Intended for SSEN Transmission

Date 26/02/2025

Project Number 1620015322

LEWIS HUB BIODIVERSITY NET GAIN ASSESSMENT



Project No.1620015322Issue No.1Date26/02/2025Made byGrace EnglishChecked bySam WillisApproved byAlexander Sharp

Made by: Grace &	linging	
Checked by: Swillis		
Approved by:	>	

This report is produced by Ramboll at the request of the client for the purposes detailed herein. This report and accompanying documents are intended solely for the use and benefit of the client for this purpose only and may not be used by or disclosed to, in whole or in part, any other person without the express written consent of Ramboll. Ramboll neither owes nor accepts any duty to any third party and shall not be liable for any loss, damage or expense of whatsoever nature which is caused by their reliance on the information contained in this report.

Revision	Date	Made by	Checked by	Approved by	Description
1	20/01/2025	GE	MN	AS	First Draft
2	31/01/2025	GE	SH	MN	Second Draft
3	14/02/2025	GE	SW, AF	VP	Third Draft
4	18/02/2025	GE	SW	AS	Fourth Draft

Version Control Log

Ramboll 240 Blackfriars Road London SE1 8NW United Kingdom T +44 20 7808 1420 www.ramboll.co.uk

CONTENTS

EXECUTI	/E SUMMARY	1
Irreplacea	ble Habitats	1
Non-Irrepl	aceable Habitats	2
1.	INTRODUCTION	3
1.1	Background	3
1.2	The Proposed Development	3
1.3	BNG Approach	4
1.4	Policy and Legislation	5
1.5	Local Plan Policy	5
1.7	Report Outline	6
2.	METHODOLOGY	7
2.1	Desk Study	7
2.2	Baseline Biodiversity Assessment	7
2.3	Post-development Biodiversity Assessment	9
2.4	Assumptions and Limitations	10
3.	BIODIVERSITY BASELINE	12
3.1	Desk Study: Designated Sites	12
3.2	Irreplaceable Habitats	12
3.3	Non-Irreplaceable Habitats	12
3.4	Trees	14
4.	CALCULATION OF BIODIVERSITY CHANGE	15
4.1	Irreplaceable Habitats	15
4.2	Non-Irreplaceable Biodiversity Change Calculations	17
5.	DISCUSSION	18
5.1	Recommendations for Irreplaceable Habitats	18
5.2	Recommendations for Non-Irreplaceable Habitats	19
5.3	Long-term Management	20
6.	CONCLUSION	21
6.1	Irreplaceable Habitats	21
6.2	Non-Irreplaceable Habitats	21

LIST OF TABLES

Table 3-1: Area-based Irreplaceable Baseline Habitats and Conditions affected by Permanent Loss Table 3-2: Area-based Non-Irreplaceable Baseline Habitats and Conditions affected by Permanent Table 3-3: Linear (Hedgerow) Non-Irreplaceable Baseline Habitats and Conditions affected by Permanent Loss14 Table 3-4: Linear (Watercourse) Non-Irreplaceable Baseline Habitats and Conditions affected by Permanent Loss14 Table 4-1: Irreplaceable Baseline Habitat, Post-development Habitat for Permanent Losses to Irreplaceable Habitats16 Table 4-2: Area-based Non-irreplaceable Baseline Biodiversity, Post development Biodiversity and Biodiversity Unit (BU) Change17 Table 4-3: Linear Non-irreplaceable Baseline Biodiversity, Post development Biodiversity and Biodiversity Unit (H BU/W BU) Change17 Table 5-1. Post Development Recommendations for on and off-site enhancements to achieve 1:10 Table 5-2: On-site Mitigation Recommendations to Achieve Positive Impacts for Non-irreplaceable Area-based Habitats.....19 Table 5-3: On-site Mitigation Recommendations Outcome: Baseline Biodiversity, Post-development

APPENDICES

APPENDIX 1

FIGURES

APPENDIX 2

IRREPLACEABLE AND NON-IRREPLACEABLE TOOLKITS

APPENDIX 3

RETAINED HABITATS TOOLKITS

EXECUTIVE SUMMARY

This Biodiversity Net Gain ('BNG') Assessment has been prepared by Ramboll on behalf of Scottish Hydro Electric Transmission plc ('the Applicant'), who, operating and known as Scottish and Southern Electricity Transmission ('SSEN Transmission), own, operate and develop the high voltage electricity transmission system in the north of Scotland and remote islands. In this BNG Assessment the terms "Applicant" and "SSEN Transmission" are used interchangeably unless the context requires otherwise.

The Applicant has submitted an application for planning permission in principle to Comhairle nan Eilean Siar ('CnES') to construct and operate a High Voltage Direct Current ('HVDC') Converter station and associated 132 kV and 400 kV AC substation (the 'Proposed Development'). The Proposed Development is located approximately 2 kilometres (km) southwest of Stornoway on the Isle of Lewis ('the Site'). The location of the Proposed Development and Biodiversity Baseline is described in the Project Description chapter of the Environmental Impact Assessment Report (EIAR) (Volume 2, Chapter 2: Project Description)¹, and shown in **Appendix 1, Figure 1** of this report.

BNG is a process, governed by a set of UK good practice principles², whereby development leaves biodiversity in a measurably better state than before the development and construction work started, quantified by achieving a 10% Net Gain for biodiversity. SSEN Transmission are committed to positively contribute to the UN and Scottish Government Biodiversity strategies by delivering a 10% Net Gain in biodiversity on new infrastructure projects^{3,4}. This BNG Assessment has been undertaken in accordance with the SSEN Transmission Biodiversity Net Gain Toolkit User Guide (2022) ('the Toolkit')⁵, based on the Natural England metric (the Biodiversity Metric version 3.1⁶). This is achieved through calculating the biodiversity change as a result of the Proposed Development and including recommendations to ensure the Proposed Development minimises biodiversity loss and maximises positive effects for biodiversity. This report provides the results of the BNG assessment in relation the Proposed Development.

Irreplaceable Habitats

Irreplaceable habitats are acknowledged for their particular importance and are technically very difficult or impossible to restore, recreate, or replace once destroyed. Therefore, they are quantified differently to non-irreplaceable habitats.

SSEN Transmission consider irreplaceable habitats within their network to be Ancient Woodland (categories 1a and 2a of the Ancient Woodland Inventory), ancient or veteran trees, blanket bog or raised bog in good or moderate condition. As per the SSEN Transmission BNG Toolkit User Guide, irreplaceable habitats are measured in hectares (ha) rather than Biodiversity Units (BU) to allow for bespoke compensation.

The BNG assessment identified the Proposed Development post-development plans will result in the permanent loss of 3.13 ha of moderate condition irreplaceable blanket bog (as shown in **Appendix 1**, **Figure 2**); this is due to the construction of the substation platform, Sustainable Drainage System (SuDS) ponds, bunds, and permanent access track. A further 14.31 ha of good condition and 2.58 ha of moderate condition irreplaceable blanket bog will be lost during the construction of the Proposed Development; this is due to the requirement for temporary access tracks, borrow pits and a temporary

¹ Ramboll, 2025. Lewis HVDC Converter Station and Substation Hub. Environmental Impact Assessment Report, 2025. Volume 2: Main Report. Chapter 2: Project Description

² CIEEM, CIRIA & IEMA, 2016. Biodiversity Net Gain: Good practice principles for development [online]. Available at:

https://cieem.net/wpcontent/uploads/2019/02/Biodiversity-Net-Gain-Principles.pdf

³ Scottish and Southern Electricity Networks, 2019. Our Sustainability Plan: Turning Ambitions into Action. [Online]. Available: oursustainability-plan-consultation-report.pdf (Home - SSEN Transmission (ssen-transmission.co.uk))

⁴ Scottish and Southern Electricity Networks, 2024. Sustainability Strategy: Pathway to 2030. [Online]. Available: ssen-transmission-

sustainability-strategy-2024 (Home - SSEN Transmission (ssen-transmission.co.uk))

⁵ Scottish and Southern Electricity Networks Transmission, 2022. TG-NET-ENV-526. Biodiversity Net Gain Toolkit User Guide. Rev 2.00

⁶ Natural England, 2023. Archive Site for the Biodiversity Metric 3.1 [Online] Available at: ARCHIVE SITE for the Biodiversity Metric 2.0, 3.0, 3.1 and the beta test version of the Small Sites Metric (naturalengland.org.uk)

laydown area. It is assumed the loss of irreplaceable blanket bog during construction will be reinstated to baseline condition and extent. In addition to the reinstatement of this habitat, it is recommended that the loss of blanket bog is compensated for using a 1:10 compensation ratio⁷.

No category 1a or 2a Ancient Woodland or ancient or veteran trees are present within the Site.

Non-Irreplaceable Habitats

The BNG assessment identified the Proposed Development post-development plans will result in a Net Loss for non-irreplaceable habitats of -83% (-295.14 BU) for area-based habitats, and a Net Loss of -100% for hedgerow (-0.12 H BU) and watercourse (-1.50 W BU) habitats (as shown in **Appendix 1**, **Figure 2**). It is recommended that habitats are enhanced on and off-site to mitigate for losses within the Proposed Development.

⁷ SSE's approach to impacts on irreplaceable peatland habitats follows guidance published by NatureScot whereby there is a 1:10 ratio for loss:mitigation. Available at: https://www.nature.scot/doc/advising-peatland-carbon-rich-soils-and-priority-peatland-habitats-development-management

1. INTRODUCTION

1.1 Background

This Biodiversity Net Gain ('BNG') Assessment has been prepared by Ramboll on behalf of Scottish Hydro Electric Transmission plc ('the Applicant'), who, operating and known as Scottish and Southern Electricity Transmission ('SSEN Transmission), own, operate and develop the high voltage electricity transmission system in the north of Scotland and remote islands. In this BNG Assessment the terms "Applicant" and "SSEN Transmission" are used interchangeably unless the context requires otherwise. The Applicant has submitted an application for planning permission in principle to Comhairle nan Eilean Siar ('CnES') to construct and operate a High Voltage Direct Current ('HVDC') Converter station and associated 132 kV and 400 kV AC substation (the 'Proposed Development').

Connections will be required from the Proposed Development to the existing electricity transmission network on Lewis, as well as to the consented landfall point at Arnish. The connections to the existing network would comprise a number of overhead lines and underground cables carrying voltages of up to 132 kV, as well as connections of lower voltages (33 kV, likely underground cables). The High Voltage Direct Current (HVDC) cable connection to the consented landfall point would also be placed underground; underground cables would comprise Permitted Development in accordance with Class 40 of the *Town and Country Planning (General Permitted Development) (Scotland) Order 1992 (as amended)*, while overhead lines would be the subject of separate consent application to Scottish Ministers, under the *Electricity Act 1989*.

1.2 The Proposed Development

The Proposed Development is located approximately 2 km southwest of Stornoway on the Isle of Lewis ('the Site') in the Western Isles Council area (Comhairle nan Eilean Siar). The location of the Proposed Development and the Site (the 'Site') is shown in **Appendix 1, Figure 1**.

The Proposed Development would comprise a HVDC Converter station and associated 132 kV and 400 kV AC substation. These structures would be sited on two separate platforms, with a total area of 164,200 m^2 . Proposed Development would include the following key components:

1.1.1 High Voltage Direct Current (HVDC) Converter Station

A HVDC Converter station with an overall platform footprint of around 320 m by 310 m and a maximum height of 27.5 m, and would consist of the following:

- two main converter buildings housing transformers, converters, dynamic brake system and DC hall;
- service and control building between the converter buildings;
- two AC Hall and Filter Equipment buildings; and
- a number of smaller auxiliary buildings (diesel generator, spares building, etc).

1.1.2 132 kV and 400 kV Substation

A series of buildings would be situated on a joint 400 kV/132 kV Substation platform. The platform footprint would be approximately 260 m by 250 m. The buildings that would be situated on the platform would comprise the following:

- three 132/400 kV Super Grid Transformer (SGTs) buildings, each with an overall footprint of around 45 m by 78 m and a maximum height of 20 m. They would be enclosed to protect from the weather and reduce the noise impact;
- 400 kV Gas-Insulated Substation (GIS) substation building and associated control building; and
- 132kV GIS substation building and associated control building.

1.1.3 Ancillary Works

Ancillary works would be required to facilitate construction and operation of the Proposed Development including:

- Vegetation clearance;
- Landscape bunding;
- Two permanent access tracks, one connecting to the A859 road and one connecting to the minor road leading from the A859 to Arnish Point;
- Temporary access tracks;
- Establishment of new junction bellmouths;
- Removal of existing land drainage channel as part of the peat removal/site clearance;
- extraction of rock from borrow pits;
- establishment of temporary and permanent access for the construction and maintenance of the Proposed Development;
- establishment of new drainage channels and attenuation ponds for site drainage (see Technical Appendix 2.1: Drainage Strategy, EIAR Volume 4⁸ for further detail);
- establishment and reinstatement of temporary site compounds; and
- establishment and reinstatement of borrow pit areas for peat management (see Technical Appendix 10.2: Outline Peat Management Plan, EIAR Volume 4⁹ for further detail),

The impacts of this construction on habitats within the Site have been assessed within this BNG assessment. It is assumed that all habitats that fall within the footprint of the substation platform, SuDS ponds, and permanent access tracks will be permanently lost to the Proposed Development, with the post-development habitat assumed to be Urban – Developed land; sealed surface.

1.3 BNG Approach

The process of BNG is governed by a set of UK good practice principles² along with industry guidance which outlines the practical implementation of the principles¹⁰. The key principle is the application of the mitigation hierarchy, which sets out that development should avoid by removing the impact at the outset, minimise by reducing the impact, restore by repairing damaged habitats, and offset impacts on biodiversity by compensating for any residual impact, with preference to on-site over off-site measures¹¹. The principles require use of a biodiversity metric to assess and quantify net biodiversity change.

The BNG assessment has been undertaken using the SSEN Transmission Toolkit Version 3 (herein referred to as 'the Toolkit') published in 2020¹² and based on the Natural England's metric (the Biodiversity Metric version 3.1⁶). The Toolkit calculates the Biodiversity Units (BU) before, during and after works on a specific development site, and assesses whether a development will achieve Net Loss, No Net Loss or Net Gain. Use of the Toolkit follows industry-published best practice and SSEN Transmission's BNG Toolkit User Guide⁵. This report provides the results of the BNG assessment in relation to the Proposed Development and the associated construction works and post-development plans for the Proposed Development.

The Toolkit assesses both the area and linear habitat separately within the same Toolkit. The Toolkit produces a Biodiversity Unit value for the three categories of habitat type: Area Biodiversity Units (BU),

⁸ Mott MacDonald, 2024. LT14 Western Isles HVDC – Arnish Moor Drainage Impact Assessment. Included at Technical Appendix 2.1 of the Lewis Hub EIA Report (2025

⁹ OWC, 2024. LT14 Western Isles – Lewis Hub Outline Peat Management Plan. Included at Technical Appendix 10.2 of the Lewis Hub EIA Report (2025) ¹⁰ IEEM, CIRIA & IEMA, 2019. Biodiversity Net Gain: Good practice principles for development. A practical guide [online]. Available at:

https://cieem.net/wp-content/uploads/2019/02/C776a-Biodiversity-net-gain.-Good-practice-principles-for-development.-A-practicalguide-web ¹¹ Scottish Government, 2023. National Planning Framework 4: Revised Draft [online]. Available

at: https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2023/02/national-planning-framework-4/documents/national-planning-framework-4-revised-draft/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4.pdf

¹² Scottish and Southern Electricity Networks Transmission, 2020. TG-NET-ENV-526. Biodiversity Net Gain Toolkit User Guide. Rev 1.00

Linear Hedgerow Biodiversity Units (H BU) and Linear Watercourse Biodiversity Units (W BU). These units are not interchangeable.

1.4 Policy and Legislation

BNG is a process whereby development leaves biodiversity in a measurably better state than before the development and construction work started. In February 2023, the Scottish Government adopted the fourth version of the National Planning Framework (NPF4)¹¹ against which all planning applications will be assessed. The NPF4 includes policy requirements for developers to '*conserve, restore and enhance biodiversity*' and '*achieve significant biodiversity enhancements*'¹³. The *Nature Conservation (Scotland) Act 2004*¹⁴ outlines the Scottish Government's duty to '*further the conservation of biodiversity*' and specifies the need for a Scottish Biodiversity Strategy to achieve this aim. The 2024 Scottish Biodiversity Delivery Plan 2024-2030¹⁵ outlines priority actions to halt biodiversity loss in Scotland by 2030, and the Scottish Biodiversity Strategy to 2045¹⁶ furthers this plan to achieve broader nature restoration and biodiversity regeneration by 2045.

1.5 Local Plan Policy

The Proposed Development is situated within the area covered by Comhairle nan Eilean Siar. The Western Isles Local Biodiversity Action Plan (LBAP)¹⁷ serves as an audit report of the biodiversity and species of local significance to the Isles, without setting out planning objectives related to biodiversity.

1.6 SSEN Transmission's BNG Commitment

SSEN Transmission is committed to protecting and enhancing the environment by minimising the potential impacts from their construction and operational activities. SSEN Transmission is committed to deliver a 10% BNG on all new projects, which adds onto their previous Sustainability Strategy (2024)⁴ for new infrastructure projects, committing to¹⁸:

- Ensure natural environment considerations are included in decision making at each stage of a project's development;
- Utilise the mitigation hierarchy to avoid impacts by consideration of biodiversity in project design;
- Positively contribute to the UN and Scottish Government Biodiversity strategies by achieving an overall net gain for biodiversity on new infrastructure projects;
- Work with their supply chain to gain the maximum benefit during asset replacement and upgrade';
- Avoid all impacts on irreplaceable habitats, wherever possible. Where there is an unavoidable impact, the Applicant commits to mitigate, restore more than what is lost, and enhance to support greater biodiversity grown in the long term; and
- No Net Loss ('NNL') of woodland cover with tree loss only considered as a last resort. Where unavoidable, compensatory planting of native species mitigates any woodland loss to enhance local ecosystems and create a biodiversity net gain.

¹⁷ Western Isles Local Biodiversity Action Plan (2002).Available at:

¹⁸ SSEN Transmission, 2023. Delivering for Nature and Net Zero on World Biodiversity Day by committing to biodiversity net gain on all our projects. [Online]. Available at: https://www.ssen-transmission.co.uk/news/news--views/2023/5/delivering-for-nature-and-net-zero-on-world-biodiversity-day-by-committing-to-biodiversity-net-gain-on-all-our-projects/

¹³ It should be noted that, at present, enhancement that would classify as 'significant' has not yet been defined.

¹⁴ Scottish Government, 2004. Nature Conservation (Scotland) Act 2004 asp 6. [Online]. Available at:

https://www.legislation.gov.uk/asp/2004/6/pdfs/asp_20040006_en.pdf

¹⁵ Scottish Government, 2024. Scottish biodiversity delivery plan 2024-2030. [Online]. Available at:

https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2024/11/strategic-biodiversity-framework-delivery-plan-20242030/documents/scottish-biodiversity-delivery-plan-20242030/scottish-scotti

^{20242030/}govs cot%3 A document/scottish-biodiversity-delivery-plan-20242030.pdf

¹⁶ Scottish Government, 2024. Scottish biodiversity strategy to 2045: Tackling the nature emergency in Scotland. [Online]. Available at: https://www.gov.scot/binaries/content/documents/govscot/publications/strategy-plan/2024/11/scottish-biodiversity-strategy-

^{2045/}documents/scottish-biodiversity-strategy-2045-tackling-nature-emergency-scotland/scottish-biodiversity-strategy-2045-tackling-nature-emergency-scotland/govscot%3Adocument/scottish-biodiversity-strategy-2045-tackling-nature-emergency-scotland.pdf

BIODIVERSITY NET GAIN ASSESSMENT Lewis Hub (AC Substation and HVDC Converter Station)

1.7 Report Outline

The report is supported by the following appendices:

- Appendix 1: Figures;
- Appendix 2: Irreplaceable and Non-Irreplaceable Toolkits; and,
- Appendix 3: Retained Habitats Toolkits.

An Environmental Impact Assessment Report (EIAR)¹⁹ has been produced by Ramboll for the Proposed Development, and this has been used to inform the BNG assessment.

¹⁹ Ramboll, 2025. Lewis Hub (AC Substation and HVDC Converter Station). Environmental Impact Assessment Report, 2025.

2. METHODOLOGY

The methodology used for this assessment follows SSEN Transmission's BNG Toolkit User Guide⁵, in addition to the BNG good practice principles and guidance published by the Chartered Institute of Ecology and Environmental Management (CIEEM), Construction Industry Research and Information Association (CIRIA) & Institute of Environmental Management and Assessment (IEMA) for the development industry^{2,10}.

2.1 Desk Study

A desk study was undertaken to inform the Ecology chapter of the associated EIAR²⁰ (EIAR Volume 2, Chapter 7: Ecology) and the information obtained has also informed this BNG assessment. The purpose of the desk study was to identify designated sites and irreplaceable habitats within the Proposed Development and to identify other natural features which may have importance for biodiversity. As per SSEN Transmission's BNG Toolkit User Guide⁵, areas of blanket and raised bog assessed to be in good or moderate condition are deemed to be irreplaceable habitat. Ancient Woodland (Categories 1a and 2a²¹ of the Ancient Woodland Inventory²²) and ancient and veteran trees, are also deemed to be irreplaceable habitat. The Ancient Woodland Inventory dataset²³ and SiteLink²⁴ were checked for designated sites and areas of Ancient Woodland within the Proposed Development which would be classed as irreplaceable habitats.

SiteLink was reviewed for information on protected sites within 2 km of the Proposed Development. Supplementary information on the site and the wider study area were obtained from aerial images available from Google Earth.

The following has been considered within and up to 2 km from the Site:

- Designated sites, including Special Areas of Conservation ('SAC'), Special Protection Areas ('SPA'), and Sites of Special Scientific Interest ('SSSI');
- Irreplaceable habitats, including category 1a and 2a Ancient Woodland ancient/veteran trees, and blanket bog and raised bog (in good, or moderate habitat condition); and
- Other sites of importance for biodiversity, including National Nature Reserves ('NNR'), Local Nature Reserves ('LNR'), Sites of Importance for Nature Conservation ('SINC').

In line with BNG guidance, any irreplaceable habitats identified within the Proposed Development have not been included within the baseline calculations. However, the area of loss or deterioration of irreplaceable habitats within the Proposed Development has been calculated to ensure potential impacts on these habitats are captured and appropriately compensated for.

2.2 Baseline Biodiversity Assessment

2.2.1 Habitat Survey, Irreplaceable Habitats and Condition Assessment

A UK Habitat Classification (UKHab) survey and on-site habitat condition assessment (HCA) of the habitats within the Site was undertaken by Ramboll in January and August 2023 and supplemented in September 2024 to provide National Vegetation Classification (NVC) coverage of the Site. The main habitats present were recorded using UKHab survey methodology as described in the UK Habitat Classification Version 2.0²⁵. Target notes were used to record habitats and features of particular interest.

²³ NatureScot, 2010. Ancient Woodland Inventory. [Online] Available at: Ancient Woodland Inventory - Natural Spaces - NatureScot (snh.gov.uk)

²⁴ NatureScot, SiteLink. [Online] Available at: https://sitelink.nature.scot/home

²⁰ Ramboll UK Ltd (2025) *Lewis Hub (AC Station and HVDC Converter Station): Environmental Impact Assessment Report*. Volume 2: Main Report. Chapter 7: Ecology

²¹ Ancient Woodland categorised as 1a and 2a Ancient Woodland are interpreted as semi-natural woodland from maps of 1750 (1a) or 1860 (2a) and continuously wooded to the present day. If planted with non-native species during the 20th century they are referred to as Plantations on Ancient Woodland Sites (PAWS). NatureScot, 2022. A guide to understanding the Scottish Ancient Woodland Inventory (AWI). [Online] Available at: A guide to understanding the Scottish Ancient Woodland Inventory (AWI) | NatureScot

²² NatureScot, 2010. Ancient Woodland Inventory. [Online] Available at: Ancient Woodland Inventory - Natural Spaces - NatureScot (snh.gov.uk)

²⁵ UKHab Ltd, 2023. UK Habitat Classification Version 2.0. Available at: https://ukhab.org/.

NVC surveys²⁶ were completed to identify potential Ground Water Dependant Terrestrial Ecosystems (GWDTEs)²⁷ and to provide a greater level of detail than the UK Habitat survey for sensitive habitats, such as peatland and wetlands. The NVC surveys followed the methodology described in best practice guidance²⁶. The HCA undertaken in January 2023 used the methods instructed for the Natural England Biodiversity Metric 3.1 and the HCA undertaken in 2024 used the methods instructed for the Statutory Biodiversity Metric released in February 2024. The HCA undertaken with the Statutory Biodiversity Metric 3.1 to integrate with the SSEN Transmission Toolkit and guidance²⁸.

The HCA assessment has been carried out by Cecilia Nielsen and Danny Oliver. Cecilia is a Graduate Consultant Ecologist at Ramboll UK Limited (Ramboll) with a BSc (Hons) in Ecology and one year of experience undertaking ecology surveys and Ecological Impact Assessments (EcIAs). Danny is a Principal Consultant Ecologist at Ramboll and a Member of CIEEM with a BSc in Biological Sciences (Ecology) and 11 and a half years of experience undertaking ecology surveys and EcIAs.

It should be noted that the condition of watercourses was not assessed during the on-site survey, and that watercourse condition was applied to habitats via the following methodology from the Natural England Metric 3.1⁶:

- High distinctiveness = good condition;
- Moderate distinctiveness = moderate condition; and
- Low distinctiveness = poor condition.

For retained watercourse habitats that were not assessed to be ditches, it is assumed these watercourses are of medium distinctiveness and moderate condition.

2.2.2 Habitat Distinctiveness, Connectivity and Strategic Significance

Distinctiveness per habitat type was determined by the pre-set values within the Toolkit which are based upon the values set within the Natural England Biodiversity Metric 3.1⁶. The connectivity score per habitat polygon was based upon the distinctiveness score, where:

- Low and medium distinctiveness = low connectivity; and
- High and very high distinctiveness = medium connectivity.

The strategic significance rating was entered into the Toolkit for each habitat type and was based upon the habitat's biodiversity value; the biodiversity value of a habitat was determined through desk study checks (as described in **Section 2.1**) which identify if the habitat is:

- High strategic significance: formally identified in local strategy, plan or policy;
- Medium strategic significance: location ecologically desirable but not identified in a local strategy, plan or policy; or
- Low strategic significance: not identified in a local strategy, plan or policy or no strategy or plan is in place in the area.

The Western Isles Local Biodiversity Action Plan (LBAP)¹⁷ was reviewed to identify priority habitats as designated by the Western Isles Council (Comhairle nan Eilean Siar). Habitats within the Proposed Development that are designated as priority habitats in the Western Isles LBAP, and as such have been given high strategic significance, consist of: Heathland and shrub – Upland heathland, and Wetland – Blanket bog. All other habitats have been designated as having low strategic significance.

²⁶ Rodwell, J.S., 2006. *National Vegetation Classification: User's Handbook*. Peterborough: JNCC.

²⁷ SEPA, 2017. *Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems* Version 3.0. Available at: https://www.sepa.org.uk/media/144266/lups-gu31-guidance-on-assessing-the-impacts-of-development-proposals-on-groundwater-abstractions.pdf. [28/10/2024]

²⁸ Natural England, 2023. Biodiversity Metric 3.1 – Habitat Condition Assessment Sheets with Instructions. Available at: https://publications.naturalengland.org.uk/publication/5850908674228224

2.2.3 Baseline Biodiversity Calculation

The biodiversity unit (BU) score per area-based habitat was calculated via the Toolkit using the quality factors (i.e., distinctiveness, condition, connectivity and strategic significance) and their assigned values. The sum of all the BUs provided the area-based habitat biodiversity baseline for non-irreplaceable habitats.

It should be noted that only habitats impacted by the Proposed Development are included within the Toolkit and BU score. Habitats impacted by temporary losses that are considered reversible (i.e., habitats affected by temporary construction that are expected to recover to the same habitat type and condition within two years from the initial impact to the habitat) are not assessed within the Toolkit. As per Natural England Biodiversity Metric 3.1 User Guide⁶, and adopted by SSEN Transmission, habitats impacted by temporary construction that will not recover to the same habitat type and condition within two years of the initial impact are calculated within the Toolkit as permanent losses. All habitats within the Site that are not impacted by the Proposed Development are considered retained and excluded from the Toolkit and BU score. In order for these habitats to be considered retained they must undergo no material change in condition due to the Proposed Development.

Linear features are calculated using the same quality factors and are recorded as hedgerow biodiversity units (H BU) or watercourse biodiversity units (W BU).

2.3 Post-development Biodiversity Assessment

2.3.1 Post-development Habitats and Target Condition

The post-development habitat types were determined based upon the post-development plan (see **Appendix 1, Figure 2**) using UKHab classification and the professional judgement of the ecologist.

The target condition of the post-development habitats has been assigned based upon the expert judgement of Ramboll ecologists informed by the Natural England Biodiversity Metric 3.1 HCA²⁸ criteria and the future management aspirations of the Site.

2.3.2 Habitat Distinctiveness, Connectivity and Strategic Significance

The distinctiveness was assigned by the Toolkit based upon the habitat types entered in the postdevelopment sections. Habitat connectivity and strategic significance values were assigned following the methodology described in **Section 2.2**.

2.3.3 Temporal and Difficulty Risk Factors

The relevant risk factors for the 'time to target condition' and the 'difficulty to create' were assigned according to Natural England's Biodiversity Metric 3.1²⁹ by a suitably qualified ecologist and are deemed appropriate for the Proposed Development. Additional time to target condition delays have been added to post-development habitats, informed by the phased construction plan laid out in the Project Description chapter of the associated EIA³⁰ (Volume 2, Chapter 2: Project Description). Impacts incurred via Phase 1 of the construction plan have had 22 months (the duration of Phase 1), added to their time to target condition. The Phase 1 delay has been rounded to 2 years due to restrictions within the Toolkit. This includes areas of created developed land; sealed surface, SUDS ponds, peat reuse and restoration areas, and areas impacted by temporary borrow pit access. Impacts from Phase 4 of the construction plan have had 6 years (the longest potential duration from the beginning of Phase 1 to the end of Phase 4) added to the time to target condition. This includes areas impacted by temporary laydown areas, temporary access tracks, and the landscape bunding. The construction phases are noted in the relevant line of each Toolkit.

²⁹ Natural England 2023. Biodiversity Metric 3.1: User Technical supplement. Available at:

http://nepubprod.appspot.com/publication/6049804846366720

³⁰ Ramboll, 2025. Lewis Hub (AC Substation and HVDC Converter Station) Environmental Impact Assessment Report, 2025. Volume 2: Main Report. Chapter 2: Project Description.

The guidance published by Natural England's Biodiversity Metric 3.1 states the time to target condition for reinstating blanket bog is 30+ years. However, having noted site specific conditions for the Site, the Ramboll ecologists who undertook the baseline habitat survey believe 10 years' time to target condition is more reflective of the time to reinstate this habitat type to the same baseline condition and will result in a more reflective assessment of the Proposed Development.

Blanket Bog is the dominant habitat on Lewis, covering the majority of the land at higher elevation and away from the coast. The high levels of rainfall and acid, nutrient-deficient soils³¹ are well suited to growing peat forming species, including Sphagnum. As Sphagnum grows it prevents water from draining, raising the water table and creating the conditions by which peat forms (plant material breaking down in anaerobic conditions)³². In addition to this there is no shortage of bog plants attempting to naturally seed onto any areas of bare ground. This means that the default habitat that most areas on Lewis are tending towards is blanket bog, and effort is required to maintain any farmland in these areas to prevent blanket bog from forming. A report commissioned by NatureScot highlights the key features required for blanket bog formation (high rainfall etc) and states that Lewis has a great potential for peatland regeneration³³.

It is therefore considered to be reasonable that the difficulty for creation of blanket bog would be reduced from very high to medium on Lewis and time to target condition would be significantly shorter than the average prescribed for the rest of the UK (30+ years). The mixed woodland within in the peat reuse area, as a mostly coniferous woodland with the ground cover tending towards bog formation, is also expected to have minimal resistance to future blanket bog formation in poor condition.

Time to target condition for upland heathland has also been reduced from 20 years (as per Natural England's Biodiversity Metric 3.1 guidance⁶) to 10 years; this decision was taken following examples on similar projects within Scotland, in particular Ramboll ecologists' work on the SSEN Kinardochy substation where dry heath was observed returning on access track areas (albeit to a lower condition) within 2 years. Therefore, the reduction in time to target condition from 20 years to 10 years is considered to be appropriately conservative given the potential climatic differences between the sites.

2.4 Assumptions and Limitations

An Outline Peat Management Plan (PMP)⁹ has been prepared for the Proposed Development and the following requirements have been set:

- Peat will be reinstated (peat reuse) where losses occur due to excavation in 'borrow areas' to provide material for construction of raised platform, laydown areas and tracks. The reinstated peat may not be from the exact originally displaced peat, but this is not considered problematic due to the peat across the Site being of similar quality.
- Peat restoration will occur in the Creed North area using peat extracted from the Proposed Development. The impact of permanent habitat loss is based on the construction elements described in **Section 1.2**.

Any habitats not impacted by the Proposed Development, which therefore have undergone no material change, are assumed to be retained and were not calculated within the Toolkit. It is assumed that all habitat types impacted by the construction of the Proposed Development, including the reinstated peat, would not return to their original habitat type and condition within 2 years of the initial impact and therefore **these losses have been calculated within this BNG assessment as permanent losses**.

³¹ NatureScot, 2025. Landscape character assessment: Outer Hebrides - Landscape evolution and influences. Available at:

https://www.nature.scot/doc/landscape-character-assessment-outer-hebrides-landscape-evolution-and-influences

³² NatureScot, 2025. *Blanket bog*. Available at: https://www.nature.scot/landscapes-and-habitats/habitat-types/mountains-heaths-and-bogs/blanket-bog

³³ Artz et al., 2014. managing and restoring blanket bog to benefit biodiversity and carbon balance – a scoping study. University of the Highlands and Islands. Available at: https://pureadmin.uhi.ac.uk/ws/portalfiles/portal/1587027/562.pdf

For the target condition of post-development habitats (**Appendix 1, Figure 2**), the following assumptions have been made:

- All reinstated habitats, which includes blanket bog and lowland heathland, have been assumed to reach their baseline moderate condition; and
- Blanket bog habitat being created in areas of baseline upland heathland or other woodland; mixed have been assumed to reach poor condition.

The Proposed Development includes two landscape bunds that, for the purposes of this assessment, have been assumed to become areas of created upland heathland.

3. **BIODIVERSITY BASELINE**

3.1 Desk Study: Designated Sites

No designated sites are situated within the Site. One statutory designated site was identified within 2 km of the Site. The Lewis Peatlands SPA and RAMSAR site is located 1.7 km west of the Site at its closest point. The Lewis Peatlands SPA and RAMSAR site is designated for features including acid peat-stained lakes or ponds, wet heathland with cross-leaved heath, and blanket bog habitats. Further information about these sites is detailed in **EIAR Volume 2, Chapter 7: Ecology³⁴**. There are no other statutory designated sites within 2 km of the Site.

3.2 Irreplaceable Habitats

No category 1a or 2a Ancient Woodland, ancient or veteran trees, or raised bog, were found within the Site. Irreplaceable blanket bog of good and moderate condition was identified within the Proposed Development.

Within the Site, 137.80 ha of irreplaceable habitat in good condition were identified, including 130.96 ha of retained habitat and 6.84 ha of permanently lost habitat (see **Table 3-1**). Additionally, 44.71 ha of blanket bog in moderate condition were identified, comprising 31.53 ha of retained habitat and 13.18 ha of permanently lost habitat (see **Table 3-1**). As per SSEN Transmission's BNG Toolkit User Guide⁵, all habitats within the Site that are not impacted by the Proposed Development and are considered retained, are excluded from the Toolkit. Losses to irreplaceable habitats cannot be compensated for within a reasonable timeframe, and therefore are not quantified alongside non-irreplaceable habitats are measured quantitatively (via area) to ensure the mitigation hierarchy is followed rigorously and to allow for bespoke compensation. The impacted irreplaceable habitat present on-site is detailed in **Table 3-1**. As per Natural England Biodiversity Metric 3.1 User Guide⁶, adopted by SSEN Transmission, the losses detailed in **Table 3-1** have been calculated as permanent losses as these habitats will not recover to the same condition within two years of the initial impact.

Table 3-1: Area-based Irreplaceable Baseline Habitats and Conditions affected by Permanent Loss

UKHab Habitat Type	Area (ha)	Condition	Distinctiveness	Post-Development Action
Wetland – Blanket bog	6.84	Good	High	Permanent loss
Wetland – Blanket bog	13.18	Moderate	High	Permanent loss
Total	20.02	-	-	-

3.3 Non-Irreplaceable Habitats

3.3.1 Area based habitats

The non-irreplaceable habitat types found on the Site are shown in **Appendix 1, Figure 1**, and the full list of impacted non-irreplaceable habitats found within Site are detailed in **Table 3-2**.

Table 3-2: Area-based Non-Irreplaceable Baseline Habitats and Conditions affected by Permanent Loss

UKHab Habitat Type	Area (ha)	Condition	Distinctive -ness	Biodiversity Units (BU)	Post- development construction	Post-development habitat
Woodland and forest – Other woodland; Mixed	0.06	Poor	Low	0.24	Landscape bund	Heathland and scrub – Upland heathland
Woodland and forest – Other woodland; Mixed	0.09	Poor	Low	0.36	Peat reuse	Wetland – Blanket Bog

³⁴ Ramboll, 2025. Lewis Hub (AC Substation and HVDC Converter Station) Environmental Impact Assessment Report, 2025. Volume 2: Main Report. Chapter 7: Ecology.

UKHab Habitat Type	Area (ha)	Condition	Distinctive -ness	Biodiversity Units (BU)	Post- development construction	Post-development habitat
Woodland and forest – Other coniferous woodland	0.11	Poor	Low	0.22	Permanent access track	Urban – Developed land; sealed surface
Woodland and forest – Other coniferous woodland	0.04	Poor	Low	0.08	Temporary borrow access	Woodland and forest – Other coniferous woodland
Woodland and forest – Other coniferous woodland	0.10	Poor	Low	0.20	Converter substation	Urban – Developed land; sealed surface
Woodland and forest – Other coniferous woodland	0.07	Poor	Low	0.14	Temporary laydown area	Woodland and forest – Other coniferous woodland
Woodland and forest - Other coniferous woodland	0.08	Poor	Low	0.16	SUDS pond	Urban - Artificial lake or pond
Heathland and shrub – Upland heathland	0.36	Moderate	High	5.46	Permanent access track	Urban – Developed land; sealed surface
Heathland and shrub – Upland heathland	0.55	Moderate	High	8.35	Temporary borrow access	Heathland and shrub – Upland heathland
Heathland and shrub – Upland heathland	6.48	Moderate	High	98.37	Converter substation	Urban – Developed land; sealed surface
Heathland and shrub – Upland heathland	1.07	Moderate	High	16.24	Landscape bund	Heathland and shrub – Upland heathland
Heathland and shrub – Upland heathland	4.04	Moderate	High	61.33	Temporary laydown area	Heathland and shrub – Upland heathland
Heathland and shrub – Upland heathland	8.10	Moderate	High	122.96	Peat reuse	Wetland – Blanket Bog
Heathland and shrub – Upland heathland	0.17	Moderate	High	2.58	SUDS pond	Urban – Artificial lake or pond
Grassland – Modified grassland	0.55	Moderate	Low	2.20	SUDS pond	Urban – Artificial lake or pond
Grassland – Modified grassland	0.86	Moderate	Low	3.44	Access track	Urban – Developed land; sealed surface
Grassland – Modified grassland	8.21	Moderate	Low	32.84	Converter Substation	Urban – Developed land; sealed surface
Grassland – Modified grassland	0.43	Moderate	Low	1.72	Temporary laydown area	Grassland – Modified grassland
Total	31.3 7	-	-	356.89		

3.3.2 Hedgerows

A total of 1.04 km of Woodland; Other coniferous woodland in poor condition is present within the Site and as this linear habitat is not an option within the Toolkit, this has been input into the Toolkit as the most applicable linear habitat option 'line of trees'. A permanent loss of 0.06 km of this habitat will occur during the construction of the permanent access road. Linear hedgerow features are calculated using the same quality factors as area-based habitats and are recorded as hedgerow biodiversity units (H BU), as presented in **Table 3-3**.
 Table 3-3: Linear (Hedgerow) Non-Irreplaceable Baseline Habitats and Conditions affected by

 Permanent Loss

UKHab Habitat Type	Length (km)	Condition	Distinctiveness	Hedgerow Biodiversity Units (H BU)	Post- development action
Line of Trees	0.06	Poor	Low	0.12	Permanent loss
Total	0.06	-	-	0.12	-

3.3.3 Watercourses

A total of 7.16 km of watercourses and agricultural drainage ditches are present within the Site, as shown in **Appendix 1, Figure 1.** During construction of the converter station and substation platform, an artificial man-made agricultural drainage ditch would be infilled. Watercourse features are calculated using the same quality factors as area-based habitats and are recorded as watercourse biodiversity units (W BU), as presented in **Table 3-4.**

Table 3-4: Linear (Watercourse) Non-Irreplaceable Baseline Habitats and Conditions affected byPermanent Loss

UKHab Habitat Type	Length (km)	Condition	Distinctiveness	Hedgerow Biodiversity Units (H BU)	Post- development action
Rivers and lakes – Other rivers and streams (Low)	0.75	Poor	Low	1.50	Permanent loss
Total	0.75	-	-	1.50	-

3.4 Trees

There are no individual trees (outside of habitats with trees), or ancient or veteran trees, currently present within the Site.

4. CALCULATION OF BIODIVERSITY CHANGE

4.1 Irreplaceable Habitats

Table 4-1 shows the areas of permanent loss as a result of the Proposed Development for irreplaceable blanket bog, and the associated post-development habitats. Overall, a total of 20.02 ha of irreplaceable blanket bog (6.84 ha of good condition blanket bog and 13.18 ha of moderate condition blanket bog) would be permanently lost to the Proposed Development.

The post development habitats show that 6.84 ha good condition and 10.05 ha of moderate condition irreplaceable blanket bog would be reinstated as same condition blanket bog post-development; however, these habitats would not recover to the same condition within two years of the initial impact and therefore have been considered as permanent losses, as per Natural England Biodiversity Metric 3.1 User Guide⁶, followed by SSEN Transmission.

UKHab Habitat Type	Baseline Area (ha)	Condition	Distinctiveness	Post- Development Action	Post- Development Habitat	Post- Development Area (ha)	Post-Development Condition
Wetland – Blanket bog	6.84	Good	High	Permanent loss	Wetland – Blanket Bog	6.84	Good
				Permanent loss	Wetland – Blanket Bog	10.05	Moderate
				Permanent loss	Urban – Artificial lake or pond	0.65	N/A No biodiversity value
Wetland – Blanket bog	13.18	Moderate	High	Permanent loss	Urban -Developed land; sealed surface	1.78	N/A No biodiversity value
				Permanent loss	Heathland and scrub – Upland heathland	0.70	Moderate
Total	20.02	-	-	-	-	20.02	

Table 4-1: Irreplaceable Baseline Habitat, Post-development Habitat for Permanent Losses to Irreplaceable Habitats

4.2 Non-Irreplaceable Biodiversity Change Calculations

Table 4-2 shows the calculation of change for impacted area-based habitats pre-and post-development, along with the outcome for biodiversity, for habitats impacted by the Proposed Development based on the results of the Toolkit. Overall, the Proposed Development would lead to a Net Loss of -83% for area-based habitats. The post-development UKHab habitats, their proposed after-work condition and the BU each habitat delivers are detailed in **Appendix 2**.

Table 4-2: Area-based Non-irreplaceable Baseline Biodiversity, Post development Biodiversity andBiodiversity Unit (BU) Change

Biodiversity Feature	Baseline Area (ha)	Baseline Units (BU)	Post- development Units (BU)	Change in Biodiversity Units (BU)	Outcome
Area-based Habitats	31.37	356.89	61.75	-295.14	-83% = Net Loss

Table 4-3 shows the calculation of change for impacted linear-based habitats pre-and post-development, along with the outcome for biodiversity, for habitats impacted by the Proposed Development based on the results of the Toolkit. Overall, the Proposed Development would lead to a Net Loss of H BU of -100% for linear hedgerow habitats, and an -100% loss of W BU for watercourse habitats. The post-development UKHab habitats, their proposed after-work condition and the H BU/W BU each habitat delivers are detailed in **Appendix 2.**

Table 4-3: Linear Non-irreplaceable Baseline Biodiversity, Post development Biodiversity andBiodiversity Unit (H BU/W BU) Change

Linear Biodiversity Feature	Baseline Length (km)	Baseline Units (H BU/W BU)	Post- development Units (H BU/W BU)	Change in Biodiversity Units (H BU/W BU)	Outcome
Hedgerow Habitats	0.06	0.12	0.00	-0.12	-100% = Net Loss
Watercourse Habitats	0.75	1.50	0.00	-1.50	-100% = Net Loss

5. **DISCUSSION**

5.1 Recommendations for Irreplaceable Habitats

Proposed post-development plans would result in a loss of 20.02 ha of irreplaceable blanket bog, inclusive of 13.18 ha of bog in moderate condition and 6.84 ha of bog in good condition. SSEN Transmission's approach to impacts on irreplaceable peatland habitats follows guidance published by NatureScot³⁵ whereby there is a 1:10 ratio for loss and mitigation. It is therefore recommended that the enhancement of approximately 200.20 ha of blanket bog is undertaken to mitigate for this loss, either through the enhancement of poor and moderate condition blanket bog on-site (to moderate and good condition respectively), or via off-site mitigation. The enhancement of poor and moderate condition blanket bog could include:

- Management to ensure the cover of scrub and scattered trees is less than 10% of the habitat;
- Management to ensure bare ground cover is less than 5% of the habitat;
- Management and monitor invasive non-native species; and,
- Management to ensure sphagnum moss Sphagnum spp. and cotton grasses *Eriophorum spp.* are frequent throughout the habitat.

A total of 10.05 ha (moderate condition) and 6.84 ha (good condition) of the area of irreplaceable blanket bog lost would be reinstated³⁶ forming part of the 1:10 mitigation post-development. At present, it is assumed that this blanket bog would be reinstated to the same baseline condition. It is recommended that, if possible, the 10.05 ha of reinstated blanket bog of moderate condition is managed to achieve good condition.

A further 31.53 ha of moderate condition blanket bog, and 2.30 ha poor condition blanket bog are available for enhancement within the Site, which could also contribute to the 1:10 mitigation. These recommendations are summarised in **Table 5-1.** If these on-site enhancements can be achieved, totalling 33.83 ha, in addition to the re-instatement of 6.84 ha of good condition and 10.05 ha of moderate condition blanket bog, a further 149.48 ha of blanket bog enhancement or creation would need to be undertaken off-site to meet the total 200.20 ha required to mitigate for the losses (as stated above). This could include the enhancement of blanket bog from poor to moderate condition, or from moderate to good condition.

Baseline UKHab Habitat Type	b Post-development recommendation				
Wetland – Blanket bog	Reinstated habitat to baseline good condition.	6.84			
Wetland – Blanket bog	Reinstated habitat to baseline moderate condition. Manage to achieve good condition if possible.	10.05			
Wetland – Blanket bog	Retained habitat within the Site. Enhance from moderate to good condition.	31.53			
Wetland – Blanket bog	Retained habitat within the Site. Enhance from poor to moderate condition.	2.30			
Total Compensation Available On-site					
Total Compensation Required to meet 1:10 Mitigation					
Remaining Compensation Required Off-site					

Table 5-1. Post Development Recommendations for on and off-site enhancements to achieve 1:10
mitigation for irreplaceable habitats

³⁵ NatureScot. 2023. Advising on peatland, carbon-rich soils and priority peatland habitats in development management. Available

at: https://www.nature.scot/doc/advising-peatland-carbon-rich-soils-and-priority-peatland-habitats-development-management

³⁶ The habitats listed here as 'reinstated' have been quantified in the metric as a permanent loss following guidance in the SSEN Transmission guidance⁵ whereby any habitat losses that take longer than two years to return to the pre-construction habitat type and condition are considered a permanent loss by SSEN, as described in Section 2.2.3 and Section 2.4.

5.2 Recommendations for Non-Irreplaceable Habitats

5.2.1 Area-based Habitats

Section 4.2 of this report shows that the Proposed Development would result in a -83% Net Loss in nonirreplaceable biodiversity (-295.14 BU) demonstrating that, at present, a 10% Net Gain in biodiversity would not be achieved for non-irreplaceable area-based habitats without biodiversity enhancements undertaken on- and off-site.

The reduction in biodiversity for area-based habitats is predominantly a result of habitat loss of heathland and scrub; upland heathland. It is recommended that opportunities be sought to mitigate for the loss of this habitat off-site as it is a local priority habitat.

It is also recommended that losses are compensated for via the enhancement of retained habitats within the Site. The recommendations presented in **Table 5-2** would achieve an additional 21.52 BU and lead the Proposed Development to achieve a -66% Net Loss, as presented in **Table 5-3**. In addition to these recommendations, an additional 314.87 BU would be required for the Proposed Development to achieve a 10% Net Gain for area-based habitats. It is recommended that these BU are provided via off-site habitat enhancement and/or creation.

Table 5-2: On-site Mitigation Recommendations to Achieve Positive Impacts for Non-irreplaceable Area-based Habitats

Baseline UKHab Habitat Type	Area (ha)	Baseline Units (BU)	Post-development recommendation	Potential increase in Biodiversity Units (BU)
Wetland – Blanket bog	2.30	17.46	Retained habitat. Enhance from poor to moderate condition	+8.19
Grassland – Modified grassland	9.52	38.08	Retained habitat. Enhance from moderate to good condition	+13.33
Total	11.82	55.54	-	+21.52

Table 5-3: On-site Mitigation Recommendations Outcome: Baseline Biodiversity, Post-development Biodiversity and Biodiversity Change for Area Habitats

Biodiversity Feature	Baseline Area (ha)	Baseline Units (BU)	Post- development Area (ha)	Post- development Units (BU)	Change in Biodiversity Units (BU)	Outcome					
Area-based Habitats (On- site recommendations)	43.19*	412.43	43.19*	138.80	-273.62	-66% = Net Loss					
*This is the total area of the habitats in Table 4-2 and Table 5-1											

Landscape bunding that is being created for building screening purposes is recommended to be replanted to create upland heathland (in moderate condition) as a local priority habitat. For the purposes of this assessment this area has already been included as created.

This could be achieved by;

- Planting at least two dwarf shrub species so that cover is >25% and planting at least 10% degenerate or mature *Calluna vulgaris;*
- Planting scattered trees and/or scrub (not including gorse *Ulex* spp.) so that canopy cover if less than 20%; and,
- Managing to ensure total gorse cover is less than 50%, with common gorse *Ulex europaeus* less than 25%, and the cover of bracken *Pteridium aquilinum* is less than 5%.

5.2.2 Linear Habitats

For linear hedgerow habitats, no planting of hedgerows or lines of trees has been planned within in the Proposed Development. If losses cannot be mitigated for on-site, this would result in the loss of **0.12 H**

BU (-100% Net Loss) which would require on-site or off-site compensation in order to achieve a 10% Net Gain for linear hedgerow habitats.

For watercourse habitats, no watercourse creation or enhancement has been planned within the Proposed Development. At present, the Proposed Development would lead to the loss of **-1.50 W BU** (-100% Net Loss) due to the filling of an artificial agricultural drainage ditch. It is not recommended that compensation for the loss of the drainage ditch is undertaken on-site, as this could negatively impact peat habitat within the Proposed Development. Therefore, it is recommended that compensation for the -1.50 W BU lost is undertaken off-site in order to achieve a 10% Net Gain for linear watercourse habitats.

5.3 Long-term Management

Habitats delivered in the landscape strategy should be sympathetically managed for biodiversity to ensure they develop and mature appropriately. Management and monitoring of the habitats over a 30-year period is recommended to ensure they reach maturity and their target condition, in line with the BNG principles. A Habitat Management Plan (HMP) would be produced to describe the long-term management and monitoring of habitats and features suitable for use by wildlife. This would be produced prior to construction and would comprise an update of the Outline HMP submitted as part of the Lewis Hub EIAR (2025). This would include measures to increase the ecological value of the Site following completion of the development for the long-term. The HMP would be transferred and explained to a maintenance company or the staff responsible for the ongoing management of the Site.

The HMP should be suitable for a 15-year period, after which it would be advised that it is reviewed and updated. SSEN Transmission's guidance document states that 'ongoing management must be undertaken in order for a development to achieve Net Gain'⁵. Long-term management of the habitats over a 30 year-period to ensure the correct development and management of the habitats, is in line with the BNG principles.

6. CONCLUSION

6.1 Irreplaceable Habitats

As stated, the proposed post-development would result in a loss of 20.02 ha of irreplaceable blanket bog (in both good and moderate condition) due to the construction of the converter station and substation platform, SuDS ponds, bunds, permanent and temporary access tracks, borrow pits and temporary laydown area. Therefore, it is recommended that approximately 200.20 ha of blanket bog be enhanced or created both on-site and off-site to provide bespoke mitigation for this loss. No Ancient Woodland, or ancient or veteran trees, are present within the Site.

Detailed recommendations for mitigating the loss of irreplaceable blanket bog loss are outlined in **Section 5.1.** If these recommendations are followed, the Proposed Development would align with guidance published by NatureScot³⁵, which recommends that restoration to achieve offsetting should '*be in the order of 1:10 (lost: restored)*'.

6.2 Non-Irreplaceable Habitats

6.2.1 Area-based habitats

At present, the Proposed Development would result in a -83% Net Loss (-295.14 BU) in non-irreplaceable habitats, which would not deliver on SSEN's BNG commitment to deliver a 10% Net Gain in biodiversity on new infrastructure projects (**Section 1.5**) and would not align with the Scottish Biodiversity Strategies'⁴. overall aim of halting biodiversity loss by 2030. The -83% Net Loss is predominantly due to the removal of high value Heathland and shrub – Upland heathland.

Detailed recommendations for mitigating non-irreplaceable habitat loss are outlined in **Section 5.2**. It is recommended losses are compensated for via on-site enhancement in the first instance. This includes the enhancement of retained Wetland – Blanket bog (poor to moderate condition) and Grassland – Modified grassland (moderate to good condition). This mitigation would lead to the delivery of an additional 21.52 BU and a reduction to a -66% Net Loss.

To achieve a 10% Net Gain, off-site offsetting is recommended. Off-site offsetting should follow the mitigation hierarchy, compensating for habitats like-for-like, and where possible, consider Scotland's Nature Networks Framework³⁷ to ensure off-site mitigation provides connectivity to local Nature Networks. If these recommendations are followed, the Proposed Development would achieve a 10% Net Gain for biodiversity and satisfy Policy 3 of the NPF4¹¹ by contributing to the restoration and enhancement of biodiversity via on-site and off-site compensation.

6.2.2 Linear Habitats

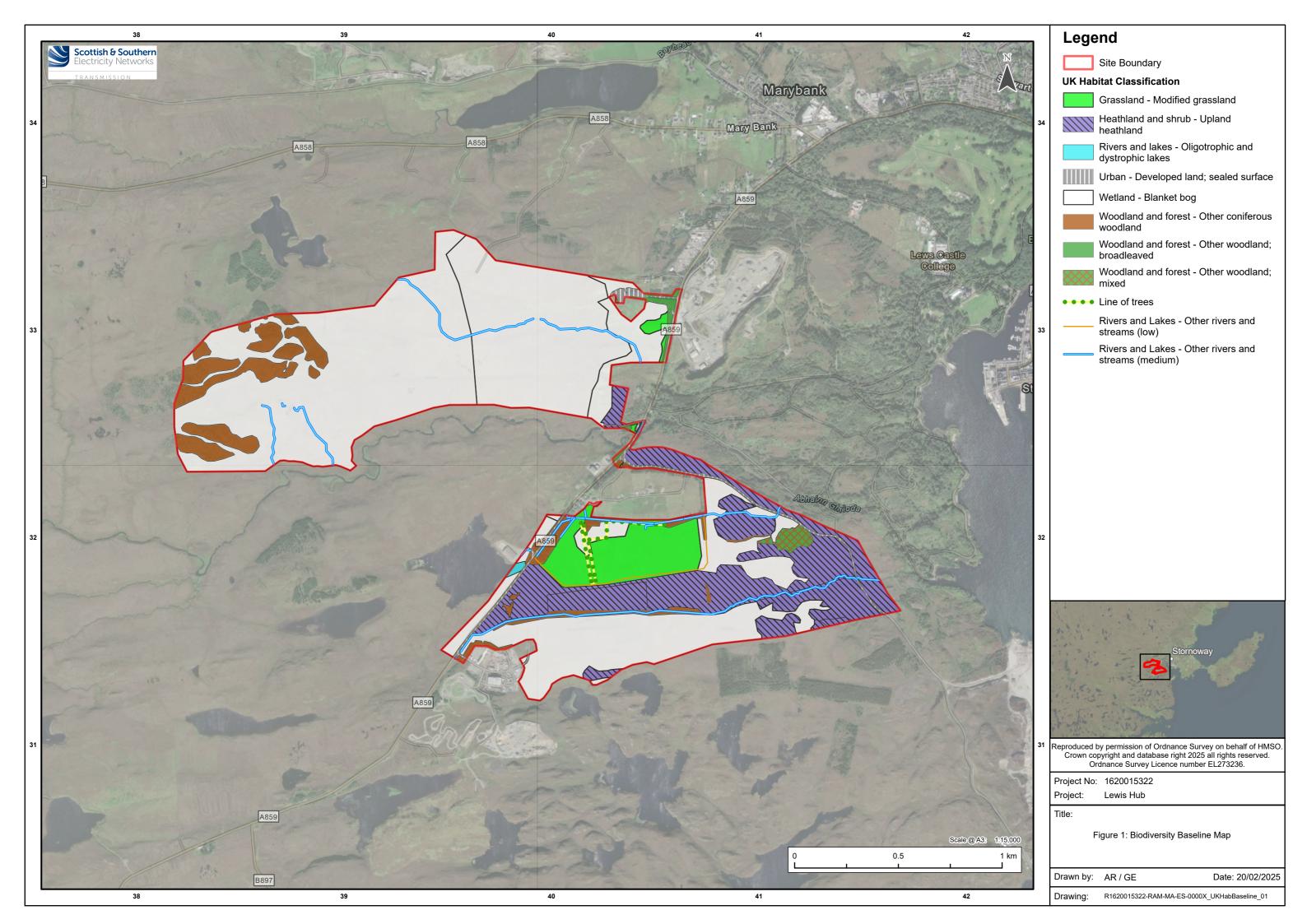
At present, the Proposed Development would result in a -100% Net Loss for both hedgerow and watercourse habitats. This is due to the loss of 0.06 km of line of trees, and the infilling of 0.75 km of a drainage ditch (Rivers and lakes – Other rivers and streams (Low)).

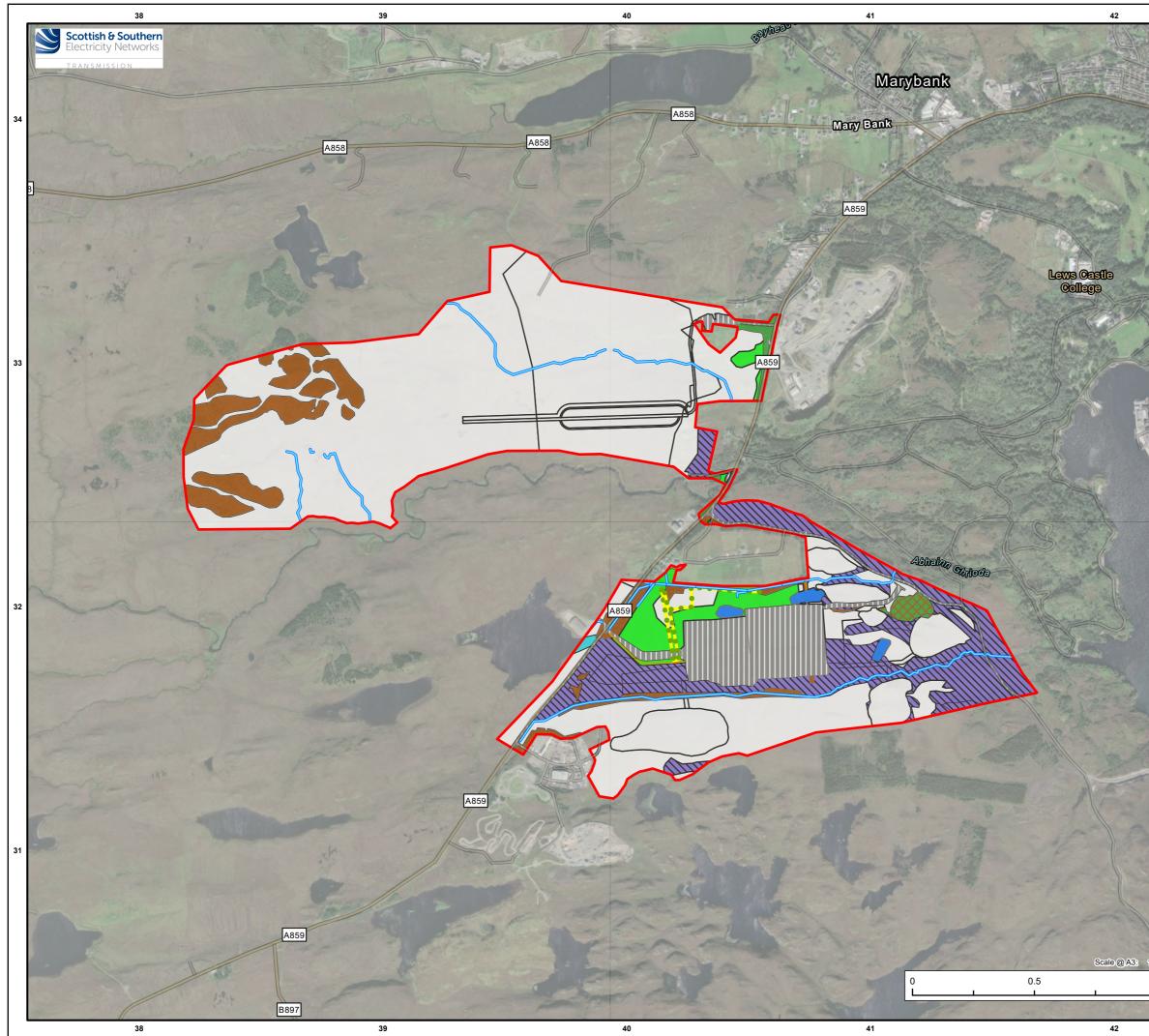
Detailed recommendations for mitigating linear habitats are presented in **Section 5.2.2.** For hedgerow habitats, it is recommended that on-site or off-site mitigation is undertaken to compensate for -0.12 H BU that would be permanently lost in order to achieve a 10% Net Gain. For watercourse habitats, on-site mitigation is not recommended as the creation on-site of a like-for-like agricultural ditch being permanently lost could negatively impact peat within the Proposed Development. It is therefore recommended that compensation for the loss of 1.50 W BU is mitigated for off-site in order to achieve a 10% Net Gain for hedgerow habitats.

³⁷ NatureScot. 2025. Nature Networks Framework. [Online] Available: Nature Networks Framework | NatureScot

BIODIVERSITY NET GAIN ASSESSMENT Lewis Hub (AC Substation and HVDC Converter Station)

APPENDIX 1 FIGURES





	1	Legend
N		Site Boundary
S Vart		UK Habitat Classification
		Grassland - Modified grassland
	34	Heathland and shrub - Upland heathland
C		Rivers and lakes - Oligotrophic and dystrophic lakes
Mar "		Urban - Artificial lake or pond
Con the second		Urban - Developed land; sealed surface
		Wetland - Blanket bog
		Woodland and forest - Other coniferous woodland
		Woodland and forest - Other woodland; broadleaved
		Woodland and forest - Other woodland; mixed
	33	•••• Line of trees
144 A	55	Rivers and Lakes - Other rivers and streams (low)
No la		Rivers and Lakes - Other rivers and
St		streams (medium)
	32	
	32	
		it is a second to
		All a state of the
- ALE		Stornoway
1.33)		3
		Nite State
		and the second second
91		ALLAN CARDON
	31	Reproduced by permission of Ordnance Survey on behalf of HMSO.
a Ch		Crown copyright and database right 2025 all rights reserved. Ordnance Survey Licence number EL273236.
S		Project No: 1620015322
JE.		Project: Lewis Hub
120		Title:
1:15,000		Figure 2: Biodiversity Post Development Map
1 km		
1.50		Drawn by: AR / GE Date: 20/02/2025
		Drawing: R1620015322-RAM-MA-ES-0000X_UKHabPostDev_01

APPENDIX 2 IRREPLACEABLE AND NON-IRREPLACEABLE TOOLKITS

Biodiversity Project Toolkit



Project title	Lewis Hub										
Project lead	Catherine Mackenzie										
Project reference number	1620015322										
Toolkit lead	Grace English										
Toolkit approver	Sam Willis										
Habitat classification system	UKHab	Site type	Development site								
Date toolkit completed or updated	11 February 2025	Type of project	Area								
Location start (grid reference)		Location end (grid reference)									
Brief description of works											

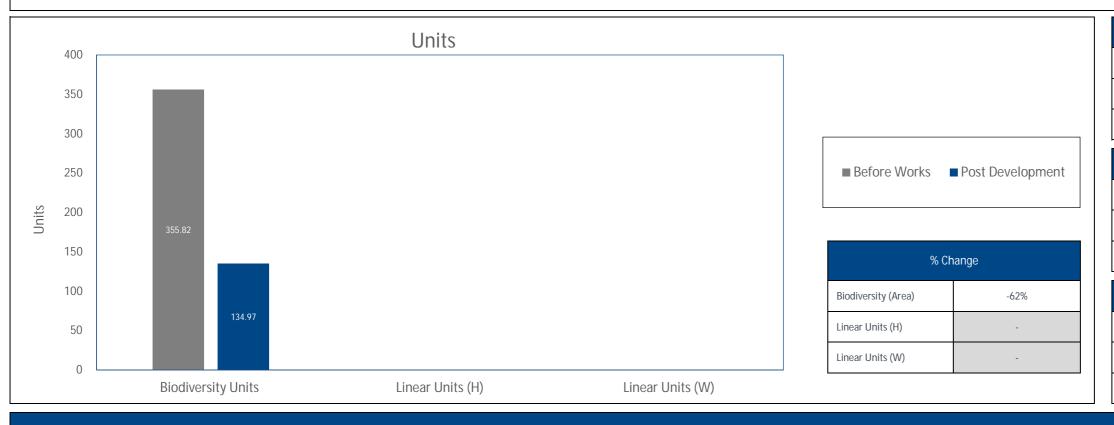


찾 Biod	diversity Proj	ject Toc	lkit																																		Scottish & Southe Electricity Network
liodiversity Unit Ca	alculation																																				
akulate biodiversity an	d linear (hedgerow (H) and watercour	nos (W)) units of your	ito by: (1) establish	ing the habitat	t (2) identifying	the condition, car	nectivity and st	tratogic signif	ficance of that	habitat, and (2)	orbining the hectare	on (b)() or finance metrics (p).																									
				Before w (Baselin	ranks ine)							1			Actio (During W	i irks)								After work a (Following Ac	tions lions)						Post devel	opment		Ne	t change		
Calculation U	nis UK Habitats	Area or I of Hal	ingth tat Distinctiv	eness Co	endlion	Connectivity	Strategic significant	c ce				Area or 1	Length of Hab	isa 😽			nits (H)		is (W)	After work	UK Habian	Area or Leng of Hubitut	h Distinctivene	ss Target Conditio	n Connectivit	Strategic significant	a Difficulty	Time to condi	target tion Soatial								
(Area / Lines (H/M))								Bio:	diversity (Area)	Linear (H)	Linear (W)	Retained		end Arter	ed Removed	Retained	Removed	Retained	Renoved	action	UK REDEAK						Uncary			Biod (/	iversity rea) Linear	H) Linear (V) Biodivi (An	ensity IA) Li	insar (H)	Linsir (M)	Notes
roject Total								3	355.82	0.00	0.00	0.00	20.0	2 0.0	355.82	0.00	0.00	0.50	0.00	Project Total										15	14.97 0.03	0.00	-223	185	0.00	0.00	
			333333						TRC	TEC	180		120			TBC	190	TEC	TBC											-	100 100	TBC	10	c	190	TBC	
1060,Ava	Wetland - Market larg	63	-		Mideale	Madeute	нар		2.64			0.00	0.2		2.64	-			-	Credion	Weland -Barletting	0.21	жарь	Malwate		16.0	Madum	12		33-	- 199		- 44				Conduction Phase 1 (added 22 months to TTC) temporary borrise access, further changes in difficulty and TTC politically note
UDAG_Bris	Wettand - Haviet Lop	0.3	-	_	Madecate	Madwide	нр	_	12.62		1.1	600	62		1 12.63	1.1	1	1.1	1.1	Credian	Helblind and drule: Spland Hulblind	0.70	жıp	Malwatt		тp	Medium	14	2000000000	55			-64			1.1	Conduction Phase 4 (indeed a years to TTTL) Band, Tarther sharps in TTTL politically somega or schandespandedon in report
UDSA, Rea	Wetland - Banket Lop	0.6			Mideale	Madeule	High	_	9.27			6.00	042		9.82					Criedian	Utan-Arthraitan or post	0.65	Lów	NX No body vidue		Line	Medure	3	0000000000	1	100 -		-91				Conclusion Place 1 (added 22 months to TTC) SUDS pand
UD66,8%	Wetland - Manuel Log	1.2		_	Mideale	Madwate	High	_	27.02			0.00	5.28	1 0.0						Creden	Ultan - Developed and coated surface	1.78	TeryLow	value	- Low	Line	Line	2		1	100 -		-22.				Conclusion Phase 1 (added 22 maritis to TTIC)
0066,8%	Wetland -Manuel kep	1.4		_	Madeute	Madeate	Hip		121.21			000				-	-		-	Onetion	Weland Rightling	8.45 1.16	тp	Malwate		16.p.	Mature	12	0000000000	55	- 2.16		-12				Conduction/Phase 1 (added 22 months to TTC) Pract reconteducation, further changes in difficulty and TTC (addied by scalage
100.6,814	Welland - Bankel kop	13	14.0	122222	Mades alle	Madeule	np	_	TRC			000	15		1 12.65	-	TRC	-	-	Oraban	Wetand-Bartechag	114	×.p	332	Makab	np	Medium	14		33	140 · ·	TRC			TRC	TRC	Construction Phase 4 (added 4 years to TTC) temporary Leptines area, further changes in difficulty and TTC publied by easing
			10000000				-		TRC	TRC	180		180		TRC	TRC	180	32					10000000000	222 221	-	-	-		000000000000000000000000000000000000000		INC INC				THC THC	TRC TRC	
			3333333	122222			-		TRC	TRC.	100		- 18.			185	100	-	TRC				122222222222	222 222	-	-	-	-	0000000000	33	10. 10.	10.	10		10.	105	
T UTING Area	Willand Barteri lass		10000000	133333	Cool	Madmide	1940		130.29			1.00	420	_		10.			10%	Cristian	Weland - BarterClass	425		222	Materia	1940	Million		0000000000	8	2.15 .	10%	-		10.	105	Condination Plane 1 (added 22 months to TTC) Prof. www.inducation. turber changes indifficulty and TTC (addined by nodegy
USAR Are	Writiand - Barteri Lop	03		_	Good	Madmide	110	_	7.51			0.00	02							Creation	Wind Banching	0.33		Good		700	Midun	10	110000000	22	2.95		-14				Conduction/Paper (paper 2) means or () / Paper and provide a second state (second state () and () , paper and provide a second state () and ()
1010.010	Wottand - Banket Log	12		_	Good	Madeule	Hip		29.35			0.00	1.21	. 0.0	39.85				-	Ovedon	Votion - Marine Long	1.75	man	Good		mp	Midun	14	000000000000000000000000000000000000000	50 51	£11 ·		-24	34			Londowships There 4 (added is yours to TTC) Temporary having lines, further sharps to difficulty and TTC (addined by waiving a
			10000000	122222			1		TRC	Tic.	100		100		TRC	TRC	TRC	320	TRC			1	1010101010	888		1	-	+	1000000000	11	TRC TRC	TRC	19	-	TRC	TRC	

Project Toolkit

Summary outputs

Review the automatically updated biodiversity unit and linear habitat (hedgerow (H) and water courses (W)) results graphs to help the optioneering process and site selection.





Before WorksUnitsBiodiversity (Area)355.82Linear Units (H)0.00Linear Units (W)0.00

Post Development	Units
Biodiversity (Area)	134.97
Linear Units (H)	0.00
Linear Units (W)	0.00

Net Change	Units
Biodiversity (Area)	-220.85
Linear Units (H)	0.00
Linear Units (W)	0.00



Biodiversity Project Toolkit



Project title	Lewis Hub											
Project lead	Catherine Mackenzie											
Project reference number	1620015322											
Toolkit lead	Grace English	Grace English										
Toolkit approver	Sam Willis											
Habitat classification system	UKHab	Site type	Development site									
Date toolkit completed or updated	20 February 2025	Type of project	Area									
Location start (grid reference)		Location end (grid reference)										
Brief description of works												

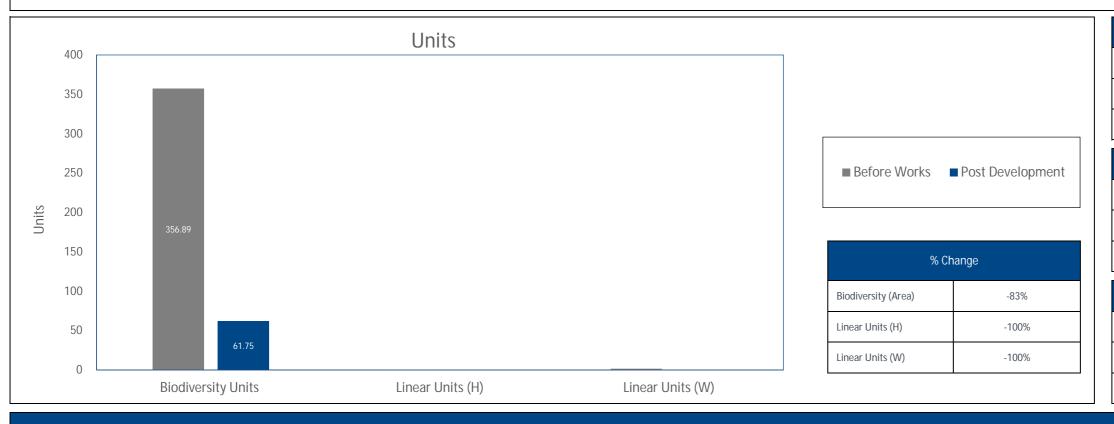


	ation																																
	ar (hedgerow (4) and watercourses (W))	units of your 1	uito by: (1) extabilishing t	he habitat; (2) ide	tillying the condition,	connectivity and strat	togic significance o	f that habital, and; (2)	entering the hectary	. (ta) or linear metros	(11).																						
				iefore works (Baseline)									Action (During Wor	ks)				After work actions (Following Actions)									Po	ost developme	nt	1	Net change		
abulation Units	UK Habitats	Area or L of Hab	ength itat Distinctivene	ss Conditio	n Connectivi	y Strategic significance		Unis		Area or Len	gth of Habitat	Biodiversit	ly Units	Linear Units (H)	Linear	Units (W)	After work	UK Habiturs	Area or Length of Habitat	h Distinctivenes	Target Condition	Connectivity	Strategic significance	Difficulty	Time to target condition	Spatial	Pas	t development e	niti		Net change in uni	ь.	
Area / Linear (H/WJ)							Biodiversit	y Linear (H)	Linear (W)	Rotained		Retained	Removed	Retained Removed	Retained	Removed	action										Biodiversity (Area)		Linuir (N)	Biodiversity (Anna)	Linear (H)	Linur (N)	Notes
AL COL					_		356.89	0.12	1.50	0.00	32.18	0.00	356.89	0.00 0.12	0.00	1.50	Project Total			-							61.75	0.00	0.00	-295.14	-0.12	-1.50	
						1	TRC	TRC	180		TRC	TRC .	TBC	TRC TRC	TRC	TRC								1	1		182	TRC	TRC	182	190	TRC	
N, WHILE	lane of frees	0.06	i biw	Nor	Line	liw		0.12		0.00	0.06			6.03 0.12														003			-0.12		
							TEC	TEC	180		190	192	TBC	TRC TRC	TBC	TBC											100	180	TRC	TEC	180	TBC	
a, kea	Granitand - Modified granitand	0.04	i Sów	Moderate	Line	Liw	2.44		1.1	0.00	0.95	0.00	2.44				Oneban	Urban Developed and costed cartace	0.3h	Terpiow	NR Natiodewaty salae	lider .	lán	Lin	2		0.00		1.1	-2.44			Conduction Phase 1 (added 22 months to TTE) Premarent access VacA
6,8m	Granitand - Middled gaustiand	0.11	. Lów	Makate	Line	Lów	2.30	1.00		0.00	0.55	0.00	2.20				Crisban	Urban - Arthhuar Later or pand	035	läne	N.S. Nakodowaly vitur	Live .	1.00	Malun	2		0.00			-2.20		1.1	Contraction Phase 1 (added 22 months to TTE) SIZES good
a, hu	Granited Midfielgranited	8.21	50w	Makate	Line	Liw	22.94			0.00	8.21	0.00	22.54				Chaban	Dilan Developed land, out-of-sufface	821	They Law	NA Notestary	50w	labor	later .	2		0.00			-32.84			Construction/Phase 1 (added 22 months to TTC) Converter substitutes
6,519	Granitand - Middled gravitand	0.03	50w	Malecale	kim	Line	1.72			0.00	0.42	0.00	1.72	- H - H			Cristian	traviand-Modifedgraviand	0.43	later	Madmide	law	labor	later .	13		1.20			-652			Conclination/Phase 4 (added 4 years to 1772) Temporary Stydown area
							TRC	TBC	TEC		320	TEC	TRC	TRC TRC	TBC	TRC											TEC	320	TRC	TBC	340	190	
							TRC	TBC	TBC		360	TEC	TBC	TRC TRC	TBC	TRC											TBC	192	190	TBC	TBC	190	
k,hna	Heltiniani Ora-Spint Heltini	147	жıр	Madwarte		жp	56.24			0.00	1.67	0.00	\$6.24				Creation	Headband and chride - Uptand Headbland	1.07	High.	Madecale	Madwate	High	Medun	14		6.56			-10.08			Conduction Phase 4 (added is years to TTTC) thand, further changes to TTTC (addited by waitage on oth and reparded on one part
a,ava	Hedrandant Ond - Optimit Hedrand	0.17		Malacia		mp	2.58			0.00	0.17	0.30	2.58				Onation	Urban - Arthout take or pand	0.17	Line	NA Advanturely villet	Löw	Liber .	Midun	2		0.00			-2.53			Conclusion Phase 1 (added 22 months to 1111) SUES pand
6,816	Helbland and Orch - Uptand Helbland	0.34		Moleccie		16.05	20.45			0.00	0.36	0.20	5.45				Onation	Urban Developed Land under Varian	0.36	Wely Line	value	Line	5.0w	later .	2		0.30			4.4			Construction Phase 1 (added 32 months in 1992) Permanent access block
0,010	Healtrand and Orak-Optional Healtrand	8.10		Molecule		High	122.96			0.00	8.10	0.20	122.96				Chalban	Welland - Bantel log	8.10	Hip	Pour	Madwate	нр	Midun	12		26.86			-96.53	-		Conduction/Place 1 (added 22 months to TTC) Post-monitodication, further changes indifficulty and TTC (added by noing
lab_Bria	Instituted and doub. Uptand Instituted	035		Maderade		нр	8.25			600	0.55	0.00	8.25				Crieban.	Helbland and shrule-Option/Healbland	0.55	жıр	Modwata	Moderate	тp	Median	12		2.65			-6.20			Construction/Phase 1 (added 22 months to TTC) temporary bencies access, Tarther changes in TTC publicating existing on citeran
un des	Instituted and doub-Uptand Instituted	6.04		Maderate		нр	61.22			600	6.01	0.00	41.22				Crieban.	Healthand and shrule-Option/Healthand	6.04	mgh	Moderate NA - No local versity	Moderate	тp	Medium	14		23.26			-28.67			Conduction/Phase ()oddid kynes in TTC) frequency laydown area, further shanges in TTTC publicatly scolage on oth and re
10,000	Instituted and doub. Uptand Instituted	6.03	1000000000	Maderate	Maderate	нр	98.37 TBC		110	600	6.43 TBC	0.00	98.22		-	-	Creban	Utlan- Destoped land, seated cartace	6.03	10000000000	salar	Line	lin	Low	1		0.00 19C	-	- 100	-98.17 192	TRC	TRC	Conduction Phase 1 (added 22 months to TTC) Converter substation
		-	0111111111		_	_	TRC	704	10.		TRC III		185	10. 10.	18%	10%											16	185	18%	180	180	185	
		-	000000000000000000000000000000000000000		_	_	TRC	704	10.		TRC		185	10. 10.	18%	18%				100000000000000000000000000000000000000							16	185	105	180	180	TRC	
		-	0333333333	131			TRC	TRE	100		180	396	THE	12/ 12/	TRA	TRC		1	-	11111100000					1		12	The second	TRC	36	180	TRC	
Jone	Woodand and familin Other continuous	0.11	10000000000	Paur	Line	line .	0.22			6.00	0.11	0.00	0.22				Creation	Urban - Developed and costed surface	0.11	Trylaw	N.X. No loadsorvity	10w	law.	Line	2		0.00			-0.22			Conclosation Phase 1 (added 22 months to 1115) Permanent access tools
t, Arm	Woodland Woodland and harrol. Other cambrous	0.00		Pair	Line	Liw	0.16			0.00	0.08	0.00	0.16				Onetion	Dilan - Artificial Server pand	0.08	Line	salar N.S. Nakodowychy sither	line .	line	Melun	2		0.00			-0.16			Condition Theory 1 (addred 32 months to TTTC) SIZE good
al, Area	Woodland Woodland and Sanci - Other cambrook woodland	0.10	line line	Paur	Line	Line	0.20			0.00	0.90	0.00	0.20				Cristian	Litten Developed land, online surface	0.10	Thrytian	sidue N.S. Notestherwity without	lider .	Line	lána	2 00		0.00			-0.20			Construction Marke 1 (added 22 months to 1710) Converter code/action
6,010	Woodland and family Other somehous woodland	0.07		Paur		Line	0.14			0.00	93.0	0.00	0.14				Cristian	Wandtand and fared. Other continuous minifiand	0.07	Line	Pair	law	liter	law	11		0.09			-6:05			Construction Phase 4 (added 4 years to 1111) Temporary Taplaten ama
6,Am	Woodland and Tariel - Other combridue, woodland	0.04		Paur	Line	Line	608			6.00	0.04	0.00	0.02				Oraban	Woodland and Sared - Other conference woodland	8.04	Line	Paur	line	liter .	line .	7		0.06			-6:02	1.1		Cancilitation Phase 1 (added 22 marchs to 1000) Temporary Service access
							TRC	TRC	TBC	1	TRC .	TRC	TBC	18C 18C	TRC	TRC	1										TBC	192	190	TRC	TRC	190	
							180	TBC	TBC		TBC	TEC	TBC	TRC TRC	TBC	180	1	1									TBC	340	180	TRC	TEC	265	
							180	TBC	TBC		TBC	TEC	TBC	TRC TRC	TBC	180	1	1									TBC	340	180	TRC	TEC	265	
a.ava	WoodandandTerrol - Other woodand reas	ed 0.29	Median	744	Line	line	0.36			0.00	0.09	0.30	0.26				Cristian	Welland Hantellog	1.09	14.0	Nor	Madwale	нар	Midun	12		0.30			4.06			Construction Phase 1 (added 22 months to TTIC) Proct-involved or during in the design in difficulty and TTIC particle by scale
140,814	Woodland and Sared-Other woodland; mile	ed cos	Midun	Poor	Line	5.0w	0.24			0.00	006	0.00	0.34				Credon	Helbland and divals- Spland Healthand	0.0%	mp	Paur	Moderate	np	Medium	14		0.17		-	-017			Construction Phase 4 (added 4 years to TTTC) Band, Tarther sharpes in TTC publicatly essage an utransmission in report
· · · · ·							TBC	TBC	190		TRC	180	TBC	TRC TRC	340	TBC											180	TRC	TRC	192	TRC	TBC	
The same of	Borri and lates - Other rivers and clinices.	0.75	i Dow	Pour	Line	10w			1.90	000	0.75				0.00	1.50													0.30			-1.90	Agricultural dramage data

Project Toolkit

Summary outputs

Review the automatically updated biodiversity unit and linear habitat (hedgerow (H) and water courses (W)) results graphs to help the optioneering process and site selection.





Before WorksUnitsBiodiversity (Area)356.89Linear Units (H)0.12Linear Units (W)1.50

Post Development	Units
Biodiversity (Area)	61.75
Linear Units (H)	0.00
Linear Units (W)	0.00

Net Change	Units
Biodiversity (Area)	-295.14
Linear Units (H)	-0.12
Linear Units (W)	-1.50



APPENDIX 3 RETAINED HABITATS TOOLKITS

Biodiversity Project Toolkit



Project title	Lewis Hub										
Project lead	Catherine Mackenzie										
Project reference number	1620015322										
Toolkit lead	Grace English										
Toolkit approver	Sam Willis										
Habitat classification system	UKHab Site type Development site										
Date toolkit completed or updated	11 February 2025Type of projectArea										
Location start (grid reference)		Location end (grid reference)									
Brief description of works											

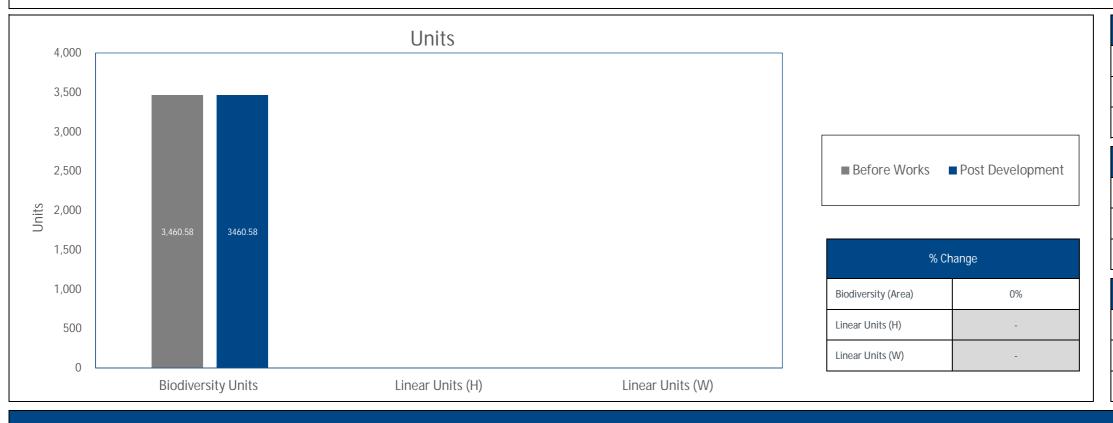


🌞 Biodiv	versity Projec	t Toolk	it																															Scottish & Southern Electricity Networks
Biodiversity Unit Calcul	skorkjust Gilado																																	
Calculate biodiversity and line																																		
				afore works (Baseline)							Action After work actions (Dang Work) (Johnsy Actions									F	Post developme	ut.		Net change	1									
Calculation Units	UKHabitats	Area or Lengt of Habitat	h Distinctivene	s Condition	Connectivity	Strategic significance				Area or Long	th of Habitat	Biodiversit	y Units		0 Li		After	work	UKHabitats	Area or Lengt of Habitat	Distinctiveness	Target Condition	Connectivity	Strategic significance		Time to target condition	Soutial	Po						
(Area / Linear (H/W))	UK HIETERS						Biodivervity (Area)	Linear (H)	Linear (W)	Retained		Retained	Removed R	stained Rem	oved Rete	ined Remov	ed act		UK PSEILUS						Uncury		openee	Biodiversity (Area)	Linear (H)	Linair (W)	Biodiversity (Ansa)	Linear (H)	Linair (M)	Notes
Project Total							3460.58	0.00	0.00	162.49	0.00	3460.58	0.00	0.00 0.1	00 0.0	0.00	Projec	t Total										3460.58	0.00	0.00	0.00	0.00	0.00	
1 00%6,6%6	Wetland - Barnet kep	132.7%	High.	Good	Madeute	нр	261.96			130 %	6:00	2921.96	0.00															2921.96			0.00	1.1		
2 00%6,6%6	Welland - Barnet log	21.52	Hip.	Moderate	Madecale	нр	03.62			21.82	0.00	478.63	0.00															478.63			0.00			
1							TRC	TEC	190		18C	790	TEC	TRC 15	ac na	C TRC												190	190	TBC	TRC	190	TBC	

Project Toolkit

Summary outputs

Review the automatically updated biodiversity unit and linear habitat (hedgerow (H) and water courses (W)) results graphs to help the optioneering process and site selection.





Before WorksUnitsBiodiversity (Area)3460.58Linear Units (H)0.00Linear Units (W)0.00

Post Development	Units
Biodiversity (Area)	3460.58
Linear Units (H)	0.00
Linear Units (W)	0.00

Net Change	Units
Biodiversity (Area)	0.00
Linear Units (H)	0.00
Linear Units (W)	0.00



Biodiversity Project Toolkit



Project title	Lewis Hub											
Project lead	Catherine Mackenzie											
Project reference number	1620015322											
Toolkit lead	Grace English											
Toolkit approver	Sam Willis											
Habitat classification system	UKHab	Development site										
Date toolkit completed or updated	20 February 2025Type of projectArea											
Location start (grid reference)		Location end (grid reference)										
Brief description of works												

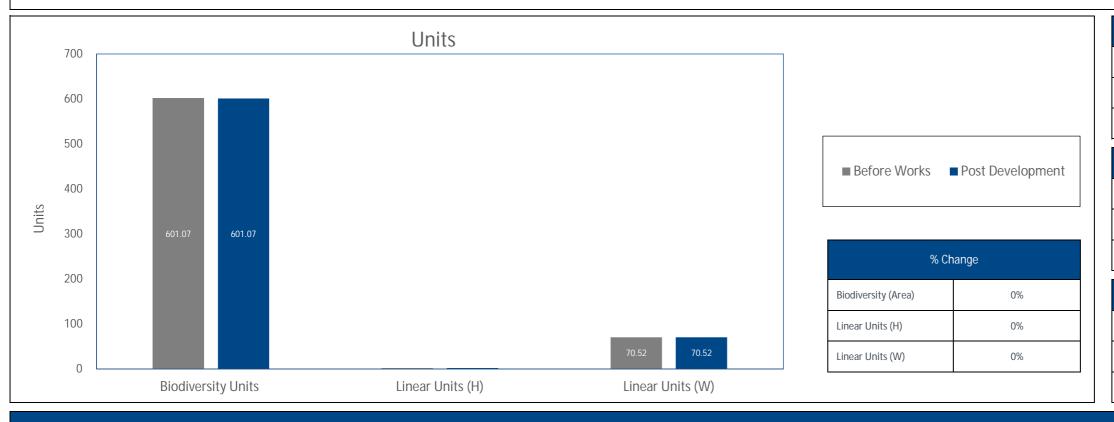


눩 Biodi	versity Project	Toolki	t																														Scottish & Southern Electricity Networks
iodiversity Unit Calo.	ulation																																
iculate biodivenity and lin	sar (hedgerow (H) and saturcourses (H)) u	sits of your site by	(1) establishing the	habitat (2) identifyi	ng the condition, co	mectivity and strate	gic significance of th	athabital, and; (2) e	intering the hectarius	(ha) or linear methos	010																						
	Bistore works Action (Basilina) (During Works)																	After work action (Following Action	ns. J				P	fost developmen	t		Net change		1				
Calculation Units	UK Hielans	Area or Length of Habitat	Distinctiveness	Condition	Connectivity	Strategic significance				Area or Long	gth of Habitat	Biodiversit	y Units		040		(4)	After work	UK Habitats	Area or Lengt of Habitat	h Distinctivene	is Target Condition	Connectivity	Strategic significance	Difficulty	Time to target condition	Po						
d (Area / Linear (H/M))	UK Hierbits						Biodiversity (Area)	Linear (H)	Linear (W)	Retained		Retained	Removed	Retained Ret	moved At	stained A	moved		UK Habrais						Difficulty		Biodiversity (Area)	Linear (H)	Linuir (N)	Biodiversity (Anta)	Linear (H)	Linur (A)	Notes
roject Total							601.07	1.96	70.52	78.89	0.00	601.07	0.00	1.96 0	202	70.52	0.00	Project Total									601.07	1.96	70.52	0.00	0.00	0.00	
							TRC	TEC	190		TRC	780	TBC	TRC	19C	TEC	TRC										180	TIC	TBC	190	180	TBC	
UD46324671	law of these	0.11	50w	Paur	Line	50w		1.96		0.11	0.00	1.1		1.96	0.00	1											1.1	195			0.00		
UD46,Ava	Instituted and shock - Uptions Instituted	21.58	Hip.	Midwale	Maderate	HID	01.28	1.1		27.58	0.00	47428	0.00		*	1											479.28			0.00			
1056,Am	Rows and Lakes - Organophic and dysDophic lakes	0.30	нр	FairtyGood	Madecade	Liter	4.95		1.1	0.30	0.00	4.95	0.30				-					2000					4.9%			0.00			
1016,819	Urban - Developed land snated cartace	3.40	Wry law	NR. No load we stry silter	láne	Line	6.33			1.40	0.00	0.00	0.30		-												0.00		-	0.00			
1016,819	Wetand Manuthing	2.30	нр	Paur	Malwale	man	17.66			2.30	0.00	12.46	0.30														12.46		-	0.00			
UD54,Am	Granitand Middlind granitand	4.12	lider	Maderate	Line	Line	26:08		1.1	112	0.00	38.08	0.30		·	-						8					20.00			0.00			
UD46,Ava	Woodland and harvel. Other samhnous second and	21.00	50w	Paur	law	Line	42:00			21.00	0.00	42.00	0.30			-	1										42.00			0.00			
UD66,Ava	Woodland and famil - Other woodland briail/seved	140	Malum	Maderate	lán	Lów	12.90		1.1.1	140	0.00	12.90	0.00														12.80			0.00			
U066,Ava	Woodland and Sared - Other anosland many	140	Malum	Paur	Line	Line	6.42		1.1	140	0.00	6.40	0.00	1.1			1										6.60	1.1		0.30	1.0		
1							TRC	TBC	TEC		34	TBC	TBC	180	TBC	TBC	TRC										TBC	192	TRC	TBC	36	190	
W.weilard	Evers and lates - Other itves; and streams. (Medium)	6.77	Midum	Madwarte	Line	Line			69.54	6.77	0.00				1		6:00												67.21			0.00	
Water and a second	Rivers and Latex - Other rivers and clinane. (Line)	0.64	Lów	Paur	Line	laine		-	1.28	0.84	0.00		-				0.00										-		5.28	-		0.00	
4							180	TRC	TBC		TEC	TBC	TBC	190	TBC	TBC	19C										TBC	340	180	TRC	TEC	180	

Project Toolkit

Summary outputs

Review the automatically updated biodiversity unit and linear habitat (hedgerow (H) and water courses (W)) results graphs to help the optioneering process and site selection.





Before WorksUnitsBiodiversity (Area)601.07Linear Units (H)1.96Linear Units (W)70.52

Post Development	Units
Biodiversity (Area)	601.07
Linear Units (H)	1.96
Linear Units (W)	70.52

Net Change	Units
Biodiversity (Area)	0.00
Linear Units (H)	0.00
Linear Units (W)	0.00

