



Biodiversity Net Gain Report

Kirkby, Proposed Battery Energy Storage System

Pivoted Power LLP

Pivoted Power LLP
Cardinal Place
80 Victoria Street
London
SW1E 5JL

Prepared by:

SLR Consulting Limited

5th Floor, 35 Dale Street, Manchester, M1 2HF

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11 September 2025

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Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
01	11 September 2025	Mark Nelson	Dale Broadbent	Dale Broadbent
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Basis of Report

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Acronyms and Abbreviations

BESS	Battery Energy Storage System
BMP	Biodiversity Management Plan
BNG	Biodiversity Net Gain
BU	Biodiversity units
DEFRA	Department for Environment, Food and Rural Affairs
HMMP	Habitat Management and Monitoring Plan
MMU	Minimum Mapping Unit
NGR	National Grid Reference
PEA	Preliminary Ecological Appraisal
RCA	River Condition Assessment
SLR	SLR Consulting Ltd
UKHab	UK Habitat Classification



1.0 Introduction

1.1 Background

SLR Consulting Ltd (SLR) was commissioned by Pivoted Power LLP to undertake a Biodiversity Net Gain Assessment for its proposed construction of a new Battery Energy Storage System (BESS) at Kirkby, located North of Cut Lane, Liverpool, L33 3AJ (centroid National Grid reference (NGR): SJ 44510 97577). The plan of the development footprint is provided in **Appendix A**. The proposed development consists of a Battery Energy Storage System Facility (BESS) compound with an access track to the south and a cable route to connect the site to Kirkby electricity substation. A Biodiversity Net Gain (BNG) assessment is required to support the any planning application, to demonstrate how 10% biodiversity net gain will be achieved while satisfying habitat trading rules.

1.2 Site Location and Description

The site is located to the West of the Town of Kirkby, 640m North of the major roadway A580 'East Lancashire Road' (centroid National Grid reference (NGR): SJ 44510 97577), hereafter referred to as 'the site'. The site is c3.34 Ha in size.

A large proportion of the land has been utilised for mineral extraction and cleared for the future establishment of a fishing pond where the vast majority of the site vegetation has been removed and the topsoil has been stripped. Historical imagery on Google Earth suggests that the vegetation removal started in 2019. Also present within the area is a large industrial building and several industrial containers. Lining the perimeters of the Site are hedgerows.

The Site will be utilised for the construction and operation of a new Battery Energy Storage System (BESS).

The works will likely include the construction of:

- Battery compound comprising of energy blocks with associated cooling systems; transformers; inverters; spares container; switchgear kiosk; control room kiosk; National Grid incomer substation; earthing and auxiliary transformers; and LV board. All units set on concrete slab foundations.
- Acoustic fencing.
- Security fencing and double leaf site security gate.
- Point of connection cable corridor.
- Private wire cable corridor.
- Landscape planting and perimeter hedge planting.
- CCTV cameras and masts.
- A water tower
- Access track from National Grid service road and permeable stone site surfacing around site track and concrete slab foundations.
- An attenuation basin
- A temporary compound in the field to the west of the access track.

The Red Line Boundary of the Site can be seen in **Appendix A**, Drawing KIR-EDFR-BESS-LAND-PLN-150.05 - Site Location Plan, along with the proposed cable route. The cable route exits the site to the south via the current access track and then progress west along



Cut Lane to the junction of Molly's Lane and Hewitt's Lane. The route then progresses south down Hewitt's Lane before cutting west through woodland south of Knowsley Pumping Station, crossing Knowsley Brook and progressing west along the outside of the southern edge of the substation. The route will terminate at an intermediate substation.

1.3 Scope of Works

The objectives of the Biodiversity Net Gain Assessment were to:

- Input all relevant updated habitat and landscaping information into a Biodiversity Net Gain calculator and provide detailed notes on the information input into the calculator; and
- Provide an updated quantitative assessment of biodiversity losses and/or gains as a result of the development that will be sufficient to either achieve at least a 10% net gain and satisfy all habitat trading rules within the Defra Statutory Biodiversity Metric or identify the level of trading payments required.
- Assess and recommend amendments or enhancements which will provide more desirable outcomes for the Biodiversity Net Gain results.

1.4 Relevant Legislation and Planning Policy

A summary of legislation relevant to (onshore) biodiversity in England and Wales is provided in **Appendix D**.

However, it is important to note the following; as of January 2024, under Schedule 7a of the Town and Country Planning Act 1990 (TCPA), in England, Biodiversity Net Gain (BNG) is mandatory (as inserted by Schedule 14 of the Environment Act 2021).

Developers must deliver a biodiversity net gain of 10%. This means all developments need to provide more or better-quality natural habitat than was present before development.

2.0 Key Concepts

2.1 Overview

DEFRA advise that the Statutory Biodiversity Metric "is a way of measuring biodiversity value for the purposes of BNG". It has become the standardised way of describing biodiversity change in England, noting that there are a limited number of local exceptions to its use. The biodiversity evaluation of the proposed development has been undertaken using the Statutory Biodiversity Metric.

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 3 distinct types of BUs, and these are not of equivalence or interchangeable, they are:

- Area habitat units – which describe areas of habitat based on measurement in hectares;
- Hedgerow units – which describe hedgerows and lines of trees measured in kilometres; and
- Watercourse units – 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 the 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.

2.3 Methodology

In supporting the assessment of biodiversity changes, SLR have referred to :

- Statutory biodiversity metric calculation tool
- Statutory biodiversity metric: user guide
- Statutory biodiversity metric condition assessments

The Metric uses a unified habitat classification system known as UKHabitat Classification (UKHab). This system provides benefits over existing systems such as Phase 1 and NVC, and allows Natural England, Scottish Natural Heritage, Natural Resources Wales, Department of the Environment Northern Ireland and JNCC to report consistently on habitats of European and national significance. UKHab information has been used to support the assessment of biodiversity changes.

In addition, the approach requires the condition of habitats to be assessed.

2.4 Statutory Biodiversity Metric Principles and Rules

DEFRA 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: The metric assessment should be completed by a competent person.

Principle 2: The use of this biodiversity metric does not override existing biodiversity protections, statutory obligations, policy requirements, ecological mitigation hierarchy or any other requirements. This includes consenting or licensing processes, for example woodlands.

Principle 3: This biodiversity metric should be used in accordance with established good practice guidance and professional codes.

Principle 4: This biodiversity metric is not a complex or comprehensive ecological model and is not a substitute for expert ecological advice.



Principle 5: Biodiversity units are a proxy for biodiversity and should be treated as relative values.

Principle 6: This biodiversity metric is designed to inform decisions in conjunction with locally relevant evidence, expert input, or guidance.

Principle 7: Habitat interventions need to be realistic and deliverable within a relevant project timeframe.

Principle 8: Created and enhanced habitats should be, where practical and reasonable, local to any impact and deliver strategically important outcomes for nature conservation.

Principle 9: This biodiversity metric does not enforce a minimum habitat size ratio for compensation of losses. Proposals should aim to:

- maintain habitat extent - supporting more, bigger, better and more joined up ecological networks.
- ensure that proposed or retained habitat parcels are of sufficient size for ecological function.

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: The trading rules of this biodiversity metric must be followed.

Rule 2: Biodiversity unit outputs, for each type of unit, must not be summed, traded, or converted between types. The requirement to deliver at least a 10% net gain applies to each type of unit.

Rule 3: To accurately apply the biodiversity metric formula, you must use the biodiversity metric calculation tool or small sites biodiversity metric tool (SSM) for small sites.

The tools remove the need for a user to manually calculate the change in biodiversity value.

The tool will summarise the results of the calculation and inform a user whether the biodiversity net gain objective has been met.

Rule 4: In exceptional ecological circumstances, deviation from this biodiversity metric methodology may be permitted by the relevant planning authority.

The Metric guidance also confirms:

Irreplaceable habitats – Irreplaceable habitats (as provided for in secondary legislation for BNG) do not have a BNG requirement as they are too valuable to be compensated for. As such, any losses to irreplaceable habitats cannot be calculated by the biodiversity metric tool and they are removed from the baseline.

If you have irreplaceable habitats within your site these require consideration outside of biodiversity net gain, which must comply with up-to-date policy, legislation and regulations.

Ancient woodland – Ancient woodland can be recorded as range of woodland habitat types. All ancient woodland must be recorded within the biodiversity metric tool and marked as an irreplaceable habitat.

Ancient and veteran trees – All ancient and veteran trees must be recorded within the biodiversity metric tool and marked as an irreplaceable habitat.



2.5 Habitat Trading Rules

To ensure the scheme does not replace high value habitats with lower value habitats, trading rules are built into the calculator. These are intended to ensure that higher value habitats are not replaced with lower value ones.

2.6 Strategic Significance

The Guidance Note on Mandatory Biodiversity Net Gain and its Implementation in the Liverpool City Region¹ and Knowsley Local Plan Adopted Core Strategy² have been reviewed to inform decision making regarding the strategic significance of the habitats within the Site.

2.7 Evidence of Technical Competence and Experience

This report and the associated BNG Calculations have been prepared by Mark Nelson MSc, BA (Hons), MCIEEM, an Associate Ecologist with SLR. Mark has over 11 years' experience in consultancy which has included preparing and overseeing assessments for multiple projects, including small and large infrastructure projects, in the UK.

This report has been subject to Quality Assurance reviews as per SLRs policies by Mr Dale Broadbent BSc (Hons), PGDip, MCIEEM. Dale is an Associate Ecologist with SLR with fifteen years' experience as a consultant ecologist.

2.8 Baseline Data Recording

A habitat survey of the BESS site was undertaken by SLR on 29th June 2023 by Mark Nelson MSc BA(Hons) MCIEEM, further surveys of the proposed cable routes were undertaken on 3rd October 2023 and 4th July 2024, the latter survey including a River Condition Assessment (RCA) of Knowsley Brook. Habitats and their condition were recorded on site using the UK Habitat Classification (UKHab) methodology (Professional Edition, version 2.1). using a Minimum Mapping Unit (MMU) of 25m². Habitats were classified to Level 5 of the Primary Hierarchy where possible, and all mandatory Secondary codes were used, along with optional Secondary codes where relevant. Areas of each habitat type were taken from the UKHab map (**Appendix B**).

Part of the Red Line Boundary was subject to a planning application (since withdrawn) regarding the provision of a fishing pond with associated habitat. This area was stripped to subsoil at the time of survey, and aerial imagery suggests this has been the case since 2019. Habitats within the Red Line Boundary have not changed since this event (areas outside of this have become vegetated subsequently), and therefore the results of the UK habitat surveys have been used to assess the baseline with the understanding that these have been present since 2019.

2.9 Development Proposals

The latest Site Layout Plan KIR-EDFR-BESS-CIV-PLN-300.13 - Site Layout Plan and Landscape Mitigation Plan v2 were used to assess the area of proposed Post Development Habitats (see **Appendix C**). It was assumed all land within the main area of the plot would be hard standing beneath and around the battery itself. It was also assumed that the track to the site would be upgraded to a sealed surface and the grassland habitats either side of the tracks would be retained apart from small areas where the track will be widened. An

¹ https://eas.merseysidebiobank.org.uk/wp-content/uploads/2024/03/LCR_Mandatory_BNG_Guidance_Note_FINAL.pdf

² <https://localplanmaps.knowsley.gov.uk/documents/knowsley-local-plan-adopted-core-strategy.pdf>



attenuation basin of 228m² will be installed. The temporary compound will be restored to the existing habitat classification with enhanced condition immediately following construction completion. Further landscape enhancements will be included in the design such as hedgerow planting, grassland creation and tree planting. The assessment will provide a guide as to the amount of landscape planting required to achieve 10% biodiversity net gain for the project, or alternatively what off site provision will be required.

Two areas of verge will be removed to form passing places along Cut Lane, this will impact a very small amount of land in current agricultural use where the verge forms the field margin.

It was assumed the cable route would only cause temporary disturbance of the ground, and the majority of this would be through the current roadways or footpaths; if this was not possible then the cable was assumed to pass through the maintained grassland habitats of verges. Where this passes through woodland, it assumes a 10 m working width will be required and this will involve removal of all woodland within that area. While this will have the potential to improve the woodland overall long term by creation of open areas for regeneration and improving woodland structure, because the woodland overall is not included in the RLB this will have to be considered as loss and creation for the purposes of this BNG assessment. All cable route habitats were assumed to be restored immediately following construction.

The cable route will cross over Knowsley Brook at the culvert along Hewitt's Lane and will progress using Hydraulic Directional Drilling where it passes beneath the Brook in the woodland. There will be no direct impact on the watercourse habitat itself, however it does encroach within the riparian zone of the watercourse (within 10 m of the bank top) and therefore requires a watercourse assessment.

2.10 Limitations

No significant limitations were encountered during completion of the Biodiversity Net Gain assessment. DEFRA note that the Statutory Biodiversity Metric has been extensively tested, but that they continue to listen to feedback to support correction of any errors or problems.

The BNG assessment at this stage is predictive in nature. To ensure delivery of BNG, requirements outlined within this report must be adhered to, and a rigorous programme of monitoring and maintenance must be implemented.

The assessment methodology does not incorporate ecological features beyond area and linear based habitats. The potential for the site to support protected species, for example, is not captured by this assessment. As such this report should be read in conjunction with all other ecological reports for the site. The mitigation hierarchy in relation to protected and notable habitats and species must be followed. This report should accordingly be read in conjunction with any other appropriate protected species surveys.

3.0 Results

3.1 Habitats

The completed version of the DEFRA Statutory Biodiversity Calculation Tool MS Excel calculator accompanies this Biodiversity Net Gain (BNG) report (**Appendix E**). The MS Excel calculator contains all figures used in the calculations, pre- and post-development habitat plans, and also contains detailed 'assessor comments' to help link the calculations provided to the habitat plans of the site. All pre-development habitat condition scores are those assessed during the UK Habitat Surveys.

Details on how and where habitats will be enhanced or created to achieve the calculated BNG are detailed and mapped in the calculator.



3.2 Strategic Significance

Habitats on site were listed in the Guidance Note on Mandatory Biodiversity Net Gain and its Implementation in the Liverpool City Region and Knowsley Local Plan Adopted Core Strategy as strategically significant habitat. Therefore, habitats including hedgerows, and Knowsley Brook are considered to be Formally Identified in Local Strategy.

3.3 On-Site Baseline Habitat Value

The total overall ecological baseline (habitat) of the BESS Site and cable route is 14.83 Biodiversity Units (BU). This was calculated in the Statutory Biodiversity Metric named 402.V08525.00024_Kirkby BESS_BNG_Sep25For Issue.

3.3.1 Headline Scores

Headline scores to achieve overall 10% BNG and meet the habitat trading standards are summarised in **Table 3-1** below. Further details are provided in the Statutory Biodiversity Calculation Tool Excel sheet.

Table 3-1: BNG Headline Scores

Development Phase	Unit type	Value
On-site baseline	Habitat units	14.83
	Hedgerow units	0.27
	Watercourse units	1.14
On-site post-intervention (Including habitat retention, creation & enhancement)	Habitat units	16.42
	Hedgerow units	3.58
	Watercourse units	1.14
On-site net unit change (Including habitat retention, creation & enhancement)	Habitat units	1.59
	Hedgerow units	3.31
	Watercourse units	0.00
On-site net % change (Including habitat retention, creation & enhancement)	Habitat units	10.73%
	Hedgerow units	1219.26%
	Watercourse units	0.00%
Trading Rules Satisfied		Yes

3.3.2 Habitat Scores

The summary of Trading Rules for habitats is shown in **Table 3-2** below. The main changes relate to Grassland and woodland habitats. These are Medium Distinctiveness habitat which requires replacement by the same broad habitat type (grassland or woodland) or a higher distinctiveness habitat.

Table 3-2: On site unit change by area habitat

Broad Habitat	Unit difference
Grassland	1.35
Woodland and Forest	0.00



Broad Habitat	Unit difference
Individual trees	0.22
Urban (Bioswale)	0.06
Cereal Crops	-0.04
Total Medium Distinctiveness	1.58
Total Low Distinctiveness	0.02

3.3.3 Hedgerow Scores

The summary of unit change for Hedgerows is shown in **Table 3-3** below. The changes relate to native hedgerow habitats. No loss of hedgerow is expected, and this assumes a small amount of hedgerow creation for screening purposes. Actual hedgerow creation is likely to be higher.

Table 3-3: On site unit change by linear habitat

Broad Habitat	Unit difference
Species Rich Native Hedgerow with trees	0.87
Species Rich Native Hedgerow associated with bank or ditch	0.67
Species Rich Native Hedgerow	1.77
Total High Distinctiveness	1.54
Total Medium Distinctiveness	1.77

3.3.4 Watercourse Scores

The summary of unit change for Watercourses is shown in **Table 3-4** below. No loss of watercourses is expected as this will be crossed over a culvert and by HDD. No watercourse is available within the Red Line Boundary suitable for enhancement and there are no viable options for watercourse creation. Therefore, to achieve 10% net gain off site credits will be required but other options may be considered if opportunity arises.

Table 3-4: On site unit change by watercourse habitat

Broad Habitat	Unit difference
Ditches	0.00
Culvert	0.00
Other rivers and streams	0.00
Total	0.00



4.0 Discussion

4.1 Biodiversity net gain for current proposals

The headline scores summarised above and detailed in the accompanying Statutory Biodiversity Calculation Tool show that the current design can achieve 10% Biodiversity Net Gain onsite with additional habitat creation or enhancement. There is some permanent loss of grassland within the BESS site, and temporary loss of medium distinctiveness grassland (capable of restoration within 2 years) from the setting down of the compound area. This temporary loss will be enhanced following restoration to medium condition. There will be further loss of medium distinctiveness grassland with woodland creation but this is compensated by the grassland creation and enhancement elsewhere.

The Cable route is temporary works through low distinctiveness habitats capable of full restoration within 2 years for most of its length which therefore do not count as loss. It does progress through other broadleaved woodland of moderate condition between Hewitts Lane and the southern boundary of the existing substation. This will be restored but this will take over 2 years so will incur loss of biodiversity units.

Overall area habitats show a net gain of 1.59 BU, equating to a net gain of 10.73%.

Hedgerows are not expected to have any loss, and therefore all the hedgerow planting is a gain. Overall hedgerow habitats show a net gain of 1219.26%, extremely high due to the small amount of hedgerow habitat present within the RLB and the extensive hedgerow creation required for visual screening.

The route will cross over Knowsley Brook at the culvert and again by directional drilling underneath and therefore although it will result in 0% net loss to BNG (since all works will remain within the carriageway or underneath the stream) there will be a requirement to achieve 10% BNG in watercourses. A minimum of 51m of ditch creation would be required to achieve 10% BNG, at present this is not considered feasible and therefore an off site solution will be required. To achieve 10% net gain will require 0.23 Watercourse Units, if using the DEFRA credit scheme this would have an estimated cost of £52,900.

4.2 Summary

Given the size of the development and the available space it is possible for the required 10% Biodiversity Net Gain for habitats and hedgerows to be entirely achieved onsite with the current design. The 10% for water courses will need to be achieved either through agreement for off site ditch restoration if a suitable site can be found, or through contribution to a BNG credit scheme.

Overall, the scheme in its present form can achieve the 10% mandatory target with recourse to offsite watercourse habitat creation.

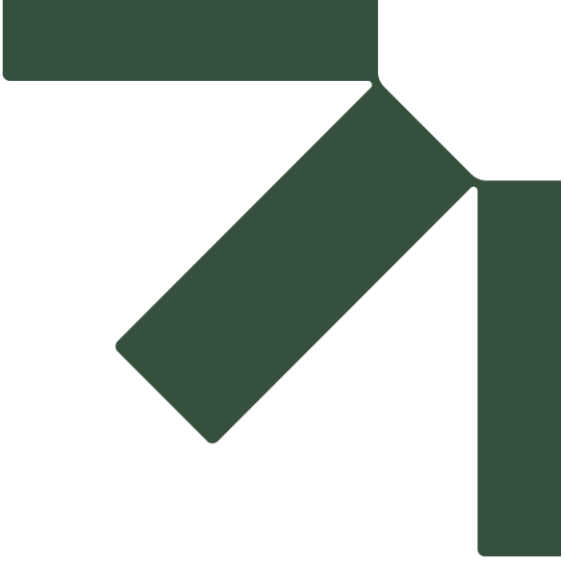
Regards,

SLR Consulting Limited



Mark Nelson, MSc. BA(Hons). MCIEEM
Associate Ecologist





Appendix A Kirkby BESS Red Line Boundary

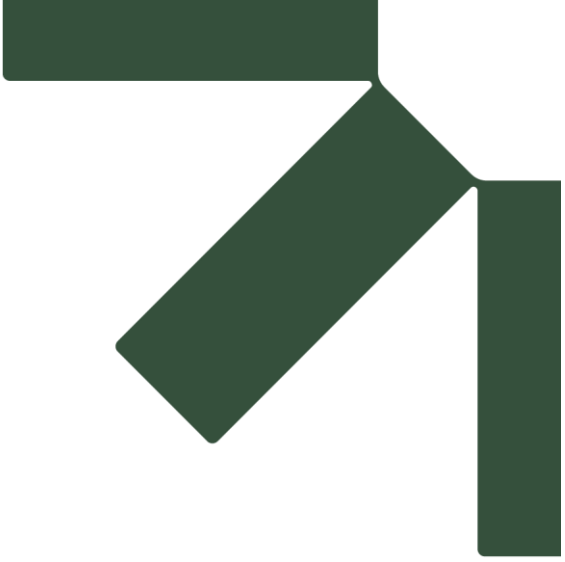
Biodiversity Net Gain Report

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SLR Project No.: 402.V08525.00024

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Appendix B UK Habitat Classification

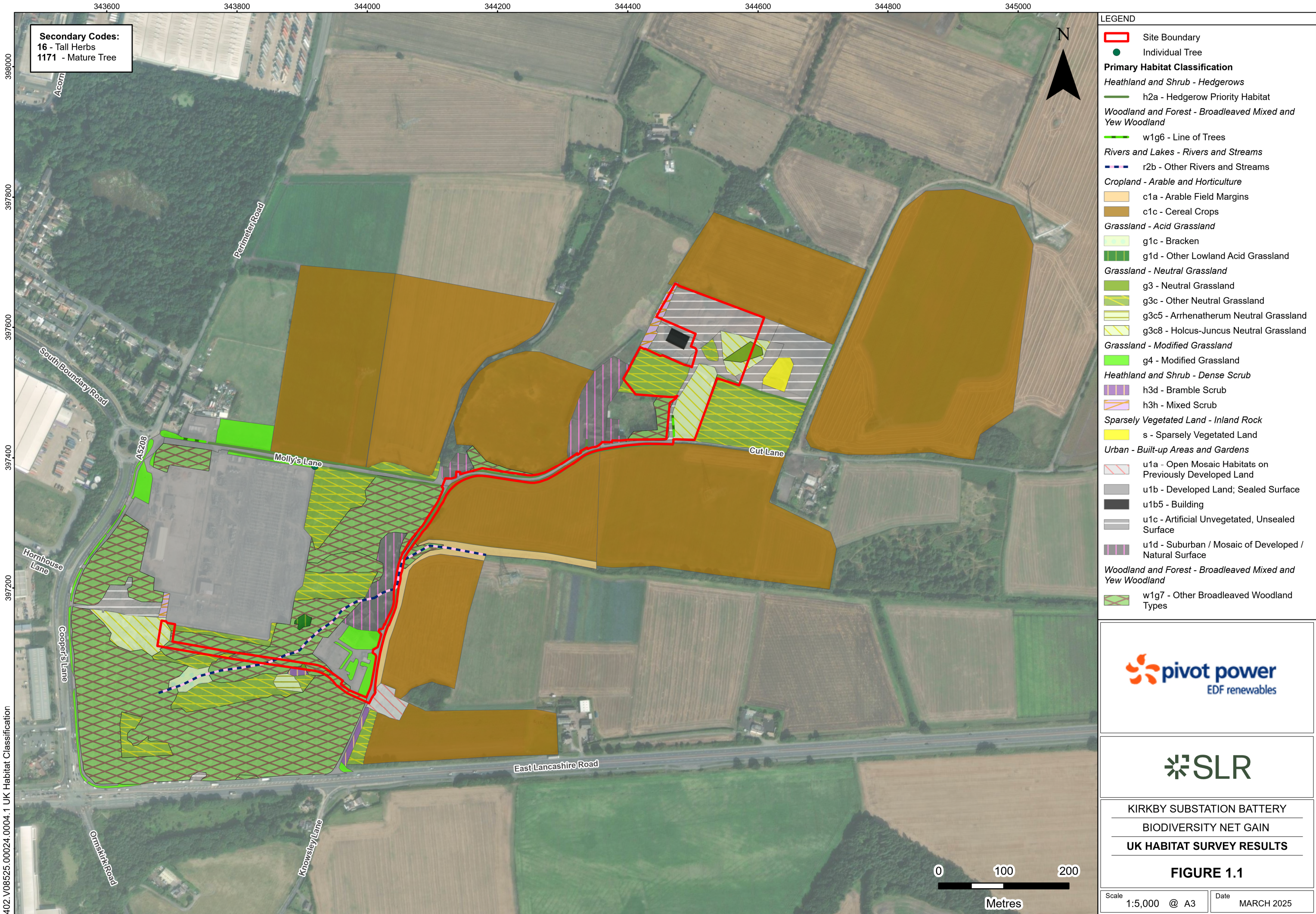
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LEGEND

Site Boundary

Primary Habitat Classification

Heathland and Shrub - Hedgerows

h2a - Hedgerow Priority Habitat

Woodland and Forest - Broadleaved Mixed and Yew Woodland

w1g6 - Line of Trees

Cropland - Arable and Horticulture

c1c - Cereal Crops

Grassland - Neutral Grassland

g3 - Neutral Grassland

g3c - Other Neutral Grassland

g3c8 - Holcus-Juncus Neutral Grassland

Heathland and Shrub - Dense Scrub

h3h - Mixed Scrub

Sparsely Vegetated Land - Inland Rock

s - Sparsely Vegetated Land

Urban - Built-up Areas and Gardens

u1b - Developed Land; Sealed Surface

u1b5 - Building

u1c - Artificial Unvegetated, Unsealed Surface

u1d - Suburban / Mosaic of Developed / Natural Surface

Woodland and Forest - Broadleaved Mixed and Yew Woodland

w1g7 - Other Broadleaved Woodland Types

KIRKBY SUBSTATION BATTERY

BIODIVERSITY NET GAIN

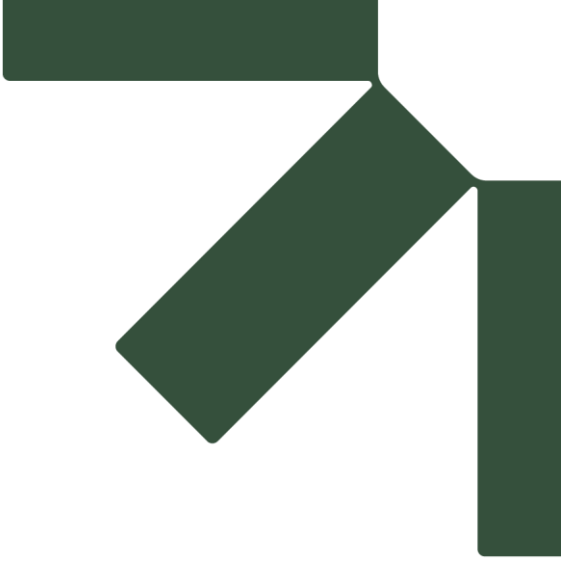
UK HABITAT SURVEY RESULTS

FIGURE 1.2

Scale1:2,000 @ A3

DateMARCH 2025





Appendix C Post development plan

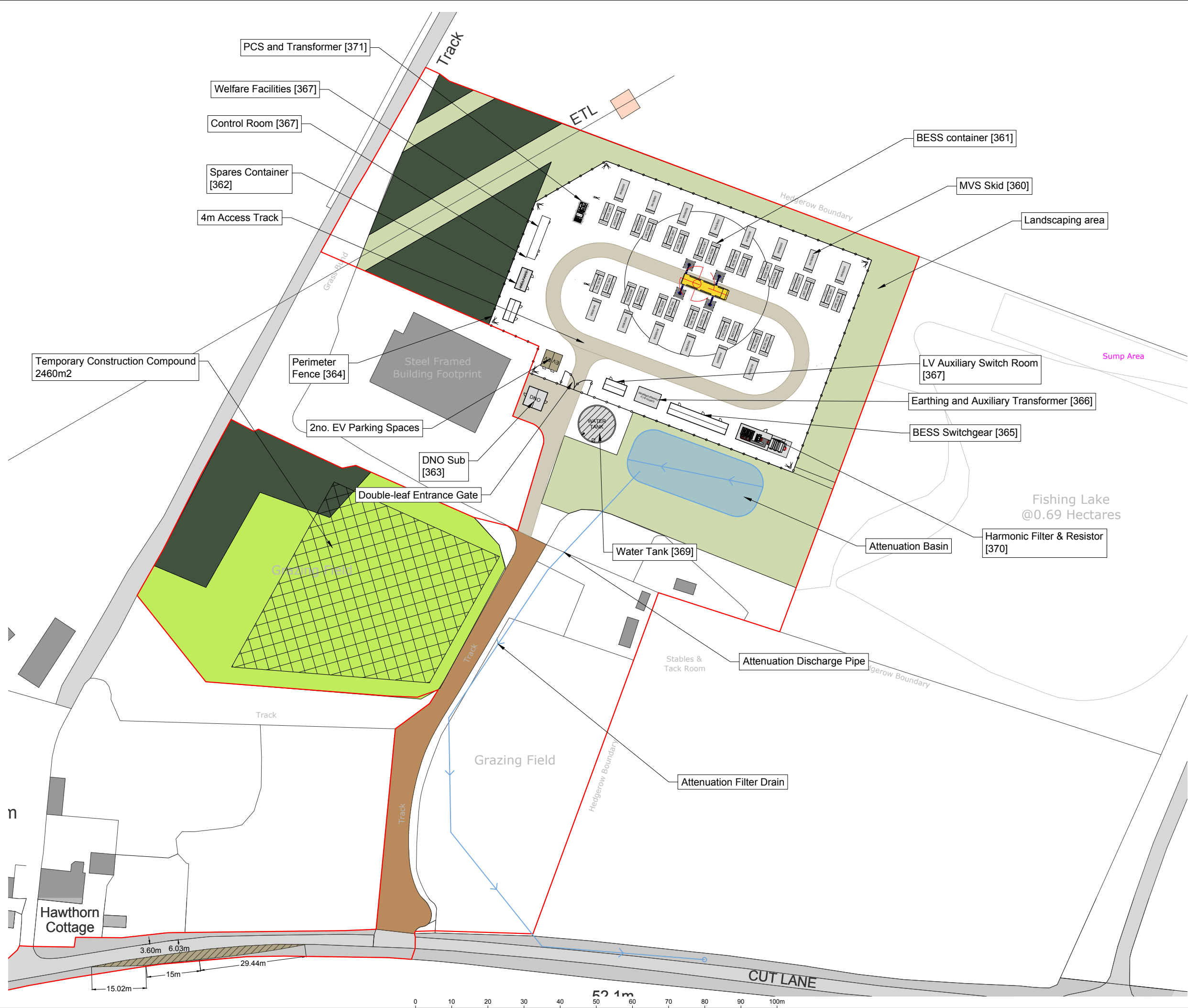
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NOTES

1. All details are indicative only.

LEGEND

- PLANNING APPLICATION BOUNDARY
- PERIMETER FENCE
- OTHER BROAD LEAVED WOODLAND
- OTHER NEUTRAL GRASSLAND, ENHANCED
- OTHER NEUTRAL GRASSLAND, MODERATE
- BIOSWALE

13.	Drainage attenuation updated	25.03.25	JL	SRY
12.	Drainage attenuation updated	24.03.25	JL	SRY
11.	RLB updated	20.03.25	JL	SRY
10.	Y Layout added to plan	19.03.25	JL	SRY
09.	BNG Layout added to plan	18.03.25	JL	SRY
08.	Drainage Layout added to plan	27.02.25	JL	SRY
07.	Passing places added	24.02.25	JL	SRY
06.	Site layout components updated	17.02.25	JL	SRY
05.	Temp compound moved	11.02.25	JL	SRY
04.	Site moved 5m North	05.02.25	JL	SRY
03.	Site moved 12m South	09.01.25	JL	SRY
02.	12m Landscape gap to West	20.12.24	JL	SRY
01.	Site layout updated for landscaping	12.12.24	JL	SRY
Rev	Description	Date	Checked	

Drawing No. **KIR-EDFR-BESS-CIV-PLN-300.13**

Project **Kirkby BESS**

Title **Site Layout Plan**

Scale **1:1000 @A3** Drawn by **JL** Checked **SRY** Date **19.11.24**



W: www.edf-re.uk
A: Cardinal Place, 80 Victoria Street, London SW1E 5JL

Figure 9 Landscape Mitigation Plan

Kirkby Battery Energy Storage System LVA

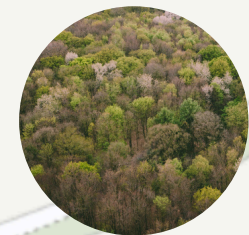


Sandy Brow Lane

Sandy Brow Cottage

Grassland

The Site will be enhanced to neutral grassland through seeding using species of a local provenance, ideally sourced from local wildlife sites or Sites of Special Scientific Interest (SSSI). The height of the grassland swards will be managed each year in August.



Woodland and Trees

Areas of broadleaved woodland are proposed throughout the Site to provide screening, landscape value and enhance the ecological value of the Site and support local biodiversity. This would include the planting of 2.5-3 m tall native trees including a mix of oak, field maple, sycamore, scots pine, birch, and mountain ash. Planting of native trees is also proposed along the eastern and southern boundaries of the Development, and to the north of the A-frame building, to provide further screening.

Hedgerows

The existing hedgerows will be retained on the south-eastern boundary of the Site. Planting of additional native hedgerow would take place on the northern and eastern boundaries to provide suitable screening of the Site. The additional hedgerows would be managed for the first two to three years to ensure appropriate growth and subsequently maintained at a height of 3 m. An allowance has been made for a maintenance strip and the required stand-off from the BESS area.

Cable Route To Knowsley Substation

Views from Sandy Brow Lane and the wider landscape screened by existing bund and regenerating scrub.

Views from Sandy Brow Lane screened by existing bund, and proposed trees and hedge.

Overhead Line Wayleave

Existing A-frame Building

Lane Farm

Hawthorn Cottage

Cut Lane

52.1m

Views from the south screened by existing hedges and proposed trees.

Views from the wider landscape including New Cut Lane screened by existing hedge located east of the Site, and proposed hedge and trees.



Proposed **wetland** and riparian vegetation to support native wildlife and support drainage on site.



Measures have been implemented to achieve a **biodiversity net gain of 10%.**

Key

- Site Boundary
- BESS Enclosure
- Proposed Attenuation Basin with Wetland
- Existing Bund with Scrub
- Proposed Broadleaved Woodland
- Other Neutral Grassland, Enhanced
- Other Neutral Grassland, Moderate
- Areas of Proposed Development
- Temporary Construction Compound
- Existing Access Track
- Existing Tree
- Existing Hedge
- Proposed Native Species Hedge
- Proposed Native Species Tree

New Hedgerow Proposed Species Mix

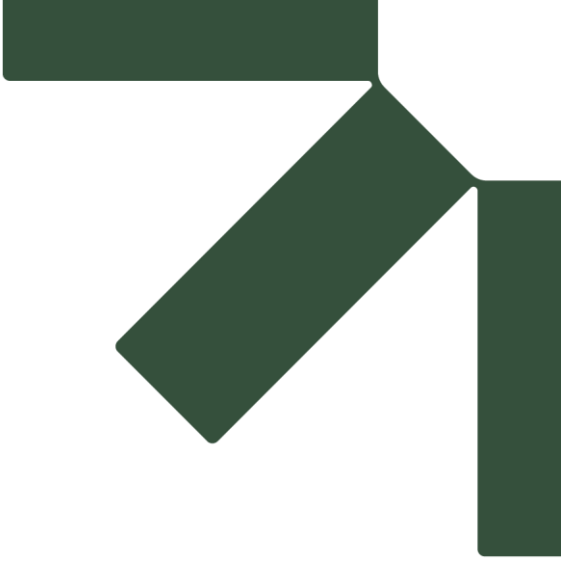
During the first 2 to 3 years cut annually to ensure the development of bushy growth low down in the hedge. Maintain at eventual upper height of 3 m. Any gaps within existing hedgerows will also be planted using species selected from the mix identified in the following table.

Common name	Latin name	% mix	Size of plants when planted (cm)
Hazel	Corylus avellana	5	40-60
Hawthorn	Crataegus monogyna	60	40-60
Holly	Ilex aquifolium	10	40-60
Honeysuckle	Lonicera periclymenum	5	40-60
Blackthorn	Prunus spinosa	5	40-60
Field Rose	Rosa arvensis	5	40-60
Dog Rose	Rosa canina agg.	5	40-60

Broadleaved Woodland/Native Species Trees

Trees should be planted as Heavy Standard size at 2.0 m centres as informal groups, with each group containing 5-50 plants of the same species. All plants would be supplied bare root and would be protected with 0.6 m high plastic spiral guards supported by bamboo canes. The proposed species mix is shown in the following table.

Common name	Latin name	% mix	Girth of plants when planted (cm)
Field Maple	Acer campestre	10	12-14
Alder	Alnus glutinosa	5	12-14
Birch	Betula Pendula	5	12-14
Beech (climax)	Fagus sylvatica	15	12-14
Crab Apple	Malus sylvestris	5	12-14
Scots pine (climax)	Pinus sylvestris	15	12-14
Aspen	Populus tremula	5	12-14
Wild Cherry	Prunus avium	5	12-14
Sessile Oak (climax)	Quercus petraea	15	12-14
English / Pedunculate Oak (climax)	Quercus robur	15	12-14
Mountain ash	Sorbus aucuparia	5	12-14



Appendix D Relevant Legislation & Planning Policy

Biodiversity Net Gain Report

Kirkby, Proposed Battery Energy Storage System

Pivoted Power LLP

SLR Project No.: 402.V08525.00024

11 September 2025

Relevant Legislation and Planning Policy

Legislation

A summary of legislation 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 legislation should be consulted for definitive information.

Environment Act (2021)

The Environment Act has wide ranging provisions including those around:

- Environmental governance;
- Environmental regulation;
- Waste and resource efficiency;
- Air quality and environmental recall;
- Water;
- Nature and biodiversity;
- Conservation covenants.

Of particular relevance is Part 6 of the Act which introduces “biodiversity gain in planning” and will apply in England to planning applications under the Town & Countryside Act and the Planning Act. Schedule 14 now requires that biodiversity gain be a condition of planning permission in England. These changes will be enacted through subsequent secondary legislation or regulations. This part of the Act also changes the responsibilities that Government or public bodies have by strengthening the existing NERC Act biodiversity duty. Public authorities are now required to seek to conserve and enhance biodiversity in the exercise of their functions.

Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) (the Habitats Regulations) consolidate the Conservation of Habitats and Species Regulations 2010 with subsequent amendments. The Regulations transpose Council Directive 92/43/EEC, on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive), into national law. Under the Habitats Regulations it is an offence to deliberately capture, kill or disturb¹ wild animals listed under Schedule 2 of the Regulations as well as damage or destroy a breeding site or resting place of such an animal (even if the animal is not present at the time). European Sites, including Special Areas of Conservation (SACs) and Special Protection Areas (SPAs), are also protected under the Habitat Regulations, and any proposal that could affect them will require a Habitats Regulations Assessment (HRA).

¹ Disturbance, as defined by the Conservation of Habitats and Species Regulations 2010, includes in particular any action which impairs the ability of animals to survive, breed, rear their young, hibernate or migrate (where relevant); or which affects significantly the local distribution or abundance of the species.



The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017

Part 3 of the regulations provide for the protection of areas of habitats or species where maintenance of the status of water is an important factor. Under the regulations additional consideration may need to be given to sites in the form of a Water Framework Directive (WFD) assessment where a project lies in proximity to a water body or to linked water bodies which could be affected. This includes consideration of whether water bodies are WFD receptors in particular those of high status or have high status morphology.

Environment (Wales) Act 2016

The Environment (Wales) Act puts in place the legislation needed to plan and manage Wales' natural resources in a more proactive, sustainable and joined-up way. Part 1 Section 6 of the Act introduces a new biodiversity duty, which replaces and enhances the biodiversity duties set out in the NERC Act 2006 and requires public authorities to seek to maintain and enhance biodiversity in the exercise of their functions and in so doing promote the resilience of ecosystems.

Section 7 of the Act lists living organisms and types of habitat in Wales, considered to be of key significance to sustain and improve biodiversity in relation to Wales.

Natural Environment & Rural Communities (NERC) Act 2006

Section 40 of the NERC Act 2006 places a duty on public authorities to have regard to the purpose of conserving biodiversity in the exercise of their functions. Public authorities include government departments, local authorities and statutory undertakers.

Section 41 of the Act (Section 42 in Wales) requires the publication of a list of habitats and species publish which are of principal importance for the purpose of conserving biodiversity. The Section 41 list is used to guide authorities in implementing their duty to have regard to the conservation of biodiversity.

Note that Sections 40 and 42 were superseded in Wales by the Environment (Wales) Act 2016 (see below).

Protection of Badgers Act 1992

The Protection of Badgers Act 1992 makes it illegal to kill, injure or take a badger or to intentionally or recklessly interfere with a badger sett. Sett interference includes disturbing badgers whilst they are occupying a sett or obstructing access to it.

Wildlife & Countryside Act 1981

The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way (CROW) Act 2000 and the Natural Environment and Rural Communities (NERC) Act 2006, consolidates and amends existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive), making it an offence to:

- Intentionally kill, injure or take any wild bird or their eggs or nests (with certain exceptions) and disturb any bird species listed under Schedule 1 to the Act, or its dependent young while it is nesting;
- Intentionally kill, injure or take any wild animal listed under Schedule 5 to the Act;



-
- intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any wild animal listed under Schedule 5 to the Act;
 - intentionally or recklessly disturb certain Schedule 5 animal species while they occupy a place used for shelter or protection;
 - Pick or uproot any wild plant listed under Schedule 8 of the Act; or
 - Plant or cause to grow in the wild any plant species listed under Schedule 9 of the Act.

Planning Policy

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. For local planning policy relevant to biodiversity the relevant local plans should be consulted.

National Planning Policy Framework December 2024(England)

The National Planning Policy Framework (NPPF)² sets out guidance for local planning authorities and decision-makers in how to apply planning policies when drawing up plans and making decisions about planning applications. Along with Government Circular 06/052, the broad policy objectives in relation to the protection of biodiversity and geological conservation in England through the planning system are set out. Specific policies relating to habitats and biodiversity are set out in paragraphs 187 to 195 of the NPPF.

Paragraph 187 states that:

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

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development f) should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate”.*

² Ministry of Housing, Communities & Local Government (December 2024).

<https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf>



Paragraph 192 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 193 of the NPPF states that:

“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 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.”*

Paragraphs 194 - 195 relate to European sites (referred to as habitats sites) and state:

“The following should be given the same protection as habitats sites:

- a) potential Special Protection Areas and possible Special Areas of Conservation;*
- b) listed or proposed Ramsar sites; and*
- c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.*

The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.”

National Planning Policy (Wales)

Planning Policy Wales (PPW)³ sets out the land use planning policies of the Welsh Government. The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic,

³ Welsh Government. 2018. Planning Policy Wales. Edition 10, December 2018.



environmental and cultural well-being of Wales. Section 6.4 of PPW relates to biodiversity and ecological networks.

Paragraph 6.4.3 of PPW states that:

“The planning system has a key role to play in helping to reverse the decline in biodiversity and increasing the resilience of ecosystems, at various scales, by ensuring appropriate mechanisms are in place to both protect against loss and to secure enhancement.”

It goes on to state that:

“Development plan strategies, policies and development proposals must consider the need to:

- *support the conservation of biodiversity, in particular the conservation of wildlife and habitats;*
- *ensure action in Wales contributes to meeting international responsibilities and obligations for biodiversity and habitats;*
- *ensure statutorily and non-statutorily designated sites are properly protected and managed;*
- *safeguard protected and priority species and existing biodiversity assets from impacts which directly affect their nature conservation interests and compromise the resilience of ecological networks and the components which underpin them, such as water and soil, including peat; and*
- *secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks.”*

Section 6.4 goes on to set out policy in respect of:

- The Biodiversity and Resilience of Ecosystems Duty, as set out in Section 6 of the Environment (Wales) Act 2016;
- Designated Sites, including:
 - Sites of Special Scientific Interest;
 - Special Protection Areas, Special Areas of Conservation and Ramsar Sites;
 - Proposed Special Areas of Conservation, Special Protection Areas and Ramsar sites; and
 - Non-statutory Designations.
- Protected Species; and
- Trees, Woodlands and Hedgerows.

PPW is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters, which together with PPW provide the national planning policy framework for Wales. TAN 5⁴ deals with Nature Conservation and Planning and states in paragraph 2.4:

“When considering policies and proposals in local development plans and when deciding planning applications that may affect nature conservation, local planning authorities should:

- *Pay particular attention to the principles of sustainable development, including respect for environmental limits, applying the precautionary principle, using scientific*

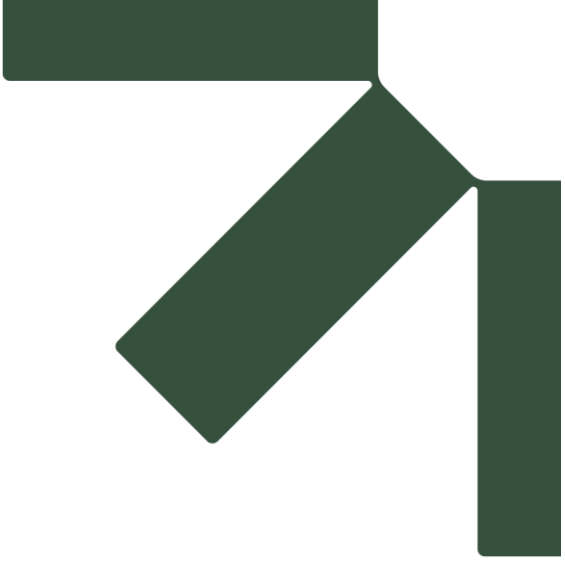
⁴ Welsh Assembly Government. 2009. Planning Policy Wales Technical Advice Note 5: Nature Conservation and Planning. September 2009.



knowledge to aid decision making and taking account of the full range of costs and benefits in a long term perspective;

- *Contribute to the protection and improvement of the environment, so as to improve the quality of life and protect local and global ecosystems, seeking to avoid irreversible harmful effects on the natural environment;*
- *Promote the conservation and enhancement of statutorily designated areas and undeveloped coast;*
- *Ensure that appropriate weight is attached to designated sites of international, national and local importance;*
- *Protect wildlife and natural features in the wider environment, with appropriate weight attached to priority habitats and species in Biodiversity Action Plans;*
- *Ensure that all material considerations are taken into account and decisions are informed by adequate information about the potential effects of development on nature conservation;*
- *Ensure that the range and population of protected species is sustained;*
- *Adopt a step-wise approach to avoid harm to nature conservation, minimise unavoidable harm by mitigation measures, offset residual harm by compensation measures and look for new opportunities to enhance nature conservation; where there may be significant harmful effects local planning authorities will need to be satisfied that any reasonable alternative sites that would result in less or no harm have been fully considered.”*





Appendix E Statutory Biodiversity Metric Calculation Tool

Biodiversity Net Gain Report

Kirkby, Proposed Battery Energy Storage System

Pivoted Power LLP

SLR Project No.: 402.V08525.00024

11 September 2025



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