

100MW Swansea Greener Grid Park Extension

784-B070706

Green Infrastructure Strategy

Statkraft UK Ltd.

4th April 2025

Document prepared on behalf of Tetra Tech Group Limited. Registered in England number: 6595608



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Appendices

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1.0 Introduction

1.1 Background

Tetra Tech Limited (Tetra Tech) was commissioned by Statkraft UK Ltd. During March 2025 to produce this Green Infrastructure Strategy (GIS) for the land earmarked for the 100MW Swansea Greener Grid Park Extension proposal. Statutory Pre-Application Consultation was undertaken with NRW and a response was received on 18th March 2025 (ref. CAS-275550-Y0T6), this document stated that a condition of the application should include the requirement for a Construction Environmental Management Plan (CEMP), the wording of which is as follows:

No development including site clearance, shall commence until a site wide Construction Environmental Management Plan (CEMP) has been submitted to and approved in writing by the Local Planning Authority. The CEMP should include:

- *Construction methods: details of materials, how waste generated will be managed;*
- *General Site Management: details of the construction programme including timetable, details of site clearance; details of site construction drainage, containments areas, appropriately sized buffer zones between storage areas (of spoil, oils, fuels, concrete mixing and washing areas) and any watercourse or surface drain, identification of nearby watercourses that may be at risk from pollution.*
- *Biodiversity Management: details of tree and hedgerow protection; species and habitats protection, avoidance and mitigation measures.*
- *Soil Management: details of topsoil strip, storage and amelioration for re-use.*
- *CEMP Masterplan: details of the extent and phasing of development; location of landscape and environmental resources; design proposals and objectives for integration and mitigation measures.*
- *Control of Nuisances: details of restrictions to be applied during construction including timing, duration and frequency of works; details of dust control measures.*

- *Resource Management: details of fuel and chemical storage and containment; details of waste generation and its management; details of water consumption, wastewater and energy use.*
- *Traffic Management: plant on site, wheel wash facilities.*
- *Pollution Prevention: demonstrate how relevant Guidelines for Pollution Prevention and best practice will be implemented, including details of emergency spill procedures and incident response plan.*
- *Details of the persons and bodies responsible for activities associated with the CEMP and emergency contact details*

This statement has been prepared by Associate Ecologist Sean Flynn MCIEEM CEnv and the conditions pertinent to it are in Appendix A.

1.2 Site Description

The site is located southeast of Swansea North 400kV GIS substation and is centred at Ordnance Survey National Grid Reference SN 65374 00903 (Figure 1). It comprises grazed other neutral grassland divided by lines of trees, including oak standards, newly formed banks, and banks of species rich native hedgerow. There is bramble scrub, a stream and a ditch along site boundaries. The wider environment comprises sheep and horse grazed pastures divided by hedges and farm buildings.

1.3 Development Proposals

The proposal is for the installation of a 100MW Battery Energy Storage System (BESS) to the immediate southeast of Swansea North 400kV GIS substation.

The current proposed Landscape Mitigation Strategy 2242 Swansea BESS (TGP Landscape Architects, February 2025) is included in Appendix B.

1.4 Purpose of this Statement

This statement has been produced in accordance with Planning Policy Wales 12 (PPW12), published in February 2024, that states (paragraph 6.2.12:

“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. In the

case of minor development this will be a short description and should not be an onerous requirement for applicants. The green infrastructure statement will be an effective way of demonstrating positive multi-functional 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.”

PPW12 defines Green Infrastructure (GI) as:

“...the network of natural and semi-natural features, green spaces, rivers and lakes that intersperse and connect places.”

In accord with PPW12 the assessment and subsequent enhancements have been devised in a step-wise approach to secure a net benefit for biodiversity as a consequence of the proposed development. This GIS therefore identifies how impacts have been avoided and, where necessary, how the mitigation and enhancements have been incorporated into the Landscape Mitigation Strategy (see Appendix B) for the site.

2.0 Baseline

A UKHab survey was undertaken during January 2025, the findings are provided in a Preliminary Ecological Appraisal (Tetra Tech, 2025), below is a summary of the findings presented in that report:

2.1 Protected Sites

There are no international or European protected sites within 2km of the site and no Special Areas of Conservation for bats with 10 km of the site.

Nant y Crimp Site of Special Scientific Interest (SSSI): Located approximately 1.5 km north-west of the site, this SSSI is designated for its habitats and plant species. Due to its distance from the proposed development site and the scale and localized nature of the development, it is considered unlikely to be impacted by the scheme.

Sites of Importance for Nature Conservation (SINC): The proposed development is not anticipated to have significant impacts on the following SINC's but all potential pathways via hydrological links will be monitored.:

- Llety-Morfil SINC
- Felindre Grasslands SINC
- Waun Garn Wen SINC.

2.2 Habitats

The habitat onsite is predominantly classified as other neutral grassland, hedges, ecologically valuable lines of trees, scrub, a ditch, and a stream located along the boundaries. All these habitats are of local importance.

2.3 Protected Species

The site has the potential to support a variety of protected and notable species, including:

- Badger
- Hazel Dormouse
- Bats
- Birds
- Reptiles

- Hedgehog

3.0 Green Infrastructure Strategy

3.1 Introduction

This GIS outlines the approach to enhance and protect ecological assets during the construction and operation of the BESS so that biodiversity benefit can be demonstrated.

3.2 Further Surveys / Assessment

To ensure a thorough understanding of the ecological landscape, the following assessments will be conducted:

- Aerial Assessment: Conduct tree climbing assessments of trees with potential roosting features (PRFs) identified as TNs 13, 14, 15, and 16.
- Invasive Non-Native Plant Species (INNPS) Survey: Conduct a survey for invasive non-native plant species during the months of June and July.
- Ecological Clerk of Works (ECoW) Checks: Implement checks for badger activity prior to the commencement of works.

3.3 Avoidance Measures

To mitigate potential impacts on sensitive ecological areas, the following avoidance measures will be implemented:

- Protection of Sites of Importance for Nature Conservation (SINCs): All SINCs will be protected during construction activities.
- Pollution Control: Due to the proximity of SINCs, measures to manage noise, vibration, and dust will be enforced in accordance with best practice guidance (NRW, 2017).
- Habitat Protection: Adjacent habitats will be safeguarded during works, and existing habitats such as hedgerows, lines of trees, and mature trees will be retained wherever possible. Trees with potential for bat roosting will be prioritized for protection.
- Nesting Bird Precautions: Works during the nesting bird season (March to September) will require a pre-works nesting bird check by an ECoW. If active nests are found, they will remain undisturbed until the young have fledged.

- **Reptile and Hedgehog Precautions:** Refugia, including brash piles and debris, will be hand-searched prior to clearance. Any sheltering wildlife, such as hedgehogs, will be relocated to a safe area. Clearance will be timed to minimize impacts on active wildlife (April to October).
- **Hazel Dormouse Habitat:** Removal of hazel dormouse habitat (trees, scrub, hedgerow and trees) will follow a Non-Licence Method Statement (NLMS).
- **Wildlife Entrapment Prevention:** Good practice measures, such as covering excavations and providing escape routes, will be implemented to prevent wildlife entrapment.
- **Sensitive Lighting Scheme:** A lighting scheme will be developed to minimize disturbance to sensitive ecological receptors, including hedgerows, trees, and bat boxes.
- **INPS Management:** General precautionary measures will be taken to prevent the introduction and spread of invasive non-native species, particularly Himalayan balsam and Japanese knotweed.

The above measures will be detailed in the CEMP as per the recommendations for the planning condition from NRW.

3.4 Enhancements

To promote biodiversity and enhance ecological value, the following enhancements will be implemented:

- **Grassland Reseeding:** Retain and reseed 1.91 hectares of neutral grassland with a wildflower meadow mix to improve species diversity.
- **Hedgerow Restoration:** Restore defunct hedgerows along the boundaries of the site.
- **Native Hedgerow Planting:** Establish 0.56 km of new species-rich native hedgerow.
- **Woodland Planting:** Plant 0.631 hectares of new lowland mixed deciduous woodland.
- **Tree Planting:** Introduce 56 new native standard trees to the landscape.
- **Wildlife Boxes:** Install bat boxes and bird boxes to provide nesting opportunities.
- **Hibernacula Creation:** Construct hibernacula for common amphibians and reptiles to support their populations.
- **Insect Hotels:** Create insect hotels to enhance habitat for invertebrates.

3.5 Long-Term Management

All retained, enhanced, and newly created habitats will be managed in accordance with a long-term ecological management plan. This plan will ensure the sustainability and health of the ecological features established through this strategy.

3.6 Conclusion

This Green Infrastructure Strategy aims to balance development needs with ecological preservation and enhancement. By implementing thorough assessments, avoidance measures, and habitat enhancements, we can foster a resilient and biodiverse environment that benefits both wildlife and the community.

4.0 Summary

The GIS outlines strategies to protect and enhance ecological assets during the Swansea Greener Grid Park Extension's construction and operation. Key components include:

Avoidance Measures: Strategies to mitigate impacts on sensitive areas include protecting Sites of Importance for Nature Conservation (SINCs), implementing pollution control measures, safeguarding existing habitats, and conducting pre-works checks for nesting birds and other wildlife.

Enhancements: To promote biodiversity, the strategy includes reseeded grassland, restoring hedgerows, planting new native hedgerows and trees, installing wildlife boxes, creating hibernacula for amphibians and reptiles, and establishing insect hotels.

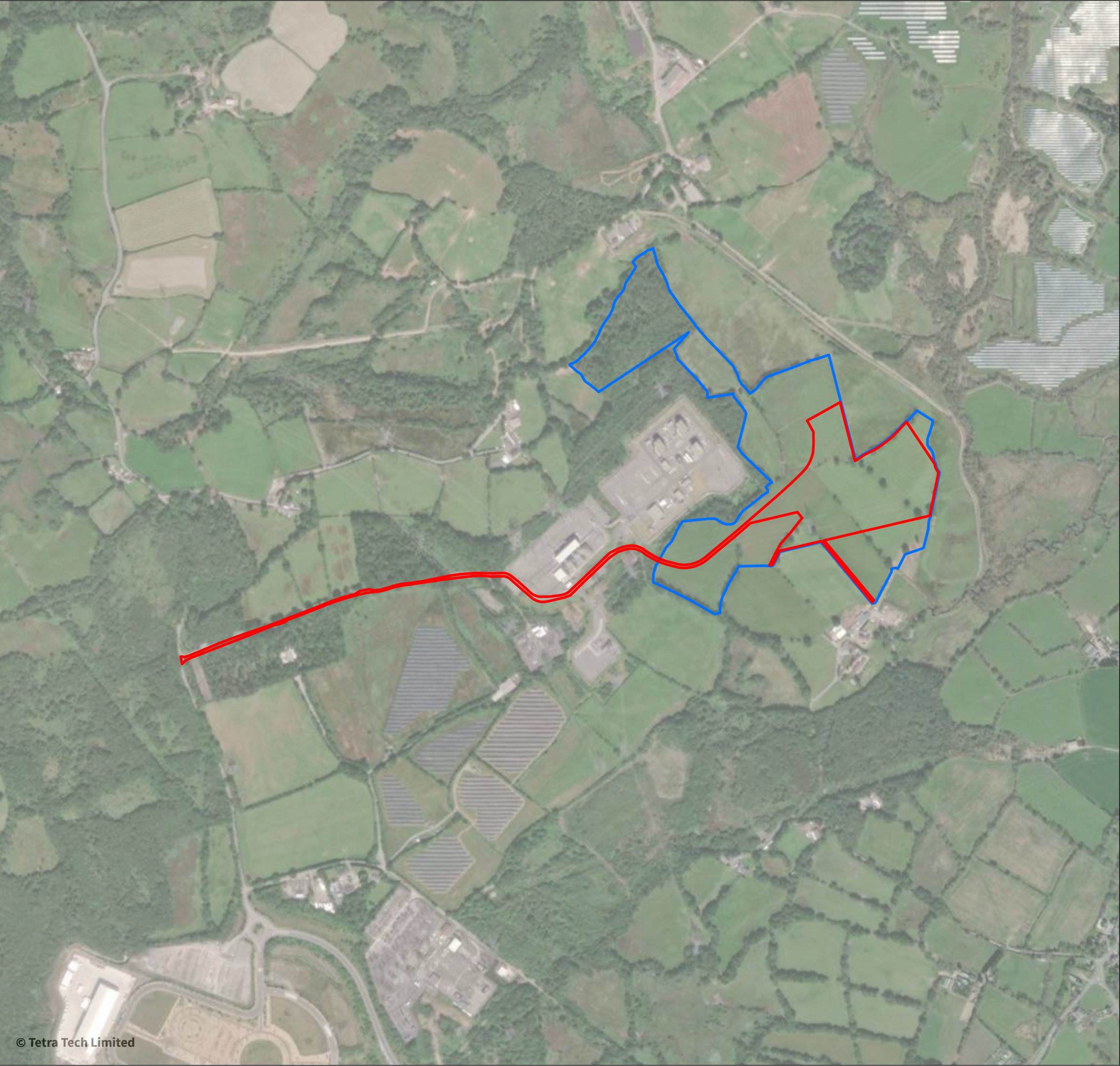
Long-Term Management: A long-term ecological management plan will ensure the sustainability of all retained and newly created habitats.

The Green Infrastructure Strategy aims to harmonize development with ecological preservation, fostering a resilient environment that benefits both wildlife and the local community. By implementing thorough assessments, avoidance measures, and habitat enhancements, the strategy seeks to secure a net biodiversity gain from the proposed BESS development.

5.0 References

NRW. (2017). *Guidance for Pollution Prevention GPP 5: Works and maintenance in or near water*. NRW, NIEA, SEPA.

Tetra Tech. (2025). *Swansea BESS Preliminary Ecological Appraisal*. Bristol: Tetra Tech.



Site Location Plan

100MW Swansea BESS



Statkraft

Legend

- Site boundary
- Survey area

Notes:

Drawn by: lily.dunwell
Checked by: Sean Flynn

Figure No. 1
Revision No. B
26 March 2025

0 100 200 300 400 Meters British National Grid
Scale 1:7,500 @A3 NGR: 264835E 200899N

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UK Hab Habitat Plan

100MW Swansea BESS



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Legend

- Site boundary
- Survey area
- Unsurveyed area
- g3c - Other neutral grassland
- h3d - Bramble scrub
- u1b - Developed land, sealed surface
- u1c - Artificial unvegetated unsealed surface
- w1f - Lowland mixed deciduous woodland
- h2a5 - Species-rich native hedgerow
- h2a6 - Other native hedgerows
- r1g - Other Standing Water
- r2 - Rivers and streams
- u1e - Built linear feature
- w1g - Other woodland broadleaved
- Target Notes

Secondary Codes:
34 - Ecologically valuable line of trees
50 - Ditch
102- Sheep grazed
510 - Bare ground
605 - Mid-field bund

Symbology defined by UK Habs. <https://ukhab.org/ukhab-documentation/>

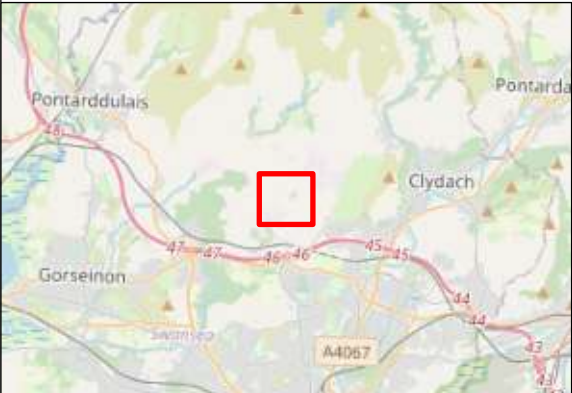
Drawn by: lily.dunwell
Checked by: Sean Flynn

Figure No. 2
Revision No. B
26 March 2025

0 50 100 150 200 Meters
Scale 1:5,200 @A3

British National Grid
NGR: 264835E 200899N

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Figures

Figure 1 – Site location plan

Figure 2 – UKHab map

Appendices

Appendix A: Report conditions

This Report has been prepared using reasonable skill and care for the sole benefit of Statkraft Ltd. (“the Client”) for the proposed uses stated in the report by Tetra Tech Limited (“Tetra Tech”). Tetra Tech exclude all liability for any other uses and to any other party. The report must not be relied on or reproduced in whole or in part by any other party without the copyright holder’s permission.

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The report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections'. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions.

Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions. The “shelf life” of the Report will be determined by a number of factors including; its original purpose, the Client’s instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

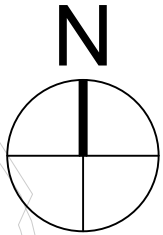
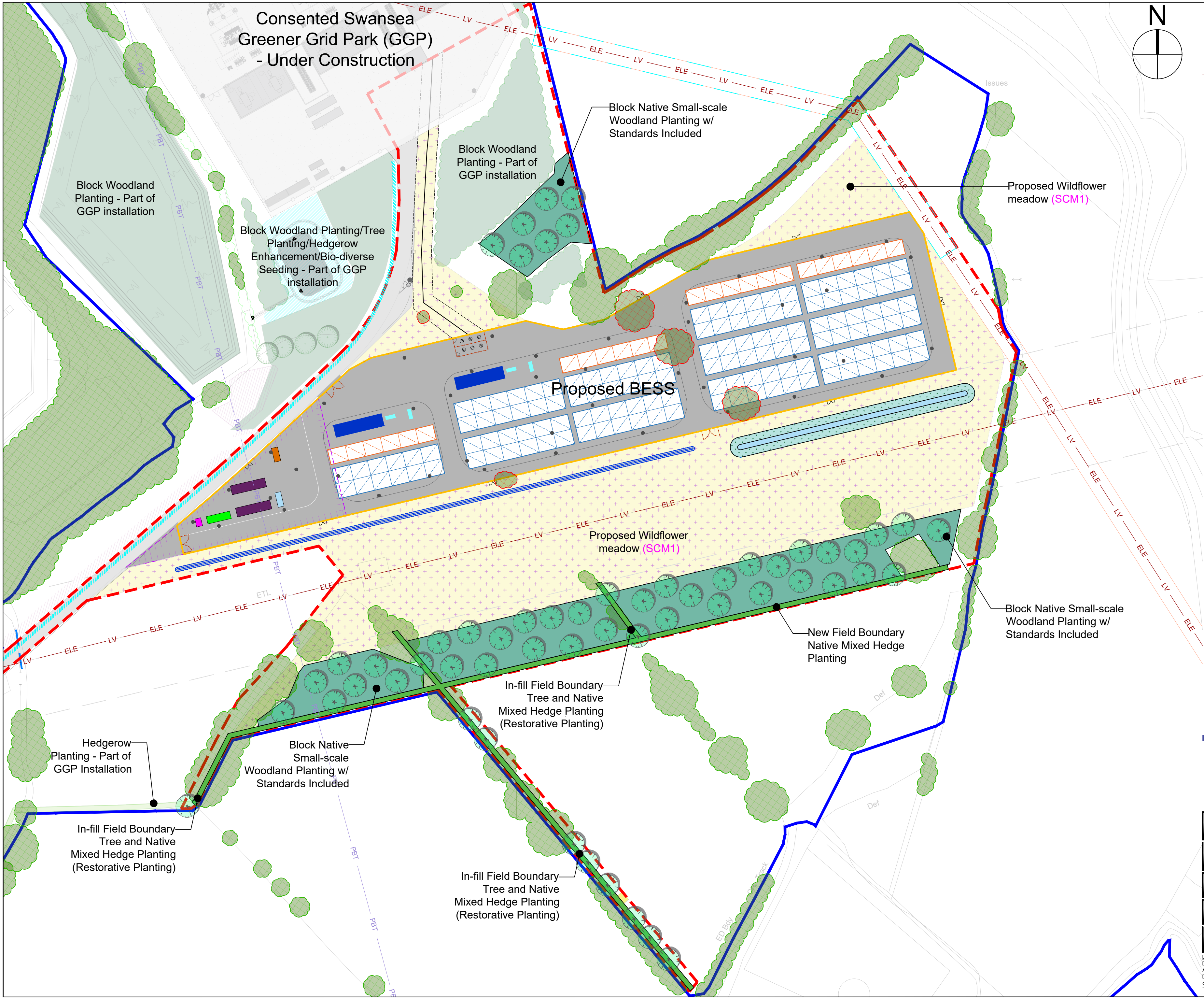
The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

Tetra Tech reserves the right to share this Report and any related materials, surveys, drawings and/or documents at any time with the relevant Local Ecological Records Centre (LERC), any relevant statutory body or any equivalent organisation as Tetra Tech may reasonably require from time-to-time.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Tetra Tech accept no liability for issues with performance arising from such factors.

Appendix B: Landscape Mitigation Strategy

Consented Swansea Greener Grid Park (GGP) - Under Construction



- Legend**
- Site Boundary
 - Ownership Boundary
 - Existing Overhead Cable Route
 - Existing Telecom Route
 - Watercourse
 - Proposed Security Fence
 - Existing Woodland/Tree retained and maintained
 - Removed Tree Material
 - Proposed Native Woodland Mix planting (W1) with Woodland Meadow Mix seeding underneath (SCM3)
 - Proposed Native Wildflower Meadow (SCM1)
 - Proposed hedge/in-fill planting
 - Corylus avellana
 - Crataegus monogyna
 - Ilex aquifolium
 - Lonicera periclymenum
 - Prunus spinosa
 - Sambucus nigra
 - Proposed SuDS
 - Proposed Native Wetland Meadow (SCM2)

Rev D 27.03.2025 - Hedge spec. /Update areas per Ecol.
Rev C 25.03.2025 - Insert Site Plan w/ moved BESS and new RLB
Rev B 24.02.2025 - Alter base map/GGP site; Reinforce NMA Hedge.
Rev A 17.02.2025 - Alter base map/GGP site; Remove access wayleave; Alter plan colours/legend; Add plan notation (GGP landscape).



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Project Swansea BESS					
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Job 2242	Suitability -	No. L01	Issue -	Revision B	
LI WORKSTAGE: 0/1 2 3 4 5 6					
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