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Project No: 315341

BESS: Bridge Road North, Wrexham
Great Crested Newt Conservation Plan

Prepared for submission to Wrexham Council for Discharge of Condition 3 Planning Consent P/2022/0057

Prepared for:

Hero Future Energies UK Ltd

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Contents Amendment Record

This report has been issued and amended as follows:

Revision	Description	Date	Signed
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1.1	Client Comments	10th October 2024	Douglas Kilpatrick

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Acknowledgement

This report has been prepared for the sole and exclusive use of Hero Future Energies UK Ltd in accordance with the scope of work presented in Mabbett & Associates Ltd (Mabbett) Letter Agreement (315341/DK/190624/1.0), dated 19th Juni 2024. This report is based on information and data collected by Mabbett. Should any of the information be incorrect, incomplete, or subject to change, Mabbett may wish to revise the report accordingly.

This report has been prepared by the following Mabbett personnel:

[redacted]

Douglas Kilpatrick MSc MA BSc (Hons)
Senior Ecological Consultant

This report has been approved by the following Mabbett personnel

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Andrew Taylor MSc, MRSB
Manger Ecology, Scotland

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Executive Summary

Mabbett and Associates Ltd (Mabbett) was commissioned by Hero Future Energies UK Limited on the 11th of July 2024 to prepare a Great Crested Newt (GCN) Conservation Plan for a proposed Battery Energy Storage System (BESS) development and discharging planning condition 3 of the application reference P/2022/0057. A Preliminary Ecological Appraisal (PEA) was conducted in 2020 by Ensafe Consultants as part of works to inform the BESS development. The PEA identified a breeding pond during the desk study and due to close proximity of breeding pond to the development, a conservation plan was requested. The GCN Conservation Plan report outlines the aims and objectives of the conservation plan, the mitigation strategies, scheduling, proposed enhancements and further recommendations to safeguard this protected species.

The site is located within 30 meters of a known GCN breeding pond, and the risk to GCN from construction activities is assessed as high. In compliance with the Wrexham Unitary Development Plan (EC6 Biodiversity Conservation), this Conservation Plan must be submitted and approved in writing by Wrexham Borough County Council prior to any development activities.

The report will rely on information provided in the associated Preliminary Ecological Appraisal report (EnSafe Consultants, 2020), and the Ecological Mitigation & Enhancement Scheme (Reference 20-0948.03) (Delta-Simons, 2021), as well as the most up-to-date guidance documents for the relevant species, including the Great Crested Newt Conservation Handbook (Langton et al. 2001).

The Great Crested Newt Conservation Plan should fulfil the requirements of condition 3 laid out in Condition Notice ISY P/2022/0057 of the Wrexham Borough County Council. These requirements are;

- Purpose and objectives of the GCN Conservation Plan
- Conservation management techniques for GCN
- Locations and schedules for monitoring surveys and maintenance
- Qualifications and required licenses for involved personnel
- Contact information for the project's Ecological Clerk of Works
- Monitoring plan for the site covering at least the next 5 years
- Report publication timeline, including ongoing monitoring and procedures
- Relevant legislation concerning the protected species
- Designated Avoidance Zones and Buffer Zones
- Work restriction schedules
- Fencing and exclusion methods
- Habitat enhancement measures
- Protocols for encounters with protected species, including emergency contact details

A 5-year population monitoring plan will be implemented to closely observe the population dynamics of both the breeding pond and the mitigation pond, ensuring the long-term health of the Great Crested Newt population. This plan will be supported by annual reports prepared by the Ecological Clerk of Works (ECoW), which will document population trends, habitat conditions, and any necessary conservation actions. Furthermore, any habitat maintenance or management activities carried out on site will require oversight by the ECoW to ensure that they are conducted in a manner that protects the species and preserves habitat integrity.

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Section 1.0: Introduction

1.1 Introduction

Mabbett and Associates Ltd (Mabbett) was commissioned by Hero Future Energies UK Limited on the 11th of July 2024 to prepare a Great Crested Newt (GCN) Conservation Plan for a proposed Battery Energy Storage System (BESS) development. A Preliminary Ecological Appraisal (PEA) was conducted in 2020 by Ensafe Consultants as part of works to inform the BESS development. The PEA identified a breeding pond during the desk study and due to close proximity of breeding pond to the development an Ecological Mitigation and Enhancement Scheme was prepared by Delta-Simons (2021). A GCN conservation plan was subsequently requested by Wrexham Council. The GCN Conservation Plan report outlines the aims and objectives of the conservation plan, the mitigation strategies, scheduling, proposed enhancements and further recommendations to safeguard this protected species.

The site is located within 30 meters of a known GCN breeding pond, and the risk to GCN from construction activities is assessed as high. In compliance with the Wrexham Unitary Development Plan (EC6 Biodiversity Conservation), this Conservation Plan must be submitted and approved in writing by Wrexham Borough County Council prior to any development activities.

In order to fulfil the Council's relevant policy in the Wrexham Unitary Development Plan: EC6 Biodiversity Conservation. The planning must fulfil Condition 3:

- *No development shall commence until a Great Crested Newt Conservation Plan has been submitted to and approved in writing by the Local Planning Authority. The Plan shall include measures for after the initial 5-year period, the name and contact details of the ecological clerk of works, monitoring and maintenance, and procedures for reporting of identified actions. The development shall thereafter be carried out in strict accordance with the Great Crested Newt Conservation Plan as approved.*

Condition 3 must be fulfilled to protect named species / habitats / biodiversity which would otherwise be damaged / lost by the development hereby permitted in accordance with Policies GDP1 and EC6 of the Wrexham Unitary Development Plan. The construction is based on the approved drawing(s) numbered Layout 01 Rev 1, SLH-01-006, SP4148718, SLH-01-008, SLH-01-010, SLH-01-007, ENERGY STORAGE UNIT RSU-4000 and RIU-2500.

1.2 Site Location

The proposed development, known as "Land south of Bridge Road North" hereafter referred to as "the site", is located along Bridge Road North, Wrexham Industrial Estate, Wrexham. It lies approximately 4.6 km from Wrexham centre. The site is located at OS Grid Reference: SJ 38117 49576 and has the postal code LL13 9PS, although postcode LL13 9RD is also used.

1.3 Site Description

The development site spans 0.6 hectares and consists primarily of young alder woodland. Some portions of the woodland were previously felled but show signs of natural regeneration. The site also features grassland with tall swards and areas of ruderal vegetation, particularly along its margins.

Two tributaries of the Redwither Brook run along the eastern and southern boundaries of the site, adding to the ecological complexity and habitat connectivity of the area. While the site lies within a heavily industrialized zone, relic patches of woodland interspersed among industrial buildings create a mosaic of habitats that could support various wildlife, including GCN during their terrestrial phase.

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1.4 Proposals

- The development proposal involves the construction of a Battery Energy Storage System (BESS), occupying an area of approximately 0.6 hectares. The project will consist of:
- 6 number 3.85 MW Battery Energy Storage Containers
- 6 number 1.75MW power conversion systems, with combined transformers and switchgear
- Two client electricity switchrooms
- Two DMO 11 KV substations
- Other associated infrastructure, e.g.; fencing, gates, etc.

1.5 Aims and objectives of the Conservation Plan

The primary objective of the Great Crested Newt (GCN) Conservation Plan is to ensure the long-term protection and enhancement of habitats suitable for the species, in compliance with relevant legislation.

This section outlines the key aims and objectives of the plan, as well as the specific measures required to achieve effective conservation and monitoring:

Legislation and Legal Requirements:
- Detail the relevant national and international legislation protecting GCN, ensuring that the project is fully compliant with the legal framework governing this protected species.
- Include specific references to laws such as the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981.

Competencies and Personnel Requirements:
- Outline the qualifications and competencies required for personnel involved in GCN conservation and monitoring activities, including necessary licenses (e.g., handling licenses for GCN).
- Emphasize the role of skilled personnel in ensuring compliance with legal requirements and best practices.

Ecological Clerk of Works (ECoW):
- Identify the Ecological Clerk of Works (ECoW) responsible for overseeing GCN conservation efforts on-site, providing their name, contact information, and role in ensuring compliance with the conservation plan.

Conservation Methods:
- Outline the specific methods and strategies to be employed for GCN conservation, such as habitat management, creation of new ponds, appropriate vegetation management, and any translocation efforts if necessary.
- Describe mitigation measures such as fencing, exclusion zones, and avoidance of harmful construction practices during key GCN life stages.

Monitoring Locations and Timing:
- Provide details on the specific locations within the site where monitoring surveys will be conducted, as well as the timings for these surveys (e.g., during breeding, migration, and hibernation seasons).
- Clarify the frequency of monitoring activities and how they align with the different phases of the project.

Monitoring and Reporting Schedule:
- Provide a detailed monitoring schedule for the site, ensuring at least a 5-year commitment to continuous observation and reporting of GCN populations.
- Describe the frequency of monitoring activities, including pre-construction, construction, and post-construction phases.

Report Publication and Monitoring Procedures:
- Establish a clear schedule for the publication of monitoring reports, ensuring transparency and consistency in documenting GCN conservation progress.
- Outline the procedures for ongoing monitoring and reporting, including how and when updates will be provided to regulatory bodies and stakeholders.

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Avoidance Zones and Buffer Zones:

- Define specific avoidance and buffer zones within the site to protect GCN habitats from disturbance.
- Include information on how these zones will be marked and maintained during project implementation.

Timing of Work Restrictions:

- Specify any seasonal restrictions on construction or project activities to avoid disrupting key GCN life stages such as breeding, migration, or hibernation.
- Include restrictions on activities such as vegetation clearance and heavy machinery operation during sensitive periods.

Fencing and Exclusion Methods:

- Provide detailed information on the types of fencing to be used for GCN exclusion, such as temporary amphibian fencing, to prevent newts from entering hazardous areas during construction.
- Describe the procedure for installing and maintaining these exclusion measures.

Habitat Enhancement Measures:

- Describe specific measures for enhancing GCN habitats, such as creating new ponds, improving existing water bodies, planting native vegetation, and managing habitats to promote biodiversity and connectivity.
- Include details on how these measures will be monitored and maintained to ensure long-term success.

Procedures for Encountering GCN:

- Establish clear procedures for personnel to follow if GCN are encountered during project activities.
- Include emergency contact details for the Ecological Clerk of Works and relevant conservation authorities to ensure prompt and appropriate action in the event of an unexpected discovery.

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Section 2.0: Legislation and Policy Context and Licensing

Great crested newt and their habitats receive legal protection in the United Kingdom under various pieces of legislation, including:

2.1 Legislation:

- Wildlife and Countryside Act 1981 (as amended) – GCN are protected under Schedule 5 of this act, making it an offence to kill, injure, or disturb them, or to damage their habitats.
- Conservation of Habitats and Species Regulations 2017 – Under Regulation 43, GCN are classified as a European Protected Species (EPS), which extends further protection to their breeding and resting places.
- Natural Environment and Rural Communities (NERC) Act 2006 – GCN are a species of principal importance in conserving biodiversity under Section 41.

2.2 Wrexham Unitary Development Plan:

- Policy GDP1 – General Development Principles ensuring the protection of local biodiversity.
- Policy EC6 – Biodiversity Conservation, ensuring developments avoid impacts on protected species and habitats.
    - **Planning Condition 3**:
        - No development can begin until a GCN Conservation Plan is submitted and approved.
        - The plan must cover measures for a 5-year monitoring period and include contact details of the Ecological Clerk of Works.
        - Work must comply with approved plans and mitigation measures.

2.3 Licensing:

- A European Protected Species License (EPSL) must be obtained from Natural Resources Wales (NRW) prior to works commencing on-site. This will be applied for by Delta-Simons.
- It is an offence to kill, injure, or disturb GCN, or to damage or destroy their breeding or resting places without an appropriate license.
- Ecologists will require a handling license at minimum. Pitfall trapping require additional certification.

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Section 3.0: ECOW and Competencies

3.1 Ecological Clerk of Works (ECoW):

The ECoW will oversee all GCN-related activities, ensure compliance with this Conservation Plan, and respond to any GCN encounters during construction. The ECoW will be responsible for liaising with construction teams and ensuring that all personnel are aware of GCN exclusion zones and protection measures. The ECoW will require at minimum a GCN Level 1 License when disturbing or handling GCN. Pitfall trapping will require a GCN Level 2 Class License CL09. All relevant parties must be notified of changes in ECoW contact details.

- **Douglas Kilpatrick MSc MA BSc (hons),** *Senior Ecological Consultant*.
  - License Number GCN Level 1 Survey Class License CL08: Registration Reference 2021-10101-CL08-GCN
  - +44 (0)77290 73543
  - DKilpatrick@mabbett.eu
- **Amy Berry MSc BSc (hons),** *Senior Ecological Consultant*.
  - License Number GCN Level 1 Survey Class License CL08
  - +44 (0)7730289259
  - Amy.Berry@mabbett.eu
- **Nick Masters MSc BSc (hons),** *Director, Ecology*.
  - License Number GCN Level 1 Survey Class License CL08
  - +44 (0)7545 651257
  - Nick.Masters@mabbett.eu

3.2 Personnel Training Requirements:

Any contractors working on site will be briefed on GCN ecology during the Toolbox Talk and the need to report any encounters with protected species. All mitigation measures in place will be explained and the location of the exclusion zones.

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Section 4.0: Emergency Procedures and Contact Details

4.1 Procedures if GCN are found on Site:

Despite thorough pre-construction surveys and mitigation measures, it is possible that GCN may still be encountered during site works. In such an event, the following actions will be implemented:

- All construction or operational activities in the vicinity of the encounter must cease immediately. This action is necessary to prevent any harm to the GCN.
- The area where the GCN is found will be cordoned off using suitable barriers to prevent accidental access by workers or machinery. The area will remain undisturbed until further assessment is completed.
- The ECoW will be contacted to assess the situation and handle GCN relocation if required (under appropriate license).
- The ECoW will document the encounter, including the number of GCN observed, their condition, the location of the encounter, and any actions taken. This information will be included in the monitoring report for submission to Natural Resources Wales (NRW) and the Local Planning Authority (LPA).
- In the event that any other amphibians (excluding GCN) are found during works, they will be carefully relocated to suitable vegetation a safe distance from the working area in proximity to the breeding pond.

4.2 Environmental Incident:

In case of an environmental incident, such as a pollution spill, where there is a risk to GCN habitats or individuals, the following emergency actions will be taken:

- On identification of the spill, works in the affected area will stop, and containment measures will be deployed immediately as per the Site Construction Environmental Management Plan (CEMP). This may include the use of spill kits, sandbags, or other containment tools to prevent further spread of pollutants into sensitive habitats, such as watercourses or areas where GCN are known to reside.
- The area affected by the spill will be isolated to prevent further contamination, and access to the area will be restricted.
- Notification of relevant authorities noted in the emergency contact listed below

4.3 Emergency Contacts:

Emergency Contact Details			
Role	**Name**	**Phone**	**Email**
Ecological Clerk of Works	Douglas Kilpatrick	+44 (0)77290 73543	DKilpatrick@mabbett.eu
Applicant	Robert Ayres	+447850882679	robert.ayres@herofutureenergies.com
Site Manager	Mark Draper	+44790951318	Mark.draper@herofutureenergies.com
Natural Resources Wales		0300 065 3000 (Emergency Reporting)	Natural Resources Wales, Chester Road, Buckley, CH7 3AJ, Wales
Local Planning Authority Biodiversity Officer	TBA	TBA	TBA

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Section 5.0: Mitigation Measures

5.1 Drift Fencing:

Prior to works commencing, the site must have completed the translocation of newts and other relevant wildlife. This will be done using drift fencing.

- Work involving GCNs will take place during their active season, typically from mid-March to October, when night temperatures are above 5°C and there are no overnight frosts.
- Amphibian fencing will be placed around the site before works commence to facilitate the installation of generators and landscaping, which includes areas of scrub and young woodland.
- The installation will be overseen by the Site ECoW, who will inspect the area manually just before the fencing is set up. Any vegetation removal, including trees and shrubs, needed for fence installation will also be supervised by the ecologist, ensuring the area is checked before clearance. The fencing will enclose the work area to prevent GCNs from remaining where activities may occur.
- Pitfall traps and refugia will be set along the fence at 5-meter intervals. Based on the population, trapping will last a minimum of 30 days, contingent on suitable weather conditions. Any GCNs or other wildlife caught will be relocated to a designated receptor site approved under the licence application. Pitfall traps must be checked at least once in every 24 hours between 06.00 and 11.00 hours.
- Once trapping is completed and no GCNs have been captured for at least five consecutive days within the 30-day minimum period, the Site ECoW will conduct a destructive search within the fenced area to ensure no GCNs or suitable habitats remain.
- The perimeter fencing will stay in place throughout the project and will be regularly maintained. The ecologist will check and repair any damage promptly during the trapping and relocation phase.
- After the relocation is finished, the Site ECoW will give a “tool-box talk” to all contractors involved, covering the potential presence of GCNs, the mitigation steps in place, and procedures to follow should GCNs be encountered during construction. This information will also be part of the standard site induction.
- A visual inspection of the fence will be performed daily by a site contractor, designated by the Site Manager. A daily report will be kept on-site, and any damage to the fence will be addressed within the same working day if possible. If ground-level repairs are required, the the Site ECoW will be contacted for appropriate actions, including a site visit if needed.
- The Site EcoW will conduct monthly inspections throughout the project to ensure the fence is correctly positioned and remains effective.
- If any amphibians (excluding GCNs) are found during the project, they should be carefully moved by hand (using damp hands) to a nearby area with suitable vegetation, away from the active work zone but near the breeding pond.
- In the event a GCN is found when an ecologist is not on-site, work must stop immediately, and the ecologist must be contacted for guidance.
- All mitigation efforts are to be recorded and collated into the annual and final reports.

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Section 6.0: Monitoring and Maintenance Schedule

Records from Cofnod indicate a GCN population assessment was carried out in 2012, which recorded four adult GCN (EnSafe Consultants, 2020). Based on guidance laid out in English Nature (2001) the population size class is therefore classed as 'low". The site falls within "*the immediate terrestrial habitat of a breeding pond*" (approx. <50m) and the planned works include destruction of suitable GCN habitat. The impact classification of the proposed development is therefore "high". Additional emphasis has been placed on GCN in the Wrexham Local Planning Policy Guidance No. 29 (2009). As a result, the council has requested a minimum 5-year monitoring plan.

6.1 Population Monitoring Plan

Population Monitoring will be conducted annually during the first 5 years post-construction to assess GCN population and habitat quality in spring time:

- Year 1: One survey in spring.
- Year 2: One survey in spring.
- Year 3: One survey in spring.
- Year 4: One survey in spring.
- Year 5: One survey in spring.

6.2 Reporting Schedule:

- Initial Report: Within 3 months of project completion, outlining mitigation conducted by the ECoW during the construction phase. This should list any environmental incidents and maintenance.
- Annual Reports: Submitted to the Local Planning Authority providing the results of the first year of monitoring and summarizing GCN activity that are found in relation to the works, the habitat condition, and any required actions.
- Final Report: After 5 years, collating all previous reports and data, with recommendations for any long-term management or additional monitoring.

6.3 Maintenance Schedule:

- Pond maintenance visits to take place during spring, summer and autumn. Spring and autumn are to allow for barley straw application, which helps prevent algal blooms. The summer visit is to monitor water levels in both ponds.
- Enhancement (Section 8) and management works should ideally take place during the exclusion phase.

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Section 7.0: Monitoring and Maintenance Methodology

7.1 Monitoring Locations:

Two ponds related to the development will require GCN population monitoring, these ponds are;

- The breeding pond located 30m north of the site. (See Ensafe Consultants PEA, 2020)
- The mitigation pond within the red line boundary. (Figure 2)

7.2 Survey Methodology:

Great crested newt monitoring will follow standard survey methodology laid out below.

- The methodology will follow the Great Crested Newt Mitigation Guidelines (Natural England, 2001).

- Surveys are to be carried out in during optimal times for detecting GCN activity (Mid-April to June).

- Techniques used include:
  - Bottle trapping: Safe trapping method used to estimate GCN population density.
    - Submerged bottle traps which do not allow for air breathing by newts must not be left unattended longer than 12 hours in March and April, 10 hours in May, 8 hours in June, 7 hours in July and August and 8 hours in September.
    - Bottle traps that allow air breathing by newts must not be left unchecked
    - between 06.00 and 11.00 hours. Submerged bottle traps must be held firmly in place to prevent tilting and loss of the air bubble.
    - Bottle trapping should be used with great caution in full summer sunlight as the internal temperature of the trap may rise considerably. In these cases the position of the trap or the frequency of checking may need to be reviewed.
    - Any death of GCN must be immediately reported to NRW. If more than one death occurs in a bottle trap then trapping must be suspended and advice sought from NRW. If newts are found unconscious and then recover, trapping should also be suspended and advice sought.
    - From July-September, GCN larvae may be vulnerable to damage, predation or suffocation in bottle traps. Trapping should be suspended if more than two larvae are found dead and advice sought from NRW.
  - Torchlight surveys: Conducted at night, targeting water bodies to observe GCN.
  - Habitat Suitability Index (HSI): HSI data and pond condition will be collected for both the breeding pond and the mitigation pond each year and collated in the reports. Vegetation in and around the pond should also be monitored.
  - No egg searches are to be conducted unless other survey methods fail.

7.3 Maintenance:

- Regularly monitor the water depth using a depth gauge to ensure optimal conditions are maintained.
- The mitigation pond must never be allowed to completely dry out. In the event that this occurs, immediate remediation measures should be taken.
- Ensure that shading over the pond does not exceed 50%. If shading surpasses this limit, vegetation around the pond will need to be managed and maintained.
- Barley straw should be applied to both ponds twice a year-once in early spring and again in autumn at a rate of 10-50 grams per square meter of the pond's surface area. This aims to prevent algal blooms.
- Raking out blanket weed as a method of pond maintenance is to be strictly **prohibited** and should not be carried out as GCN and other aquatic life can become entangled during removal.

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- Fencing and other mitigation features will be inspected and maintained regularly (e.g., *once per month during the active season*).
- Management of the buffer zone, ensuring suitable vegetation cover and no invasive species.
- Maintenance works should be collected and collated in the annual and final reports.

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Section 8.0: Enhancement Measures

To improve the ecological value of the site for terrestrial GCN, several habitat enhancement measures will be implemented. These measures aim to create a more suitable environment for the species, promoting safe movement and supporting its life cycle requirements.

All management will require licensed ECoW supervision. No mowing regimes are to be implemented in the mitigation areas.

8.1 Buffer Zone Management

An 8-meter buffer zone will be established and maintained along the watercourses within the site. This buffer zone will serve as a protective corridor, allowing GCN to pass freely through the site allowing individuals to migrate between breeding, foraging, and hibernation habitats without obstruction, disturbance or exposure to risks from nearby activities. The buffer will also act as a safeguard against pollution and disturbance, promoting a healthier ecosystem around the aquatic habitats.

8.2 Installation of Hibernacula

To further enhance the terrestrial habitat for GCN, hibernacula will be strategically installed within the grassland areas at suitable intervals. These hibernacula will provide safe, sheltered environments where GCN can hibernate during the colder months. Constructed using materials such as logs, stones, and soil, the hibernacula will mimic natural features that offer refuge from extreme weather conditions and predators.

8.3 Vegetation Management

The woodland areas and tall ruderal vegetation on the site will be actively managed with GCN conservation in mind. Management efforts will focus on increasing the structural diversity of these habitats to support a wider range of species, thereby enhancing the overall biodiversity of the site. Specific actions will include:

- Selective thinning of woodland to encourage ground-level vegetation growth, providing shelter and foraging opportunities for GCN.
- Maintenance of ruderal areas to prevent overgrowth while preserving essential cover for GCN movement and protection.
- An area of 295m^2 in the south-east corner of the site has been selected for enhancement. This area, which is currently overgrown by bramble will be removed under EcoW supervision and replaced with more suitable habitat for amphibians, reptiles and hedgehogs, namely tall swards of grassland with hibernacula.

The combination of buffer zone management, hibernacula installation, and vegetation management will ensure that the site remains a valuable habitat for terrestrial GCN while fostering increased biodiversity throughout the area.

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Section 9.0: References

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Appendix A: Figures

Figure	Title
1	Red Line Boundary
2	Proposed Site Plan 10 MW BESS Project_Wincle_10.10.2024_R5
3	Ecological and Habitat Management Areas: CBP-UK05-008_COEMP Schematic

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Red Line Boundary

Hero Future Energies UK Ltd	Bridge Road North, Wrexham

Key:

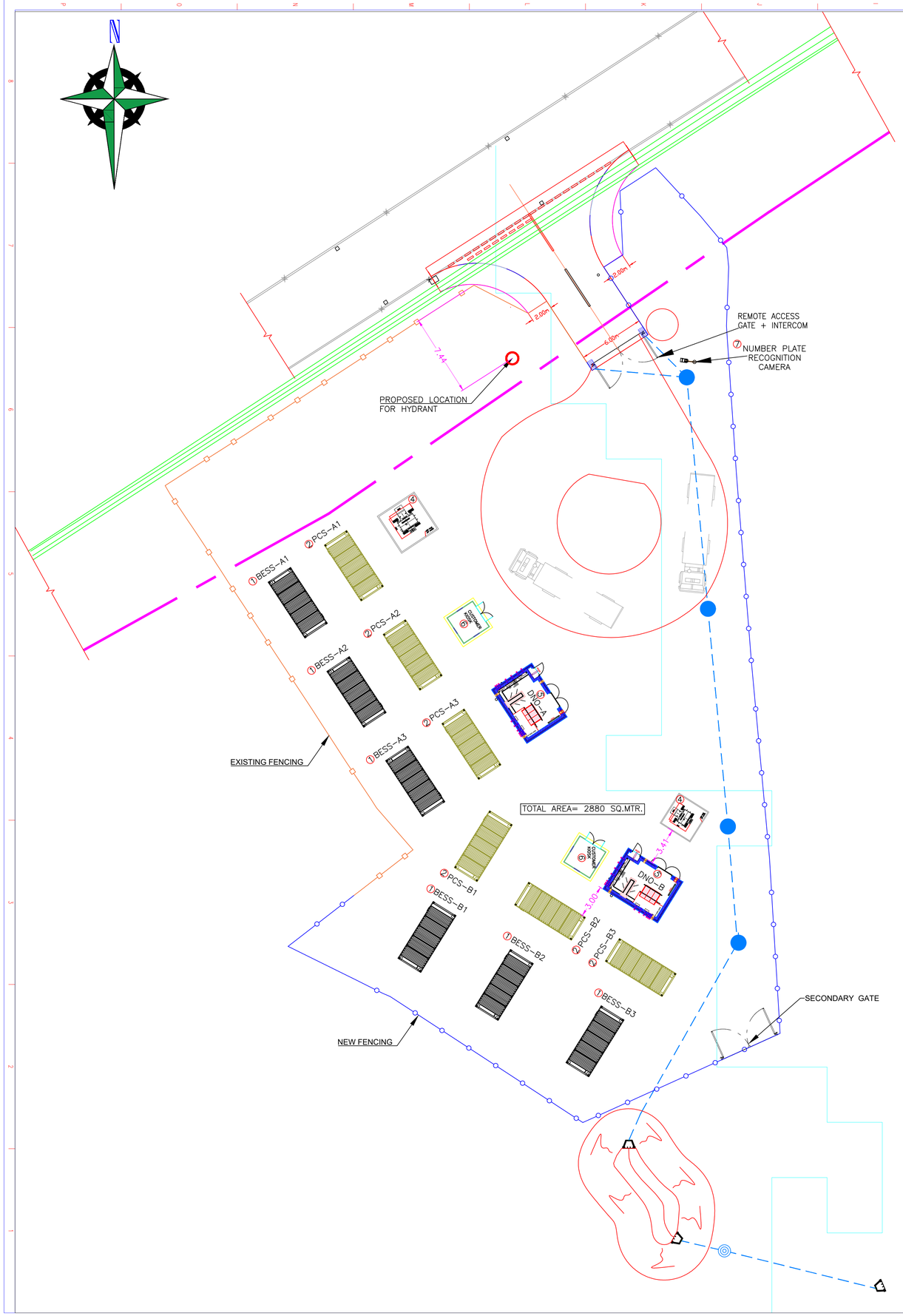
- GCN Pond
- Site Boundary

0 20 40 m

N

Project Number: 315341	Scale at A3: 1:1,000
Drawn By: DK	
Reviewed By: DK	Version: Final
Projection: OSGB 1936/British National Grid - EPSG 27700	Issue Date: 17/10/2024

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No.	Equipment Description	Dimension	Requirement
1	Battery Container	6060 x 2440	6 no.
2	PCS & Transformer Container	6060 x 2440	6 no.
3	Auxiliary Transformer	2500 x 2500	2 no.
4	DNO Building	4578 x 5840	2 no.
5	HV Client Building	3200 x 3200	2 no.
6	Number Plate Recognition Camera		1 no.

REFERENCE DRAWING

1. 315341 RC001 - ACCESS ROAD LAYOUT AND CONSTRUCTION
2. 315341 RC002 - SETTING OUT AND CONSTRUCTION
3. 315341 RC003 - DRAINAGE LAYOUT
4. 315341 RC004 - DRAINAGE DETAILS

PLANNING PLAN

LEGENDS:

- AVAILABLE LAND
- SEWER LINE
- FLOOD ZONE C1
- PERIMETER FENCELINE
- PROPOSED DRAINAGE
- WATER MAIN
- BATTERY CONTAINER = 6 Nos
- PCS (POWER CONDITIONING SYSTEM) = 6 Nos
- DNO BUILDING 11 kV (2 Nos)
- HV CLIENT BUILDING (2 Nos)
- NUMBER PLATE RECOGNITION CAMERA
- AUXILIARY TRANSFORMER
- PROPOSED LOCATION FOR HYDRANT
- REMOTE ACCESS GATE + INTERCOM

REV	DATE OF ISSUE	PREPARED BY	CHECKED BY	VALIDATED BY	SUBMISSION PURPOSE
R5	10.10.2024	ANK	AT	RT	PLANNING
R4	03.09.2024	ANK	AT	RT	PLANNING
R3	23.11.2022	ANK	AT	RT	PLANNING
R2	07.04.2022	ANK	AM	RT	REVISED AS PER COMMENTS RECEIVED
R1	23.01.2022	ANK	AM	RT	REVISED AS PER COMMENTS RECEIVED
R0	27.01.2022	ANK	AM	RT	PLANNING

DEVELOPER:-
HFE (UK) Limited

PROJECT:-
BESS LAYOUT FOR 10 MW STORAGE PLANT AT BRIDGE ROAD NORTH, WREXHAM

	NAME	DATE
DRWN	ANK	27.01.2022
CHKD	AM	27.01.2022
APPD	RT	27.01.2022

TITLE:- Proposed Site Plan 10 MW BESS Project

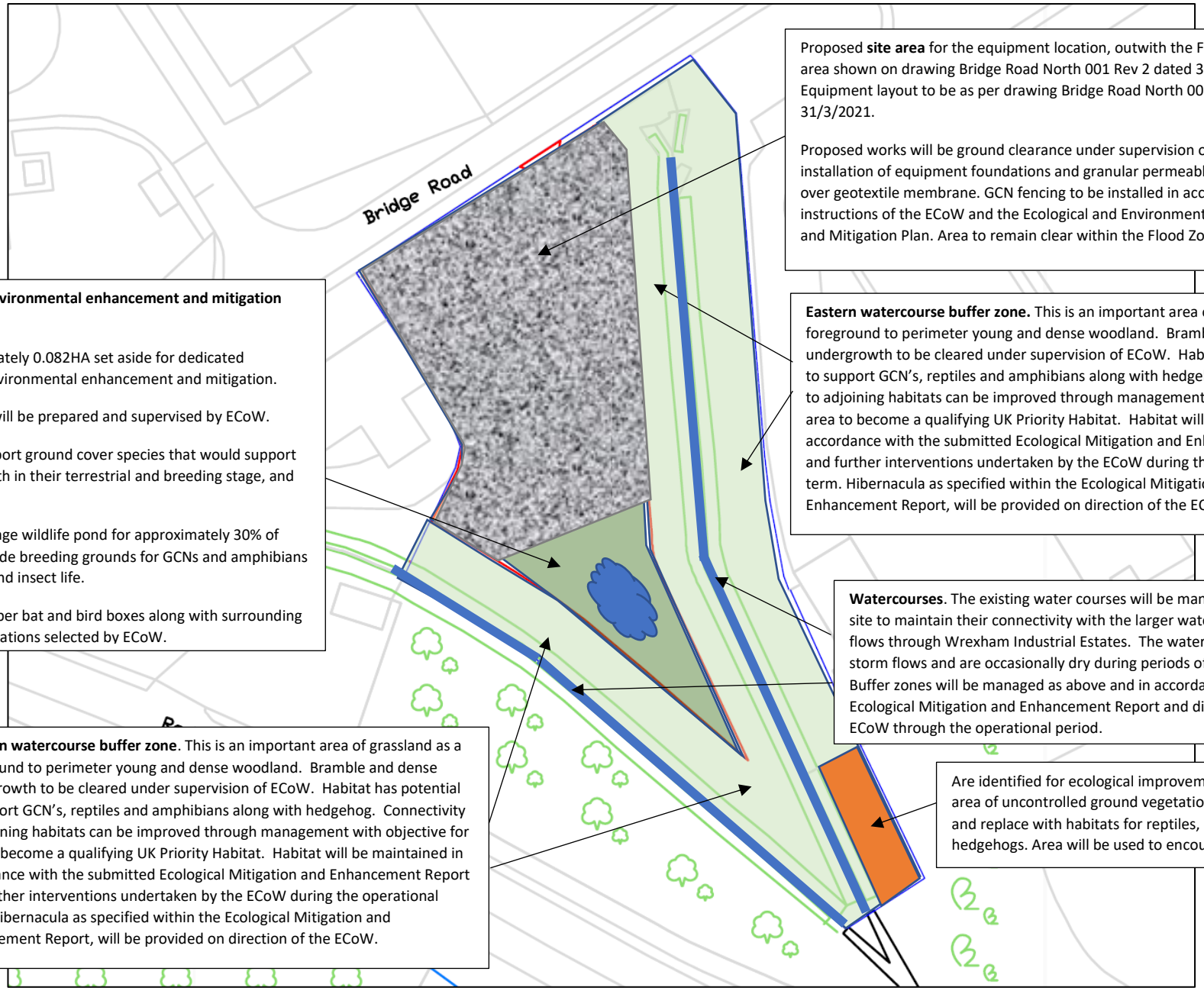
DRG. NO.:- Layout 01 | SIZE A1 | REV. R5

SCALE:- 1:200 | SHEET 01 OF 01

RELEASED FOR:- ☑ PLANNING ☐ TENDER ☐ INFORMATION ☐ APPROVAL ☐ CONSTRUCTION ☐ AS BUILT

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Proposed diagram of ecological and habitat management areas



Proposed **site area** for the equipment location, outwith the Flood Zone C2 area shown on drawing Bridge Road North 001 Rev 2 dated 31/3/2021. Equipment layout to be as per drawing Bridge Road North 001 Rev 2 dated 31/3/2021.

Proposed works will be ground clearance under supervision of ECoW, installation of equipment foundations and granular permeable material laid over geotextile membrane. GCN fencing to be installed in accordance with instructions of the ECoW and the Ecological and Environmental Enhancement and Mitigation Plan. Area to remain clear within the Flood Zone C2.

Ecological and environmental enhancement and mitigation area

Area of approximately 0.082HA set aside for dedicated ecological and environmental enhancement and mitigation.

Target activities will be prepared and supervised by ECoW.

Improve and support ground cover species that would support reptiles, GCNs both in their terrestrial and breeding stage, and hedgehogs.

Provide and manage wildlife pond for approximately 30% of land area to provide breeding grounds for GCNs and amphibians and other pond and insect life.

Provide two number bat and bird boxes along with surrounding hibernacula at locations selected by ECoW.

Eastern watercourse buffer zone. This is an important area of grassland as a foreground to perimeter young and dense woodland. Bramble and dense undergrowth to be cleared under supervision of ECoW. Habitat has potential to support GCN's, reptiles and amphibians along with hedgehog. Connectivity to adjoining habitats can be improved through management with objective for area to become a qualifying UK Priority Habitat. Habitat will be maintained in accordance with the submitted Ecological Mitigation and Enhancement Report and further interventions undertaken by the ECoW during the operational term. Hibernacula as specified within the Ecological Mitigation and Enhancement Report, will be provided on direction of the ECoW.

Watercourses. The existing water courses will be managed through the site to maintain their connectivity with the larger water course that flows through Wrexham Industrial Estates. The watercourses carry storm flows and are occasionally dry during periods of low rainfall. Buffer zones will be managed as above and in accordance with the Ecological Mitigation and Enhancement Report and directions from the ECoW through the operational period.

Western watercourse buffer zone. This is an important area of grassland as a foreground to perimeter young and dense woodland. Bramble and dense undergrowth to be cleared under supervision of ECoW. Habitat has potential to support GCN's, reptiles and amphibians along with hedgehog. Connectivity to adjoining habitats can be improved through management with objective for area to become a qualifying UK Priority Habitat. Habitat will be maintained in accordance with the submitted Ecological Mitigation and Enhancement Report and further interventions undertaken by the ECoW during the operational term. Hibernacula as specified within the Ecological Mitigation and Enhancement Report, will be provided on direction of the ECoW.

Are identified for ecological improvement to remove area of uncontrolled ground vegetation and brambles and replace with habitats for reptiles, amphibians and hedgehogs. Area will be used to encourage bio-diversity.