
9. Optimise sustainability	BNG has fed into the design proposals at an early stage, ensuring habitat creation and enhancement are included at a viable scale from the beginning. Landscape design includes sustainable drainage features which will alleviate flood risks.
10. Be transparent	All methods used for site assessment have been detailed in the methodology, ensuring surveys are repeatable. The completed metric which has informed this assessment has been submitted to ensure transparency in line with good practice guidelines.



APPENDIX A: Biodiversity Metric 3.1 (provided as a separate document)



APPENDIX B: Associated Plans

Phase 1 Habitat Survey by TEP (G9562.007)

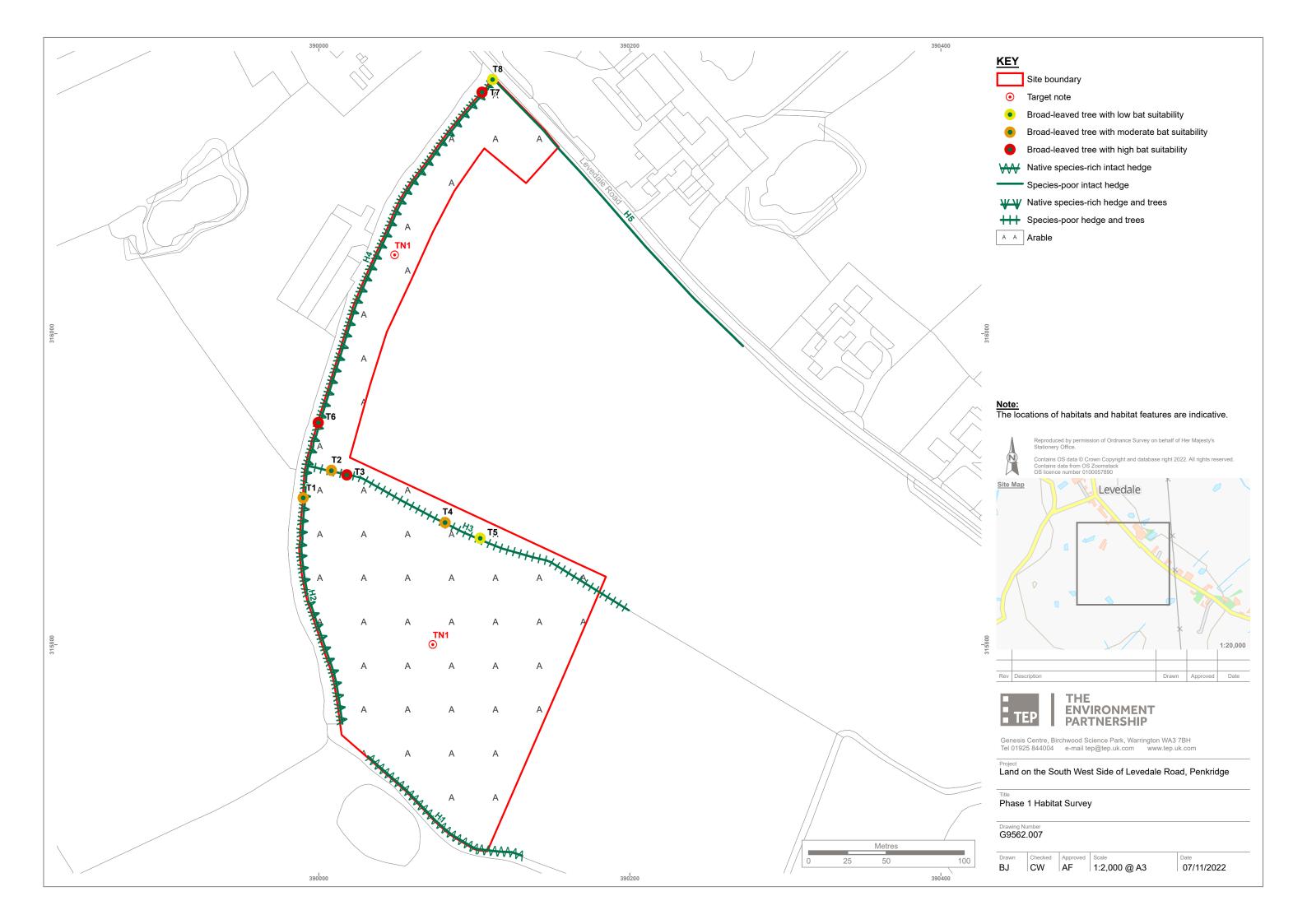
Baseline UK Habitats by TEP (ref: G9562.008)

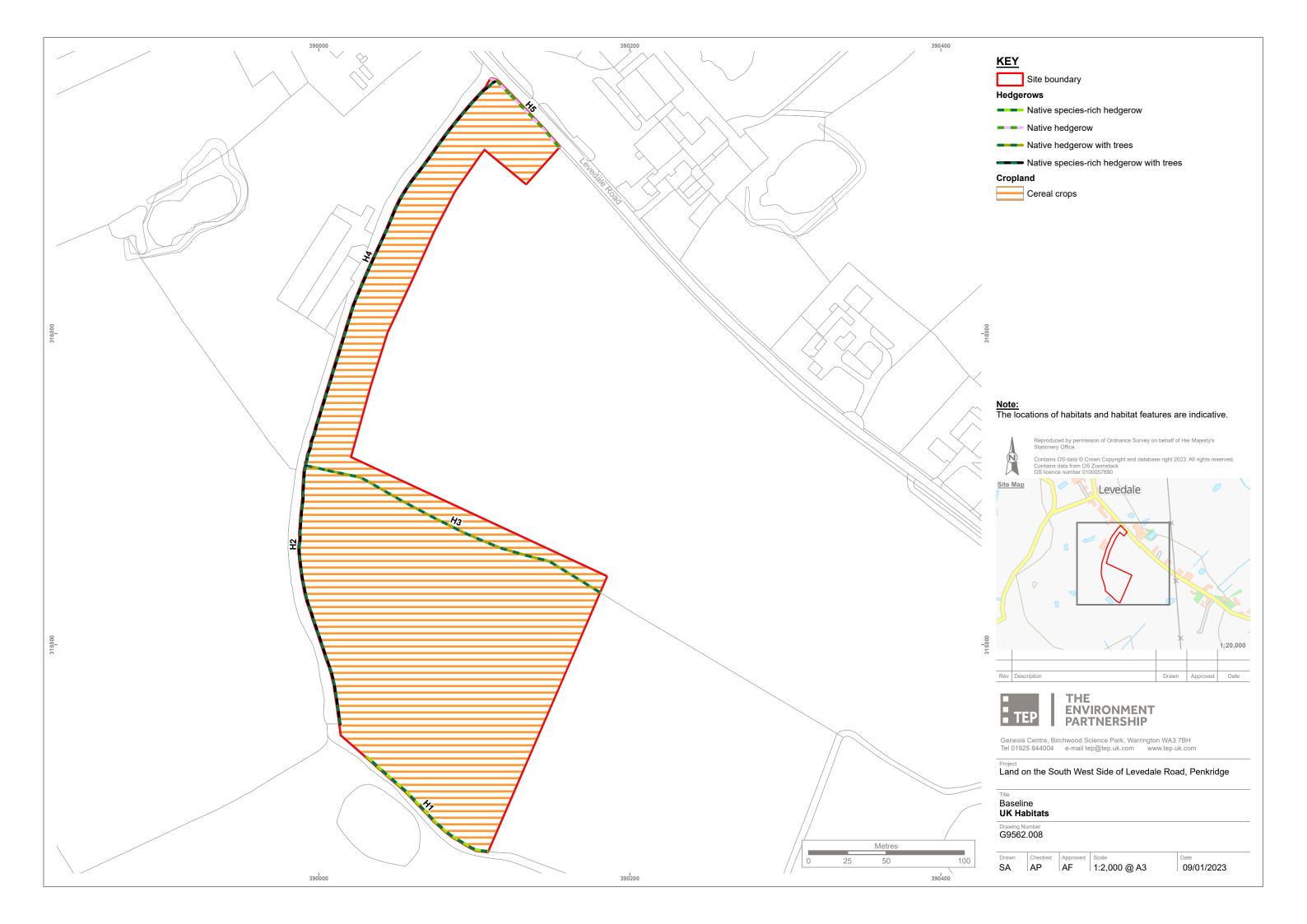
Baseline Condition and Strategic Significance by TEP (ref: G9562.009A)

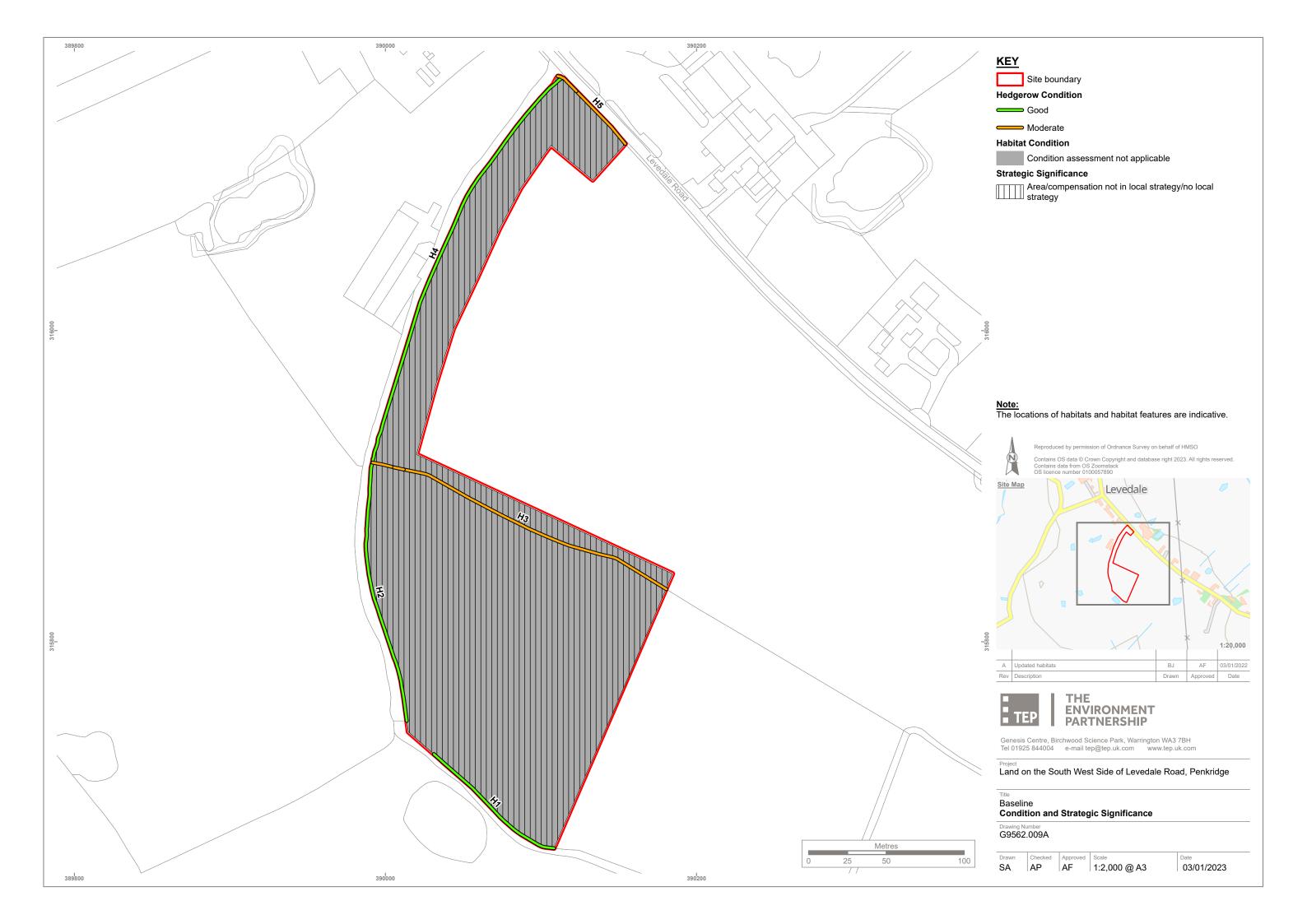
Proposed Development UK Habitats by TEP (ref: G9562.010B)

Proposed Development Condition and Strategic Significance by TEP (ref: G9562.011B)

Habitat Impact by TEP (ref: G9562.012A)















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