



ETIVE ECOLOGY Ltd

Proposed Commercial Development Plots 1A and 1B

Land off Bryn Lane, Wrexham

Great Crested Newt Mitigation Strategy

Produced for:



December 2021

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Quality Assessment Record

Report Version	Written by	Date	Reviewed by	Date
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1 INTRODUCTION

1.1 The Scheme

- 1.1.1 Etive Ecology Ltd was commissioned by Portal Construction NW Ltd to develop a mitigation strategy in relation to great crested newts (GCN) and the proposed construction of a commercial development on Plots 1A and 1B off Bryn Lane, Wrexham Industrial Estate (WIE). The proposed development site is centred on National Grid Reference SJ 3903 5015.
- 1.1.2 The proposed scheme is to develop the existing site for industrial use, including two large warehouse units, offices and storage, with associated parking and landscaping. Full details of the proposed scheme are given in the submitted planning application.

1.2 Previous Study

- 1.2.1 Plots 1B has already been subject to trapping and translocation of all amphibians, under a previous GCN licence (67880:OTH:EPS:2015). The exclusion barrier fencing in place around Plot 1B remains fully intact at the time of writing and continues to provide a functional barrier to GCN dispersal onto the site. Thus, GCN are considered to be absent from the low value habitats present within Plot 1B.
- 1.2.2 More recently, a GCN eDNA surveys were undertaken on ponds adjacent to the west of Bryn Lane, to support a previous planning application for the site (Arbtech, August 2020). The eDNA surveys confirmed the presence of GCN in two of the four ponds surveyed. Two additional ponds to the west of Bryn Lane were dry at the time of survey and none of the ponds on the eastern side of Bryn Lane (and immediately adjacent to the Site) were surveyed. WIE is known to be an important site for GCN and the species is considered to be present locally to the Site and likely present on site.
- 1.2.3 Given the likely presence GCN within the application site boundary, a European Protected Species (EPS) licence will be required before any development works on site can commence.

1.3 Scope of this Report

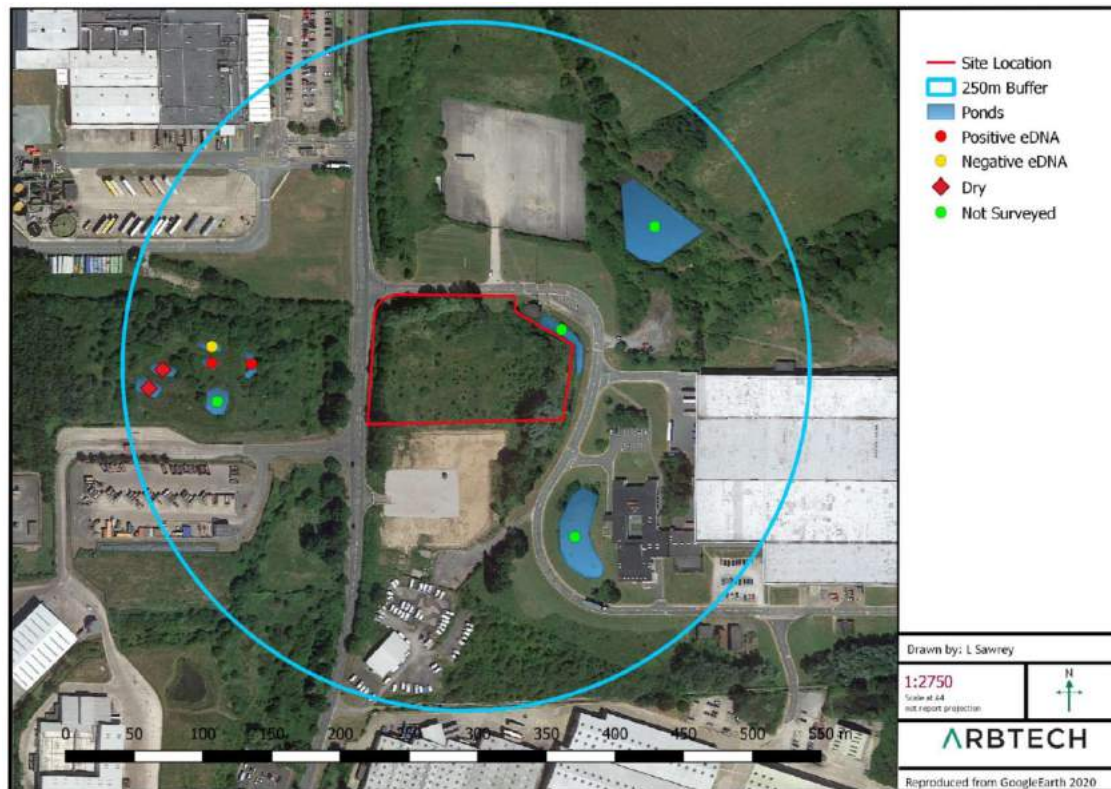
- 1.3.1 The report provides a summary of the status of GCN on and adjacent to the Site, based on the recommended survey methods found in the *Great Crested Newt Mitigation Guidelines* (English Nature, 2001).
- 1.3.2 An impact assessment is provided in **Section 3**, identifying the likely impacts posed to GCN by the scheme and the magnitude of these impacts. Details of the proposed scheme are presented, and key risk areas and activities are identified.
- 1.3.3 **Section 4** presents the GCN mitigation strategy. The mitigation measures proposed follow the *GCN Mitigation Guidelines* and aim to avoid any harm to GCN, to minimise disturbance to GCN and to ensure there is no long-term impact on the Favourable Conservation Status (FCS) of the species as a result of the proposed scheme.
- 1.3.4 A short section on the 'three tests' is provided in **Section 5**. This provides a summary of the key issues which is given to assist the LPA in determining whether the scheme satisfactorily passes these tests.

2 RESULTS

2.1 eDNA Survey

2.1.1 Water samples were taken from four ponds located 80-100m to the west of the Site in June 2020 (Arbtech). Plate 2.1.1 shows the locations of these ponds and their GCN presence/absence status.

Plate 2.1.1 Ponds Subject to eDNA



2.1.2 Based on the eDNA results, two of the four ponds were confirmed to hold GCN at the time of survey. It is also noted that two ponds were dry at the time of survey and that none of the ponds on the east side of Bryn Lane were subject to survey, presumably due to access constraints. There is also an additional pond located within the northern site boundary, not shown on Plate 2.1.1 but noted in the most recent survey (Section 2.2 below).

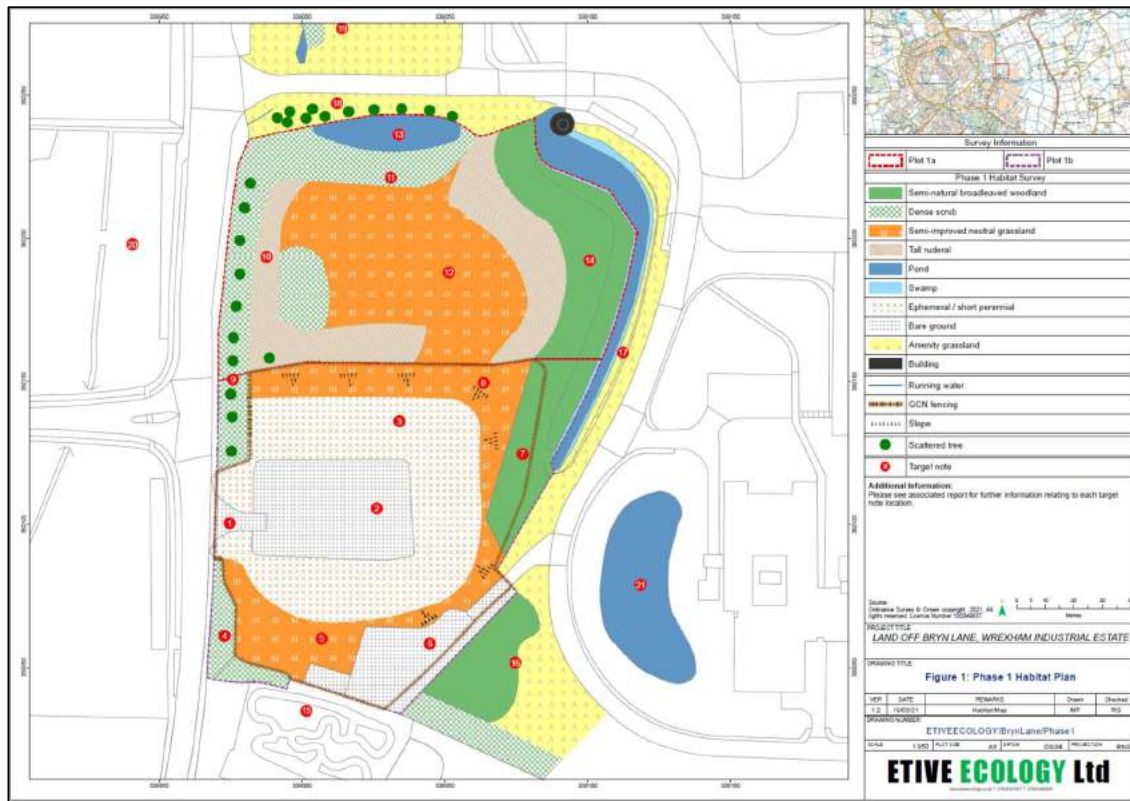
2.2 Extended Phase 1 Habitat Survey

2.2.1 An Extended Phase 1 Habitat Survey of the site was undertaken by Etive Ecology Ltd in February 2021. The survey established the presence of two ponds within the red-line boundary and the presence of suitable terrestrial habitat for GCN throughout much of the site. The Phase 1 Habitat Map is presented as Plate 2.2.1 below and the Ecology Report is provided as part of the planning submission.

2.2.2 Given the presence of GCN within 100m of the site, the previous GCN trapping effort on land within the red line boundary and the use of part of the site as the receptor area for a previous GCN license, it is concluded that GCN are likely present within the development footprint. No data has been gathered with regards to the likely population size class, but it is considered

suitable for a precautionary approach to be taken with regards to mitigation measures, given the importance of the WIE GCN population.

Plate 2.2.1 Extended Phase 1 Habitat Map



2.3 Limitations

- 2.3.1 Only four of the six ponds on the west side of Bryn Lane were subject to eDNA survey in 2020, due to low water levels in two ponds at the time of survey. None of the ponds on the east side of Bryn Lane could be sampled due to access restrictions at that time. However, the surveys have confirmed recent presence of GCN within 100m of the site and as such provide confidence in the assumption that GCN are likely present on site.
- 2.3.2 The initial Phase 1 Habitat survey was undertaken outside of the recommended survey season. Therefore, it was not possible to identify all species of flora. However, it was still possible to ascertain habitat types accurately during the survey effort.
- 2.3.3 Access was permitted to all land within the proposed development footprint. Access beyond the site boundary was restricted but much of the adjacent land was at least visible to the surveyor.

3 GCN IMPACT ASSESSMENT

3.1 The Proposed Scheme

3.1.1 The scheme will include the following components and activities:

- Develop Plot 1A and Plot 1B as separate single large industrial units.
- Create a new vehicle access in the northern site boundary for Plot 1A.
- Retain and improved the existing western boundary site access for Plot 1B.
- Provide sufficient car-parking and turning areas within each plot.
- Retain woodland, scrub, broadleaved trees and grassland around the east, west and north of the site, as mitigation for GCN and other biodiversity interests.
- Manage the retained habitats for their biodiversity value in-perpetuity, with monitoring and site wardening.

3.1.2 **Figure 1** shows the existing site layout pre-development and highlights the anticipated impacts without [mitigation][wo1], as described below. **Figure 2** shows the proposed mitigation measures required to ensure there is no direct harm posed to GCN during the construction phase of the scheme. **Figure 3** shows the footprint of the development and illustrates the compensation and management measures to be delivered as part of the scheme (detailed in Section 4).

4.2 Short-term Impacts - Disturbance

4.2.1 Without mitigation, the construction of the scheme will result in immediate disturbance to approximately 50% of the existing semi-natural habitats on site, comprising neutral semi-improved grassland, dense continuous scrub, ruderals, scattered trees, semi-natural broadleaved woodland, and [two][wo2] ponds. Any GCN present within these habitats will also be subject to disturbance and likely harm. These impacts would be significant at the local level given the assumed presence of GCN within Plot 1A, including two potential breeding sites.

4.3 Long-term Impacts – Site Modification

A 5-10m wide corridor of habitat will be retained around the periphery of the site ensuring the retention of all semi-mature and mature broadleaved trees and the vegetation immediately surrounding Ponds 1 and 2.

4.4 Long-term Impacts – Site Loss

4.4.1 Habitat lying within the footprint of the proposed scheme will be permanently lost. These losses comprise; scrub, neutral semi-improved grassland, broadleaved woodland and tall ruderal vegetation. This will reduce the availability of foraging, commuting and sheltering habitat for GCN. The permanent loss of ~1.8ha of high value terrestrial habitat for GCN would pose a minor impact on the status of the local GCN population.

4.5 Long Term impacts - Fragmentation and Isolation

4.5.1 Post-development, the development of the site would pose a significant fragmentation/isolation impact on the immediate population of GCN. The development removes 1.8ha of semi-natural habitat that is likely to be used by dispersing GCN, which is also located in between a number of on-site and off-site ponds. Thus, the development would

restrict dispersal and interconnectivity between potential breeding site.

4.6 Post Development Interference Impacts

- 4.6.1 Post-development, the operation of the site as two industrial units would pose a significant interference impact on the immediate population of GCN. The site would be subject to surface water management solutions that would be incompatible with GCN and would also involve the frequent operation of machinery and large vehicles, human activity and potentially impacting landscape management for amenity purposes. All of these activities would contribute to cause a significant adverse impact on the local GCN population in the form of mortality and disturbance.

4 GCN MITIGATION STRATEGY

4.1 Capture and Exclusion

- 4.1.1 The GCN mitigation strategy is based upon the goal of excluding all GCN from the entire construction zone required to install the scheme. To achieve that goal, a line of perimeter fencing will be installed, according to best practise standards, around the working area as shown on **Figure 2**, excluding Pond 1 and 2. A number of internal fence-lines will also be installed to assist trapping operations. Alternate pitfall traps and refugia will be installed every 10m along the inside of this fence line and will be used to capture GCN, and any other amphibian species, for a period of 30 consecutive days. Artificial refugia (carpet tiles or similar) will be laid in between pitfall traps and checked daily to improve trapping efficacy. Once the trapping period has been completed and no GCN are caught for a minimum of 5 consecutive days, the area will be deemed clear of GCN. A vehicle access in the form of a newt-grid, will be created in the northern perimeter fence. Retained boundary corridors will be protected during the construction phase to ensure continued use by GCN and other amphibians.
- 4.1.2 All amphibians caught during the trapping effort will be translocated into the areas surrounding Ponds 1 and 2.
- 4.1.3 Once the construction zone has been cleared of GCN, the internal drift fencing will be removed under ecological supervision and the perimeter fence will remain in situ for the duration of construction works. To facilitate construction access into the site, the newt-grid will remain in-situ in the northern boundary, in the location of the proposed new permanent access point.
- 4.1.5 All industry standard GCN pitfall trapping protocols as described in the GCN Mitigation Guidelines will be fully adhered to. These include the checking of traps by GCN licenced ecologists, trapping only during suitable weather conditions and ensuring that the traps are set-up to provide shelter for amphibians and a means of egress for small mammals.

4.2 Receptor Site

- 4.2.1 The proposed Receptor Site will comprise Ponds 1 and 2, and the terrestrial habitat surrounding them. These areas will sit outside the GCN exclusion fencing and will therefore allow translocated GCN to disperse around the north, east and west of the site and into other ponds and terrestrial areas. Some vegetation clearance is required around both of these ponds to enable the proposed development, however all such works will fall within the GCN fencing or else be covered by Reasonable Avoidance Measures (RAMs).

4.3 Enhancements, Monitoring, Management and Maintenance

- 4.3.1 Ponds 1 and 2 will be enhanced pre-construction. Excessive shade surrounding the ponds will be removed, to ensure there is not more than 50% shading of the margins. Pond 2 will also be subject to electro-fishing to remove all fish.
- 4.3.2 A Landscape Proposals has been submitted with the planning application, which includes;
- Retention of all semi-mature and mature trees along the north, east and west boundaries of the site.
 - Removal of much of the young plantation woodland and scrub.

- Creation of a species-rich wildflower grassland around the areas between the boundary and the edge of the development footprint.
 - Creation of wildflower 'butterfly mounds' to generate species-richness and structural diversity.
 - Provision of five hibernacula, placed strategically around the eastern and northern parts of the site (constructed as per the GCN Mitigation Guidelines specification).
 - Creation of a vegetated corridor along the boundary between Plots 1A and 1B.
- 4.3.3 The new site entrance for Plot 1A in the northern site boundary will be installed with a GCN underpass beneath it, so as to connect the semi-natural habitat corridors to the east and west and thereby maintain the habitat connectivity. The design of this features will be a 500mm radius/width culvert beneath the road, raised above the surrounding ground to avoid permanent water inundation and with rough semi-natural vegetation running immediately to the entrances on either side.
- 4.3.4 The surface water drainage solution will be designed such that all gully-pots will be of a newt-friendly design, with dropped kerbs immediately adjacent to these pots to allow amphibians to disperse around such features. The design specification (drawing ref) specifies these features and makes them integral to the proposed development. [WO3]
- 4.3.5 The retained and newly-created habitats within the red-line boundary will be subject to a Habitat Management Plan (HMP) for a period of at least 25 years, as included within the planning submission (Etive Ecology, 2021). The HMP includes annual maintenance and management of Ponds 1 and 2, to ensure that the enhancement measures are successful and that these features deliver high quality breeding habitat for GCN. Likewise, the management of terrestrial habitats created and retained will also be subject to appropriate management for nature conservation, targeted at creating high quality foraging, dispersal and sheltering opportunities for GCN and other amphibians.
- 4.3.6 As part of the licencing requirements, there will be a schedule of monitoring put in place to assess the GCN population across the site and the efficacy of habitat enhancement and management works. In accordance with the GCN Mitigation Guidelines, this should comprise six consecutive years of GCN survey post-development. Each year's survey effort should comprise four separate surveys undertaken in line with the standard survey guidelines, i.e. three survey techniques used on each visit, with visits undertaken across the period mid-March to mid-June. A review of the habitat enhancements will also be undertaken during these visits and any necessary alterations to the management regime will be made. Beyond the six year period, the licensee will permit access for any on-going GCN monitoring of ponds, undertaken by a registered third-party nature conservation organisation.

4.4 Timing of Works

- 4.4.1 Table 4.4.1 below gives an indication of the likely programme of works for the GCN mitigation, construction and post-development monitoring.

Table 4.4.1 Outline Programme of Works

Year	Date	Activity	Responsibility
2022	January - February	Undertake vegetation clearance around Ponds 1 and 2. Creation of hibernacula adjacent to pond using cuttings from vegetation clearance.	Suitable contractor under direct supervision of GCN-licensed ecologist.
	February	Removal of fish from Ponds 1 and 2.	Suitable contractor.
	March	Installation of GCN fencing and pitfall traps on site, including creation of newt friendly vehicle access point with newt grids.	Suitably-experienced GCN fencing contractor.
	March - May	Minimum of 30 days pitfall trapping. GCN License Report submitted to NRW.	GCN-licensed ecologist.
	May	Removal of internal drift fencing under ecological supervision.	Suitably-experienced GCN fencing contractor.
	May – September (2023)	Construction Phase.	Principal Contractor.
2023	September – October	Creation of habitat and landscaping within GCN fencing.	Suitable landscape contractor.
	October	Removal of GCN fencing under ecological supervision. GCN License Report submitted to NRW.	Suitably-experienced GCN fencing contractor. GCN-licensed Ecologist.
	March-June	4 x GCN monitoring surveys & habitat assessment.	GCN-licensed ecologist.
	June	GCN Licence Report submitted to NRW.	GCN-licensed ecologist.

5 THE “THREE TESTS”

5.1 The NEED

- 5.1.1 The proposed development lies within the existing WIE and is land already allocated to development within the Wrexham Local Plan. The Wrexham Town Centre Masterplan highlights the importance of WIE where it is noted as a ‘real asset’.
- 5.1.2 The site is already approved for development under the Local Plan as it will bring socioeconomic benefits to the region in the form of employment and increased commercial activity.

5.2 No SUITABLE ALTERNATIVE

- 5.2.1 No alternative locations were considered for the location of this scheme as the site presented itself as being highly suitable on the grounds that it is located within the WIE and surrounded by pre-existing infrastructure. The site is under ownership of the applicant and has been allocated for development with the Local Plan. Furthermore, the proposed layout of the site addresses the requirements for an even split of developed land and retained habitat.
- 5.2.2 The “Do Nothing” scenario would pose no adverse impacts to GCN but would make no contribution to meeting the NEED for additional industrial units within an existing industrial setting.

5.3 No Impact on FAVOURABLE CONSERVATION STATUS

- 5.3.1 The proposed development has been identified as posing a significant risk of disturbing, injuring and killing GCN during construction and operational activities, as well as resulting in the loss of suitable GCN terrestrial habitat. However, as a result of the mitigation and compensation measures proposed herein, all GCN will be removed from the working area, thereby avoiding harm during the construction phase. The existing ponds on site will be subject to a series of enhancements. Terrestrial habitats will also be created, enhanced and managed in perpetuity for GCN.
- 5.3.2 These measures will ensure that there will be no loss of functionality due to the retention of habitat available to GCN post-development and will ensure no significant long-term impacts on the GCN population at the site, local or county level. The proposed monitoring should demonstrate this strategy to be successful in ensuring no short to medium-term impacts on the species and therefore no impact on Favourable Conservation Status (FCS).

FIGURES

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Short Term impacts:

Disturbance
Disturbance of existing semi-natural habitats.
Disturbance and potential harm to GCN.

Long term impacts:

Site Modification
Retention of habitat around the site periphery only, including Ponds 1 and 2.

Site Loss
Loss of all habitats within the development footprint;
- Scrub
- Semi-improved neutral grassland
- Broadleaved woodland
- Tall ruderal

Fragmentation / Isolation
Loss of ~50% of the site to development
Management of retained land for amenity/aesthetic value.
Impact on connectivity between on/off-site ponds.
Impact on genetic diversity of local GCN population.
Impact on the robustness of the local GCN population.

Post Development Interference Impacts:

Human disturbance
Vehicle movements
Drainage infrastructure
Disturbance to adjacent habitats from poor management.
Reduction of dispersal habitat on site.

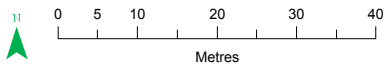


Survey Information

	Development extent
Phase 1 Habitat Survey	
	Semi-natural broadleaved woodland (2,962.8m ²)
	Dense scrub (3,034.2m ²)
	Semi-improved neutral grassland (6,573.6m ²)
	Tall ruderal (2,606.0m ²)
	Pond (1,388.8m ²)
	Swamp (320.8m ²)
	Ephemeral / short perennial (4,307.5m ²)
	Bare ground (3,103.3m ²)
	Amenity grassland (2,360.2m ²)
	Building (58.1m ²)
	Running water
	GCN fencing
	Slope
	Scattered tree

Additional Information:
The area in the Northeast falls outside the original survey area and measures 597.6m².

Source:
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PROJECT TITLE
LAND OFF BRYN LANE, WREXHAM INDUSTRIAL ESTATE

DRAWING TITLE

Figure 1: Impacts

VER	DATE	REMARKS	Drawn	Checked
2.1	21/12/21	Impacts	MP	RG

DRAWING NUMBER:
ETIVEECOLOGY/BrynLane/Impacts

SCALE	1:950	PLOT SIZE	A3	DATUM	OSGB	PROJECTION	BNG
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Survey Information	
	Development extent
GCN Mitigation	
	GCN fencing
	Drift fencing
	Existing GCN fencing
	Pitfall trap (20)
	Carpet tile (19)
	Hibernacula (4)
	Receptor site
	Newt grid

Source:
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11

0

5

10

20

Metres

PROJECT TITLE
LAND OFF BRYN LANE, WREXHAM INDUSTRIAL ESTATE

DRAWING TITLE
Figure 2: Mitigation Measures During Construction of the Scheme

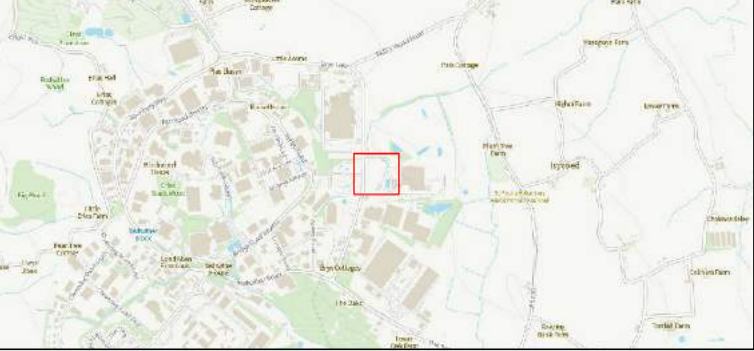
VER	DATE	REMARKS	Drawn	Checked
22	22/12/21	GCN mitigation	MP	RG

DRAWING NUMBER:
ETIVEECOLOGY/BrynLane/GCNmitigation

SCALE	1:650	PLOT SIZE	A3	DATUM	OSGB	PROJECTION	BNG
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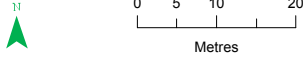
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Survey Information	
	Development extent (27,312.9m ²)
Proposed Habitats	
	Woodland - retained (898.4m ²)
	Scrub - retained (1,911.0m ²)
	Scrub - planting (1,666.9m ²)
	Butterfly grassland mound (694.7m ²)
	Germinal A4 seed mix (2,119.0m ²)
	Meadow mixture (4,692.5m ²)
	Pond - retained (1,027.2m ²)
	Hardstanding (4,676.5m ²)
	Building (9,626.7m ²)
	Newt grid
	Tree - planted
	Hibernacula

Source:
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PROJECT TITLE
LAND OFF BRYN LANE, WREXHAM INDUSTRIAL ESTATE

DRAWING TITLE
Figure 3 - Post Development Management and Maintenance

VER	DATE	REMARKS	Drawn	Checked
2.1	21/12/21	Post-development	MP	RG

DRAWING NUMBER:
ETIVEECOLOGY/BrynLane/Post-development

SCALE	1:950	PLOT SIZE	A3	DATUM	OSGB	PROJECTION	BNG
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