ESS - LAND AT NORTH CRAY ROAD, SIDCUP

Biodiversity Net Gain Report

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1. INTRODUCTION

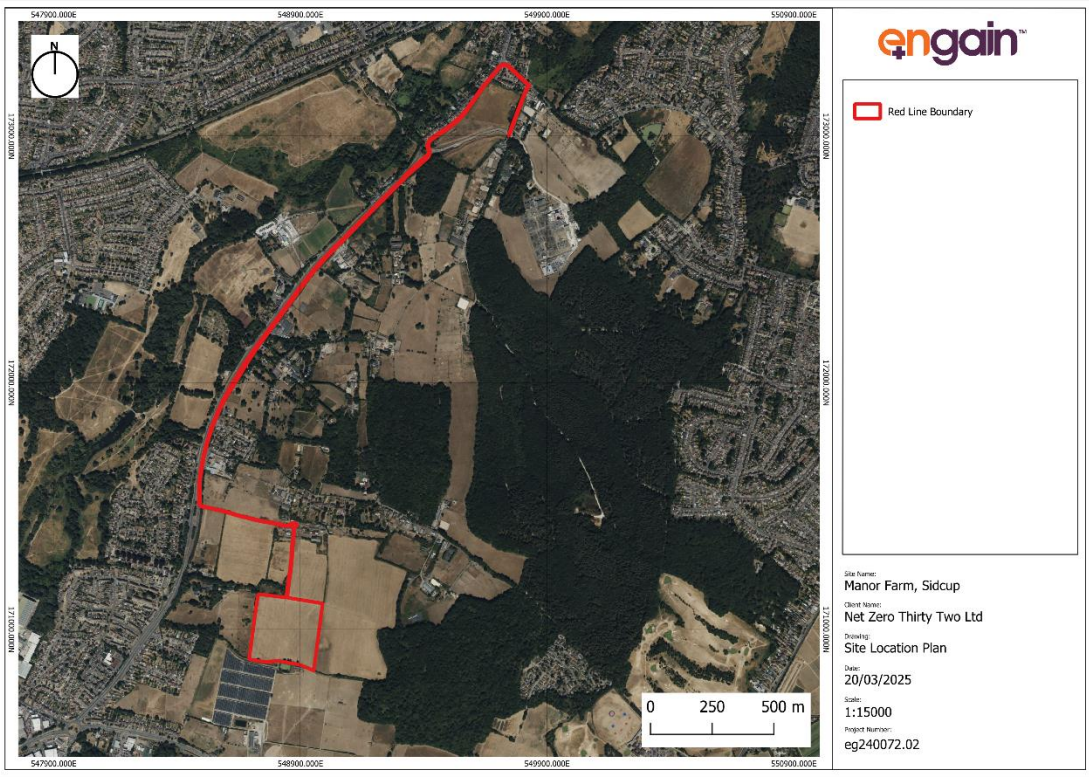
1.1. This Biodiversity Net Gain (BNG) Assessment has been prepared to support a planning application for a 200mw Energy Storage System (ESS) and associated infrastructure on land at North Cray Road, Sidcup (Grid Reference: TQ48837100).

1.2. The site location is shown in **Figure 1**. The proposed ESS is situated within an agricultural field sown with grass cover, which holds negligible botanical value. Hedgerows border the site to the north, west, and south, while a fence encloses the eastern boundary. The proposed cable route extends north of the site to North Cray Road before joining the A223 north.

1.3. This report sets out:

1. The baseline habitat conditions at the site;
2. A locally appropriate strategy for delivering a biodiversity net gain
3. The results of the Statutory Metric 4.0 for habitats, hedges and watercourses.

Figure 1, "Site Location Plan"



2. LEGISLATION AND POLICY

Introduction

2.1. Wildlife in the UK is protected through European Directives, which are transposed into national legislation, supported by a range of national and local policy and guidance. Recent changes in planning policy and legislation have gone beyond site and species-specific protection to set broader goals for the conservation and enhancement of the natural environment and halting the continued loss of biodiversity in the UK.

2.2. Development can contribute to these goals through, for example, protecting the best features of a site and making them a valued part of the site's new use, any by incorporating enhancements to improve the site's value for wildlife.

2.3. The sections below provide a brief guide to the principal legislation and policy that sets the terms of reference for ecological appraisals in the UK. This is not intended to be a full description of all the obligations enacted by the various referenced documents, which should be referred to in their original form for the full details

Relevant Legislation

2.4. The principal pieces of legislation relating to wildlife that are of relevance to this report are:

1. The Environment Act 2021[1] and subsequent regulations and guidance
2. EU Habitats Directive[2] (1992);
3. EU Birds Directive[3] (1979);
4. Conservation of Habitats and Species (Amendment) Regulations[4] (2017);
5. The Wildlife and Countryside Act 1981[5] (as amended);
6. The Countryside and Rights of Way Act 2000[6];
7. The Natural Environment and Rural Communities Act 2006;

[1] UK Government (2021). Environment Act 2021. [online] Available at: https://www.legislation.gov.uk/ukpga/2021/30/enacted.
[2] Council of the European Communities (1992). Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (Habitats Directive). Official Journal of the European Communities, L206, pp.7–50.
[3] Council of the European Communities (1979). Council Directive 79/409/EEC on the conservation of wild birds (Birds Directive). Official Journal of the European Communities, L103, pp.1–18.
[4] UK Government (2017). The Conservation of Habitats and Species (Amendment) Regulations 2017. [online] Available at: https://www.legislation.gov.uk/uksi/2017/1012/contents/made.
[5] UK Government (1981). The Wildlife and Countryside Act 1981 (as amended). [online] Available at: https://www.legislation.gov.uk/ukpga/1981/69.
[6] UK Government (2000). The Countryside and Rights of Way Act 2000. [online] Available at: https://www.legislation.gov.uk/ukpga/2000/37/contents.

2.5. The main focus of much of this legislation is the protection of sites and species, the delineation of precisely how they are protected, and what actions would constitute an offence.

National Planning Policy

2.6. National, regional and local planning authorities are obliged to follow key principles to ensure that the potential impacts of planning decisions on biodiversity conservation are fully considered. The National Planning Policy Framework sets out the Government's policies for the protection and enhancement of biodiversity through the town and country planning system. This encourages the contribution to, and enhancement of, natural and local environments through minimising the impacts on biodiversity and providing net gains in biodiversity where possible.

2.7. Planning authorities are required to follow key principles in their consideration of potential impacts of planning decisions on biodiversity conservation. Circular 06/05: Biodiversity and Geological Conservation provides guidance on the application of the law relating to planning and nature conservation and complements the National Planning Policy Framework.

2.8. The presence of species protected under UK and European legislation are a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat. Ecological appraisals and protected species surveys are therefore designed to provide local planning authorities with the baseline information they require in order to fully consider the potential ecological effects of a planning application.

Biodiversity 2020

2.9. A strategy for England's wildlife and ecosystem services, provides the UK Biodiversity Action Plan and country level biodiversity strategies for England, based on the list of habitats and species listed under The Natural Environment and Rural Communities Act 2006.

Biodiversity Net Gain

2.10. Planning permission, if granted, would be subject to the biodiversity gain condition as set out in Article 7 of the Town and Country Planning (Development Management Procedure) (England) Order 2015 (as amended).

Adopted Plan

2.11. The adopted Development Plan for the London Borough of Bexley comprises the London Plan (2021) and Bexley Local Plan (2023).

London Plan (2021)

2.12. Policy G5: Urban Greening - This policy introduces the Urban Greening Factor (UGF) as a tool to quantify the amount of greening required in new developments. By encouraging features such as green roofs, walls, and soft landscaping, it promotes biodiversity enhancement and supports net gain objectives.

2.13. Policy G6: Biodiversity and Access to Nature - This policy requires development proposals to manage impacts on biodiversity and achieve net gains. It stresses the protection of Sites of Importance for Nature Conservation (SINCs) and the application of the mitigation hierarchy—avoidance, minimization, and compensation—to address biodiversity impacts

2.14. Policy G7: Trees and Woodlands - This policy emphasizes the protection of existing trees and woodlands and encourages the planting of new ones. It acknowledges the role of urban forests in supporting biodiversity and contributing to net gains.

Bexley Local Plan (2023):

2.15. Policy SP9: Natural Environment - This strategic policy emphasizes the protection, conservation, restoration, and enhancement of the borough's natural environment, including biodiversity and geodiversity assets. It aligns with national and regional policies to secure measurable net gains for biodiversity, recognizing and promoting sites where ecological value has increased.

2.16. Policy DP20: Biodiversity and Geodiversity in Developments - This policy mandates that development proposals must protect and enhance biodiversity and geodiversity assets. It emphasizes the conservation, restoration, and enhancement of ecological networks and Sites of Importance for Nature Conservation (SINC), aiming to secure measurable net gains for biodiversity.

2.17. Policy DP21: Greening of Development Sites - This policy focuses on the protection and enhancement of green and blue infrastructure, including open spaces and waterways. By promoting the integration of natural features into developments, it supports biodiversity enhancement and contributes to net gains.

3. METHODS

Baseline Survey

3.1. A habitat survey was conducted on the 4th of July 2024, following the UK Habitats Classification (UKHab) methodology as outlined in the UKHab User Manual.

3.2. This process evaluates key criteria and characteristics specific to each habitat type, providing a standardised framework for assessing habitat condition. The assessment considers a range of factors, including habitat extent, health, vegetation structure, and the presence of undesirable species. These criteria vary depending on the habitat type, ensuring that the evaluation is tailored and reflective of the ecological features present.

3.3. The baseline Biodiversity Unit (BU) value of the habitats was calculated using the Statutory Biodiversity Metric. Habitat data were mapped in QGIS and imported into the metric using the GIS Import Tool, ensuring accurate and efficient integration of spatial data for the assessment.

3.4. Baseline biodiversity units have been established using the findings of:

- The UK Habs survey including a condition assessment (where applicable)
- Measuring both on site baseline and post-development intervention habitats using QGIS; and
- Professional judgement.

Strategic Significance

3.5. Strategic Significance is a mechanism within the Statutory Metric that ensures habitats are evaluated in relation to their local conservation importance. This helps ensure that BNG delivers effective, place-based biodiversity benefits rather than just meeting numerical offset targets. Existing and proposed habitats are categorised based on their strategic significance, ranging from low to high, as detailed below.

High Strategic Significance – Formally identified in local strategy

3.6. This applies to habitats located within designated conservation areas, such as Special Areas of Conservation (SACs), Sites of Special Scientific Interest (SSSIs), Local Nature Reserves (LNRs), or those identified within a Local Plan, Neighbourhood Plan, or Nature Recovery Network. These habitats are recognised for their contribution to biodiversity objectives and typically require higher compensation if impacted by development.

Medium Strategic Significance – Location ecologically desirable but not in local strategy

3.7. This includes habitats that are not formally designated but still align with local conservation priorities. They may be in areas identified for potential ecological enhancement or recovery but are not directly part of a protected site. These areas may be noted in local biodiversity strategies but lack the full weight of formal protection.

Low or No Strategic Significance – Area/compensation not in local strategy/no local strategy

3.8. This tier applies to habitats that are not included in any local plans, conservation strategies, or designated ecological networks. These areas generally have lower ecological value and require less compensation when impacted by development.

3.9. Developers are encouraged to assess Strategic Significance early in the planning process to align with policy requirements and proactively manage potential project constraints. Identifying habitat significance at an early stage can help integrate biodiversity considerations into project design and improve outcomes for both development and conservation goals.

Proposed Habitats

3.10. Proposed habitat conditions have been assigned to newly created and enhanced habitat. This has been determined by reviewing the criteria characteristics for each habitat, set out in the guidance, to select a realistic, likely achievable condition once the habitats have established (over the period allowed for in the Defra 4.0 calculator's 'time to target condition' multiplier) and assuming they are subject to appropriate management.

4. BASELINE CONDITIONS

Habitats

4.1. The dominant habitat on site is temporary grass and clover leys. An unsealed track leads to the north of the site, where it joins to the North Cray Road (A223).

4.2. The site is surrounded by hedgerows forming the boundaries to the north, west and south. A fence line bounds the site to the east.

4.3. A summary of the baseline habitats is provided in **Table 1**.

Figure 2, "Land at North Cray Road Baseline Habitats"

Table 1, "Summary of Baseline Habitats"

Location	Baseline Habitat	Definition	Area/Length	Condition	Strategic Significance
On-site	Developed land; sealed surface	Soil surface sealed with impervious materials as a result of urban	15316m^2	N/A – Other	Low

Location	Baseline Habitat	Definition	Area/Length	Condition	Strategic Significance
		development and infrastructure construction			
On-site	Artificial unvegetated, unsealed surface	Land that has no or very low (<10%) cover of vegetation through direct or indirect human activity, and the soil surface is not sealed with impervious materials.	2405m^2	N/A – Other	Low
On-site	Temporary grass and clover leys	Temporary grass or legumes in rotation with grain or tilled crops, usually as a soil conservation measure.	70239m^2	Condition Assessment N/A	Low
On-site	Native hedgerow with trees	A hedgerow with >80% canopy cover of UK native or archaephyte woody species with a minimum of one tree per 20m length	537m	Good	High
On-site	Native hedgerow	A hedgerow with >80% canopy cover of UK native or archaephyte woody species	206m	Moderate	High

5. PROPOSED DEVELOPMENT

5.1. The proposed development includes a variety of habitat types within its landscape strategy, balancing semi-natural habitats with energy infrastructure (**Figure 3**). The most extensive habitat type is other neutral grassland, covering 2.5 hectares, which accounts for approximately 34.0% of the total habitat area. Additionally, modified grassland encompasses 1.5 hectares, representing 21.2% of the habitat area. Mixed scrub occupies 0.4 hectares (5.1%) of the landscape, while broadleaved woodland comprises 0.3 hectares (3.7%).

5.2. Developed land with sealed surfaces constitutes the largest single habitat category, totalling 2.6 hectares or 35.9% of the site area. However, 61.3% of this hardstanding already exists and will only be impacted temporarily for the laying of cables.

5.3. Proposed habitats have been mapped and are shown in **Figure 4** and a summary provided in **Table 2**.

Figure 3, "RHLA Illustrative Landscape Masterplan - Dated 10.03.2025"

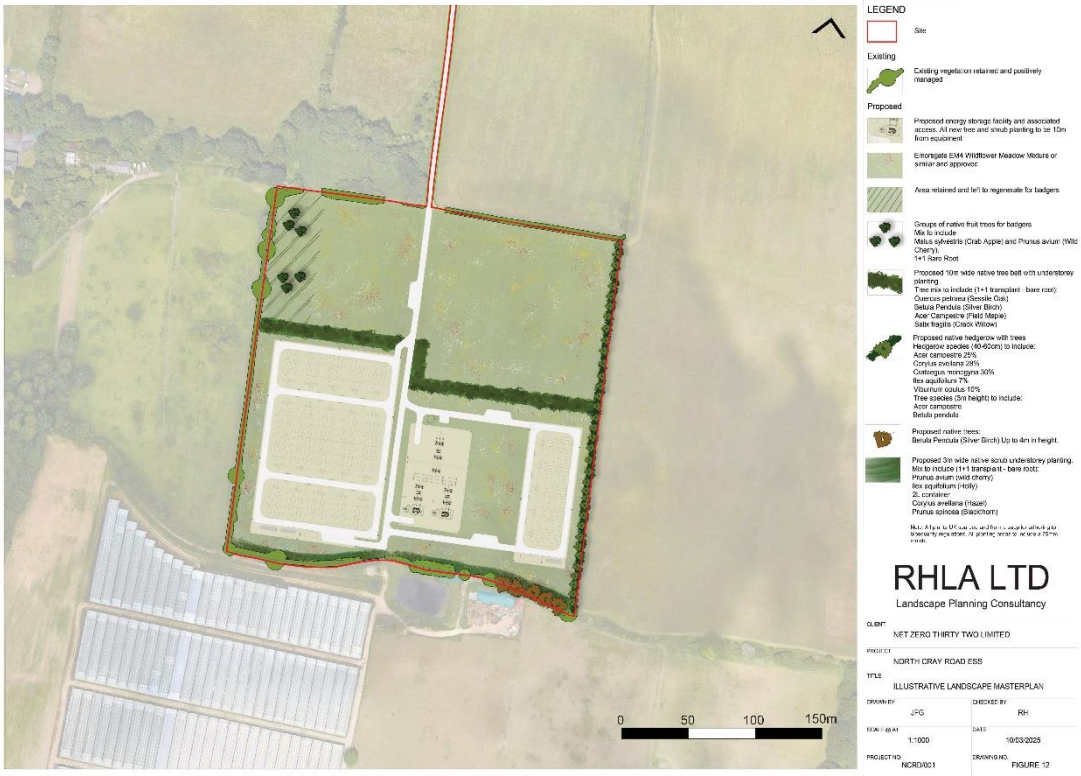


Figure 4, "Proposed Habitat Plan"

Table 2, "Summary of Proposed Habitats"

Location	Proposed Habitat	Definition	Area/ Length	Condition	Strategic Significance
On-site	Artificial unvegetated, unsealed surface	Land that has no or very low (<10%) cover of vegetation through direct or indirect human activity, and the soil surface is not sealed with impervious materials.	2405m^2	N/A – Other	Low
On-site	Mixed Scrub	Dense scrub comprising a mixture of species without a single species dominant or stands with a	3738m^2	Moderate	Low

Location	Proposed Habitat	Definition	Area/ Length	Condition	Strategic Significance
		dominant species not listed in h3a – h3k.			
On-site	Broadleaved Woodland	Broadleaved and mixed woodland that does not meet the definition of w1a-w1f.	2654m^2	Moderate	High
On-site	Individual Trees	3x Crab Apple 3x Wild Cherry	244m^2	Moderate	High
On-site	Native hedgerow with trees	A hedgerow with >80% canopy cover of UK native or archaephyte woody species with a minimum of one tree per 20m length	537m	Good	High
On-site	Native hedgerow	A hedgerow with >80% canopy cover of UK native or archaephyte woody species	206m	Moderate	High

Woodland belt habitat classification

5.4. Typically, for tree planting to constitute woodland, it would be required to meet the Forestry Commission[7] definition:

"…To be considered "woodland", the site must meet all the following:

- *a minimum area of 0.5ha*
- *a minimum width of 20m*
- *a potential tree canopy cover of at least 20%*
- *a canopy consisting of specimens that meet the definition of trees (see Section 3)"*

[7] Forestry Commission (2025) Guidance: Definition of trees and woodland. Available at: https://www.gov.uk/government/publications/definition-of-trees-and-woodland/definition-of-trees-and-woodland

5.5. The proposed woodland belt does not meet these criteria, as it is less than 20 m in width and under 0.5 ha in area. As such, the Statutory Biodiversity Metric classifies the trees as 'Individual Trees'. However, this presents its own complications: the proposed planting schedule follows the Miyawaki method, with a density of approximately 4 trees/m², equating to around 10,612 trees. In the context of the Biodiversity Metric, this would theoretically produce a canopy cover of roughly 44 ha, which is clearly unrealistic for the site.

5.6. Given these inconsistencies, the habitat has instead been classified as 'Other Broadleaved Woodland' within the metric. While it does not meet the Forestry Commission's strict definition of woodland, this classification more accurately reflects the proposed habitat's structure and ecological function.

Woodland and Hedgerows: High Strategic Significance

5.7. The proposed woodland belt, fruit trees and hedgerow planting are considered of 'High Strategic Significance' as they align with both Policy G7: Trees and Woodlands of the London Plan (2021) and Policy DP21: Greening of Development Sites in the Bexley Local Plan (2023). These policies advocate for the protection of existing trees and the planting of new woodlands to enhance urban environments, improve air quality, support biodiversity, and provide recreational spaces. The London Plan aims to increase tree canopy cover by 10% by 2050, while Bexley's Local Plan emphasises retaining and enhancing existing trees, promoting native species planting, and advocating for tree-lined streets to strengthen the borough's green infrastructure and ecological resilience.

6. BIODIVERSITY NET GAIN METRIC

6.1. The proposals will deliver an additional 11.86 Habitat Units and 1.87 Hedgerow Units, in excess of the mandatory 10% net gain (see **Figure 5** below). The proposed strategy will require a Habitat Management and Monitoring Plan (HMMP) because the BNG strategy involves creating habitats of medium distinctiveness, which constitute significant habitat enhancements[8].

6.2. An HMMP is necessary to ensure long-term management and monitoring, maintaining the ecological value of these habitats for at least 30 years through a legal agreement or planning condition.

Figure 5, "Statutory Metric - Headline Results"

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	11.86
	Hedgerow units	1.87
	Watercourse units	0.00
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	84.43%
	Hedgerow units	21.52%
	Watercourse units	0.00%
Trading rules satisfied?	Yes ✓	

Unit Type	Target	Baseline Units	Units Required	Unit Deficit
Habitat units	10.00%	14.05	15.45	0.00
Hedgerow units	10.00%	8.68	9.55	0.00
Watercourse units	10.00%	0.00	0.00	0.00

[8] Department for Environment, Food & Rural Affairs (DEFRA) (2024) Make on-site biodiversity gains as a developer. Available at: https://www.gov.uk/government/publications (Accessed: 24 February 2025)

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