



Biodiversity Net Gain Assessment

Proposed Rainham Landfill Extension of Life

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Basis of Report

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Acronyms and Abbreviations

ASNW	Ancient Semi-Natural Woodland
BNG	Biodiversity Net Gain
BSc	Bachelor of Science
BU	Biodiversity Unit
CIEEM	Chartered Institute of Ecology and Environmental Management
ES	Environmental Statement
ha	Hectares
Hons	Honours
JNCC	Joint Nature Conservation Committee
LNR	Local Nature Reserve
LPA	Local Planning Authority
MSc	Master of Science
NPPF	National Planning Policy Framework
NVC	National Vegetation Classification
OEP	Office for Environmental Protection
PAWS	Plantations on Ancient Woodland Sites
SINC	Site of Importance for Nature Conservation
SLR	SLR Consulting Ltd
SSSI	Sites of Scientific Interest
TRP	The Royal Parks
VHDH	Very High Distinctiveness Habitat



1.0 Introduction

SLR Consulting Ltd (SLR) was commissioned in October 2024 by Veolia ES Landfill UK Ltd (the Client) to undertake an evaluation of biodiversity performance and to undertake a Biodiversity Net Gain (BNG) assessment for the proposed 5-year extension of the Rainham landfill site with subsequent 2-year restoration period following completion of waste disposal at the site located at Rainham Landfill, Coldharbour Lane, Rainham, RM13 9YB (hereafter referred to as the 'Site').

1.1 Site Description

A full description of the current ecological baseline of the Site is provided within the Preliminary Ecological Appraisal (PEA) report¹ for the proposed development. The application site extends to approximately 156 hectares (ha) and is centred on National Grid reference TQ 52335 79495.

The southern areas of the Site are currently being used as a landfill, with most of the remaining areas having undergone restoration. The Site comprises an access road with weighbridge facilities and associated infrastructure, small, site compound with two temporary buildings, car parking and storage facilities, access roads and tracks, variety of vegetated habitats (mostly grassland types) and small waterbodies and wet ditches.

The Site is located adjacent to the northern bank of the River Thames and south of Rainham, Greater London, which comprises dense residential and commercial areas. The Site is accessed via an adjacent minor road on the northwest boundary (Coldharbour Road), with the busy A13 dual carriageway further to the north. Inner Thames Marshes Site of Special Scientific Interest (SSSI) is adjacent to the Site to the east and Rainham Marshes Local Nature Reserve (LNR) to the north of the Site, both are only separated from the Site by Coldharbour Road. The Site is also within 2 km of eight non-statutory Sites of Importance for Nature Conservation (SINC).

1.2 Details of the Proposed Development

The current site at Rainham has been used for landfill purposes since the original consent issued in 1998 and has undergone various planning applications since this time, with the most recent being issued in September 2016 (P1566.15, London Borough of Havering). The 2016 planning application consented to the continuation of waste inputs and operation of other waste management facilities (materials recycling facility, waste transfer station, open air composting site and associated soil plant, gas engines, leachate treatment plant, and incinerator bottom ash processing) until 2024 and re-profiling of final contours.

The planning application to which this BNG assessment relates to is seeking for a 5-year extension of the landfill site to allow waste disposal and open windrow composting operations to continue until 31 December 2029, with restoration to be completed by 31 December 2031 following completion of waste disposal. The application also seeks to regularise the existing levels at the site. Save for proposed amendments to the proposed landfill phasing plan, there are no other changes to the approved and current operations for either the landfill or composting operations.

¹ Preliminary Ecological Appraisal Report (2023) SLR, London. 20231212_425.064709.00001 Rainham Landfill PEA Report v2



1.3 Purpose of the Report

This report is intended to provide the planning authority with sufficient information on the biodiversity performance of the proposed development in comparison to the baseline, and to inform consideration of the planning application, specifically the alignment of the application with the relevant planning policy.

1.4 Other Supporting Documents

This report is currently supported by a number of other documents or figures, including:

- Restoration Baseline Map ([Appendix A](#)).
- Summary outputs or results from use of The Statutory Biodiversity Metric².

1.5 Evidence of Technical Competence and Expertise

Olivia Guindon, who wrote this report, is an Associate Ecologist at SLR. Olivia has a BSc degree in Ecology and Wildlife Conservation (BSc Hons) and a MSc in Species Identification and Survey Skills. Olivia has over six years' professional experience within ecological consultancy and has undertaken numerous ecological assessments of this type.

This report has been subject to Quality Assurance review as per SLR's policies by Ruth Holland ACIEEM, Associate Ecologist at SLR. Ruth has a BSc in Ecology and Conservation Management and a MSc in Biological Recording. She has over nine years of experience as a professional ecological consultant, during which time she has worked on many development projects.

1.6 Relevant Legislation and Policy

1.6.1 Environment Act 2021

The Environment Act (the Act) gained Royal Assent on 9 November 2021 and is now enshrined within UK law. The Act provides a mechanism for implementing the Government's ambitions for 'improving the natural environment', which were previously set out in publications including the 25 Year Environment Plan. The Act provides recognition of the 25 Year Environment Plan as the first "environmental improvement plan" which can be used as the basis for understanding the steps Government intends to take to improve the natural environment.

The Act implements the ambitions for an improved natural environment, by setting out statutory or legal requirements which mandate action, under the oversight of the newly formed Office for Environmental Protection (OEP). The focus of the Act is the "...*provision [of] targets, plans and policies for improving the natural environment...*" and its requirements are structured around a number of broad themes.

Part 6 of this Act is relevant to this report as it sets out provisions for '*Biodiversity gain as condition of planning permission*'. Amendments to the Town and Country Planning Act 1990 require planning applications to be supported with additional information on the change in the biodiversity value attributed to a project, with biodiversity metric calculations, and with biodiversity gain plans. Planning authorities are required to consider these submissions in

² GOV.UK Statutory biodiversity metric tools and guides. Guidance. Obtained in November 2024 via URL: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>



the exercise of their planning functions, to ensure that they are secured, approved and where relevant registered.

1.6.2 National Planning Policy Framework

A summary of national planning policy relevant to (onshore) biodiversity in England and Wales is provided below. Note that the summary provided here is intended for general guidance only and the original policy documents should be consulted for definitive information.

1.6.2.1 National – The National Planning Policy Framework (NPPF), 2023

The National Planning Policy Framework (NPPF, 2023)³ sets out guidance for local planning authorities and decision-makers on how to apply planning policies when drawing up plans and making decisions about planning applications. Along with Government Circular 06/05⁴, the broad policy objectives in relation to the protection of biodiversity and geological conservation in England through the planning system are set out.

Paragraph 180 d of the NPPF states that:

“Planning policies and decisions should contribute to and enhance the natural and local environment by:

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

Furthermore, Paragraph 181 states that plans should:

“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”.

Paragraph 185 states that:

“To protect and enhance biodiversity and geodiversity, plans should:

- a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and*
- b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.”*

Paragraph 186 goes on to state:

“When determining planning applications, local planning authorities should apply the following principles:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other*

³ Department for Levelling Up, Housing & Communities (December 2023) *National Planning Policy Framework*.

⁴ Office of the Deputy Prime Minister. 2005. Government Circular: Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System. ODPM Circular 06/2005.



developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest; c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.”

1.6.3 Local Planning Policy

1.6.3.1 London Borough of Havering Local Plan 2016 – 2031

Policy 30 Biodiversity and Geodiversity

The Council will protect and enhance the borough’s natural environment and seek to increase the quantity and quality of biodiversity in Havering by:

- i. Ensuring developers demonstrate that the impact of proposals on protected sites and species have been fully assessed when development has the potential to impact on such sites or species. Appropriate mitigation and compensation measures will also need to be identified where necessary. If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission will normally be refused;
- ii. Not permitting development which would adversely affect the integrity of Specific Scientific Interest, Local Nature Reserves and Sites of Importance for Nature Conservation except for reasons of overriding public interest, or where adequate compensatory measures are provided; If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission will normally be refused;
- iii. Supporting proposals where the primary objective is to conserve or enhance biodiversity;
- iv. Encouraging developments where there are opportunities to incorporate biodiversity in and around the development;
- v. Supporting developments that promote the qualitative enhancement of sites of biodiversity value, (by supporting proposals that improve access, connectivity and the creation of new habitats. Measures include maintaining trees, native vegetation, and improving and restoring open spaces and green infrastructure for the benefit of wildlife;
- vi. Working with partners and local conservation groups to improve conditions for biodiversity in the borough;
- vii. Working with partners and local conservation groups to improve conditions for biodiversity in the borough.



2.0 Key Concepts

2.1 Overview

The biodiversity evaluation of the proposed development has been undertaken using the Statutory Biodiversity Metric⁵.

The Biodiversity Metric uses a comparison of habitats as a proxy for biodiversity and describes these habitats using standard units referred to as biodiversity units (BUs). There are three distinct types of BUs and these are not of equivalence or interchangeable, they are:

- Habitat BUs – which describe areas of habitat based on measurement in hectares;
- Linear BUs – which describe hedgerows and lines of trees measured in kilometres; and
- Riparian BUs – which described rivers and streams measured again in kilometres.

The overall calculation of the change in biodiversity resulting from a project or development is derived by subtracting pre-project or 'baseline' biodiversity units' valuation of an area of land from the number of post-project units.

The results are influenced by:

- Habitat area/length;
- Distinctiveness (an indication of value);
- Condition – an indication of quality; and
- Multipliers or risk factors – that take account of the contribution to local priorities, the difficulty of habitat creation/management, the time it takes to deliver and variation in the location of habitat delivery.

2.2 Definitions

In the context of this project, we have assumed the following definitions:

- Biodiversity net gain (BNG) is an approach to development, and/or land management, that aims to leave the natural environment in a measurably better state than it was beforehand.
- Under the Act the relevant percentage for Biodiversity Net Gain is a change in value attributed to a development $\geq 10\%$ the pre-development value (of onsite habitats).

2.3 Methodology

In supporting the assessment of biodiversity changes SLR have made reference to:

- Statutory Biodiversity Metric - Calculation Tool
- Statutory Biodiversity Metric - User Guide

The Metric uses a unified habitat classification system known as UKHab. This system provides a number of benefits over existing systems such as Phase 1 and National Vegetation Classification (NVC), and allows Natural England, Scottish Natural Heritage, Natural Resources Wales, Department of the Environment Northern Ireland and the Joint

⁵ GOV.UK Statutory biodiversity metric tools and guides. Guidance. Obtained in March 2024 via URL: <https://www.gov.uk/government/publications/statutory-biodiversity-metric-tools-and-guides>



Nature Conservation Committee (JNCC) to report consistently on habitats of European and national significance. UKHab information has been used where available to support the assessment of biodiversity changes.

Where habitat data has been recorded using the Phase 1 habitat classification system, these have been subject to conversion to UKHab classifications using the Metric Phase 1 translation tool.

In addition, the approach requires the condition of habitats to be assessed. Where habitat data was collected before the publication or widespread use of the Metric this is unlikely to have been collected and, in this case, an assumed condition rating has been adopted. Such variations from the Metric approach are explained in the relevant sections.

2.4 Statutory Biodiversity Metric Principles and Rules

Natural England advise that the Metric is a tool that helps inform plans and decisions, by using habitats as a proxy for measuring biodiversity value, but that any assessment must be undertaken with awareness of its limitations. The metric specifically requires interpretation and ecological expertise to provide evidence of the appropriateness of proposed approaches to BNG and sets out a series of key principles and rules that help to support an understanding of whether proposals support wider considerations that a calculation output.

The Metric User Guide indicates that assessments should be conducted with regard to:

- **“Principle 1:** *This metric does not change existing biodiversity protections, statutory obligations, or policy requirements. The use of this metric does not override the ecological mitigation hierarchy and other requirements (such as consenting or licensing processes, for example woodlands).”*
- **“Principle 2:** *This metric should be used in accordance with established good practice guidance and professional codes.”*
- **“Principle 3:** *This metric is not a complex or comprehensive ecological model and is not a substitute for expert ecological advice.”*
- **“Principle 4:** *Biodiversity units are a proxy for biodiversity and should be treated as relative values.”*
- **“Principle 5:** *The metric is designed to inform decisions in conjunction with locally relevant evidence, expert input, or guidance.”*
- **“Principle 6:** *Habitat interventions need to be realistic and deliverable within a relevant project timeframe.”*
- **“Principle 7:** *Created and enhanced habitats should seek, where practical and reasonable, to be local to any impact and deliver strategically important outcomes for nature conservation.”*
- **“Principle 8:** *The metric does not enforce a minimum habitat size ratio for compensation of losses. However, proposals should aim to:*
 - maintain habitat extent (supporting more, bigger, better and more joined up ecological networks) and;
 - ensure that proposed or retained habitat parcels are of sufficient size for ecological function.”

In addition to these principles the Metric also sets out a series of rules that should be followed when undertaking a BNG calculation. These are:

- **“Rule 1:** *Competency requirements must be complied with.”*



- **“Rule 2:** Biodiversity unit outputs are unique to this metric. The results of other metrics, including previous versions of this metric, are not comparable to those of this metric. The three types of biodiversity units generated by this metric (area, hedgerow and watercourse) cannot be summed, traded, or converted between modules.”
- **“Rule 3:** The trading rules of this metric must be followed.”
- **“Rule 4:** Losses and deterioration of irreplaceable or very high distinctiveness habitat cannot be accounted for through this metric.”
- **“Rule 5:** In exceptional ecological circumstances, deviation from this metric methodology may be permitted by the relevant consenting body or planning authority. Any deviation must be fully justified and evidenced, and follow advice set out in Section 3.3. (Rule 5).”

The Metric also confirms the guidance for:

- **Irreplaceable habitats**
 - “Rule 4 states losses and deterioration of irreplaceable habitat cannot be accounted for through this metric. Irreplaceable habitats require separate consideration which must comply with up-to-date policy, legislation and regulations.”
 - “Where there are no losses or deterioration of irreplaceable habitats, their enhancement may contribute towards the calculation of biodiversity units.”
 - “Bespoke compensation to address specific losses and deterioration of irreplaceable habitats needs to be agreed on a case-by-case basis with the determining body or planning authority.”
- **Very high distinctiveness habitats (VHDH)**
 - “Very high distinctiveness habitats (VHDH) are a metric-specific classification of highly threatened, internationally scarce habitats which require conservation action.”
 - “...some VHDH will meet the definition of irreplaceable habitats” and “...not all metric habitat types that meet the definition of an irreplaceable habitat are VHDH.”
 - “Losses of VHDH should be avoided. Bespoke compensation for losses to VHDH will be required. Bespoke compensation needs to be agreed on a case-by-case basis with the determining body or planning authority...”
 - “Areas of VHDH can be enhanced. The metric applies the following precautions when VHDH are recorded within site baseline sheets, as:
 - Lost or retained – the metric removes biodiversity unit value from the biodiversity unit baseline;
 - Enhanced – the metric adds the biodiversity unit value to the biodiversity unit baseline.”
 - “VHDH distinctiveness habitats within the hedgerows module are not subject to the above.”
- **Ancient woodland**
 - “Ancient woodland (an irreplaceable habitat) is not a discrete habitat type and, as such, is not listed in the metric.”



- “Ancient woodland encompasses ancient semi-natural woodlands (ASNW), plantations on ancient woodland sites (PAWS) and ancient wood-pasture and parkland. These habitats may fit a range of metric woodland habitat types.”
- “To ensure ASNW and PAWS are recorded in full, assessors should take the following steps where there is woodland within a site:
 - Check the current Ancient Woodland Inventory Database.
 - If a woodland is less than 2 ha, check against the criteria set out in the Ancient Woodland Inventory Handbook.”
- **Ancient and veteran trees**
 - “Ancient and veteran trees may be found within a range of situations, including within hedgerows, lines of trees, woodland, open habitats and urban settings. Wherever ancient and veteran trees occur they should be considered and recorded as irreplaceable habitat.”

2.4.1 Strategic Significance

The ‘Habitat Networks’ dataset published by Natural England was used to determine ‘Strategic Significance’. This is a spatial dataset that describes the geographic extent and location of Habitat Networks for 18 priority habitats based primarily, but not exclusively, on the priority habitat inventory. It identifies areas most suited to habitat restoration/creation by using the location of the priority habitats.

2.4.2 Metric Trading Rules

“Rule 3 is automatically applied by the metric and sets minimum habitat creation and enhancement requirements to compensate for specific habitat losses (up to the point of no net loss)”. These requirements are based on habitat type and distinctiveness, as set out in Table 1 below.

Table 1: Trading rules and required compensation for losses

Baseline habitat distinctiveness	Area module (area units)	Hedgerow module (hedgerow units)	Watercourse (watercourse units)
Very high	Losses are not permitted within this metric AND bespoke assessment and compensation are required	Losses must be replaced with hedgerow units of the same habitat type	Losses are not permitted within this metric AND bespoke compensation and assessment and compensation are required
High	Losses must be replaced with area units of the same habitat type	Losses must be replaced with hedgerow units of the same habitat type or of a higher distinctiveness band	Losses must be replaced with watercourse units of the same habitat type
Medium	Losses must be replaced by area units of either: Medium distinctiveness habitats with the same broad habitat type OR	Losses must be replaced with hedgerow units of the same or higher distinctiveness band	Losses must be replaced with watercourse units of the same habitat type



Baseline habitat distinctiveness	Area module (area units)	Hedgerow module (hedgerow units)	Watercourse (watercourse units)
	Any habitat from a higher distinctiveness band (from any broad habitat type)		
Low	Losses must be replaced with area units of the same or higher distinctiveness band	Losses must be replaced with hedgerow units of the same or higher distinctiveness band	Losses must be replaced with watercourse units of a higher distinctiveness band
Very low	Not applicable	Losses must be replaced with hedgerow units of the same or higher distinctiveness band	Not applicable

2.4.3 Compensating for loss of high distinctiveness woodland

If woodland creation is required to compensate for the loss of high distinctiveness woodland, then:

- “A ‘like for like’ replacement must be provided and input into the metric”
- “Target habitat must replicate the woodland type that is being lost”
- “Lower distinctiveness woodland habitat types must not be used”
- “A realistic target condition should be set (likely poor condition)”

2.4.4 Woodland creation

If a woodland is being created, and is not replacing the loss of a high distinctiveness woodland, the newly created woodland should be input into the metric as either:

- Woodland and forest – ‘other woodland; broadleaved’ or
- Woodland and forest – ‘other woodland; mixed’ or
- Woodland and forest – ‘other coniferous woodland’

2.4.5 Watercourse module

Any compensation for the loss of watercourse units should be on a section of watercourse with similar habitat features (where it is in a natural state), and be of a similar size, function and stream order (rivers). For example:

- “Impacts on headwaters cannot be offset on large lowland rivers.”
- “Impacts on canals cannot be offset on rivers.”
- “Impacts on ditches cannot be offset on canals or rivers.”

2.5 Limitations

The baseline habitats are based on a restoration plan provided by the Client and submitted to the Local Planning Authority (LPA) in 2021 for approval. This plan has yet to be approved, therefore this assessment would need to be updated if any further changes are proposed. Existing data regarding habitats proposed at start of restoration is limited and do not allow for a thorough condition assessment. Baseline conditions have therefore been assumed.



The proposed restoration plan was produced prior to the requirement of BNG and therefore does not include condition values of the habitats proposed. Therefore, condition values for the proposed development scenario have been assumed based on typical habitat creation and restoration plans for similar schemes.

This assessment is based on the assumption that waste disposal and open windrow composting operations will continue until 31 December 2029, with restoration to be completed by 31 December 2031. Any further delays or change to this timetable would impact the temporal risk multipliers which have been applied for this assessment.



3.0 Baseline Habitats

The baseline habitats are based on a restoration plan provided by the Client and submitted to the Local Planning Authority (LPA) in 2021 for approval. For this assessment, habitats have been translated to the UKHab Classification, a summary of which is given in Table 2 below and presented in [Appendix A](#) at the end of this report.

Table 2 Baseline habitats within the proposed development boundary

Broad Habitat	Habitat Type	Area/Length
Grassland	Other neutral grassland	130.91 ha
Grassland	Modified grassland	6.87 ha
Urban	Developed land; sealed surface	4.70 ha
Urban	Artificial unvegetated, unsealed surface	9.79 ha
Heathland and shrub	Mixed scrub	6.24 ha
Heathland and shrub	Blackthorn scrub	1.01 ha
Coastal saltmarsh	Saltmarshes and saline reedbeds	0.34 ha
Intertidal sediment	Littoral mud	0.16 ha
Wetland	Reedbeds	0.06 ha
Lakes	Ponds (Priority Habitat))	0.13 ha
Heathland and shrub	Species-rich native hedgerow (Priority Habitat)	0.36 km
TOTAL AREA-BASED HABITATS		160.20 ha
TOTAL LINEAR-BASED HABITATS		0.36 km

3.1.1 Consideration of principles and rules

This report has recognised the ‘trading down’ rule (rule 3), the need to avoid such situations and specifically any losses of irreplaceable or very high distinctiveness habitat. In considering any proposed works to the Site, existing areas of woodland and ponds, together with linear features including hedgerows and drainage will be retained, and consideration given to their enhancement, where possible. If required, such habitats will need to be replaced on a “like for like” or “like for better” basis.

3.2 Baseline Habitat Value

3.2.1 Area Habitat Units

The total area of the Site is approximately 160.20 ha. Of these areas, the areas of grassland have the highest biodiversity value (949.84 BU), followed by the heathland and shrub areas (33.04 BU), the coastal saltmarsh (4.03 BU), intertidal sediment (1.87 BU), wetland (0.74 BU) and lakes (1.02 BU). The baseline total biodiversity value of the site is 990.55 BU.

3.2.2 Linear Habitat Units

There is also one species rich native hedgerow on site, which total biodiversity value equates to 2.86 BU.



Table 3: Summary of baseline habitat value

Biodiversity Unit Type	Area/Length (ha/km)	Baseline Units (BU)
Area Habitat	160.20 ha	990.55
Linear Habitat (terrestrial)	0.36 km	2.86
Linear Habitat (rivers and streams)	N/A	N/A



4.0 Post-Development Habitats

No changes to broad habitat type are proposed and the areas of habitat for the post development scenario will therefore remain the same as outlined in [Table 2](#). The following changes to condition have been assumed:

- Enhancement of other neutral grassland parcels with poor condition to moderate condition;
- Enhancement of mixed shrub parcels with poor condition to moderate condition; and
- Enhancement of modified grassland parcels to other neutral grassland with moderate condition.

In the absence of the proposed development, the Site would be wholly restored by 2026. As post-development restoration is intended to commence in 2031, a 5-year delay to habitat enhancement has been applied to metric calculations.

Extension of the hedgerow to include an additional 0.06 km of species native hedgerow is also proposed.

4.1 Post-development habitat value

4.1.1 Area Habitat Units

The proposed restoration plan would lead to an increase in biodiversity value for the following broad habitats: grassland (+121.48 BU) and heathland and shrub areas (+23.83 BU). Other habitats would retain the same biodiversity value including the coastal saltmarsh (4.03 BU), intertidal sediment (1.87 BU), wetland (0.74 BU) and lakes (1.02 BU). The post development total biodiversity value of the site is 1135.86 BU.

Overall, the proposed restoration plan is expected to lead to a net increase of 145.31 BU, which corresponds to an increase of 14.67% in biodiversity value, and also satisfies the trading rules.

4.1.2 Linear Habitat Units

The post development restoration plan proposes to increase the length of species-rich native hedgerow by +0.06km which would lead to a net increase of 0.34 BU. This corresponds to an increase of 11.77% in biodiversity value, and also satisfies the trading rules.

4.1.3 Current Baseline to Proposed Plans

The proposed plans are expected to support changes in habitat units of 14.67% and in linear units of 11.77%. This satisfies the current requirement for biodiversity enhancement under the National Planning Policy Framework and Environment Act. An overall summary of the proposed biodiversity gain is given in Table 4 below.

Table 4: Summary of biodiversity net gain

Biodiversity Unit Type	Baseline Units	Post-Intervention Units (BU)	Total Net Unit Change (BU)	% Net Gain (%)
Area Habitat	990.55 BU	1135.86 BU	145.31 BU	14.67%
Linear Habitat (terrestrial)	2.86 BU	3.19 BU	0.34 BU	11.77 %
Linear Habitat (rivers and streams)	N/A	N/A	N/A	N/A



The biodiversity gain identified within this report requires planting plans and management plans to secure the predicted level of gain.



5.0 Conclusion

The assessment of the proposed development against the current baseline indicates that an increase in biodiversity performance of the Site of approximately 14.67% in habitat units and 11.77% in linear units can be achieved. This is subject to appropriate planting plans and management plans being developed to optimise the delivery of biodiversity performance on the Site and to realise its intended out-turn condition.

This is considered to satisfy the current requirement for biodiversity enhancement under the national Planning Policy Framework and Environment Act.

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Appendix A Baseline Restoration Habitat Map

Biodiversity Net Gain Assessment

Proposed Rainham Landfill Extension of Life

Veolia ES Landfill UK Ltd

SLR Project No.: 425.064709.00001

9 December 2024



Making Sustainability Happen