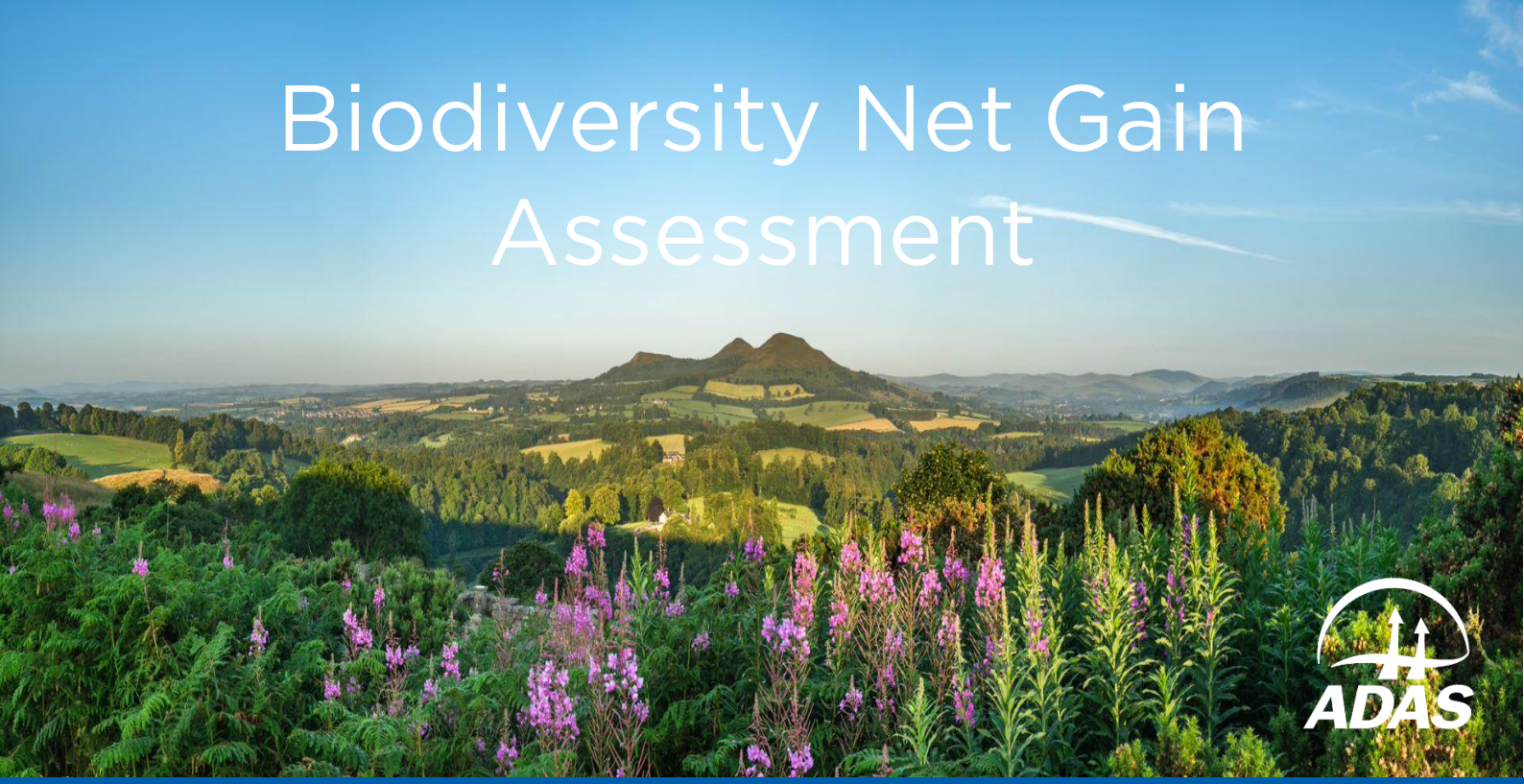
Biodiversity Net Gain Assessment



Eden Meadows Solar, Evershill Lane, Morton, Derbyshire, DE55 6HB

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The information which ADAS has prepared and provided is true and has been prepared and provided in accordance with the CIEEM's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

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Where any data supplied by the client or from other sources have been used, it has been assumed that the information is correct. No responsibility can be accepted by ADAS for inaccuracies in the data supplied by any other party. The conclusions and recommendations in this report are based on the assumption that all relevant information has been supplied by those bodies from whom it was requested.

Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK ADAS Ltd.

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Summary

The proposed development essentially compromises the construction of a 66-ha solar PV array and Battery Energy Storage System (BESS), with an envisioned export capacity of up to 49.9 MW, on agricultural land associated with Evershill Lane, Morton, Derbyshire, DE55 6HB.

The proposed development will result in the loss of 25.60 ha of cereal crop (winter stubble), 33.90 ha of non-cereal crop and 6.01 ha of modified grassland. Approximately 0.05 km of native hedgerow will be lost as a result of the proposed development.

Proposed landscape plans include the sowing of Habitat Aid Grazing Meadow Seed Mix under, between and around the solar panels on site as well as areas of species-rich grassland using an Emorsgate EM2 General Purposed Meadow Mix, wildflower meadow using Emorsgate EM3 Special General Purpose Wild Flowers, wetland meadow using EM8 Wetland Mixture for Wetlands seed mix, a traditional orchard as well as native hedgerow and tree planting.

The current development design is expected to result in a net habitat unit change of 116.44 habitat units, which represents an 88.87% net gain and a net linear unit change of 19.42 hedgerow units, which represents a 17.89% net gain.

The trading rules in relation to the loss of area and linear habitat units have been satisfied as part of the proposed landscape plan.

1 Introduction

1.1 Background and Objectives

ADAS were commissioned by ADAS Planning (on behalf of their client RWE Renewables UK Solar and Storage Ltd) to undertake a biodiversity net gain assessment in support of a planning application to construct an approximately 66 ha solar PV array and battery energy storage system (BESS), with an envisioned export capacity of up to 49.9 MW, on agricultural land associated with Evershill Lane, Morton, Derbyshire, DE55 6HB (National Grid Ref: SK 40542 60956), hereafter referred to as 'the site'.

Due to the nature of the proposed development, a biodiversity net gain assessment of the proposed works is required, as per local and national planning policy. Biodiversity net gain occurs in development when the project leaves the natural environment in a better state than it was prior to the project. To achieve biodiversity net gain, the developer is required to ensure that wildlife habitats are created or enhanced. It requires the development to result in a demonstrable increase in habitat value to the baseline (how the site was prior to development). Biodiversity net gain should be demonstrated quantitatively.

To demonstrate biodiversity net gain, the value of the habitats are assessed using a recognized metric tool to calculate biodiversity units. The value of the habitats were assessed during the preliminary ecological appraisal (PEA) carried out on the site by ADAS in 2023 (ADAS 2023). The biodiversity losses or gains resulting from the development are then calculated by subtracting the baseline (pre-development) units from the post development units. The Biodiversity Metric 4.0 Calculation tool (Natural England, 2023) has been used to demonstrate biodiversity net gain in a quantitative manner.

The *Biodiversity Net Gain Good Practice Principles for Development* (CIEEM, CIRIA, IEMA, 2016) are a set of ten principles which have been produced to provide a framework that helps improve the UK's biodiversity by contributing towards strategic priorities to conserve and enhance nature while progressing with sustainable development. To demonstrate that biodiversity net gain has been achieved in a qualitative manner for a development it would need to be shown that the development meets these ten principles which have been listed below:

- *Apply the mitigation hierarchy*
- *Avoid losing biodiversity that cannot be offset by gains elsewhere*
- *Be inclusive and equitable*
- *Address risks*
- *Make a measurable net gain contribution*
- *Achieve the best outcomes for biodiversity*
- *Be additional*
- *Create a net gain legacy*

- *Optimise sustainability*
- *Be transparent*

1.2 Objectives of the report

The BNG assessment has been produced in accordance with the British Standard (BS) for Biodiversity – Code of practice for planning and development, BS42020:2013.

The objectives of this report are as follows:

1. *To identify the planning policy context relevant to BNG matters on the site.*
2. *To describe the baseline biodiversity value of the site based on the UK Habitat condition assessment.*
3. *To evaluate the proposed biodiversity of the site based on the agreed final landscape proposals.*
4. *To calculate the predicted change in the biodiversity unit value of the site post development and demonstrate the potential biodiversity net gain of the proposed development in a qualitative manner.*
5. *To assess if the proposed development meets the requirements of the trading rules and demonstrate how the proposed development does meet those requirements.*
6. *To demonstrate how the proposed development meets the ten principles set out in the 'Biodiversity Net Gain Good Practice Principles for Development' and has led with the mitigation hierarchy.*

1.3 Structure of the Report

The remainder of this report is structured in the following manner:

- *Section 2 Planning policy context. This describes the national, county and district level planning policy relevant to biodiversity net gain matters in relation to the proposed development.*
- *Section 3 Methods. Describes the methods used to undertake the Biodiversity Net Gain Assessment.*
- *Section 4 Proposed development. This section describes the proposed development.*
- *Section 5 Baseline Biodiversity Unit Assessment. This section describes the biodiversity baseline information, identifies key habitats, analyses the condition of the baseline habitats, and provides the findings of the baseline biodiversity units.*
- *Section 6 Proposed Biodiversity Unit Assessment. This analyses the effects of the proposed development on the baseline biodiversity units identified in section 5 and details the provision of biodiversity within the proposed development. This section will also assess the proposed development against the mitigation hierarchy and ten principles.*
- *Section 7 Conclusion. This final part of the report summarises the overall effects on biodiversity on the site and if the proposed development can achieve a net gain in biodiversity.*

1.4 The Author

This document has been prepared by Connie Webb MSc, an Assistant Ecological Consultant at ADAS. Connie is a Qualifying Member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and holds a Master's degree in Biodiversity and Conservation.

The report was updated in April 2024 as requested by the client. The document was updated by Lydia Waite BSc, an Ecological Consultant at ADAS.

The report was further updated in February 2025 to reflect new landscape plans, as requested by client. The document was updated by Lydia Waite BSc MCIEEM, a Senior Ecological Consultant at ADAS.

In September 2025, the report was updated to reflect the Amended Scheme. It is understood this was submitted at the time of lodging the Appeal. The document was updated by Lydia Waite BSc MCIEEM, a Senior Ecological Consultant at ADAS.

ADAS is a Landscape Institute and CIEEM registered practice, and all work is prepared and reviewed internally by senior highly experienced Landscape Architects and Ecologists.

2 Legislation and Policy Background

2.1 National Planning Policy Framework

The National Planning Policy Framework (NPPF) (Department for Levelling Up, Housing and Communities, 2024), is a policy framework document which provides a range of important principles. Paragraph 187 of the NPPF states that decisions should contribute to and enhance the natural local environment by:

'Minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.'

Paragraph 188 goes on to state:

'… take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.'

When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles (paragraph 193):

'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.'

2.2 The Environment Act (2021)

The Environment Act (2021) requires all development schemes in England to deliver a mandatory 10% biodiversity net gain to be maintained for a period of at least 30 years after the development has been completed. Schedule 14 makes provision for biodiversity gain to be a condition of planning permission in England. The concept seeks measurable improvements for biodiversity by creating or enhancing habitats in association with development. Part 6 on nature and biodiversity covers all areas of biodiversity net gain across two core sections and the supporting Schedule 14, particularly sections 9(3), 13(2), 14(2) and 15. Although the Environment Act 2021 is a part of UK law, its policies – with mandatory biodiversity net gain included – aren't expected to be fully integrated until the year 2023 as it goes through a two-year transition period. Many local planning authorities, however, are already enforcing the new NPPF in line with detailed guidance from DEFRA and Natural England and are applying a 10% biodiversity net gain requirement on each new development proposal.

2.3 Local Policy

Table 1 details the policies within the North East Derbyshire Local Plan (2014 – 2034) (Adopted November 2021) which are relevant to the ecological features.

Table 1: Summary of relevant local planning policy – North East Derbyshire Local Plan (2014 – 2034) (Adopted November 2021).

Policy	Description
Policy SDC4: Biodiversity and Geodiversity	*'The Council will protect and enhance the district's natural environment and seek to increase the quantity and quality of biodiversity and geodiversity by:* *1. Protecting designated national and local sites of nature conservation importance and geodiversity value including SSSI's, LNR's, LWS's, and RIGS's as shown on the Policies Map;* *2. Promoting the qualitative enhancement of all sites of biodiversity and geodiversity value (including designated SSSI's, LNR's, LWS's and RIGS's, and other sites with protected and priority species) by supporting measures that improve access, connectivity and the creation of new habitats. Such measures could include maintaining trees, native vegetation and improving green infrastructure for the benefit of wildlife.* *3. Not permitting development which would adversely affect the integrity of designated international sites located outside of the Plan area, except for reasons of overriding public interest, and only where adequate compensatory measures are provided.*
Policy SDC2: Trees, Woodland and Hedgerows	*1. Proposals for development should provide for the protection and integration of existing trees, woodland and hedgerows for their wildlife, landscape, and/or amenity value.* *2. Development that would result in the unacceptable loss of, or damage to, or threaten the continued well-being of protected trees, hedgerows, orchards, veteran trees or woodland (including those not protected but considered worthy of protection), will not be permitted.* *3. Where trees, woodland or hedgerows will be lost to development and this is considered to be acceptable, suitable replacement planting on site where it is practicable to do so, or off-site if not, will be required.* *4. New planting which uses species and varieties native to the area, are locally sourced, and maximise the benefits to the local landscape, wildlife and air quality will be preferred.*
Policy ID6: Green Infrastructure	*1. Development proposals should conserve and where appropriate improve and extend the Green Infrastructure Network running through and beyond North East Derbyshire.* *2. Development proposals that would result in the loss or isolation of existing green infrastructure will not be permitted unless:* *a) the affected site or feature does not have a significant recreational, ecological, landscape or townscape value; or* *b) The affected site can be demonstrated to be surplus to local requirements, or* *c) A compensatory amount of green infrastructure of an equivalent or better quality can be provided in the local area* *3. To ensure the quality of new or improved Green Infrastructure, development proposals shall, where appropriate:* *a) Incorporate Green Infrastructure as an integral part of designs at an early stage in the planning process in line with Policy SDC12;*

	b) Enhance connectivity between green spaces and improve public access to green infrastructure in line with Policy SDC12; *c) Contribute to the character and creation of high quality and locally distinctive places and having regard to the landscape, townscape, ecological character of the locality and the setting of heritage assets;* *d) Protect trees, woodland and hedgerows in line with Policy SDC2;* *e) Incorporate native species and habitats in line with Policy SDC4; and* *f) Capitalise on any opportunities provided by rivers, streams, ditches, drains and canals in order to improve their ecological status.*

3 Methods

3.1 Baseline Habitat Assessment

This assessment was carried out as a desk-based exercise, using the results of the UK Habitat Classification Survey (UKHab Ltd 2023) shown in Appendix 1 and Biodiversity Metric 4.0 Condition Assessment (Natural England 2023) undertaken by ADAS on the 6th of November 2023 and based on the landscape design drawing, shown in Appendix 2. The baseline assessments were carried out during the preliminary ecological appraisal undertaken by ADAS in 2023: *WNT69105-1742 (00) Eden Meadows Solar Preliminary Ecological Appraisal Update*.

3.2 The Mitigation Hierarchy

The aim of the BNG assessment is to identify, predict and evaluate potential key effects arising from the proposed development and assess them against the mitigation hierarchy. The mitigation hierarchy requires that developers first take steps to avoid and then to minimise impacts on biodiversity. Only after these steps are taken should developers look to compensate for losses that cannot be avoided. Finally, if compensation within the development footprint is not possible or does not generate the most benefits for nature conservation, the losses should be offset elsewhere. The proposals have been developed in accordance with the British Standard for 'Process for designing and implementing Biodiversity Net Gain – Specification', BS8683:2021 to reduce risk to harm of biodiversity and maximise the potential gains on the site.

3.3 Biodiversity Metric Calculation

Biodiversity metrics (units) were calculated for the site using the "Biodiversity Metric 4.0 - Calculation Tool" and guidance available on the Natural England Website in September 2023 (Natural England 2021a, 2021b). The biodiversity metric spreadsheet is provided as an Excel file with this report.

The metric uses area and linear habitat features as a proxy measure for capturing the value and importance of biodiversity. It uses a calculation in MS Excel to allow for the importance of these features for nature: their size, ecological condition, distinctiveness and location. The metric enables assessments to be made of the baseline (pre-intervention) biodiversity value of a site in terms of 'biodiversity units' and calculates the projected post-development (post-intervention) biodiversity value. The metric can also be used to measure off-site biodiversity changes for a project or development and can be applied from the level of an individual field to, for example, an entire river catchment.

The calculator uses the following variable elements to determine biodiversity units, based on the information collected in the field:

Habitat type: The original survey conducted was a UK Habitat Classification Survey, based on the definitions outlined in the UKHab V2 Classification Document (UKhab Ltd).

Area (Hectares): The area has been measured based on the digitized UK Habitat Classification map using ArcView Geographical Information System (GIS). Measurements have been rounded up or down to the nearest two decimal places to achieve a minimal mapping unit (MMU) of 0.01ha. Mapping habitats at different times of year may lead to variation between where one habitat starts, and another begins as there is potential overlap between habitats (the ecotone). The actual field mapping is based on both field survey and aerial imagery in order to achieve the best representation of the areas covered by each habitat identified onsite. The areas for the post development site were taken from a pdf version of the proposed development plan – Appendix 2.

Condition: The condition is a means to measure the quality of a habitat based on a series of physical characteristics and typical species of a particular habitat type. In order to aid the process, the Biodiversity Metric 4.0 Technical Supplement (Natural England 2023b), provides 'condition sheets.' Condition sheets provide a list of positive indicators for each habitat and dependent on how many positive indicators a particular habitat meets will equate to the relevant condition for that specific habitat. In order that this process can be followed, in relation to this calculation, the number of positive indicators that are met for each habitat type are presented in Appendix 3 for each habitat found onsite.

Strategic significance: This element is to assess the habitats on site in relation to the geographical location in which they are located. Information to determine the significance of a habitat within a specific landscape can be found in a variety of sources that include: local plans, local biodiversity and National Character Areas. The strategic significance is based on three categories which equate to a different score, which are as follows: High – 1.15; Medium – 1.1 and Low – 1.

3.4 Limitations

Measurements are based on a two-dimensional mapping and would assume the site is completely flat and therefore certain habitats may be greater in extent if they occur on a slope.

In the field the surveyor will have judged the approximate area of each of the habitat type and where appropriate use aerial imagery to assist with mapping of the habitats as accurately as possible. The Biodiversity Metric 4.0 is accurate to two decimal places; therefore, habitats are rounded up or down to the nearest whole value, with a MMU of 0.01 hectares.

Condition assessments of habitats were undertaken during winter in November 2023, outside the optimal period for botanical identification. However, given the habitat types that were present on site (primarily agricultural land), it is considered that the condition assessments provided are accurate.

4 Proposed Development

The proposed development plans involve the erection of an approximately 66-ha ground mounted solar PV array and Battery Energy Storage System (BESS) with an export capacity of up to 49.9 MW. A proposed development and landscape plan is provided in Appendix 2. The solar arrays will be constructed across the entire site in line with the layout of existing land parcels with the majority of hedgerows and tree boundary features to be retained as part of the landscape plans. The design for the development includes supporting infrastructure including battery storage units, the construction of a substation in the east of site and maintenance tracks throughout the boundaries of the fields to provide access routes.

Landscape proposal include the establishment of a permanent species rich grassland sward around the boundaries of the solar farm. The seed mix to be used here is Emorsgate EM2 General Purposed Meadow Mix, sown at 4g/m^2. The proposals also include the establishment of grassland around, underneath and between solar panels, which will also be created using Habitat Aid Grazing Meadow Seed Mix, to be sown at 4g/m^2. An area of wildflower meadow will be created within the corner of one of the southern field parcels using a wildflower seed mix such as Emorsgate EM3 Special General Purpose Wild Flowers, or a similar approved mix. One area of wetland planting will also be created to the south of the site using an EM8 Wetland Mixture for Wetlands seed mix. A Traditional Orchard will be created within a land parcel at the south of the site. This will be created using local tree species.

All areas of existing hedgerows and trees along the boundaries of the farm will be retained as part of the proposed development, excluding a total of 0.05 km of hedgerow scattered across the site which to be removed for the creation of access tracks. It is understood that a minimum of a 5 m buffer will be established around all field boundaries, with a 20 m buffer present along the northern boundary of the site and a 10 m buffer present along the southern boundary of the site with these buffers managed to retain the existing hedgerow at the current height.

Approximately 18 m of native hedgerow without trees will be removed along the farm entrance track, to allow for the construction of an access track and approximately 32 m of native species-rich hedgerow with trees will also be lost across the site to allow for the construction of new access roads into fields adjacent to Evershill Lane. To compensate for the loss of these lengths of hedgerow, 2.29 km of native species rich hedgerow and 0.44 km of native species rich hedgerows with trees will be created on site. Species to be planted include Blackthorn (*Prunus spinosa*), Hawthorn (*Crataegus monogyna*), Hazel (*Corylus avellana*), Buckthorn (*Rhamnus catherticus*) and Dog rose (*Rosa canina*).

Landscape plans include the planting of 141 native tree species across the southern boundaries of the site. Tree species to be planted include Field maple (*Acer campestre*), Holly (*Ilex aquifolium*), Pedunculate Oak (*Quercus robur*), Silver Birch (*Betula pendula*), Crab Apple (*Malus sylvestris*), Apple (*Malus cultivars*), Wild Cherry (*Prunus avium*), Rowan (*Sorbus aucuparia*) and Lime (*Tilia x europaea*).

There will be a footpath around the boundaries of the farm, with two benches and an information board installed in the southern corners of site, adjacent to an area where many trees will be planted. Seven bird / bat boxes will also be installed on existing hedgerows throughout the site for example Schwegler 1FD and Schwegler 2F bat boxes. The field parcel containing the new substation building will also be surrounded by deer fencing.

5 Baseline Biodiversity Unit Assessment

5.1 On-site baseline

The primary habitats identified within the UK Habitat Classification Survey are listed and described below. All habitats are marked on the survey map in Appendix 1, and each habitat type is illustrated with a photograph in Appendix 4.

5.1.1 Other non-cereal crops

The dominating habitat on site was arable, non-cereal crop, covering six fields covering an area of approximately 34 ha in total (Appendix 4: Photograph 1). These fields were divided by a well-established network of native hedgerows. While in some of the arable field parcels, the crop extended to the hedgerow boundaries, in others, rank grassland / tall ruderal and arable weed margins were present around the crop measuring less than 2 m in width. There was evidence of recent management across all arable fields on site and most fields were seasonally wet due to recent heavy rainfall.

5.1.2 Cereal crops winter stubble

Four fields consisted of winter stubble crop, composed of Wheat and Barley, divided by the well-established network of native hedgerows. This covered an area of approximately 26 ha (Appendix 4: Photograph 2). Similar to the fields composed of other non-cereal crops, in some of the field parcels the crop extended to the hedgerow boundaries, and in others rank grassland / tall ruderal and arable weed margins were present around the crop measuring less than 2 m in width. There was evidence of recent management across all arable fields on site and fields were seasonally wet due to recent heavy rainfall, consistent with the other arable fields on site.

5.1.3 Modified grassland

A field parcel situated to the west of the site consisted of modified grassland, covering an area of approximately 6 ha and classed as 'poor' condition. The grassland has been compartmentalised by temporary electric fencing with one section being currently grazed by horses (Appendix 4: Photograph 5). Grassland species included Perennial Ryegrass (*Lolium perenne*), Meadow Foxtail (*Alopecurus pratensis*), Yorkshire Fog (*Holcus lanatus*), White Clover (*Trifolium repens*), Creeping Buttercup (*Ranuculus repens*), Common Mouse-ear (*Cerastium fontanum*), Creeping Thistle (*Cirsium arvense*), Broadleaved Dock (*Rumex obtusifolius*) and Common Dandelion (*Taraxacum officinale*). Due to recent heavy rainfall the grassland was seasonally wet.

5.1.4 Built linear features

Evershill Lane was present on site. This was an access road used frequently by agricultural machinery and cars accessing barn and farm buildings outside the site boundary. There was also a second hardstanding

access track on site leading to the same location (Appendix 4: Photograph 4). These areas of habitat totalled an area of approximately 0.5 ha.

5.1.5 Native hedgerow (with / without trees)

A number of species rich native hedgerows were present along boundary fences and between field parcels, some of which contain mature and semi-mature native trees including Pedunculate Oak (*Quercus robur*), Ash (*Fraxinus excelsior*) and Sycamore (*Acer pseudoplatanus*) (Appendix 4: Photograph 3). The conditions of these hedgerows ranged from 'good' to 'moderate'. Although species composition and abundance varied between specific lengths of hedgerow, a combination of the following species were present: Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinose*), Grey Willow (*Salix cinerea*), Elder (*Sambucus nigra*), Field Maple (*Acer campestre*), Ash (*Fraxinus excelsior*), Hazel (*Corylus avellana*), Dog-rose (*Rosa canina*), Holly (*Ilex aquifolium*), Beech (*Fagus sylvatica*), Sycamore (*Acer pseudoplantanus*), Wild Cherry (*Prunus avium*) and Bramble (*Rubus sp.*). The hedgerows were predominately well established, dense and intact and with signs of management. No significant or notable understory was associated with any hedgerow on site. It is considered likely that the majority of these hedgerows (if not all) are defined as 'important' under the ecological criteria set out in the Hedgerows Regulations 1997. These hedgerows also classify as a Habitat of Principle Importance (HPI) under the Natural Environment and Rural Communities Act (NERC) 2006.

In addition to the hedgerows described above, species-poor hedgerows were also present on site which shared similar characteristics with regards to structure, understorey composition and management (Appendix 4: Photograph 6). These hedgerows were Hawthorn dominated and covered a total length of 2.47 km. Some of these hedgerows also incorporated mature and semi-mature native tree species as above with the rare addition of Large-leaved Lime (*Tilia platyphyllos*) and Copper Beech (*Fagus sylvatica f. purpurea*) along the farm access track. It is considered unlikely that these hedgerows are defined as 'important' under the ecological criteria set out in the Hedgerows Regulations 1997. Nevertheless, these hedgerows classify as a Habitat of Principle Importance (HPI) under the Natural Environment and Rural Communities Act (NERC) 2006.

5.2 Habitat baseline assessment

The condition of each habitat has been assessed against the relevant positive indicators. Summaries of the habitat units and linear units for each baseline habitat are provided in Tables 2 and 3 below. A full breakdown of the condition assessments is presented in Appendix 3.

For strategic significance, the following has been considered the most appropriate for each habitat:

- *Winter stubble: A common and widespread habitat of low ecological importance and therefore not associated within any local strategy.*

- *Other non-cereal crop: A common and widespread habitat of low ecological importance and therefore not associated within any local strategy.*
- *Modified grassland: a common and widespread habitat of low ecological importance and not associated within any local strategy in terms of ecology.*
- *Built linear features: Non-natural feature with no ecological value as a habitat and therefore not associated within any local strategy.*

- *Native hedgerow (with / without trees): this habitat qualifies as a Habitat of Principal Importance under the Natural Environment and Rural Communities Act 2006. North East Derbyshire's Local Plan accounts for this habitat and is therefore considered to be identified within a local strategy.*

Table 2: Baseline assessment – on-site area habitats

Habitat type	Area (hectares)	Condition	Strategic significance	Total habitat units
Other non-cereal crops	33.9	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	67.80
Winter stubble	25.6	Condition Assessment N/A	Area/compensation not in local strategy/ no local strategy	51.20
Modified grassland	6.01	Poor	Area/compensation not in local strategy/ no local strategy	12.02
Built linear features	0.48	N/A – Other	Area/compensation not in local strategy/ no local strategy	0.00
Total	**65.99**	-	-	**131.02**

Table 3: Baseline assessment – on-site linear habitats

Habitat type	Length (km)	Condition	Strategic significance	Total habitat units
Species-rich native hedgerow with trees	2.37	Moderate	Formally identified in local strategy	32.71
Species-rich native hedgerow with trees	0.66	Moderate	Formally identified in local strategy	9.11
Species-rich native hedgerow with trees	0.24	Moderate	Formally identified in local strategy	3.31
Native hedgerow	2.47	Good	Formally identified in local strategy	17.04

Species-rich native hedgerow with trees	2.24	Good	Formally identified in local strategy	46.37
Total	**7.98**	**-**	**-**	**108.54**

5.3 Trading rules

For habitat trading purposes the following is required for each baseline habitat:

- *Winter stubble: Low distinctiveness. Replace with same distinctiveness or better habitat.*
- *Other non-cereal crop: Low distinctiveness. Replace with same distinctiveness or better habitat.*
- *Modified grassland: Low distinctiveness. Replace with same distinctiveness or better habitat.*
- *Built linear features: Very low distinctiveness. Compensation not required.*
- *Native hedgerow: Low distinctiveness. Replace with same distinctiveness or better habitat.*
- *Species rich native hedgerow with trees: High distinctiveness. Replace with like for like or better.*

6 Proposed Biodiversity Unit Assessment

6.1 Impacts of the proposed development

The proposed development will result in the change in land use of 33.9 ha of non-cereal crops, 25.6 ha of winter stubble and 6.01 ha of modified grassland. All hedgerows will be retained, excluding one small (18 m) section adjacent to the existing access track and approximately 32 m of species-rich hedgerow with trees adjacent to Evershill Lane, to allow for the creation of new access tracks.

Proposed landscape plans include the sowing of grassland (UK Hab modified grassland) under, between and around the solar panels on site using Habitat Aid Grazing Meadow Seed Mix. Underneath the panels this will cover an area of 28 ha, and around the panels this will cover 27.79 ha.

In addition to this there will be 6.68 ha of species-rich grassland created around the boundaries of fields containing the solar panels (UK Hab other neutral grassland). This will be created using a species rich grassland mix – Emorsgate EM2 General Purposed Meadow Mix or similar. One area of wildflower meadow will be created, covering an area of 0.73 ha within a corner of one of the southern land parcels, around an area of tree planting and new benches. This will be created using a wildflower meadow seed mix such as Emorsgate EM3F Special General-Purpose Wildflowers or similar approved. Adjacent to this habitat, a Traditional Orchard will be planted using local species. This area will measure 0.47 ha. One area of wetland meadow measuring 0.27 ha will be created using EM8 Meadow Mixture for Wetlands. Plans also include the planting of 141 native trees, covering an area of approximately 0.57 ha along some of the southern site boundaries.

Access tracks will be created into the field parcels containing the solar panels, covering an area of approximately 1.2 ha in total, along with battery energy storage systems and a new substation building which will cover a total area of 0.84 ha. Seven bat / bird boxes will also be installed on existing hedgerows / trees throughout the site, distributed evenly. Two benches and an information board will also be installed in one of the southern corners of site adjacent to an area of trees planted.

In relation to linear habitats, landscape proposals include the planting of 2.29 km of new native species rich hedgerows and 0.44 km of native species rich hedgerows with trees across the central and eastern land parcels.

For further details of the proposed habitat creation and enhancement on site, please refer to the Illustrative landscape masterplan produced for the project shown in Appendix 2.

6.2 On-site habitats

The new on-site area habitats are based on the development plan in Appendix 2 and are summarised in Table 4 with new linear features summarised in Table 5.

Table 4: Summary of on-site habitat area retention, creation and enhancement

Habitat type	Area (hectares)	Condition	Strategic significance	Total habitat units
Retention				
Built linear features	0.48	N/A other	Area/compensation not in local strategy/ no local strategy	0.00
Creation				
Modified grassland – around solar panels Habitat Aid Grazing Meadow Seed Mix	55.79	Moderate	Area/compensation not in local strategy/ no local strategy	193.52
Other neutral grassland Emorsgate EM2 General Purposed Meadow Mix	6.68	Moderate	Area/compensation not in local strategy/ no local strategy	44.72
Other neutral grassland EM3 Wildflower seed mix	0.26	Good	Area/compensation not in local strategy/ no local strategy	2.18
Other neutral grassland EM8 Wetland seed mix	0.27	Good	Area/compensation not in local strategy/ no local strategy	2.27
Built linear features	1.20	N/A - other	Area/compensation not in local strategy/ no local strategy	0.00
Developed land; sealed surface	0.84	N/A - other	Area/compensation not in local strategy/ no local strategy	0.00
Rural trees	0.57	Moderate	Formally identified in local strategy	2.00
Traditional orchard	0.47	Moderate	Area/compensation not in local strategy/ no local strategy	2.77
Total	**65.51**	-	-	**247.46**

The total area of habitats created measures 65.51 ha excluding trees. The total area of habitats created including individual tress measures 66.08 ha.

Table 5: Summary of on-site linear feature retention, creation and enhancement

Linear type	Length (km)	Condition	Strategic significance	Total habitat units
Retention				
Species rich native hedgerow with trees	2.05	Moderate	Formally identified in local strategy	28.29
Species rich native hedgerow with trees	0.66	Moderate	Formally identified in local strategy	9.11
Species rich native hedgerow with trees	0.24	Moderate	Formally identified in local strategy	3.31
Native hedgerow	2.29	Good	Formally identified in local strategy	15.80
Species rich native hedgerow with trees	2.24	Good	Formally identified in local strategy	46.37
Creation				
Species rich native hedgerow	2.29	Good	Formally identified in local strategy	20.61
Species rich native hedgerow with trees	0.44	Good	Formally identified in local strategy	4.47
Total	**10.21**	-	-	**127.96**

6.3 Summary of habitat and hedgerow changes

The total biodiversity value of onsite habitats prior to development was 131.02 units, all of which will be lost as a result of the proposed development. Post development, 247.46 units will be created through the sowing of various grassland swards, tree planting and the creation of a Traditional Orchard.

Prior to development, the site contained 108.54 hedgerow units. Landscape plans include the retention of the majority of existing hedgerows with / without trees. Approximately 18 m of native hedgerow without trees will be removed along the farm entrance track, to allow for the construction of an access track and approximately 32 m of native species-rich hedgerow with trees will also be lost across the site to allow for the construction of new access roads into fields adjacent to Evershill Lane.

Post development, 2.29 km of native species rich hedgerows and 0.44 km of native species rich hedgerows with trees will be planted.

Under the current scheme design, post-development habitats and their associated target conditions will achieve a **total net change of 116.44 area habitat units, which represents a 88.87% net gain**. Trading rules in relation to area habitat units have been met.

Under the current scheme design, post-development linear habitats and their associated target conditions will achieve a **total net change of 19.42 linear habitat units, which represents a 17.89% net gain**. Trading rules in relation to linear habitat units have been met (see Section 6.4 below). A screenshot of the headline results within the biodiversity metric is shown in Table 6 below.

6.4 Trading rules

The trading rules in relation to all areas of habitats have been satisfied.

Table 6: Summary of Biodiversity Metric 4.0 results

On-site baseline	*Area habitat units*	131.02	
	Hedgerow units	108.54	
	Watercourse units	0.00	
On-site post-intervention (Including habitat retention, creation & enhancement)	*Area habitat units*	247.46	
	Hedgerow units	127.95	
	Watercourse units	0.00	
On-site net change (units & percentage)	*Area habitat units*	116.44	88.87%
	Hedgerow units	19.42	17.89%
	Watercourse units	0.00	0.00%
Off-site baseline	*Area habitat units*	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site post-intervention (Including habitat retention, creation & enhancement)	*Area habitat units*	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
Off-site net change (units & percentage)	*Area habitat units*	0.00	0.00%
	Hedgerow units	0.00	0.00%
	Watercourse units	0.00	0.00%
Combined net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Area habitat units*	116.44	
	Hedgerow units	19.42	
	Watercourse units	0.00	
Spatial risk multiplier (SRM) deductions	*Area habitat units*	0.00	
	Hedgerow units	0.00	
	Watercourse units	0.00	
FINAL RESULTS			
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Area habitat units*	116.44	
	Hedgerow units	19.42	
	Watercourse units	0.00	
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Area habitat units*	88.87%	
	Hedgerow units	17.89%	
	Watercourse units	0.00%	
Trading rules satisfied?	Yes ✓		

7 BNG Good Practice Principles for Development

Table 7 below outlines the justification of how each of the BNG Principles has been applied as part of the biodiversity net gain assessment.

Table 7: Good practice principles and their consideration within the scheme

Good Practice Principle	Site Considerations
Apply the mitigation hierarchy	Please refer to the PEA for further details on the mitigation hierarchy (ADAS, 2023). Where possible, ecological features on site deemed important and of medium - high distinctiveness have been retained such as hedgerows and trees.
Avoid losing biodiversity that cannot be offset elsewhere	The project will not result in losses to any statutory designated sites, ancient woodland or other irreplaceable habitat.
Compensate / Offset	Proposed landscape plans include the creation of permanent species grassland and hedgerow / tree planting and a traditional orchard which is considered sufficient compensation for the loss of existing habitats. This approach along with continued care and management will both protect biodiversity and support local wildlife.
Be inclusive and equitable	The new development will provide a source or renewable energy contributing to the government's targets for clean energy and commitments to 'net zero' emissions target by 2050. Proposed landscape plans include the creation of permanent species grassland, hedgerow and tree planting which will significantly improve the biodiversity value of the land. This approach along with continued care and management will both protect biodiversity and support local wildlife.
Address risk	Proposed habitat creations, enhancements and retentions are practical to achieve on site in association with the development and which balance the agricultural requirements of the surrounding area with the biodiversity goals.
Make a measurable net gain contribution	The Defra Metric 4.0 has been used to track the changes from baseline in order to demonstrate a measurable net gain. See section 5 and 6 for a detailed summary of the biodiversity metric calculation.
Be additional	Seven bird and bat boxes will be installed throughout the site which will further enhance its biodiversity value. The PEA also recommended that invertebrate 'hotels' and bumblebee boxes could be installed, along with the creation of reptile refugia and hibernacula (ADAS, 2023).
Create a net gain legacy	A Biodiversity Management and Monitoring Plan should be produced for the project which will details management prescriptions for the proposed habitat enhancement and creation.
Optimise sustainability	By achieving net gain through recommendations suitable to the site and practical in the long term, ecological enhancements on site are contributing to the overall sustainability of the development.
Be transparent	The LPA will be provided with the PEA report, BNG Assessment report, the Defra Metric calculation sheet and supporting drawings used in the calculations.

	All biodiversity metric choices have been fully explained and justified.

7.1 Consideration of the Mitigation Hierarchy

Table 8 below outlines how the mitigation hierarchy is being considered.

Table 8: Mitigation hierarchy

Hierarchy Step	Site Considerations
Avoid	The development is avoiding all impacts on any non-statutory or statutory designated sites, ancient woodland or other irreplaceable habitat. All pre-development habitats on the site are widespread both locally and nationally. The majority of existing habitats of high distinctiveness (native species-rich hedgerows with trees) are to be retained. 99.42% of high distinctiveness hedgerows are to be retained as part of the proposed development. Areas of modified grassland, winter stubble and non-cereal crop will be lost post construction. The loss of these habitats were considered unavoidable. These areas of habitat will be replaced with grassland of a higher species richness and greater distinctiveness post-development.
Minimise	The removal of high distinctiveness hedgerow habitat measures 50 m in total (removing only 0.6% of the baseline habitat). Measures to avoid harm to nesting birds, reptiles, and bats during site clearance, construction and operation have been outlined within the PEA for the proposed development (ADAS, 2023).
Compensate / Offset	Detailed habitat compensation measures have been identified through the use of the Biodiversity Metric 4.0, see following section.

8 Conclusion

The proposed development essentially comprises the construction of a 66-ha solar PV array and Battery Energy Storage System (BESS), including a substation, with an envisioned export capacity of up to 49.9 MW, on agricultural land associated with Evershill Lane, Morton, Derbyshire, DE55 6HB (National Grid Ref: SK 40542 60956).

Proposed landscape plans include the sowing of grassland, between and around the solar panels on site as well as areas of species-rich grassland, wildflower meadow, wetland meadow and a traditional orchard as well as hedgerow and tree planting.

The current development design is expected to result in a net habitat unit change of 116.44 habitat units, which represents an 88.87% net gain and a net linear unit change of 19.42 hedgerow units, which represents a 17.89% net gain.

The trading rules in relation to the loss of area and linear habitat units have been satisfied as part of the proposed landscape plan.

9 Reference

ADAS (2023) *WNT69105-1742 (00) Eden Meadows Solar Preliminary Ecological Appraisal Update.*

CIEEM, CIRIA, IEMA (2016) *Biodiversity Net Gain: Good practice principles.*

CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine. September 2018.*

North East Derbyshire District Council (2018) *North East Derbyshire Local Plan (2014 – 2034). Publication Draft February 2018.*

Natural England (2023a) *The Biodiversity Metric 4.0: auditing and accounting for biodiversity: User guide.*

Natural England (2023b) *The Biodiversity Metric 4.0 User Guide – Technical Annex 2.*

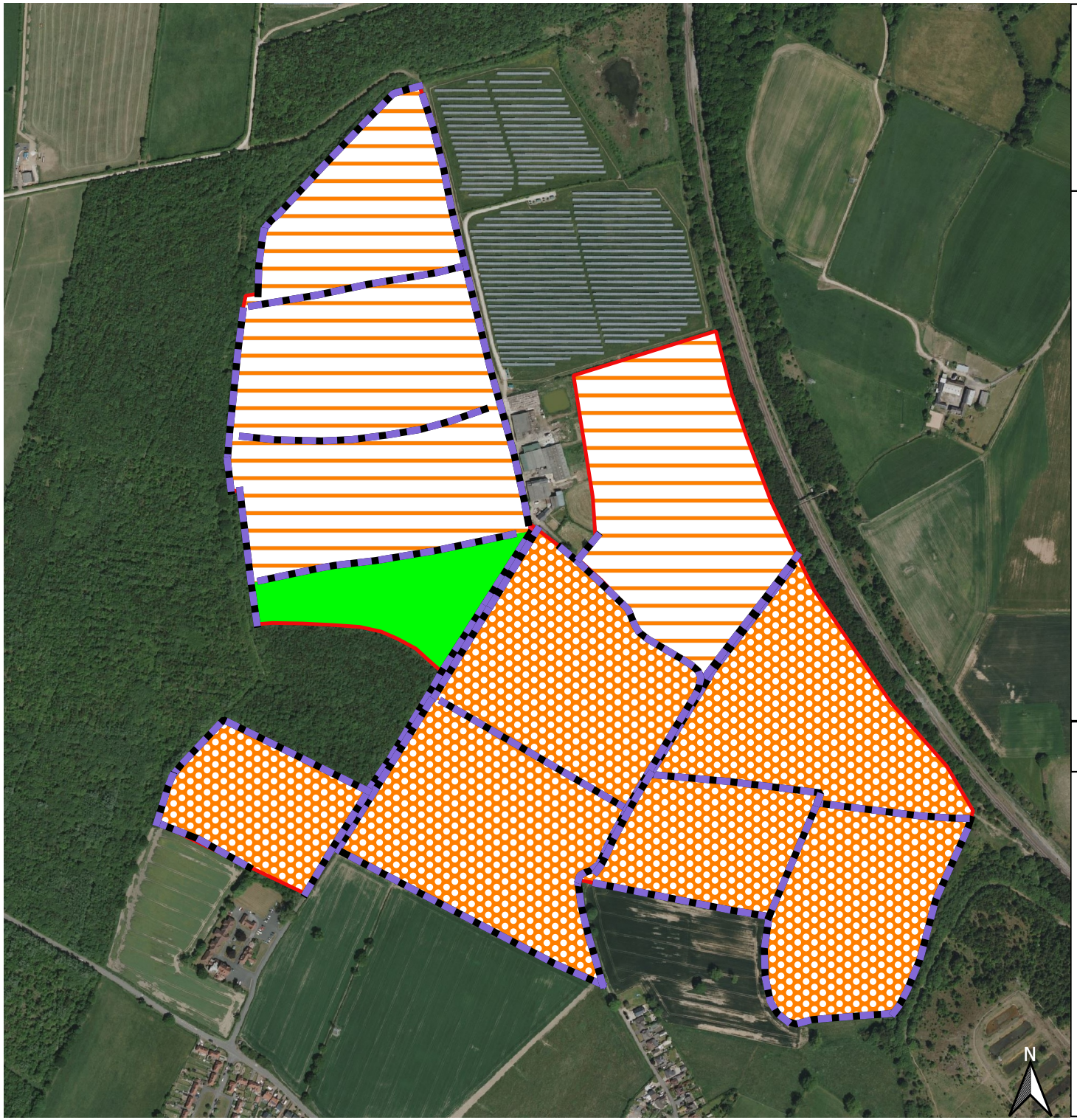
NPPF (2021) *National Planning Policy Framework: Biodiversity and Geological Conservation*. Department for Communities and Local Government, Norwich.

The British Standard Institute (2013) *BSI Standards Publication, Biodiversity — Code of practice for planning and development*.

UK HAB Ltd (2023) *The UK Habitat Classification : Habitat Definitions. Version 2.0.*

Appendix 1: UK Habitat Classification Map

See following page.



ADAS Planning

4205 Park Approach, Leeds,
LS15 8GB

Eden Meadows UK Classification Habitat Survey Map

- Red Line Boundary
- Cereal crops winter stubble - c1c5 (502, 517)
- Other non-cereal crops - c1d8 (502, 517)
- Modified grassland - g4 (103, 502)
- Built linear feature - u1e (800, 839)
- Native hedgerow - h2a (11, 517, 522, 612)

Drawn by Lydia Waite 28.11.2023

ADAS

0 100 200 m

ADAS, 4205 Park Approach
Leeds LS15 8GB
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ADAS

Appendix 2: Proposed Development and Landscape Plan

See following page.

KEY

- Site boundary
- Existing vegetation to be retained & maintained at min. 3m high – Root Protection Area (RPA) indicated by pink dashed line
- Existing vegetation to be removed
- Existing overhead powerline
- Existing road
- Existing Public Right of Way (PRoW)
- Proposed permissive route
- Proposed native tree
- Proposed orchard tree – species to be chosen from local varieties
- Proposed native hedgerow planting to be maintained at min. 3m high
- Proposed grazing meadow mix – ie. Habitat Aid 'Grazing Meadow Seed Mix, or similar
- Proposed species rich grassland – ie. Emorsgate EM2 'General Purposed Meadow Mix, or similar
- Proposed wildflower meadow – ie. Emorsgate EM3 'Special General Purpose Meadow Mix, or similar
- Proposed wetland meadow – ie. Emorsgate EM8 'Meadow Mixture for Wetland, or similar
- Proposed access track
- Solar panels
- Security fence & access gate
- Hybrid inverter container with acoustic fencing
- Spares container
- Customer switch gear container
- Substation and associated infrastructure
- CCTV to be located every 80-120m
- Reroute underground LV cable
- Temporary construction compound
- NGED operational land
- Security fence & access gate
- Indicative bird / bat box
- Indicative picnic bench
- Indicative information board

INDICATIVE PLANTING SCHEDULE

PROPOSED NATIVE TREE PLANTING

Species	Common Name	Girth (cm)	Height (cm)	Form	Root Condition
Acer campestre	Field Maple	8-10	250-300	2x; Standard; CS 175-200cm; 4 brks	RB
Betula pendula	Silver Birch	8-10	250-300	2x; Standard; CS 175-200cm; 3 brks	RB
Malus sylvestris	Crab Apple	8-10	250-300	2x; Standard; CS 175-200cm; 4 brks	B
Ilex aquifolium	Common Holly	-	175-200	Leader with laterals	RB
Prunus avium	Wild Cherry	8-10	250-300	2x; Standard; CS 175-200cm; 3 brks	RB
Quercus robur	Common Oak	8-10	250-300	2x; Standard; CS 175-200cm; 3 brks	RB
Sorbus aucuparia	Rowan	8-10	250-300	2x; Standard; CS 175-200cm; 3 brks	RB
Tilia x europaea	Common Lime	8-10	250-300	2x; Standard; CS 175-200cm; 3 brks	RB

PROPOSED ORCHARD TREE PLANTING

Species	Cultivars	Flowering Group	Height (cm)	Form	Rootstock	Root Condition
Malus domestica	Katy	B	150-200	Half-standard; CS 100-125cm; 3 brks	M25	B
	Laxton's Superb	C	150-200	Half-standard; CS 100-125cm; 3 brks	M25	B
	Lord Derby	C	150-200	Half-standard; CS 100-125cm; 3 brks	MM106	B
	Lord Lambourne	A	150-200	Half-standard; CS 100-125cm; 3 brks	M25	B
	Newton's Wonder	D	150-200	Half-standard; CS 100-125cm; 3 brks	M25	B
	Sunset	C	150-200	Half-standard; CS 100-125cm; 3 brks	MM106	B

PROPOSED NATIVE HEDGEROW PLANTING

To be planted at 5/lin. m. in double staggered rows 40cm apart (or as appropriate where infilling)

Species	Common Name	Mix (%)	Height (cm)	Form	Root Condition
Corylus avellana	Common Hazel	15	60-80	1+2; Transplant – seed raised; Branched; 3 brks	B
Crataegus monogyna	Common Hawthorn	30	60-80	1+1; Transplant – seed raised	B
Prunus spinosa	Blackthorn	30	60-80	1+1; Transplant – seed raised; Branched; 2 brks	B
Rosa canina	Dog Rose	10	60-80	1+1; Transplant – seed raised; Branched; 3 brks	B
Rhamnus catherticus	Common Buckthorn	15	60-80	1+1; Transplant – seed raised; Leader with laterals; 3 brks	B

DATE	NO	REVISION NOTE
22/08/2025	B	Minor tree survey graphic amendment to comments
20/08/2025	A	Minor amendment to plan as per client comments
11/08/2025	-	First Issue

LANDSCAPE MASTERPLAN

EDEN MEADOWS SOLAR FARM

CLIENT
JBM SOLAR PROJECTS 28

DATE	SCALE	TEAM	APPRVD
22/08/2025	1:2000 @A0	VK	CR

DRAWING NUMBER

P25-1599_EN_001B

PEGASUS GROUP

Appendix 3: Condition Assessment Tables

Area Habitats

Modified grassland Habitat Type condition assessment (low distinctiveness)			
	Criteria	**Y/N**	**Notes**
A	There must be 6-8 species per m^2. If a grassland has 9 or more species per m^2 it should be classified as a medium distinctiveness grassland habitat type. (NB – this criterion is essential for achieving moderate condition)	N	Less than 6 – 8 sp. present per m^2
B	Sward height is varied (at least 20%) of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for insects, birds and small mammals to live and breed.	Y	Pass
C	Some scattered scrub (including bramble) may be present, but scrub accounts for less than 20% of total grassland area. Note – patches of shrubs with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.	Y	No scrub present
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	Y	Less than 5% of total grassland area with physical damage evident
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	Y	Less than 10% bare ground present
F	Cover of bracken less than 20%	Y	None recorded
G	There is an absence of invasive non-native species (as listed on Schedule 9 of WCA, 1981).	Y	None recorded
	Condition:	Poor	

Linear habitats

Hedgerow Habitat Types Condition Assessment (Native species rich hedgerow with trees) (H1, H4 – 8 & H23)			
	Criteria	**Y/N**	**Notes**
A1	Height: >1.5 m average along length.	Y	Pass
A2	Width: >1.5 m average along length.	Y	Pass
B1	Gap – hedge base: Gap between ground and base of canopy <0.5 m for >90% of total length.	Y	Pass
B2	Gap – hedge canopy continuity: Gaps make up <10% of total length and no canopy gaps >5 m.	Y	Pass
C1	Undisturbed ground and perennial vegetation: >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of its length: - Measured from outer edge of hedgerow, and - is present on one side of the hedge (at least).	N	Evidence of disturbance for farm machinery access
C2	Undesirable perennial vegetation: plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground (indicator sp. Include nettles, cleavers, and docks).	N	Cleavers abundant along arable field hedgerow boundaries
D1	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species (neophytes are plants that have naturalised in the UK since AD 1500).	Y	Pass
D2	Current damage: >90% of the hedgerow or undisturbed ground is free of damage caused by human activities (could include evidence of pollution, piles of manure, rubble, excessive hedge cutting).	Y	Pass
	Additional Group – applicable to hedgerow with trees only.		
E1	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient[8]), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	N	Trees all of a similar age
E2	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	Y	Pass
	Condition:	Moderate	

Hedgerow Habitat Types Condition Assessment (Native species rich hedgerow with trees) H2 & H10			
	Criteria	**Y/N**	**Notes**
A1	Height: >1.5 m average along length.	Y	Pass
A2	Width: >1.5 m average along length.	Y	Pass
B1	Gap – hedge base: Gap between ground and base of canopy <0.5 m for >90% of total length.	Y	Pass
B2	Gap – hedge canopy continuity: Gaps make up <10% of total length and no canopy gaps >5 m.	Y	Pass
C1	Undisturbed ground and perennial vegetation: >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of its length: - Measured from outer edge of hedgerow, and - is present on one side of the hedge (at least).	N	Evidence of disturbance for farm machinery access
C2	Undesirable perennial vegetation: plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground (indicator sp. Include nettles, cleavers, and docks).	N	Cleavers abundant along arable field hedgerow boundaries
D1	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species (neophytes are plants that have naturalised in the UK since AD 1500).	Y	Pass
D2	Current damage: >90% of the hedgerow or undisturbed ground is free of damage caused by human activities (could include evidence of pollution, piles of manure, rubble, excessive hedge cutting).	Y	Pass
	Additional Group – applicable to hedgerow with trees only.		
E1	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient[8]), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	Y	More than one age-class present
E2	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	Y	Pass
	Condition:	Moderate	

Hedgerow Habitat Types Condition Assessment (Native species rich hedgerow with trees) H3			
Criteria		**Y/N**	**Notes**
A1	Height: >1.5 m average along length.	Y	Pass
A2	Width: >1.5 m average along length.	N	Width less than 1.5 m on average
B1	Gap – hedge base: Gap between ground and base of canopy <0.5 m for >90% of total length.	Y	Pass
B2	Gap – hedge canopy continuity: Gaps make up <10% of total length and no canopy gaps >5 m.	Y	Pass
C1	Undisturbed ground and perennial vegetation: >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of its length: - Measured from outer edge of hedgerow, and - is present on one side of the hedge (at least).	N	Evidence of disturbance for farm machinery access
C2	Undesirable perennial vegetation: plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground (indicator sp. Include nettles, cleavers, and docks).	N	Cleavers abundant along arable field hedgerow boundaries
D1	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species (neophytes are plants that have naturalised in the UK since AD 1500).	Y	Pass
D2	Current damage: >90% of the hedgerow or undisturbed ground is free of damage caused by human activities (could include evidence of pollution, piles of manure, rubble, excessive hedge cutting).	Y	Pass
Additional Group – applicable to hedgerow with trees only.			
E1	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient[8]), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	Y	More than one age-class present
E2	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	Y	Pass
	Condition:	Moderate	

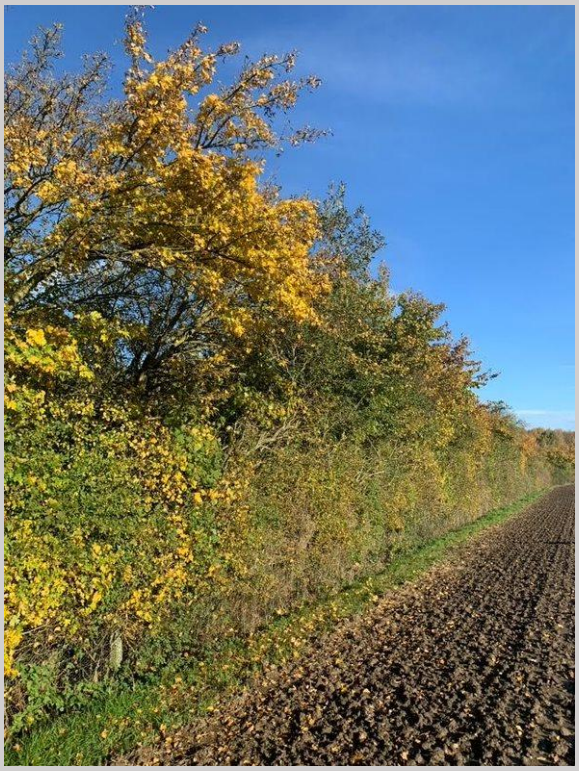
Hedgerow Habitat Types Condition Assessment (Native species-poor hedgerow) H9, H11, H12, H14, H19 & H21			
	Criteria	**Y/N**	**Notes**
A1	Height: >1.5 m average along length.	Y	Over 1.5 m
A2	Width: >1.5 m average along length.	N	Width less than 1.5 m on average
B1	Gap – hedge base: Gap between ground and base of canopy <0.5 m for >90% of total length.	Y	Pass
B2	Gap – hedge canopy continuity: Gaps make up <10% of total length and no canopy gaps >5 m.	Y	Pass
C1	Undisturbed ground and perennial vegetation: >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of its length: - Measured from outer edge of hedgerow, and - is present on one side of the hedge (at least).	Y	Pass
C2	Undesirable perennial vegetation: plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground (indicator sp. Include nettles, cleavers, and docks).	Y	Pass
D1	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species (neophytes are plants that have naturalised in the UK since AD 1500).	Y	Pass
D2	Current damage: >90% of the hedgerow or undisturbed ground is free of damage caused by human activities (could include evidence of pollution, piles of manure, rubble, excessive hedge cutting).	Y	Pass
	Condition:	Good	

Hedgerow Habitat Types Condition Assessment (Native species rich hedgerow with trees) H13, H15 – H18, H20 & H22)			
	Criteria	**Y/N**	**Notes**
A1	Height: >1.5 m average along length.	Y	Pass
A2	Width: >1.5 m average along length.	N	Width less than 1.5 m on average
B1	Gap – hedge base: Gap between ground and base of canopy <0.5 m for >90% of total length.	Y	Pass
B2	Gap – hedge canopy continuity: Gaps make up <10% of total length and no canopy gaps >5 m.	Y	Pass
C1	Undisturbed ground and perennial vegetation: >1 m width of undisturbed ground with perennial herbaceous vegetation for >90% of its length: - Measured from outer edge of hedgerow, and - is present on one side of the hedge (at least).	Y	Pass
C2	Undesirable perennial vegetation: plant species indicative of nutrient enrichment of soils dominate <20% cover of the area of undisturbed ground (indicator sp. Include nettles, cleavers, and docks).	Y	Pass
D1	>90% of the hedgerow and undisturbed ground is free of invasive non-native and neophyte species (neophytes are plants that have naturalised in the UK since AD 1500).	Y	Pass
D2	Current damage: >90% of the hedgerow or undisturbed ground is free of damage caused by human activities (could include evidence of pollution, piles of manure, rubble, excessive hedge cutting).	Y	Pass
	Additional Group – applicable to hedgerow with trees only.		
E1	There is more than one age-class (or morphology) of tree present (for example: young, mature, veteran and or ancient[8]), and there is on average at least one mature, ancient or veteran tree present per 20 - 50m of hedgerow.	Y	More than one age-class present
E2	At least 95% of hedgerow trees are in a healthy condition (excluding veteran features valuable for wildlife). There is little or no evidence of an adverse impact on tree health by damage from livestock or wild animals, pests or diseases, or human activity.	Y	Pass
	Condition:	Good	

Appendix 4: Photographs

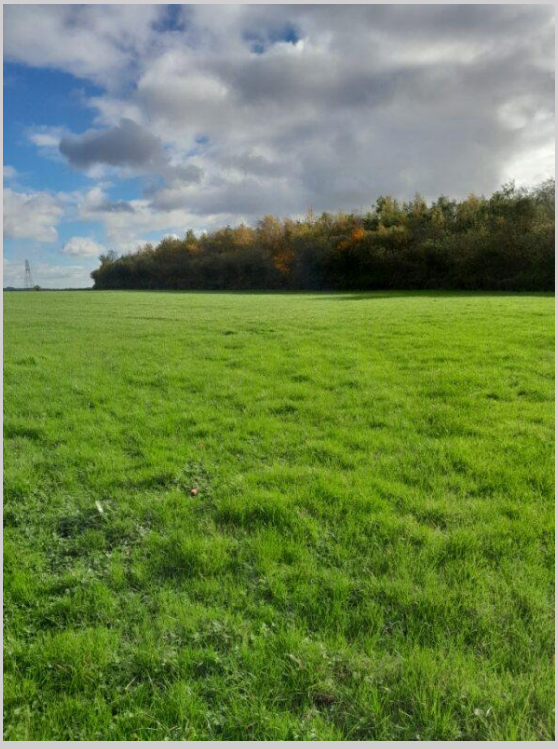
Photograph 1: Example of field containing non-cereal crop, bounded by hedgerows.

Photograph 2: Example of a field containing cereal crop (winter stubble), bounded by hedgerows.

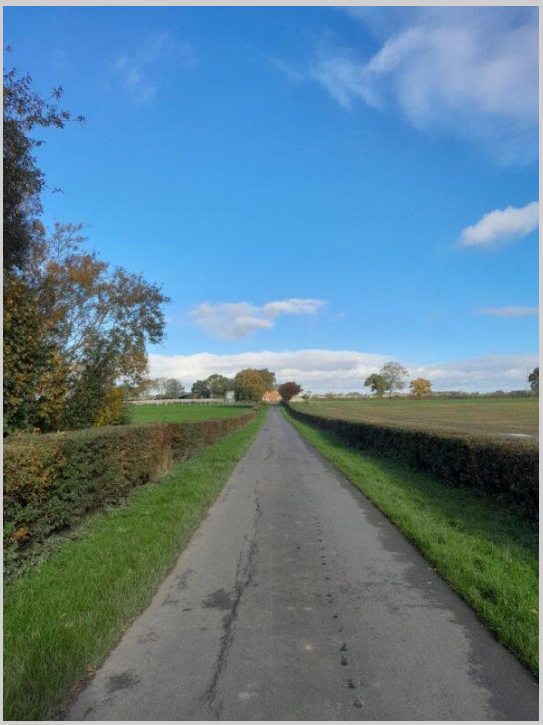


Photograph 3: Example of species-rich native hedgerow (with trees) along arable field boundaries.

Photograph 4: Evershill Lane running through the south-eastern section of site.



Photograph 5: Field consisting of modified grassland (with some areas evident of horse grazing)



Photograph 6: Species-poor native hedgerow adjacent to access road