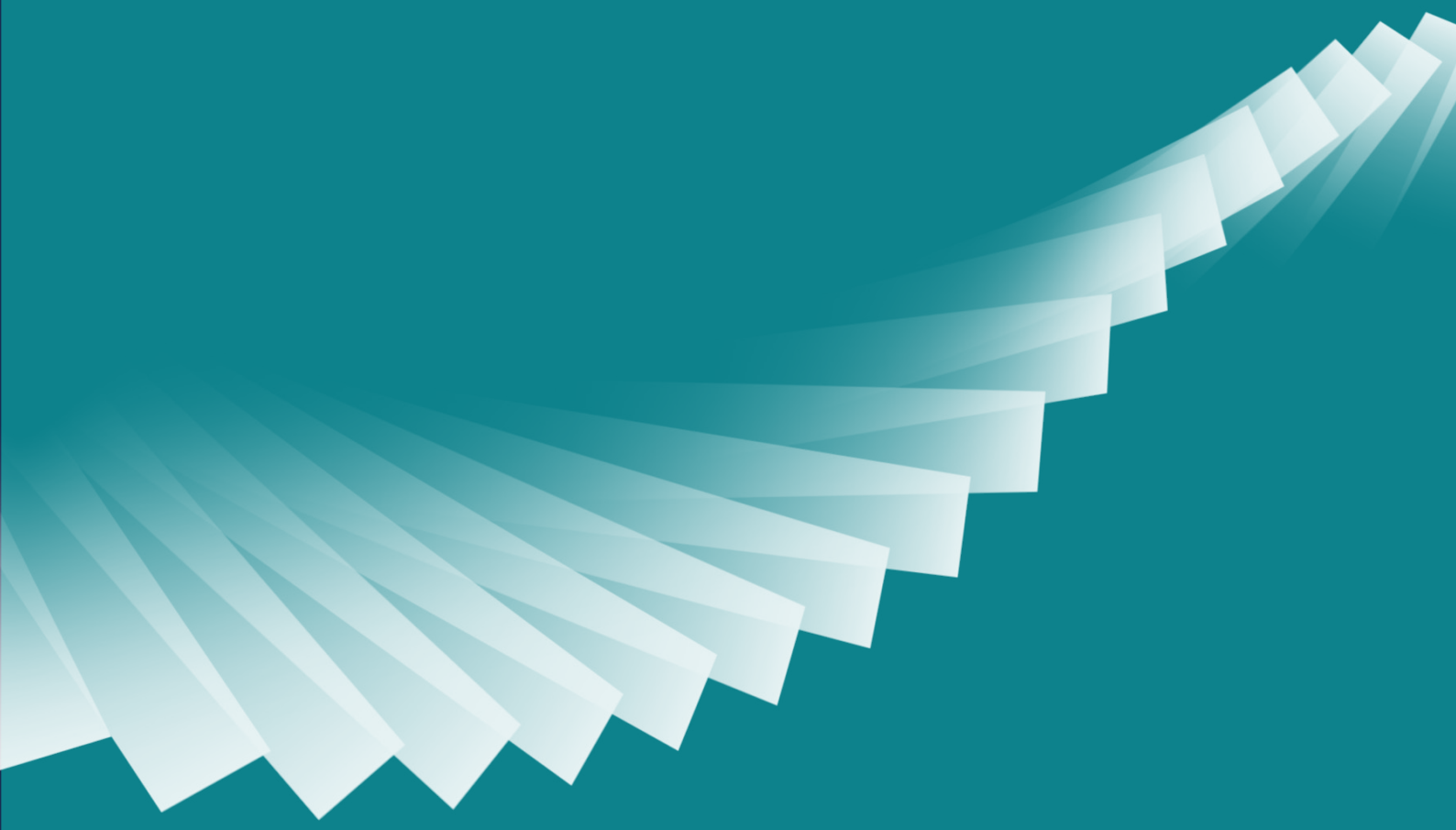
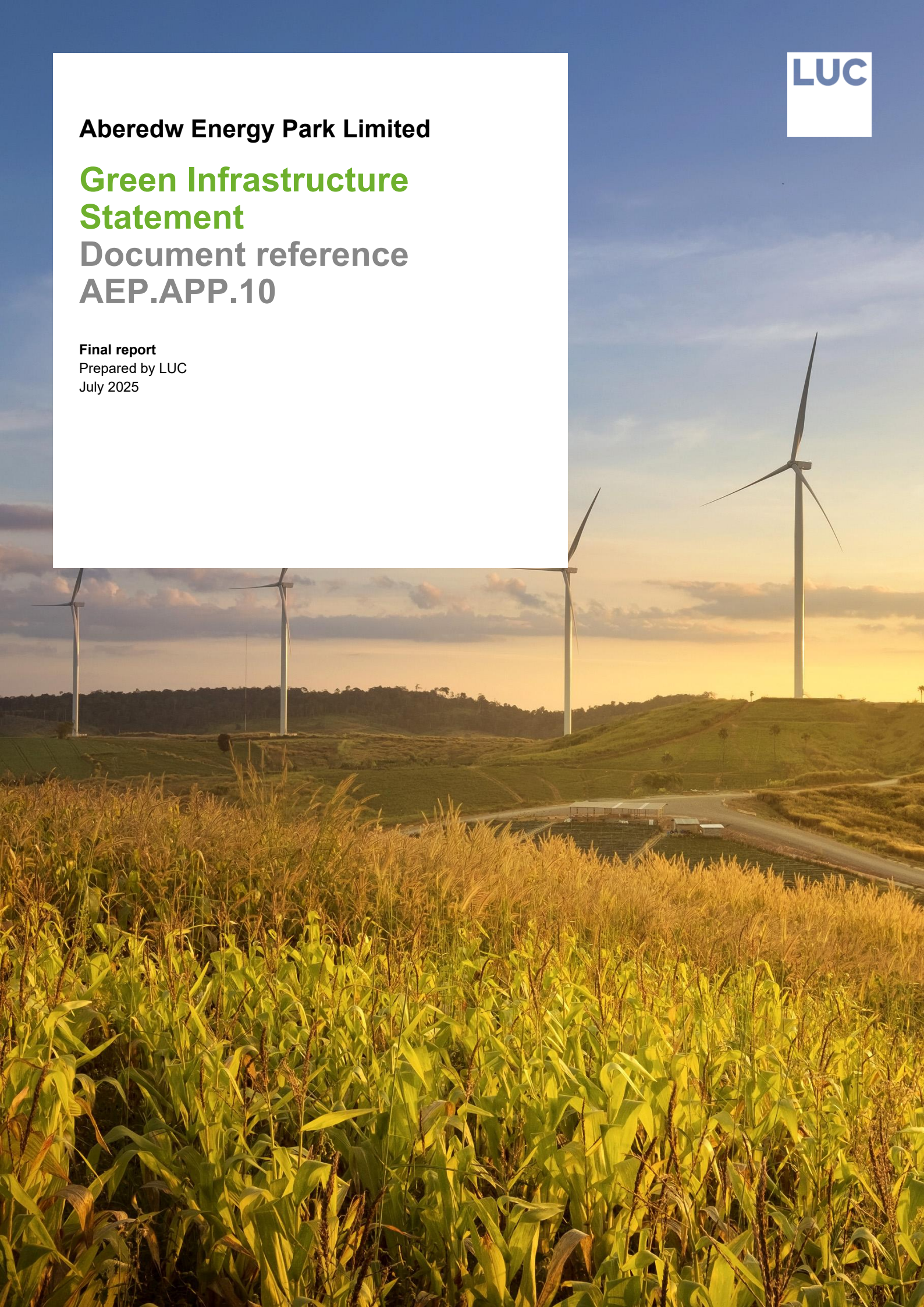
Bute Energy
Aberedw Energy Park

Green Infrastructure Statement





Aberedw Energy Park Limited

Green Infrastructure Statement

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Chapter 1
Introduction

Introduction

1.1 This Green Infrastructure (GI) Statement has been produced by Land Use Consultants (LUC) under a commission for Aberedw Energy Park Ltd (the Applicant), in relation to the proposals to construct an energy park development on Aberedw Hill, Powys, Wales.

1.2 This document has been produced in line with the requirements of Welsh Government Planning Policy Wales Edition 12 (PPW12) (2024)[1]. PPW12 sets out that a GI Statement should be submitted with all planning applications to describe how consideration of protecting and enhancing GI has been incorporated into the proposal.

1.3 PPW12 also sets out that the GI Statement should be used to demonstrate how the step wise approach (Section 6.4.15 of PPW12) has been applied. This GI Statement demonstrates how the step wise approach has been inherent throughout the development process through the application of design principles that sought to minimise adverse environmental effects and lead to beneficial environmental effects.

1.4 Whilst the requirement to utilise the step wise approach came into planning policy after the location for the development had been selected, the site selection process was, in any case, cognisant of the desire to avoid environmentally sensitive areas, thereby reducing environmental impact from the outset. Following site selection, the extensive design process has used detailed survey information and followed the step wise approach, as detailed below.

The Proposed Development

1.5 As outlined in ES Chapter 4: Development Description, the key components of the 'Proposed Development' are as follows:

- Up to 18 turbines, each with a three-blade rotor, including reinforced concrete foundations and associated earthworks;

[1] Welsh Government (2024) Planning Policy Wales Edition 12 [online]. Available at: https://www.gov.wales/sites/default/files/publications/2024-07/planning-policy-wales-edition-12.pdf

- Crane hardstanding and laydown areas for each turbine location;
- 13.35 km of access tracks (of which 11.66 km will be new track and 1.69 km will be upgraded existing track) including turning heads, passing places and associated ancillary engineering works;
- An electrical substation and control building, consisting of a switching station, transformer area control/ Supervisory Control and Data Acquisition facilities and welfare/storage facilities, and an operations building;
- Onsite underground electrical cables connecting the turbines to the substation. These are predominantly laid in trenches alongside access tracks but divert away from the tracks towards the substation off the hill;
- New site access road off the C1336 (from the A481 near Bevan House, Hundred House, Llandrindod Wells) and an additional entrance off the A481 to facilitate substation access and AIL delivery;
- Watercourse crossings;
- Site signage; and
- Biodiversity Enhancement Proposals / Habitat Management Areas.

1.6 In addition to the above components of the operational Proposed Development, construction of the Proposed Development will also require the following temporary components:

- Two temporary construction and storage compounds (including a security cabin);
- The creation of up to two borrow pit(s) for the extraction of stone (subject to detailed site investigation) which would be restored at the end of the construction phase of the Proposed Development;
- The temporary diversion or temporary closure of a number of Public Rights of Way (PRoW) that cross through the Site, as well as highway diversions for the unsurfaced unclassified road (UUCR) that crosses that Site.

1.7 The indicative output capacity of the Proposed Development at this stage is approximately 120 megawatts (MW). However, this capacity may vary subject to the final turbine model chosen[2].

1.8 Further details of the Proposed Development are included in the Environmental Statement (ES) Volume 1 Chapter 4 and ES Volume 2 Figures 4.1a-4.1e.

1.9 The Proposed Development is located at a site approximately 3 km east of the settlement of Builth Wells, within the administrative boundary of Powys County Council ('PCC'), the site boundary is shown within ES Volume 2, Figure 1.2. From here-on within this document this is referred to as 'the Site'.

Structure of this Document

1.10 This document is comprised of four chapters, set out as follows:

- **Chapter 1** (this chapter) sets out the purpose of this document, the description of the Proposed Development and document structure.
- **Chapter 2** outlines national and local policy relevant to the Proposed Development, including the suggested content of a GI Statement and its use in demonstrating the step wise approach.
- **Chapter 3** highlights the relevant information, surveys and assessment work undertaken and submitted as part of the application for the Proposed Development to demonstrate accordance with PPW12.
- **Chapter 4** provides a summary and conclusion.

[2] The turbine to be used will be subject to a tendering process if the application receives consent. This means that output capacity could change from that currently envisaged based on current market options, however the turbine selected would need to fall within the parameters for which consent is granted and as assessed in the submitted Environmental Statement.

Chapter 2
Relevant Legislation, Policy and Guidance

Relevant Legislation, Policy and Guidance

Environment (Wales) Act 2016

2.1 The Environment (Wales) Act 2016[3] introduced the legislation needed to plan and manage Wales' natural resources in a sustainable and joined-up way and is intended to work alongside the Well-being of Future Generations (Wales) Act 2015[4]. The Environment (Wales) Act 2016 brought in a new duty to replace the existing biodiversity duty (in the Natural Environment and Rural Communities Act 2006[5]) which required public authorities to have regard to conserving biodiversity. The new Section 6 duty takes this further, requiring all public authorities, when carrying out their functions in Wales, to seek to ''maintain and enhance biodiversity'' where it is within the proper exercise of their functions. In doing so, public authorities must also seek to ''promote the resilience of ecosystems''. Planning and development is a key area impacting nature's recovery and in which the Section 6 duty should be applied. The duty is referenced throughout PPW12, which states:

> *"Planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means development should not cause any significant loss of habitats or populations of species (not including non native invasive species), locally or nationally and must work alongside nature and it must provide a net benefit for biodiversity and improve, or enable the improvement, of the resilience of ecosystems… In doing so, planning authorities must also take account of and promote the resilience of ecosystems."* (Paragraph 6.4.5).

Planning Policy Wales (Edition 12)

2.2 PPW12, published in February 2024 defines GI and outlines its respective benefits as the following:

[3] Welsh Government (2016) Environment (Wales) Act 2016
[4] Future Generations Commissioner for Wales (2015) Well-being of Future Generations (Wales) Act 2015
[5] HM Government (2006) Natural Environment and Rural Communities Act 2006

'Green infrastructure is the network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect places. Component elements of green infrastructure can function at different scales and some components, such as trees and woodland, are often universally present and function at all levels. At the landscape scale green infrastructure can comprise entire ecosystems such as wetlands, waterways, peatlands and mountain ranges or be connected networks of mosaic habitats, including grasslands. At a local scale, it might comprise parks, fields, ponds, natural green spaces, public rights of way, allotments, cemeteries and gardens or may be designed or managed features such as sustainable drainage systems. At smaller scales, individual urban interventions such as street trees, hedgerows, roadside verges, and green roofs/walls can all contribute to green infrastructure networks.' (Paragraph 6.2.1).

'Green infrastructure is capable of providing several functions at the same time and as a result offers multiple benefits, for social, economic and cultural as well as environmental resilience. The components of green infrastructure, by improving the resilience of ecosystems, can result in positive benefits to well-being including flood management, water purification, improved air quality, reduced noise pollution and local climate moderation, climate change mitigation and food production.' (Paragraph 6.2.3).

2.3 The requirement for GI Statements is outlined in Chapter 6 of PPW12, contained in paragraphs under the heading 'Integrating Green Infrastructure and Development'. The importance and benefit of appropriately integrating GI into development is summarised in the following paragraph:

'The quality of the built environment should be enhanced by integrating green infrastructure into development through appropriate site selection and use of creative design. With careful planning and design, informed by an appropriate level of assessment, green infrastructure can embed the benefits of biodiversity and ecosystem services into new development and places, help to overcome the potential for conflicting objectives, and contribute to health and well-being outcomes.' (Paragraph 6.2.11).

2.4 The following paragraph describes the parameters of a GI Statement:

'A green infrastructure statement should be submitted with all planning applications. This will be proportionate to the scale and nature of the development proposed and will describe how green infrastructure has been incorporated into the proposal… The green infrastructure statement will be an effective way of demonstrating positive multifunctional outcomes which are appropriate to the site in question and must be used for demonstrating how the step-wise approach (Paragraph 6.4.15) has been applied' (Paragraph 6.2.12).

2.5 PPW12 also suggests additional content for a GI Statement to include:

'Wider landscape measures, such as the creation of species rich meadows, woodlands and the improvement of linkages between areas of biodiversity value should be considered for larger scale development. In most cases the green infrastructure statement should highlight any baseline data considered and surveys and assessments undertaken, including but not limited to, habitats and species surveys, arboricultural surveys and assessments, sustainable drainage statements, landscape and ecological management plans, open space assessments and green space provision and active travel links' (Paragraph 6.2.13).

2.6 PPW12 also provides guidance on how the GI of a site should be appraised, stating that:

'There are multiple ways of incorporating green infrastructure, depending on the needs and opportunities a site presents, and the green infrastructure assessment should be referred to, as appropriate, in order to ascertain local priorities' (Paragraph 6.2.13).

'Development proposals should be informed by the priorities identified in green infrastructure assessments and locally based planning guidance' (Paragraph 6.2.14).

'Green Infrastructure Assessments should also draw from the evidence base provided by NRW's Area Statements and Nature Network Maps, Well-being Assessments and locally and regionally collected green infrastructure data and mapping already underpinning local authority approaches to green infrastructure… The Green Infrastructure Assessment and outcomes should also be given early consideration in development proposals, and inform the design and implementation of projects' (Paragraph 6.2.6).

2.7 To apply this approach to the Proposed Development, relevant local planning guidance about GI, including any priorities identified in Green Infrastructure Assessments (or similar) is presented below.

Powys

2.8 There is no explicitly identified list of GI priorities in a Green Infrastructure Assessment or similar locally-based planning guidance documents prepared by or on behalf of Powys County Council.

Natural Resources Wales Area Statements

2.9 Natural Resources Wales (NRW) Area Statements describe the key challenges facing the relevant geographic area on which they focus, and outline the key challenges and opportunities for the sustainable management of Wales' natural resources into the future.

Mid Wales Area Statement

2.10 As set out in PPW12, GI Statements should draw from the evidence base provided by NRW Area Statements (see paragraph 2.6), the themes identified in the NRW Mid Wales Area Statement[6] (which covers the area in which the Proposed Development lies) include:

- Improving biodiversity – responding to the nature emergency;
- Sustainable land, water and air;
- Reconnecting people and places – improving health, well-being and the economy;
- Forest resources – managing timber resources effectively;
- Climate emergency – adaptation and mitigation across four themes.

2.11 The Mid Wales Area themes were developed using locally and nationally based evidence, including the State of Natural Resources Report, the Welsh Government's Natural Resources Policy priorities, information from the Powys & Ceredigion Public Service Boards and Well-being Plans.

2.12 NRW notes that the role of the Mid Wales Area Statement is to coordinate existing measures and enable new initiatives. It is a long term, iterative and innovative process.

the Area Statement also includes mapped data about the presence of ecological receptors. This data has been taken account of in the design and assessment of the Proposed Development.

Step Wise Approach

2.13 PPW12 makes detailed reference to the step wise approach as the means of demonstrating the steps taken towards securing a net benefit for biodiversity. This includes addressing the attributes identified under the DECCA framework. NRW has developed the DECCA framework for evaluating ecosystem resilience based on five attributes and properties specified in the Environment (Wales) Act 2016. The focus is on ecosystem resilience in the legislation and policies seek to address the broader issues affecting biodiversity. The five attributes of the framework are:

- Diversity;
- Extent;
- Condition;
- Connectivity; and
- Adaptability to change.

2.14 The DECCA practitioners guide demonstrates how to use the framework for understanding aspects of ecosystem resilience, and ecologically based 'rules of thumb' to design Resilient Ecological Networks in the landscape[7].

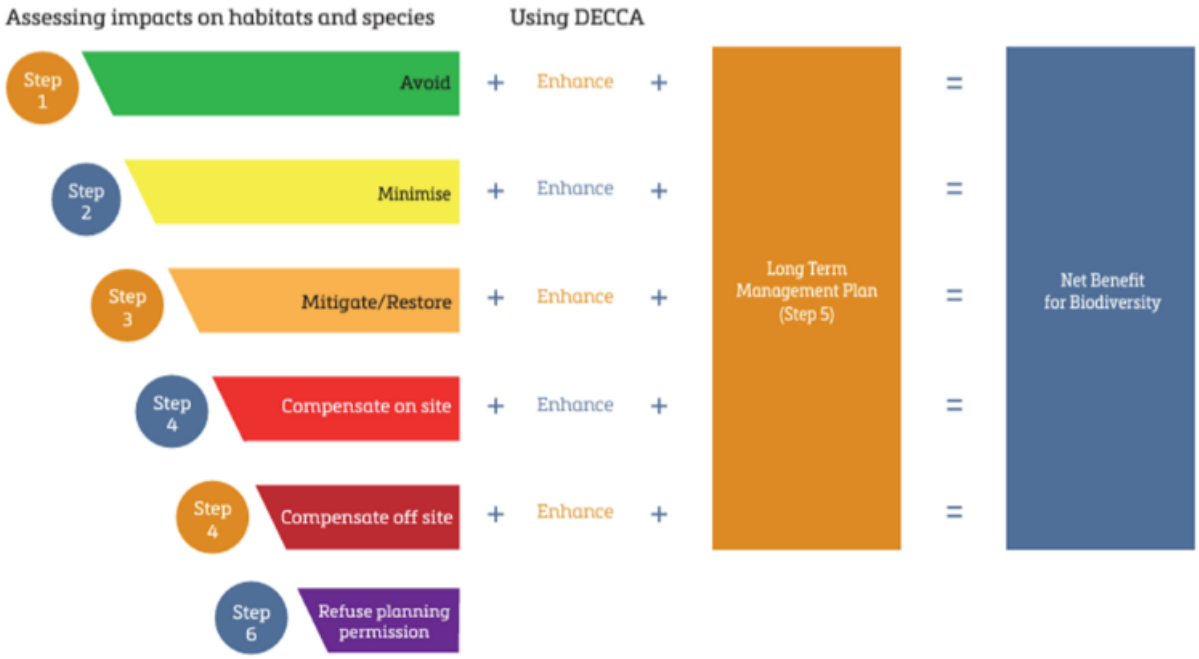
2.15 PPW12 highlights the DECCA framework through the step wise approach and the evidence to be provided in the GI Statement as follows:

> *'Having worked iteratively, in line with Figure 12, through the stages of the step-wise approach below, and providing evidence in the Green Infrastructure Statement that the step-wise approach has been followed, a scheme of enhancements must be provided to ensure a net benefit for biodiversity'* (Paragraph 6.4.12)

[6] Natural Resources Wales (undated) Mid Wales Area Statement

[7] Natural Resources Wales (2021) Terrestrial and freshwater Ecological Networks: a guide for practitioners in Wales

Figure 2.1 Extract of Figure 12 in PPW12 – Summary of the step wise Approach



2.16 In particular, the step wise approach accords with the DECCA framework to secure a net benefit for biodiversity and build resilience through the planning system, as highlighted in the below paragraphs:

> *'Improving ecosystem resilience, particularly improving connectivity to the immediate surroundings, would be a key contribution to on-site avoidance, minimisation, and mitigation strategies and enhancement. How a development would improve the attributes of resilience should be demonstrated as far as this is reasonably practical'* (Paragraph 6.4.13)

2.17 Paragraph 6.4.3 of PPW12 considers the net benefit for biodiversity in the context of climate change:

> *'Recognising that development needs to take place and some biodiversity may be impacted, the planning system should ensure that overall there is a net benefit for biodiversity and ecosystem resilience, resulting in enhanced wellbeing. Addressing the consequences of climate change should be a central part of any measures to protect, maintain and enhance biodiversity and the resilience of ecosystems'* (Paragraph 6.4.3)

2.18 The above extracts from PPW12 are most relevant to the Proposed Development. **Chapter 3** of this GI Statement highlights the relevant information, surveys and assessment work already undertaken and submitted as part of the application which demonstrate accordance with the step wise approach.

Chapter 3
Demonstration of Policy Compliance

Introduction

3.1 This chapter demonstrates how the principles set out in the step wise approach (see Chapter 2) have been reflected in the site selection and design process for the Proposed Development, in line with the DECCA framework. It is noted that whilst PPW12 came into effect after the Site had been selected, it has been inherently followed during the site selection process that was cognisant of the desire to avoid environmentally sensitive areas, thereby reducing environmental impact from the outset.

3.2 This chapter also highlights the positive multifunctional outcomes that will be realised as a result of the Proposed Development (see section titled Multi-functional benefits of this GI Statement).

3.3 In line with PPW12, GI Statements should highlight the baseline data considered and surveys and assessments undertaken (see paragraph 2.5 of this GI Statement), the following list of documents detail the baseline data, surveys and assessments undertaken for the Proposed Development which are considered relevant to this GI Statement:

- Environmental Statement (ES) Chapter 3: Site Selection and Design Strategy;
- ES Chapter 5: Landscape and Visual Amenity (including data and surveys detailed in ES Appendices 5.1 – 5.8);
- ES Chapter 7: Ecology (non-avian) (including data and surveys detailed in ES Appendices 7.1 – 7.7);
- ES Chapter 8: Ornithology (including data and surveys detailed in ES Appendices 8.1 – 8.2);
- ES Chapter 9: Hydrology, Hydrogeology and Geology (including peat) (including data and surveys detailed in ES Appendices 9.1 – 9.7);
- Design and Access Statement; and
- Strategic Recreation Framework.

Locating and Designing in Accordance with the step wise Approach

Step 1: Avoid

3.4 The first step described in the step wise approach is to '*avoid*', as follows:

> *'The first priority for planning authorities is to avoid damage to biodiversity in its widest sense (i.e. the variety of species and habitats and their abundance) and ecosystem functioning. Where there may be harmful environmental effects, planning authorities will need to be satisfied that any reasonable alternative sites (including alternative siting and design options) that would result in less harm, no harm or benefit have been fully considered.*
>
> *Proposals in statutory designated sites are, as a matter of principle, unacceptable and therefore must be excluded from site searches undertaken by developers. This principle also extends to those sites containing protected species and habitats which are irreplaceable[8] and must be safeguarded. Such sites form the heart of resilient ecological networks and their role and the ecosystem services they provide must be protected, maintained and enhanced and safeguarded from development. It will be wholly exceptional for development to be justifiable in such instances.'* (Paragraph 6.4.15 (1a & 1b)).

3.5 As detailed in ES Chapter 3, the process and approach to selecting the location of the Proposed Development involved ensuring early assessment of potential capacity for energy generation in balance with environmental and technical constraints, relevant policy and project deliverability in line with the urgency of reaching 2050 net zero targets for Wales. Step 1 of the step wise approach was employed in this context.

3.6 Early selection of the Site for wind energy was primarily driven by the following criteria:

- A desk-based assessment to identify land suitable for development using Geographical Information System (GIS) by mapping technical and environmental constraints. These constraints included but were not limited to:
  - Nationally designated landscapes such as National Parks and National Landscapes;
  - Cultural heritage designations such as World Heritage Sites, Scheduled Monuments, Listed Buildings, Conservation Areas and Registered Battlefields;
  - Application of the mitigation hierarchy, seeking firstly to avoid effects on ecological designations such as Sites of Special Scientific Interest (SSSI), Special Protection Areas (SPA), Special Areas of Conservation (SAC), Historic Gardens, Ancient Woodland, Peatland and Local Nature Reserves (LNR);
  - Terrain was reviewed to ensure that gradients supported the placement of a wind turbine and laydown areas;
  - Wind resource of the area was considered using publicly available wind data sources to assess wind speed and commercial viability;
  - Proximity to nearby residential properties; and,
  - Aviation constraints including licenced aerodromes and visibility to military and civilian RADARs.
- Alignment with planning and renewable energy policy as set out in Future Wales.
- Access to the Site from the Port of Entry of turbine components to each of the turbine locations.
- Ground conditions for building of turbine foundations, access track and cable installation.
- Ability for extant land use to be maintained as much as possible alongside the simultaneous operation of wind turbines, such as upland grazing land.

3.7 The Site was selected on the basis that it was considered that following further survey and assessment, a viable energy park could be designed and built in this location whilst avoiding, minimising and mitigating effects upon and enhancing key environmental assets, in line with the step wise approach.

3.8 Following initial site selection, the overall aim of the design strategy was to create an energy park with a cohesive design that is sympathetic in form and scale to the surrounding landscape context, whilst achieving an appropriate balance between maximising renewable energy yield and minimising other environmental and technical effects, in line with the step wise approach.

[8] PPW footnote 129 comprises the following text: 'Habitats, including the natural resources which underpin them, which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. Examples include, ancient woodland and veteran trees, ancient hedgerows, wet woodlands, sand dunes, peatland, species rich grassland, long undisturbed soils, blanket bog, salt marsh and lowland fen'.

3.9 The design objectives for the Proposed Development evolved through the Environmental Impact Assessment process, as environmental baseline information became available through desk and field-based surveys (including ecological surveys, hydrological walkovers, peat probing and site visits for other environmental disciplines) and feedback from consultation with the public and stakeholders.

3.10 ES Chapter 3 lists the design objectives employed in the design of the energy park. Objectives that relate to Step 1 of the step wise approach include:

- Minimising interactions with ecologically sensitive habitats to the greatest feasible extent: in particular, 'Section 7' habitats and Groundwater Dependent Terrestrial Ecosystems (GWDTEs).
- Protecting the Site's hydrological regime, and the Site's surroundings, with particular focus on the site setting, within the catchment of the River Wye/Afon Gwy SAC.
- Taking account for the potential for effects on all bird species of conservation concern at and around the Site.
- Taking account of the potential for effects upon bats.
- To explore opportunities within and in the vicinity of the Site to restore and enhance biodiversity, ultimately securing net benefits for biodiversity.
- To develop a layout that fulfils the above objectives whilst minimising or avoiding other environmental, social and technical constraints as far as possible.

3.11 ES Chapter 3 describes the design evolution of the Proposed Development which embed mitigation measures relating to GI. Changes that were made during the design evolution relating to 'Step 1: avoid' include:

Layout 2

- T6 moved 50 m east outside of the Section 7 Upland Heathland Priority Habitat. The track from T5 to T6 also moved east away from the priority habitat.
- T11 moved 30 m north, 16 m outside of a watercourse buffer.

Layout 3

- T6 moved 80 m north to avoid the hardstanding being constructed over a pond.
- The access track linking T16 with T13 and T14 was adjusted to remove any intersection with a watercourse buffer and to increase the distance between any tracks and a pond with known great crested newt (GCN) presence.
- T12 was moved 120 m north to avoid being positioned on a minor watercourse and steep slope.
- The T17 hardstanding was reorientated clockwise and the track connecting to T16 was realigned to avoid a potential GCN pond.
- The track between T11 and T10 was realigned to avoid a pond.
- The track between T4 and T1 was moved 30 m south-west to avoid impacting a pond.
- The track between T5 and T6 has been moved up to 120 m west to avoid impacting a pond.

Layout 4

- The T10 hardstanding was oriented southwards to avoid ponds located to the north.
- The T11 hardstanding was straightened to align with T10 and rotated north west. The track between T11 and T10 was also realigned to avoid a watercourse buffer and priority habitat.

Temporary construction compounds

3.12 Two temporary construction compounds were located on agricultural fields, identified as Improved Grassland by Extended Phase 1 habitat survey. In doing so, this avoided locating them on more sensitive habitats on the site. Whilst a third option was identified, this appeared (from aerial photography) to be located on an area with significant bracken coverage, it was also not selected due to its location within registered common land.

Borrow pit options

3.13 Seven options for borrow pits were considered. The final options were both located on areas identified as Improved Grassland by Extended Phase 1 habitat survey. In doing so, this avoided locating them on more sensitive habitats on the site. The design of one of these (Borrow Pit B) was amended during the design process to ensure a 15 m buffer was provided between the associated earthworks and an area identified as ancient semi natural woodland on the Ancient Woodland Inventory dataset from Welsh government[9].

3.14 Following the careful site selection and design process, it can be confirmed that the Proposed Development avoids the following ecological designations and assets. This list includes

[9] Welsh Government (2021) Data Map Wales: Ancient Woodland Inventory 2021 [online]. Available at: https://datamap.gov.wales/layers/inspire-nrw:NRW_ANCIENT_WOODLAND_INVENTORY_2021

the relevant *'protected species and habitats which are irreplaceable'*, as listed under footnote 129 in PPW12 (see footnote 9 of this document). The list of designations / other assets which the development avoids includes:

- SAC;
- SPA;
- Ramsar Sites;
- SSSI;
- National Parks
- National Landscapes
- Nature Reserves;
- Ancient hedgerows;
- Wet woodlands;
- Sand dunes;
- Peatland;
- Long undisturbed soils;
- Salt marsh;
- Lowland fen; and
- Ancient Woodland.

Step 2: Minimise

3.15 The second step described in the step wise approach is to '*minimise*'. This step is described as follows:

'When all locational, siting and design options for avoiding damage to biodiversity have been exhausted, applicants, in discussion with planning authorities, must seek to minimise the initial impact on biodiversity and ecosystems by:

- *maintaining the largest possible area of existing habitat supporting biodiversity and functioning ecosystems, particularly Section 7 habitats and species where present, by minimising development*
- *ensuring that retained habitats continue to be well connected to adjacent habitats to provide connectivity for key species and ensuring that the favourable conservation status of local species populations is maintained;*
- *retaining existing features, develop a management plan for their future care (e.g. trees, hedgerows, species rich grasslands, heath, wetlands, ponds and freshwater habitats) and use appropriate buffers to protect these from construction and operational impacts; and*
- *using proven innovative/creative solutions (where required) to minimise damage and maintain existing biodiversity features and ecosystems in tandem with robust monitoring and rectification strategies.'*
(Paragraph 6.4.15 (2))

3.16 Objectives used to influence the design of the Proposed Development that relate to Step 2 of the step wise approach (following the exercise of Step 1) included:

- Minimising interactions with ecologically sensitive habitats to the greatest feasible extent: in particular, 'Section 7' habitats and GWDTEs.
- To keep overall new track length to a minimum, reducing stone requirements and associated potential environmental effects.
- Limiting infrastructure on common land to access tracks and associated drainage and cable trenches, and minimising land take overall as far as possible across the Site.
- To develop a layout that fulfils the above objectives whilst minimising other environmental, social and technical constraints as far as possible.

3.17 Changes that were made during the design evolution relating to 'Step 2: minimise' include:

Layout 2

- T16 moved 140 m north-west. The access track between T14 and T16 was reoriented to reduce impingement on the watercourse buffer and GCN pond to the south.

Layout 4

- The orientation of the tracks between T1 and T2 were revised to reduce the amount of earthworks.
- The turbine elevations all increased (but no change in X and Y co-ordinates) to reduce the amount of cut and fill required for the turbine hardstandings, thereby reducing the land take required
- The T10 hardstanding was orientated southwards in order to reduce the track length to T9.

Access

3.18 The primary access to the Site was designed in January 2025, once the final turbine layout was finalised. The design objectives of the access track were to provide a connection to the public highway whilst limiting the amount of track required on common land and to utilise any existing access tracks where possible, in order to minimise the need for new excavations. As such, the proposed access track was

designed to follow the existing track that leads off the C1336, in the north-eastern part of the Site, near Hundred House.

3.19 The existing access point and existing access track will need upgrading in order to safely accommodate the delivery of the Site infrastructure. The use of the existing track reduces the amount of vegetation and habitat which would otherwise need to be removed. The proposed layout makes as much use as possible of the existing access track, before diverting onto new track only when necessary. Where the new track is required, the design of this has followed the step wise approach and changes to the alignment of new track through the design process are set out in in the above Step 1 ('*avoid*') section of this report and beneath the 'layout 2' and 'layout 4' headings of this section, ensuring that impacts on sensitive features are avoided where possible and minimised where avoidance is not achievable.

3.20 Once the location of the substation was determined, it was determined that a separate access would be required for the onsite substation, in the north of the Site. This will be a upgraded access and new track directly off the A481, utilising an existing agricultural access/egress point.

Substation

3.21 As set out in ES Chapter 3, three possible locations for the substation were identified by project engineers. These were assessed in accordance with the step wise approach. Option 3 was dismissed as this was considered to result in the greatest amount of hedgerow loss and potential visual and landscape effects. Further consideration was given to options 1 and 2, given that they both resulted in some loss of habitat and effects to environmental receptors. After deliberation, it was concluded that option 2 would be preferable because whilst it has the potential to affect GCN, it is considered that the mitigation for this impact is likely to be more straightforward and deliverable in a shorter timeframe, compared to the establishment of planting to replace the loss of two mature trees and impacts to ancient semi natural woodland, identified as irreplaceable habitat in PPW12. Mitigation for the loss of the pond is set out in **Chapter 7: Ecology (non-avian)** and involves the establishment of two new ponds. Regarding the hedgerow loss for the access to option 2, it was considered likely that a similar amount of hedgerow would be lost in constructing the access for option 1 (given the site is bounded on all sides by hedgerow and the size of the substation equipment is the same). Option 1 is also higher up the hill and therefore likely to result in greater landscape / visual effects.

Steps 3 and 4: Mitigate / Restore and Compensate on Site

3.22 Steps 3 and 4 described in the step wise approach are to '*mitigate*' (Step 3) and '*restore*', both '*on site*' and '*offsite'* (Step 4). It is noted that Step 4 is split into two sections, respectively. The steps are described as follows.

> *'Where, after measures to minimise impact, biodiversity and ecosystems could still be damaged, or lost through residual impacts, the proposed development should mitigate that damage. Mitigation measures must be put in place to limit the negative effects of a development.*
>
> *Effective mitigation or restoration measures should be incorporated into the design proposal following the consideration of steps one and two above. Mitigation or restoration measures must be designed to address the specific negative effects by repairing damaged habitats and disturbed species. They should seek to restore in excess of like for like, accounting for disturbance and time lags for the recovery of habitat and species, and in every case, mitigation or restoration measures should seek to build ecosystem resilience within the site and where possible the wider area. In some circumstances, where like for like mitigation measures are not possible, particularly in respect of restoration measures, it maybe necessary to consider on site compensation measures in the first instance. In designing mitigation measures where uncertainty exists, applicants should follow the precautionary principle and assume a significant effect. Off-site compensation measures (as set out in step four below) should be considered as a last resort.'*
> (Paragraph 6.4.14 (3a & 3b))

Mitigation

3.23 Mitigation is an integral part of the design process and environmental impact assessment, four steps of mitigation are set out in Chapter 2 of the ES, as follows:

- Design Considerations (Embedded Mitigation);
- Good Practice Measures (Applied Mitigation);
- Additional Mitigation; and
- Monitoring.

3.24 Key mitigation measures used in the design and proposed construction / operation of the Proposed Development are set out in the following documents:

- The Construction Environmental Management Plan (CEMP). This will be implemented for the construction phase to ensure that all relevant planning conditions and mitigation identified within the ES to protect the environment are implemented through agreed procedures and working methods. An outline CEMP has been provided as part of the application, a more detailed CEMP will be prepared post-consent, for approval by PCC under the terms of a suitably worded planning

condition, as detailed construction matters become more certain.

- A Drainage Strategy to manage water resources, which will be in place throughout the lifetime of the Proposed Development. An outline Drainage Strategy has been prepared to support the application , a more detailed strategy will be submitted post consent, for approval by PCC under the terms of a suitably worded planning condition.
- A Borrow Pit Restoration Plan, which includes an Outline Aftercare Plan, to manage their permanent restoration at the end of the construction period. An outline Borrow Pit Restoration Plan has been prepared to support the application, a more detailed Borrow Pit Restoration Plan will be submitted post consent, for approval by PCC under the terms of a suitably worded planning condition.
- A Soil Management Plan provides the measures that will be implemented to minimise the effect that the Proposed Development has on soils. An outline Soil Management Plan has been prepared to support the application, a more detailed plan will be submitted post consent, for approval by PCC under the terms of a suitably worded planning condition.
- A Water Framework Directive Assessment, to assess the potential for the project to affect the objectives of the Water Framework Directive.
- A Water Quality Management Plan, to assess the potential impacts of the development on water quality, which if detrimentally affected could in turn affect protected site, given the Site is hydrologically connected to these. An outline Water Quality Management Plan has been prepared to support the application, a more detailed plan will be submitted post consent, for approval by PCC under the terms of a suitably worded planning condition.
- The Habitat Management Plan (HMP), which identifies positive land management measures that will be implemented through the operational stage of the Proposed Development to deliver a Net Benefit for Biodiversity. An outline HMP (OHMP) has been provided as part of the application, a more detailed HMP will be prepared post-consent, for approval by PCC under the terms of a suitably worded planning condition, as proposals for this become more firmly established.

3.25 The above plans and strategies are intended to secure mitigation for the Proposed Development and in some cases (such as the Habitat Management Plan) may also deliver additional benefits. They have all been prepared in a consistent manner and will collectively lead to a co-ordinated reduction of effects on ecological receptors. Where appropriate, each of the plans and strategies include a system of monitoring to ensure that the effects of the Proposed Development are understood and so that additional controls can be brought in if required.

Restore and compensate

3.26 Despite the utilisation of the step wise approach in designing the Proposed Development, it is inevitable that there will be some impacts to ecological features. The step wise approach recognises this situation may occur when developing sites, and as set out above, requires that impacts are suitably mitigated through restoration and on-site compensation (step 4 for the step wise approach).

3.27 As set out in Chapter 7 of the ES, the Proposed development will result in some effects, these are summarised below, followed by commentary on whether restoration and or on-site compensation is possible:

- Permanent loss of a GCN pond (at the substation area) (GCN are defined as being a species of 'Principal Importance' within Section 7 of the Environment (Wales) Act 2016 (to be compensated).
- Loss of trees and hedgerows (to be compensated);
- Permanent decrease in area of habitat defined as being of 'Principal Importance' within Section 7 of the Environment (Wales) Act 2016[10] and those included within the Powys Nature Recovery Action Plan including:
  - Acid grassland – semi-improved: 0.7 ha will be permanently lost;
  - Marshy Grassland: 0.05 ha will be permanently lost;
  - Dry dwarf shrub heath – acid and –Dry dwarf shrub heath: 6.22 ha will be permanently lost ;
  - Dry heath/ acid grassland mosaic: 5.03 ha will be permanently lost; and
  - Flush and spring – acid/ neutral flush: 0.01 ha will be permanently lost.

3.28 The proposed on-site compensation measures in relation to these effects are set out below. Note, some of the compensation measures are also provided off site, these are highlighted in the following text as appropriate.

[10] Welsh government (2016) Environment (Wales) Act [online]. Available at: https://www.legislation.gov.uk/anaw/2016/3/section/7

Great crested newt

3.29 As set out above, one pond which is known to have GCN presence will be lost as a result of the Proposed Development. As set out in ES Chapter 7, on site mitigation and compensation is proposed, via the construction of additional new habitat for GCN. This will involve the construction of two new ponds. The extent of habitat created will be greater than that which is lost. It is therefore considered that overall, the compensation will result in a net benefit for biodiversity. The mitigation and compensation proposed will prevent significant impacts to the local GCN population, and the favourable conservation status of the population will be maintained.

Trees and hedgerows

3.30 The arboricultural evidence prepared for the project includes a Preliminary Arboricultural Assessment (PAA) for the substation and cable installation zones (where cables depart away from the tracks), and an Arboricultural Impact Assessment (AIA) for the area where turbines, hardstandings, tracks, borrow pits and construction compound options are proposed. The AIA reports the following tree losses:

- 1 category A tree (T117) (a veteran tree);
- 1 category B tree (T128);
- 2 tree groups (G118 x 2 trees & G112 x 2 trees) one category B and one category C;
- 2 other tree groups (G127(B) & G113(C)).

3.31 Additionally, there is potential for a limited number of trees to be affected by the installation of cables and construction of the substation (fewer than 30).

3.32 In relation to tree loss, PPW12 paragraph 6.4.42 sets out

> *'Where loss is unavoidable developers will be required to provide compensatory planting (which is proportionate to the proposed loss as identified through an assessment of green infrastructure value including biodiversity, landscape value and carbon capture). Replacement planting shall be at a ratio equivalent to the quality, environmental and ecological importance of the tree(s) lost and this must be preferably onsite, or immediately adjacent to the site, and at a minimum ratio of at least 3 trees of a similar type and compensatory size planted for every 1 lost'.*

3.33 As set out in ES Chapter 7 and the OHMP, a significant area of woodland management (off-site) and new woodland planting (on-site and off-site) is proposed as part of the Proposed Development (70.73 ha of woodland will be subject to improved management and or new planting). The new planting areas will cover approximately 6 ha, which at a density of 300-500 trees per hectare will more than offset the effects arising from the loss of trees. These compensatory measures will be secured through planning obligation(s).

3.34 In addition to tree loss, the AIA reports the following hedgerow losses:

- Parts of five hedgerows:
  - H094 – 67 m;
  - H095 – 68 m;
  - H116 – 14 m;
  - H119 – 56 m;
  - H120 – 24 m;

3.35 Furthermore, replacement hedgerow will be planted, whilst approximately 229 m of hedgerow will be removed, 245 m is proposed to be planted on the Site, resulting in a net gain of this habitat type. .

Habitat loss

3.36 The total area of permanent habitat loss is 38.84 ha. This includes habitats which cannot be compensated for including acid grassland and mire habitats due to management limitations on the common. However, as set out in ES Chapter 7 and the OHMP, the Proposed Development includes the provision of new riparian planting (on site and off-site), heathland restoration / creation (on site, off common land), scrub planting (on site, off common land) and woodland planting (on site and off site, off common land). These will deliver a net benefit for biodiversity when taking lost habitats into account. Off site woodland management is also proposed.

3.37 Figure 7.8 of the OHMP presents a map illustrating the proposed enhancement options and should be referred to for further detail. The total area of new habitat or habitat subject to enhanced management is 82.73 ha.

Step 4: Compensate Off Site

3.38 Step 4 (the second part thereof) described in the step wise approach is to 'compensate off site'. This step is described as follows.

> *'When all the steps above have been exhausted, and where modifications, alternative sites, conditions or obligations are not sufficient to secure biodiversity outcomes further on-site/immediately proximate, as a last resort off-site compensation for unavoidable damage must be provided'* (Paragraph 6.4.15, 4)

3.39 The section above sets out where compensation measures proposed include both on-site and off-site elements. In particular, the woodland management measures are proposed to be delivered wholly off-site. While the application

boundary does not include areas of woodland identified for management, the primary reason for locating these measures off-site is due to constraints associated with common land designation, which prevent the delivery of habitat management within much of the application boundary. The off-site woodland areas identified for enhanced management are either directly adjacent to the Site boundary or located within 500m and are therefore considered immediately proximate to the Site. These areas were not included in the application boundary as no development is proposed on this land. All off-site measures will be secured through either planning condition (where within the identified boundary of the Site or other land under the Applicant's control) or via planning obligation(s).

Compliance with the step wise approach

3.40 As set out above, significant work has been undertaken to assess the ecological conditions of the Site and design the Proposed Development in a manner which firstly avoids impacts to sensitive ecological receptors. The site selection process was also undertaken in a manner which avoided key ecological receptors, even though this was undertaken before the adoption of the step wise approach into PPW12.

3.41 Where complete avoidance has not been possible, measures to minimise the impact of the Proposed Development have been undertaken through site design. The careful design process undertaken and demonstrated in this GI Statement comprises the 'embedded mitigation' element of the Proposed Development.

3.42 In addition, applied mitigation through the use of good practice approaches and procedures has been developed, as set out in the plans and strategies listed above, to be secured by planning conditions. These incorporate monitoring to help ensure these are effective over the life of the Proposed Development.

3.43 Further to this, additional mitigation and compensation is proposed at on-site and off-site locations to mitigate for unavoidable habitat losses arising from the Proposed Development. These will be undertaken in accordance with the detailed HMP, which will be secured through a suitably worded planning condition and planning obligation(s).

Multifunctional Benefits

3.44 The final layout of the Proposed Development was a result of the iterative design approach and detailed consideration of constraints. As part of the design process, opportunities for enhancement and positive multifunctional outcomes have been explored. This aligned with the following design objectives:

- Minimising effects on the existing access and recreation opportunities provided by the PRoW and UUCR within the Site.
- Exploring opportunities within the Site to provide greater access and recreational opportunities.

3.45 In reviewing how an enhanced recreational / access offer could be achieved as a result of the Proposed Development, a Strategic Recreational Framework (SRF) has been prepared. The purpose of the SRF is to respond to site constraints while balancing the needs of different users, supporting the infrastructure outlined in the application. It seeks to promote outdoor recreation in a way that is sensitive to environmental and cultural considerations.

3.46 While the SRF outlines possible interventions and infrastructure enhancements, it does not represent a formal plan to deliver specific proposals. Instead, it serves as an aspirational document, a starting point for future discussions and will be developed further through consultation with relevant stakeholders, including landowners and commoners when planning permission for the energy park is granted.

3.47 The SRF acknowledges that much of the land in question is common land with open access status. This includes the Aberedw site and surrounding areas such as the Carneddau Hills, Llandeilo and Rhulen Hills and Cefn Wylfre. Any recreational enhancements would need to be progressed collaboratively with commoners, ensuring that no new forms of infrastructure or uses are introduced on Common Land without agreement.

3.48 The Proposed Development will provide replacement land to compensate for land to be deregistered from the commons. Moreover, existing tracks, hardstandings and associated infrastructure will remain accessible by foot following construction. This means that, overall, the Proposed Development will effectively increase the opportunities for people to access the countryside.

3.49 A number of potential interventions to aid site users' interpretation and understanding of the ecological and heritage assets on the site may also be proposed as part of the enhanced recreational / access offer which the Applicant is seeking to deliver on and around the Site. These are outlined in the SRF, and will bring benefit across a range of environmental considerations. Please refer to the SRF for more detail.

Chapter 4
Summary and Conclusion

4.1 This GI Statement has been produced to support the planning application for the Proposed Development.

4.2 Following an environmentally focussed site selection process, an iterative design approach was implemented. This design process followed the step wise approach, such that it avoids interacting with sensitive receptors in the first instance. Where interaction could not be avoided, the Proposed Development has been designed to minimise this interaction, where possible. Further to the iterative design approach, mitigation and compensation proposals have been developed. These are proposed to be secured by planning condition and planning obligation(s), as appropriate.

4.3 The ability for the site to contribute towards multifunctional benefits has also been considered, through the development of a SRF, which sets out prospective opportunities to enhance public recreation, which are subject to further discussion with relevant stakeholders.