Biodiversity Net Gain Statement and Assessment

Nailstone Substation, Leicestershire

14 January 2025

Ecology
Arboriculture
Land Management

Report Details

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Revision	Date	Author	Checked By	Approver	Summary of Changes
Rev1	14 January 2025	Vicki Baldwin BSc MSc ACIEEM	Lindsay Taylor BSc MSC ACIEEM	Richard Pash BSc MCIEEM	

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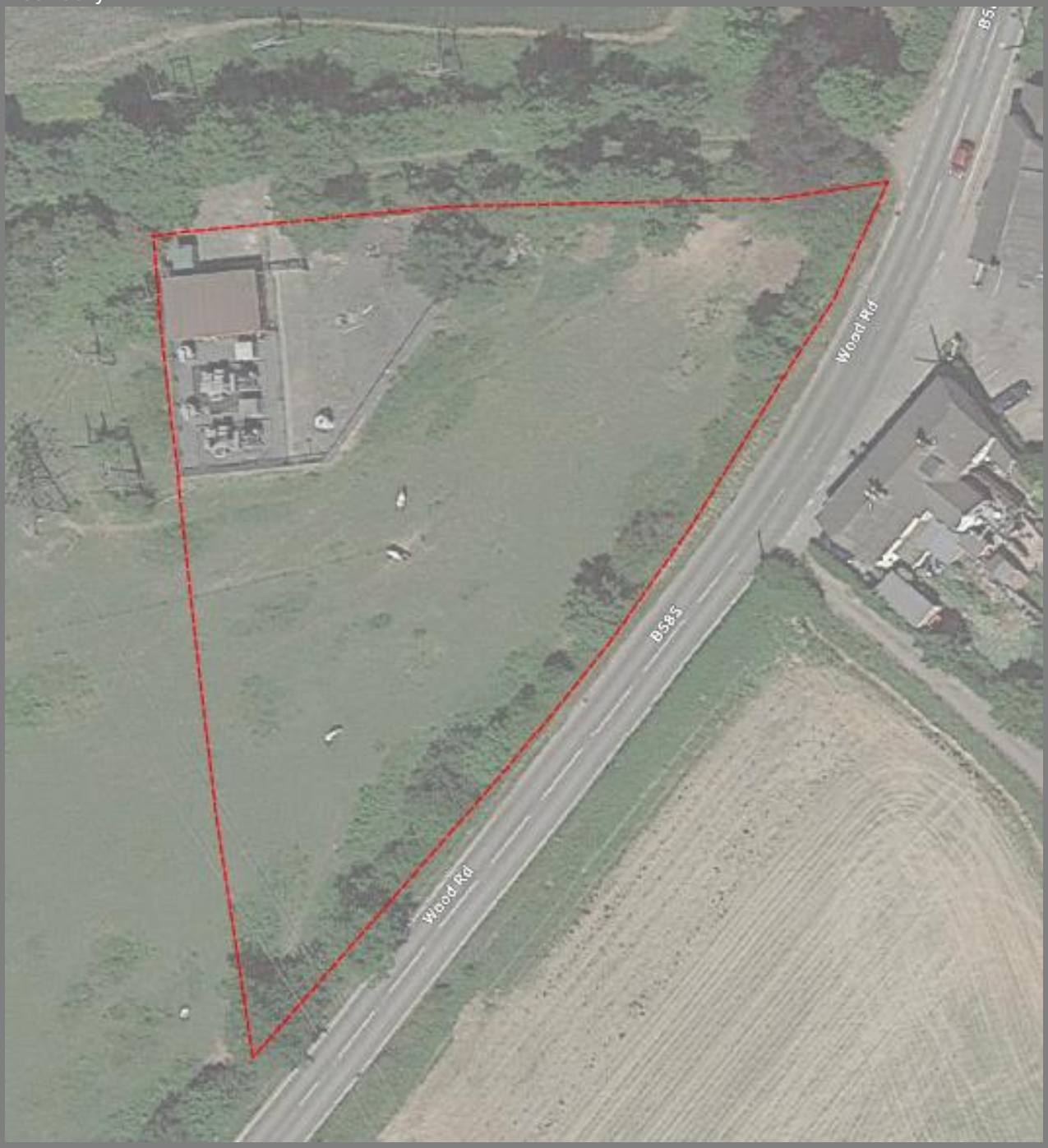
Site Details

Site Name and Location	Nailstone Substation, Leicestershire
Central OS Grid Reference	SK 43259 08914
Client	National Grid

Boundary



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1 Introduction

This report provides a Biodiversity Net Gain Statement and Assessment for Nailstone Substation, Leicestershire in relation to detailed application for an extension of the existing substation into the eastern section of the grassland field, with associated hardstanding tracks and access. The surveys were commissioned by National Grid.

The area within the application boundary is hereafter referred to as the 'Site'.

Biodiversity Net Gain is an approach to development that aims to leave the natural environment in a measurably better state than it was initially and meets the requirements of the Government's 25 Year Environment Plan. The Environment Act (2021) requires most planning applications in England to deliver a 10% net gain in biodiversity.

1.1 Site Context

The Site is located directly north of Wood Road. Surrounding land use includes arable land to the north, east and south, a small block of priority habitat deciduous woodland to the west and a new commercial development to the southwest.

1.2 Description of Proposed Development

Proposals consist of an extension to the existing substation, hardstanding roadways to access the substation and a main access point onto Wood Road.

1.3 Aims

The aims of this report are to:

- Provide the national mandatory Biodiversity Net Gain (BNG) information requirements.
- Provide any local BNG information requirements as specified by Leicestershire County Council.
- Provide the site baseline and an indicative post-development BNG assessment.

2 BNG Statement

2.1 National Mandatory Biodiversity Net Gain Information

Table 1 provides the BNG information required to support the planning application under Article 7 of The Town and Country Planning (Development Management Procedure) (England) Order 2015.

Table 1: National Mandatory Baseline BNG Information

Information required	Description	
Would the planning permission, if granted, be subject to the biodiversity gain condition?	Yes – meets criteria of a minor development.	
Pre-development biodiversity value of the on-Site habitat on the date of application	Habitats	0.75
	Hedgerows	1.42
	Watercourses	n/a
Publication date of the biodiversity metric calculation tool used	July 2024	
Is an earlier date proposed?	No – the relevant date is the date of the planning application submission.	
Is there any evidence of habitat degradation?	No – there is no evidence of any unauthorised habitat degradation since the statutory cut-off date of 30 January 2020.	
Is there any irreplaceable habitat on Site?	No – there is no irreplaceable habitat within the Site boundary.	
Plan of on-Site habitat on the date of the application (or earlier date)	Refer to **Figure 1**.	

2.2 'Significant' Net Gain

What counts as 'significant' habitat enhancement varies depending on the scale of development and existing habitat. Based on the Proposed Site Plan (Nailstone 22/11kv Substation LE42_12_0002_C), the following 'significant' on-site habitat enhancements, as defined by Government guidance, are predicted as detailed on **Figure 2**:

- ***Habitats of medium or higher distinctiveness****:* native species-rich hedgerows with trees (high distinctiveness), other neutral grassland, individual trees, native hedgerow with trees (all medium distinctiveness) proposed.
- ***Habitat creation or enhancement where distinctiveness is increased relative to the distinctiveness of the habitat before development****:* the baseline was dominated by modified grassland (low distinctiveness). Other neutral grassland, individual trees (all medium distinctiveness) and native species-rich hedgerows with trees (high distinctiveness) proposed.

2.3 Biodiversity Gain Hierarchy

The biodiversity gain hierarchy has been followed during the design process as per **Table 2.**

Table 2: Application of the Biodiversity Gain Hierarchy

Step in the hierarchy	Application
First, in relation to onsite habitats which have a medium, high and very high distinctiveness, the avoidance of adverse effects from the development and, if they cannot be avoided, the mitigation of those effects	One individual tree (medium distinctiveness) requires removal to facilitate the development. Given its location around the existing substation, there is no alternative to its removal. Six small trees in moderate condition will be planted to compensate for this. A section of medium distinctiveness native hedgerow with trees requires removal to facilitate the provision of an access road into the substation and as such is unavoidable. This has been minimised to only that required to meet safety standards for visibility, with the width of breaches also minimised.
Then, in relation to all onsite habitats which are adversely affected by the development, the adverse effect should be compensated by prioritising in order, where possible, the enhancement of existing onsite habitats, creation of new onsite habitats, allocation of registered offsite gains and finally the purchase of biodiversity credits	As most habitat will be removed, there is no opportunity to enhance all on site habitats in order to compensate the losses. Taking a precautionary approach, it is considered feasible to enhance the northern retained hedgerow to a better condition given its context within the development but not the eastern hedgerow, as a section of the eastern hedgerow will be removed to allow for the access road. On-site habitat creation in the form of other neutral grassland and a new length of species rich native hedgerow with trees will therefore be used to compensate losses.

3 BNG Assessment Summary

A baseline and indicative post-development BNG assessment was undertaken using the statutory biodiversity metric (released in July 2024) following current guidance (Defra 2024a). Further detail on the methodology is provided in **Appendix 1**.

The on-site baseline and indicative post-development BNG position are demonstrated in **Table 3**. Full details of the calculations including condition assessment criteria are provided in the statutory metric calculation tool (GE Consulting 2024) provided separately. Baseline and indicative post-development BNG plans are presented in **Figures 1** and **2**.

Table 3: Summary of on-Site BNG Metric Assessment

Unit Type	Onsite Baseline Units	Onsite Post-development Units	Net Unit Change	% Change
Habitat	0.75	0.87	+ 0.13	+ 17%
Hedgerow/ Linear	1.42	1.87	+ 0.45	+ 31.98%
Watercourse	0	0	N/A	N/A

The indicative assessment indicates that a minimum 10% net gain is achievable on-site. This will need to be updated to reflect the final site layout and [detailed] landscape plan at reserved matters/ following consent.

4 References

Defra (2024a) The Statutory Biodiversity Metric User Guide July 2024. Available from: https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides.

Defra (2024b) The Statutory Biodiversity Metric – Technical Annex 1: Condition Assessment Sheets and Methodology July 2024. Available from: https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides.

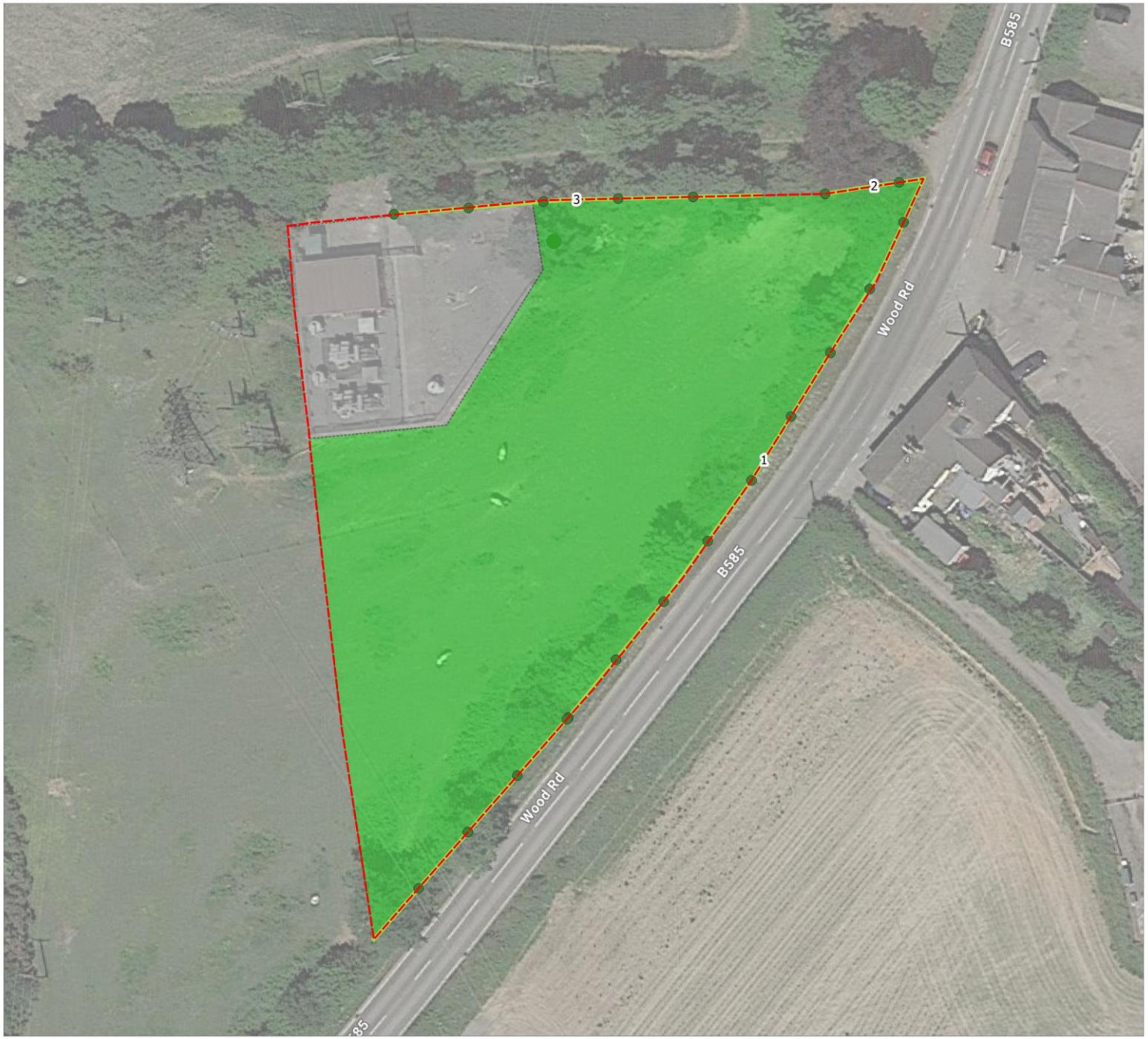
GE Consulting (2024) Ecological Impact Assessment – Nailstone Substation. Ref 2646-EcIA-VB.

GE Consulting (2024) Statutory Biodiversity Metric – Nailstone Substation. Ref 2646-SBM-VB.

Nailstone 33/11kv Substation. Proposed Site Plan. LE42_12_0002_C

JNCC (2010) *Handbook for Phase 1 Habitat Survey - a Technique for Environmental Audit*. JNCC, Peterborough, ISBN 0 86139 636 7.

UKHab Ltd (2023) *UK Habitat Classification Version 2.0*. Available from: https://www.ukhab.org.



Key:

- Site Boundary
- g4 - Modified grassland
- u1b - Developed land. sealed surface
- Native Hedgerow with trees
- Rural Tree (Broadleaved)

Plan is to Scale
Scale at A3: **1:638.759**

0 7 14 21 28 m

Figure 1:
Baseline Biodiversity Net Gain Plan

Project:
Nailstone Substation

Client:
National Grid

Date:
9/1/2025

Drawn:
VB

Ref:
2646-EcIA-F1

Revision:
-

N

Key:

- Site Boundary
- g3c - Other neutral grassland
- u1b - Developed land. sealed surface
- Native Hedgerow with trees
- Native Species Rich Hedgerow
- New Rural Tree (Broadleaved)

Plan is to Scale
Scale at A3: **1:606.104**

0 7 14 21 28 m

Figure 2:
Post Development Biodiversity Net Gain Plan

Project:
Nailstone Substation

Client:
National Grid

Date:
9/1/2025

Drawn:
VB

Ref:
2646-EcIA-F2

Revision:
-

N

Appendix 1 – Biodiversity Net Gain Assessment Methodology

Site Survey and Condition Assessment

The Site was surveyed by Vicki Baldwin BSc MSc ACIEEM on 16 October 2024, comprising a UK Habitat Classification (UKHab) survey (UKHab Ltd. 2023, V2.0) and condition assessment following the criteria in the Statutory Biodiversity Metric – Technical Annex 1: Condition Assessment Sheets and Methodology (Defra 2024a).

All habitats within the Site were identified, described and mapped during the field survey in accordance with the UK Habitat Classification (UKHab) (UKHab Ltd. 2023 (V2.0)) and Statutory Biodiversity Metric (Defra 2024b) classifications for hedgerows, with other linear and point features mapped using Phase 1 Habitat Survey symbology (JNCC 2010). Primary habitats have been mapped to a minimum mapping unit (MMU) of 25m^2, although where features of note of a smaller scale are present, these have also been recorded and mapped.

Any habitats (e.g. traditional orchard) with no appropriate primary habitat label were assigned a secondary habitat code. Other secondary UKHab codes were recorded where relevant, although they are described qualitatively within this report for ease of reading.

Biodiversity Metric Methodology

The baseline BNG assessment was undertaken as per the Statutory Biodiversity Metric User Guide (Defra 2024a.

The habitats identified during the walkover survey were compared to current and historic satellite imagery (including Google Earth Pro and Google Maps) to assess whether degradation has occurred between 30 January 2020 and the date of the survey. Where degradation has occurred in this timeframe, the habitats on Site immediately prior to the degradation was used as the baseline for the Site in line with government guidance.

The Site was divided up into distinct habitat parcels and linear features based on UKHab and Statutory Biodiversity Metric classifications and measured accordingly using the QGIS mapping tool. Where appropriate, individual trees that have been included within the metric calculations are represented using point symbols superimposed over area habitats. Their area has been calculated and included within the metric as per the Statutory Biodiversity Metric User Guide (Defra 2024a). All condition criteria information has been included in the User Comments of the baseline tab for all habitats for which a condition assessment is required.

The area of each habitat to be created, retained, and/or enhanced, as measured from the Proposed Site Plan in QGIS, was entered into the metric. These were then each given an appropriate target condition and strategic significance score.

The baseline BNG plan is shown in **Figure 1** and the indicative post-development BNG plan is shown in **Figure 2**.

Strategic Significance

The strategic significance score represents the local significance of the habitat based on its location and habitat type and is considered separately for each individual habitat. The value is determined by referring to the relevant Local Nature Recovery Strategy (LNRS). Where this has not yet been published, LPA biodiversity and green infrastructure strategies that apply to the site have been referred to. Due to the Site and habitats

not being located within a LNRS/ an area that has formerly been identified in a local strategy, all habitats were considered to have **Low** strategic significance.

Biodiversity Metric Principles

The Biodiversity Metric Principles have informed the assessment as per **Table 1.1**:

Table 1.1: Application of the Biodiversity Metric Principles

Principle	Application
Principle 1 - The metric assessment should be completed by a competent person	The metric was completed by an ecologist trained and experienced in the use of the metric.
Principle 2 - The use of this biodiversity metric does not override existing biodiversity protections, statutory obligations, policy requirements, ecological mitigation hierarchy or any other requirements. This includes consenting or licensing processes, for example woodlands	All other legislative and policy requirements have been met. See the EcIA for further details (GE Consulting 2646-EcIA-VB)
Principle 3 - This biodiversity metric should be used in accordance with established good practice guidance and professional codes	The latest User Guide and good practice guidance (including information within Planning Practice Guidance) has been followed.
Principle 4 - This biodiversity metric is not a complex or comprehensive ecological model and is not a substitute for expert ecological advice	An EcIA has been produced taking into account all other ecological considerations on site.
Principle 5 - Biodiversity units are a proxy for biodiversity and should be treated as relative values	An EcIA has been produced taking into account all other ecological considerations on site and the requirements for species have been incorporated into the design.
Principle 6 - This biodiversity metric is designed to inform decisions in conjunction with locally relevant evidence, expert input, or guidance	An EcIA has been produced taking into account all ecological considerations on site, including local requirements using survey and desk study data, with the metric used to show how habitat creation and enhancement is contributing to providing an uplift in biodiversity value of the Site, as required by the Environment Act.
Principle 7 - Habitat interventions need to be realistic and deliverable within a relevant project timeframe	The habitats proposed to be enhanced/ created have been specified based on site specific circumstances, including how these will likely be utilised and managed in the future. As such a precautionary approach has been taken to suggesting habitats to be created post-development and condition assessment.
Principle 8 - Created and enhanced habitats should be, where practical and reasonable, local to any impact and deliver strategically important outcomes for nature conservation	All habitat creation is taking place within the development site.
Principle 9 - This biodiversity metric does not enforce a minimum habitat size ratio for compensation of losses. Proposals should aim to:	Proposed habitats have been designed to link to existing landscape features, including woodland and hedgerows, to enhance existing ecological networks. Areas of grassland are proposed to offset area losses of this habitat and to maintain

Principle	Application
- maintain habitat extent - supporting more, bigger, better and more joined up ecological networks - ensure that proposed or retained habitat parcels are of sufficient size for ecological function	ecologically functional areas for species e.g. reptiles and bat foraging.

Assumptions

The following assumptions were made to complete the calculations:

- It is assumed that there will be a two-year delay between habitat loss and habitat creation.
- It is assumed the measures in a CEMP and HMMP will be followed to ensure that the proposed habitat retention, creation and enhancements are achievable.
- 0.341ha of modified grassland in poor condition lost to the development.
- 0.0163ha (one medium tree in moderate condition) removed,
- 0.108ha hardstanding created for the new substation extension,
- 0.0244ha (6 small trees in moderate condition) planted in the areas of grassland around the substation.
- 0.232ha Other neutral grassland in poor condition planted in grassland to the east and south of the substation.
- 0.013km native hedgerow with trees removed for access road.
- 0.03km species rich native hedgerow planted along western boundary of substation
- 0.065km existing native hedgerow with trees enhanced from poor to good condition.

Limitations

There were no limitations associated with the site survey or baseline BNG calculations.

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