Appendix A - Amphibian Survey Report (2022)

ARUP

CiNER Glass Ltd.

Dragon Glass Bottle Manufacturing Facility

Amphibian Survey Report 2022

Reference: DRAGON-ARUP-ENVE-XX-RP-YE-000012

Draft | 4 May 2022

Job number 273927

Ove Arup & Partners Limited
4 Pierhead Street
Capital Waterside
Cardiff
CF10 4QP
United Kingdom
arup.com

ARUP

Document Verification

Project title	Dragon Glass Bottle Manufacturing Facility
Document title	Amphibian Survey Report 2022
Job number	273927
Document ref	DRAGON-ARUP-ENVE-XX-RP-YE-000012
File reference	4-50

Revision	**Date**	**Filename**	CiNER GCN report draft.docx		
Draft 1	4 May 2022	**Description**	First draft		
			Prepared by	**Checked by**	**Approved by**
		Name	Debbie Brown	Paul Clack	
		Signature			
Issue	10 May 2022	**Filename**	CiNER GCN report Issue.docx		
		Description	Issue		
			Prepared by	**Checked by**	**Approved by**
		Name	Debbie Brown	Paul Clack	Paul Clack
		Signature			
		Filename			
		Description			
			Prepared by	**Checked by**	**Approved by**
		Name			
		Signature			

Issue Document Verification with Document ✓

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1. Introduction

1.1 Background

Ove Arup & Partners Ltd (Arup) was commissioned by CiNER Glass Ltd to undertake a range of consultancy services in relation to the proposed Dragon Glass Bottle Manufacturing facility, hereafter referred to as 'the Project'.

In 2020 a full suite of ecology surveys was undertaken to provide baseline information for the Ecological Impact Assessment (EcIA) of the Project. This included amphibian surveys to check for the presence/likely absence of great crested newts *Triturus cristatus*.

A positive result was returned from one location (waterbody 4) during eDNA surveys undertaken in May 2020, with an inconclusive result also returned from waterbody 1 during the same survey period. Subsequent presence /absence survey completed in June 2020 failed to record any great crested newts.

A precautionary approach was then proposed through the EIA process for the project on the advice from Natural Resources Wales (NRW) that assumed this species could be present. The approach allowed for a resurvey of the site in 2022.

This document describes the update amphibian surveys undertaken for the Project in April 2022.

1.2 Objectives

The objectives of the amphibian survey were to ascertain the following:

- Presence/likely absence of great crested newts within the study area;
- Population size-class of great crested newts, if present;
- Distribution of great crested newts, if present; and
- An appreciation of other notable[1] amphibian species that may be present.

[1] 'Notable' species and habitats considered in this report include species and habitats of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales, in response to section 7 of the Environment (Wales) Act 2016.

2. Project Description

The facility consists of a three-part operation for the production of glass bottles; the handling of raw material, the manufacturing of the glass containers and the product-inspection and packaging process. The proposed facility covers a total area of approximately 144,000 sqm and consists of a number of distinct components which are summarised below:

- 2No furnaces and associated filters and chimney stacks;
- 2No cullet buildings for the storage and processing of rejected and recycled glass;
- Batch building and silos for the storage and mixing of raw materials;
- 2No production lines for hot & cold processing, inspection and packaging of glass bottles;
- A printing area for applied decorations (14500 sqm);
- An automated warehouse for storage and distribution of glass bottles (17000 sqm);
- Utilities building which includes plant space, workshops, office space and welfare facilities;
- Visitor building;
- Waste stores;
- Standalone plant buildings;
- Main entrance security lodges and associated weighbridge; and
- External hardstanding for the storage of materials, parking and loading.

The site will also include three detention basins for the control of surface water, as well as landscape planting on site to help screen the development and to offset against the vegetation loss on site. A further ephemeral pond is included in the design for wildlife benefit.

The proposed works will require the delivery of raw materials to the site including sand and soda ash to produce glass alongside other raw materials required for the production process, including the use of recycled glass. The facility will also require the transportation of finished product glass bottles following production.

The facility is forecasted to create approx. 670 jobs and will operate 24 hours a day, 7 days a week via shift system.

3. Site Description

The site is allocated within the Ebbw Vale Enterprise Zone and occupies a strategic location adjacent to the A465 Heads of the Valleys Road in the head of the South Wales Valleys, approximately 700 m to the north of Rassau village and 3 km north of Ebbw Vale town centre. The site location is displayed on Figure 1.

The Rassau Industrial Estate, built in the late 1970s – early 1980s, currently comprises of purpose-built light industrial/manufacturing units with ancillary office accommodation. The industrial estate is situated on the foot slopes of Mynydd Llangynidr, approximately 500m south of the Brecon Beacons National Park (BBNP) boundary.

The proposed site is currently undeveloped and is located on the eastern extent of the industrial estate consisting of existing grass land, scrub, broadleaved and coniferous woodland. An unadopted asphalt access road extends from the western boundary of the site which transitions into an unbound gravel track providing access to the eastern site extents.

A tributary of the Ebbw River (Afon Ebwy) is located within the centre of the site which appears to have been diverted around the northern extent of Rassau Industrial Estate as part of the industrial estate development. The Ebbw River is part of the South East Valleys catchment which eventually flow into the Usk Estuary.

The topography of the site falls gradually from north to south, with the terrain elevation ranging from 427.5 m AOD in the north down to 390 m AOD in the south-eastern corner.

4. Study Area

The project site boundary, and planning application boundary, is shown in Figure 1. All suitable waterbodies[2] within 500m of project site were surveyed during the amphibian surveys, to repeat the survey effort completed in 2020. This comprised eight waterbodies in total, as displayed on Figure 2.

[2] Excluding waterbodies which are separated from the Project site by dispersal barriers such as main roads and/or are too large to be suitable, such as the adjacent reservoir.

5. Legislation

Great crested newt is a European Protected Species (EPS) under the Conservation of Habitats and Species Regulations 2017 (as amended) (known as the Habitats Regulations). The Habitats Regulations protects EPS against the following:

- Deliberate capturing, injuring or killing of any wild EPS;
- Deliberate disturbance of any wild EPS;
- Deliberate removal or destruction of the eggs of any EPS; and
- The damage or destruction of a breeding site or resting place of any EPS.

Great crested newt is also fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) (WCA) along with natterjack toad *Bufo calamita*. Natterjack toad is almost exclusively confined to coastal sand dune systems, coastal grazing marshes and sandy heaths, however, and are therefore unlikely to be found within the study area. The WCA protects great crested newt and natterjack toad against intentional killing, injuring or taking, possession and trade, and disturbance through prohibition of actions that could affect places they use for shelter.

Palmate newt *Lissotriton helveticus*, smooth newt *Lissotriton vulgaris*, common toad *Bufo bufo* and common frog *Rana temporaria* are only partially protected under the WCA. This protection prohibits the trading of these four species.

Great crested newt, natterjack toad and common toad are listed as priority species of principal importance for the conservation of biodiversity in response to Section 7 of the Environment Act (Wales) 2016. This legislation places the duties on public bodies in Wales to conserve and enhance biodiversity in the exercise of their functions, including the consideration of the resilience of ecosystems in terms of their diversity, connectivity, adaptability, scale and condition.

Lastly, great crested newt, common toad and natterjack toad are all listed as UK Biodiversity Action Plan Priority Species. Action Plans exist for each UK BAP Priority Species to demonstrate the UK's commitment to help reduce or halt the significant losses in global biodiversity.

Actions which are prohibited by legislation can be made lawful on the approval and granting of a licence from Natural Resources Wales (NRW), subject to conditions.

6. Methodology

6.1 Review of Previous Surveys

The results of the 2020 survey were reviewed during a site visit on 30th March 2022 to confirm the status and Habitat Suitability Index (HSI) results previously recorded remained accurate. The eight waterbodies, as shown on Figure 2, were assessed for their suitability to support great crested newt using the standard Habitat Suitability Index (HSI)[3,4] methodology.

The methodology has been designed to evaluate habitat quality in order to assess which waterbodies provide suitable habitat for great crested newts as breeding ponds. The HSI is a numerical index, which ranges from 0 to 1. It is calculated using ten key habitat criteria and is based on the assumption that habitat quality determines great crested newt presence/absence. Using this standard approach, ponds with higher scores are considered more likely to support great crested newts compared to those with lower scores (see Table 1 below).

Table 1 Predicted presence of great crested newts based upon HSI results

HSI	Pond Suitability	Predicted Occupancy
<0.5	Poor	0.03
0.5-0.59	Below average	0.20
0.6-0.69	Average	0.55
0.7-0.79	Good	0.79
>0.8	Excellent	0.93

Great crested newt were considered likely to be absent from ponds assessed as 'poor', whilst ponds assessed as 'below average' or above required further survey to determine presence or likely absence.

6.2 Presence/Absence Surveys

All waterbodies within the site were surveyed where possible. In 2022 only two of the waterbodies within the site held water. A full presence/likely absence survey for great crested newt was carried out at Waterbody 4; and Waterbody 8 which was a newly created ditch alongside the access track during March/April 2022.

Surveys were carried out in accordance with the methodology prescribed within the Great Crested Newt Conservation Handbook[5], although a number of limitations were encountered as described within Section 6.4 of this report. The dates of each survey visit, and the methods used are summarised in Table 2. Weather conditions are given in Table 3.

Where possible, at least three survey methods were employed during each survey visit, including torch survey, bottle traps, egg search, refuge searches and netting, as described below:

[3] Amphibian and Reptile Groups of the United Kingdom, *ARG UK Advice Note 5, Great Crested Newt Habitat Suitability Index*, May 2010.

[4] Oldham R.S., Keeble J., Swan M.J.S. & Jeffcote M.(2000*). Evaluating the suitability of habitat for the Great Crested Newt (Triturus cristatus)*. Herpetological Journal 10 (4), 143-155.

[5] Langton, T.E.S., Beckett, C.L., and Foster, J.P. (2001), Great Crested Newt Conservation Handbook, Froglife, Halesworth.

- **Torch Survey (T):** The banks of each waterbody were walked after dark, using a high-powered torch (1 million candle power) to search for newts and other amphibians. Animals observed were identified to species, sex and life stage where possible.
- **Bottle traps (B):** Bottle traps were placed around the perimeter of the waterbodies at approximately 2 metre intervals (where suitable habitat and health and safety considerations allowed) shortly before dusk and checked the following morning to determine whether amphibians were present or absent. Each trap was made from a 2-litre plastic bottle with the top cut off and inverted, to make a funnel leading into the bottle. Bamboo canes were used to anchor the traps into the waterbody, taking care to ensure that each bottle included an air bubble. Any animals caught were immediately returned to the waterbody after identification.
- **Egg searches (E):** Submerged and peripheral vegetation was searched for the presence of newt eggs. The eggs are usually folded in the leaves of aquatic plants, dead leaves or overhanging grass leaves. It is necessary to unfold the leaf to identify the egg. The unfolding increases the risk of predation, therefore once an egg is found the use of this technique is ceased. Recommended survey effort for this method is 15 minutes searching per 50 metre of bank. The presence of eggs of other amphibians was also noted, where observed.
- **Netting (N):** A sturdy dip-net was used to net the shoreline, for an average of fifteen minutes per 50 metres of shoreline. Care was taken not to damage larvae, and to reduce disturbance to the pond.
- **Refuge searches (R):** Searches of artificial refuges, and existing refuges such as logs, wooden planks and debris within the terrestrial habitats immediately surrounding the waterbody was undertaken. Any amphibians found were identified to species, sex and life stage where possible. Ten artificial refugia (roofing felt mats measuring 0.5 m^2) were placed along the banks of Waterbody 4 during Visit 1. These were then checked during all subsequent visits, in order to maximise survey effort despite the limitations present.

Table 2: Dates of survey visits and methods employed during presence/absence and population assessment surveys

Waterbody Ref.	Visit 1 – 30th March 2022	Visit 2 – 4th April 2022	Visit 3 – 12th April 2022	Visit 4 – 27th April 2022
WB4	E; N; T (too dry for other methods)	N; T; R (too dry for other methods)	T; R (too dry for other methods)	E; T; R (too dry for other methods)
WB8	E; N; T (too dry for other methods)	E; N; T (too dry for other methods)	R; N; T (too dry for other methods)	E; N; T (too dry for other methods)

Population size class of great crested newt is established using the maximum adult count per pond per survey visit, either through torching or bottle trapping, as follows:

- 'Small' for maximum counts up to 10;
- 'Medium' for maximum counts between 11 and 100; and
- 'Large' for maximum counts over 100.

Table 3 Weather conditions during the surveys

Visit 1 – 30th March 2022	Visit 2 – 4th April 2022	Visit 3 – 12th April 2022	Visit 4 – 27th April 2022
Light rain, 6°C, cloudy	Dry, cloudy, 8°C, north-westerly breeze	Intermittent showers, cloudy, 7°C	Dry, cloudy, 7°C, westerly breeze

6.3 Surveyors

Surveys were led by a Suitably Qualified Ecologist (SQE) who is a member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and has the relevant experience for undertaking such surveys: Debbie Brown MCIEEM (NRW Great Crested Newt Survey Licence S089527/1), supported by assistants Chloe Hooper, Rosie Seager-Jones, Chelsea Edwards and Hayley Glanville.

6.4 Limitations

The water level within all of the waterbodies was low, therefore bottle trapping was not possible. Netting was only undertaken in locations where the water level was deemed high enough by the SQE. Waterbody 3 was not accessible during the surveys as it was located outside the site boundary, and fenced off within an active construction site which was not accessible for Health and Safety reasons. It should be noted this waterbody previously tested negative for great crested newts using eDNA methods in 2020 and had also been surveyed previously using traditional methods for the highway expansion project and found to not contain this species. Despite the limitations during the field surveys, it is considered that sufficient survey effort was undertaken to provide confidence in the results.

The findings presented in this study represent those at the time of survey and reporting, and data collected from available sources. Ecological surveys are limited by factors which affect the presence of flora and fauna, factors such as the time of year and natural behaviour of the animals. Nevertheless, these surveys were conducted at the optimal survey periods and using methodologies which are in accordance with published guidelines.

7. Results

7.1 Update Habitat Suitability Index (HSI)

The updated HSI is provided in Table 4. Since the 2020 surveys, habitat changes and associated hydrology changes have reduced the HSI of the majority of the waterbodies, with two of the waterbodies removed as detailed in Table 4. A new waterbody (Waterbody 8) has also been created alongside the track, as shown on Figure 2. Photographs are provided in Appendix A.

Table 4 Updated Habitat Suitability Index

Waterbody Ref.	Previous HSI Score	Updated HSI Score	HSI Assessment
WB1	0.58	0.44 (Overgrown, no standing water at all this year)	Poor
WB2	0.58	0.44 (Overgrown, no standing water at all this year)	Poor
WB3	0.77	Not surveyed due to access constraints	Good
WB4	0.64	0.75	Good
WB5	Unsuitable – man-made channel with flowing water		
WB6	0.61	N/A (Dried up)	N/A
WB7	0.59	N/A (Dried up)	N/A
WB8 (newly created ditch containing water)	N/A	0.58	Below average

7.2 Presence/Absence Surveys

The presence/absence surveys confirmed the presence of a breeding population of adult palmate newts within Waterbodies 4 and 8. Newt eggs and efts recorded were also considered to be palmate newts, although due to similarities to smooth newts it was not possible to confirm this. Regardless of this, a breeding population of palmate/smooth newts were present.

No great crested newts were recorded at either waterbody during any survey visit. Great crested newts are considered likely absent from the study area, based on the lack of desk study records and the lack of field survey results in 2022 and previously.

The results of the presence/absence survey are summarised in Table 5.

Table 5 Summary of presence/absence survey results

Waterbody Ref.	Visit 1 – 30th March 2022	Visit 2 – 4th April 2022	Visit 3 – 12th April 2022	Visit 4 – 27th April 2022
WB4	Common frog spawn observed. 23x adult palmate newts viewed during torch survey. Hundreds of newt efts.	34x adult palmate newts viewed during torch survey. Hundreds of newt efts.	Common toad observed during refugia survey. 12x adult palmate newts viewed during torch survey.	18x adult palmate newts viewed during torch survey.

Waterbody Ref.	Visit 1 – 30th March 2022	Visit 2 – 4th April 2022	Visit 3 – 12th April 2022	Visit 4 – 27th April 2022
WB8	Four adult palmate newts viewed during torch survey; one caught in net.	Two adult palmate newts viewed during torch survey.	No amphibians observed.	One adult palmate newt viewed during torch survey.

8. Conclusions

No great crested newts were found within the site during 2022 and they are considered unlikely to be present. This confirms the position Arup have discussed with Blaenau Gwent CBC ecologist previously which indicates this species is absent from the County Borough and Rassau area.

Adult palmate newts were found to be present within the site. Although it was not possible to confirm whether newt eggs and efts found were smooth or palmate newts, it is considered likely that these were palmate newts due to the presence of palmate newt adults, and therefore that a breeding population of this species was present.

Populations of other common amphibian species, including common frog and common toad, are also present.

No specific amphibian mitigation is proposed, however the proposed vegetation clearance and associated translocation methods for reptiles will reduce any impacts on the common amphibians at the site. In addition, the landscaping design and enhancements provided for amphibians will provide habitat for these species.

This report is the result of the survey work undertaken between March and April 2022. This report refers, within the limitations stated, to the condition of the site at the time of the surveys. Changes in legislation, guidance, best practice, etc. may necessitate a re-assessment/survey. No warranty is given as to the possibility of future changes in the condition of the site.

The results of these surveys are considered valid for a minimum of 18 months to a maximum of 3 years. If more than 18 months elapses before any planning application is submitted, the requirement for repeat surveys should be reviewed[6].

[6] Chartered Institute of Ecology and Environmental Management (2019). *Advice Note on the Lifespan of Ecological Reports and Surveys*.

Appendix A Photographs

Photograph 1 – Waterbody 1

Photograph 2 – Waterbody 2

Photograph 3 – Waterbody 3

Photograph 4 – Waterbody 4

Photograph 5 – Waterbody 5

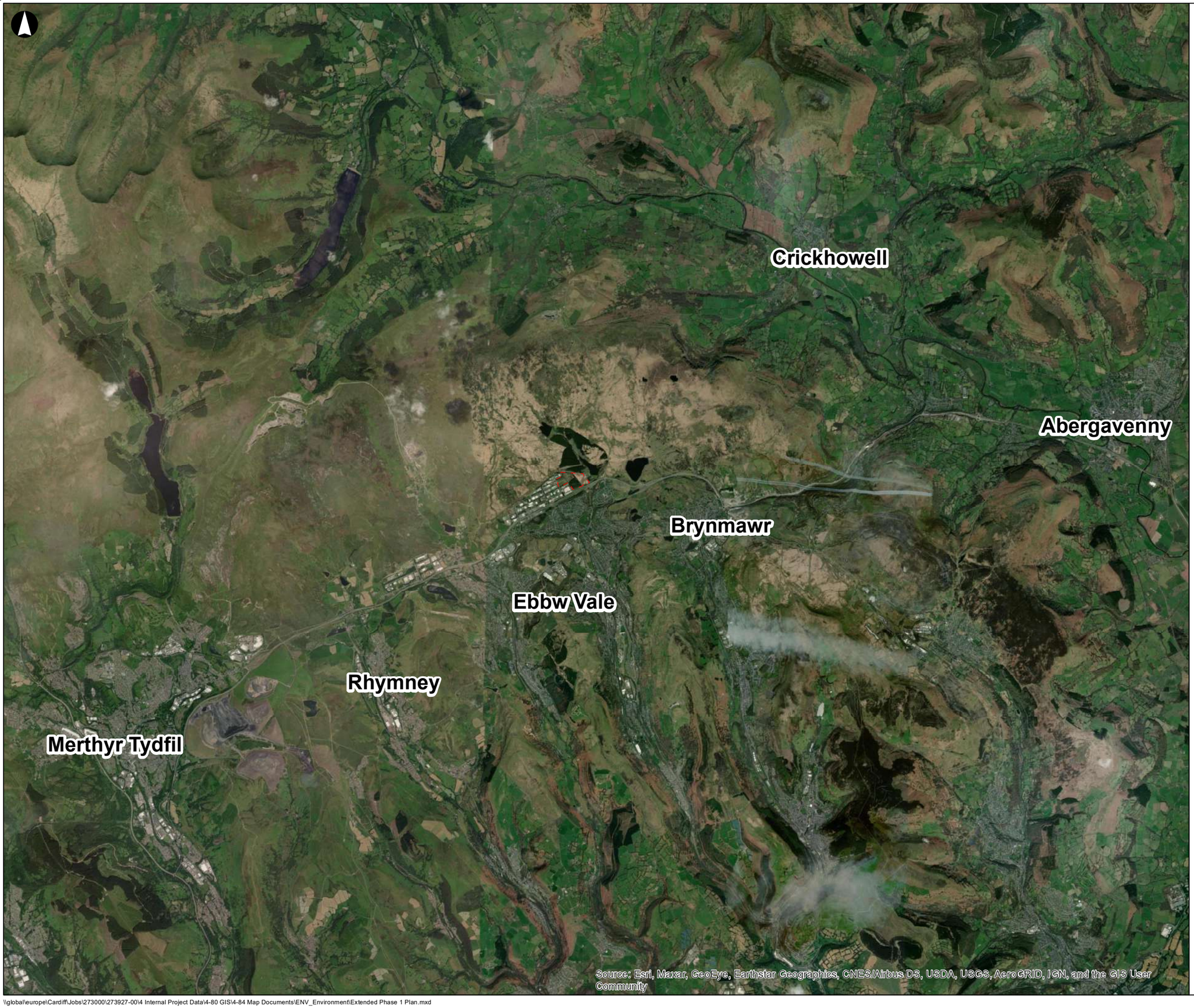
Photograph 6 – Waterbody 6

Photograph 7 – Waterbody 7

Photograph 8 – Waterbody 8

Figures

A3



Legend

Site boundary

Coordinate System: British National Grid

Metres

0 450 900 1,800 2,700 3,600 4,500

Rev	Date	By	Chkd	Appd
F1	2020-11-20	KJ	CP	PC

ARUP

4 Pierhead Street
Cardiff CF10 4QP
Tel +44 29 2047 3727 Fax +44 29 2047 2277
www.arup.com

Client
CiNER Glass Ltd.

Project Title
Dragon Glass Bottle Manufacturing Facility

Drawing Title
Site Location

Scale at A3
1:90,000

Role

Suitability
For Issue

Arup Job No
273927

Rev
F1

Name
001

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A3

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

Site boundary

Waterbodies

Coordinate System: British National Grid

Metres

0 50 100

Rev	Date	By	Chkd	Appd
F1	2020-10-13	EA	CP	PC

ARUP

4 Pierhead Street
Cardiff CF10 4QP
Tel +44 29 2047 3727 Fax +44 29 2047 2277
www.arup.com

Client

CiNER Glass Ltd.

Project Title

CiNER Glass Production Facility Rassau

Drawing Title

Waterbody Locations

Scale at A3

1:2,750

Role

Suitability

For Issue

Arup Job No

Rev **F1**

Name

002

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Appendix B - Update Ecology Appraisal (2023)

2023

Dragon Glass Bottle Manufacturing Facility, Rassau

Update Ecological Appraisal

EcoVigour
Integrated Environmental Management

DM DALCOUR MACLAREN

DOCUMENT INFORMATION			
Project	J001276 Dalcour Maclaren		
Location	Include Central Grid Ref: SO 15532 12754		
Title	Dragon Glass Bottle Manufacturing Facility Rassau		
Document Ref	EV001276PEA	Issue / Revision	0
File reference	EV001276PEA		
Start Date	27.06.2023		
	Name	Signature	Date
Assessment Undertaken by	Charles Ryder		27.06.2023
Document prepared by	Charles Ryder		06.07.2023
Checked by	Julian Gregory		21/07/23
Authorised by	Julian Gregory		21/07/23

DOCUMENT CONTROL		
Rev.	**Date**	**Description**
0	06/23	ISSUE

Disclaimer

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FIGURES

TABLES

1 TECHNICAL SUMMARY

Table 1: Technical Summary

Feature or Species	PEA Recommendations Summary
Habitat	Habitat is known to support foraging bats as well as the potential to support badgers and amphibian species. The mixture of deciduous woodland, water tolerant vegetation and pasture provides ample food for these groups. The wider habitat will be significantly cleared during these works and appropriate mitigation will be required to maintain a similar or better quality of habitat
Designated Sites	No likely impact is expected to nearby designated sites due to the enclosed nature of works, the closest site being 750m to the Southwest however care should be taken to avoid any contamination of water drainage found throughout the area.
Bats	Previous surveys have identified bat roosts within buildings adjacent to the works site, and three trees with bat potential had been identified (2 x Low Potential and 1 x High Potential). It was not possible to identify these trees during the walkover survey due to the growth of surrounding vegetation. Bats are likely to use the linear feature of the haul roads and woodland for foraging and commuting. Hence, lighting of the area should be low level, directed away from water corridors and be PIR activated if possible. An updated PRA will be required prior to felling of woodland within the works area and to assess impact on nearby roosts.
Bird Species	Vegetation within the site offers high suitability for use by nesting birds. No birds nests were identified during the survey and no evidence of ground nesting birds was identified. Prior surveys indicate nesting birds using the site. Surrounding vegetation offers habitat suitability, any vegetation clearance should be undertaken outside the bird breeding season or within 48 hours of a pre works nesting bird survey.
Common Amphibian and Reptile	Habitat suitable for common reptiles and amphibians, with connectivity along the drainage corridor and adjoining woodland areas. Common toad and common lizard were identified on site, and previous records show palmate newt and smooth newt. There are several exposed banks within the conifer plantation as well as debris acting as refugia. A High population of common lizards has previously been identified at the site and a Reptile Mitigation Strategy has been developed. This will be delivered during summer 2023 as an advanced works contract to the main works. No ponds were identified within the site, however two waterbodies in the immediate area, and there is potential for ephemeral ponds around the site.
Mammal Species	Badgers - There was no evidence of this species using the site however multiple records are within the previous survey data and surrounding habitats are suitable. No further evidence of use by badgers was found at historic setts. If works are to be undertaken within 30m of the potential sett feature further surveys will be required, which could include camera trapping of the potential sett feature.

Feature or Species	PEA Recommendations Summary
	Best practice to be employed during works, particularly night works. Ecological supervision required during the clearance of dense scrub which could hide a badger sett.
Invasive Species (INNS)	Rhododendron was identified within the survey area, predominantly along the northern conifer plantation edge and very northern extent of the site. The survey was undertaken within the flowering season for these plants, however due to the density of undergrowth some instances may remain undiscovered. Due to the invasive and allelopathic (Plant killing) nature of these species an INNS control plan will be required.

2 INTRODUCTION

2.1 PROJECT BACKGROUND

2.1.1 EcoVigour have been instructed by Dalcour Maclaren Ltd to undertake an Update Ecological Appraisal (PEA) of an area in the NE of the Rassau Industrial estate, consisting of development plateaus and plantation woodland within the Rassau area of Blaenau Gwent, Wales. EcoVigour Ltd have been commissioned to assess the ecological status of the site and surrounding area, against extensive previous survey data to identify any change to the ecological baseline of the site.

2.1.2 The objectives for the survey were:

- A review of existing ecological information pertaining to the site;
- To undertake an ecological assessment of the site;
- To identify ecological features within the site that could pose a constraint to the proposed development;
- To assess the site's potential to support protected species and make recommendations for further survey, where required to clarify potential ecological constraints;
- To make recommendations for any valuable habitats to be considered, through retention or enhancement, or if this is not possible, by habitat mitigation or compensation;
- To identify the presence of any invasive non-native species on site.

2.1.3 The ecological report has been prepared in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) guidance document 'Guidelines for Preliminary Ecological Appraisal - Second Edition' (CIEEM, 2017). The objective of the report is to provide a preliminary ecological assessment of the site based on the currently anticipated design.

2.1.4 An initial ecological overview of the site is provided and potential ecological constraints and impacts of the current proposals are assessed. Recommendations for further surveys are provided where necessary.

2.2 SURVEY AREA DESCRIPTION

2.2.1 The survey area concerns the access road and haul road at the eastern extent of Rassau industrial estate, adjoining Dwr Cymru site for Carno Reservoir. The site consists of 6 sections roughly distinguished by land use. The western two sections are formerly compacted ground covered with marshy grassland, poorly drained bog and self-seeded willow scrub. The central portion of the site is dominated with young willow woodland, forming a dense canopy and understory. South to this is a mix of willow woodland and conifer plantation with logging trails, ground investigation clearings and drainage channels. The eastern portion of the site is dominated by marshy grassland used for pasture.

2.2.2 Access was via Rassau Industrial Estate, Rassau, Blaenau Gwent, Wales, NP23 5AJ, United Kingdom SO 15536 12749.

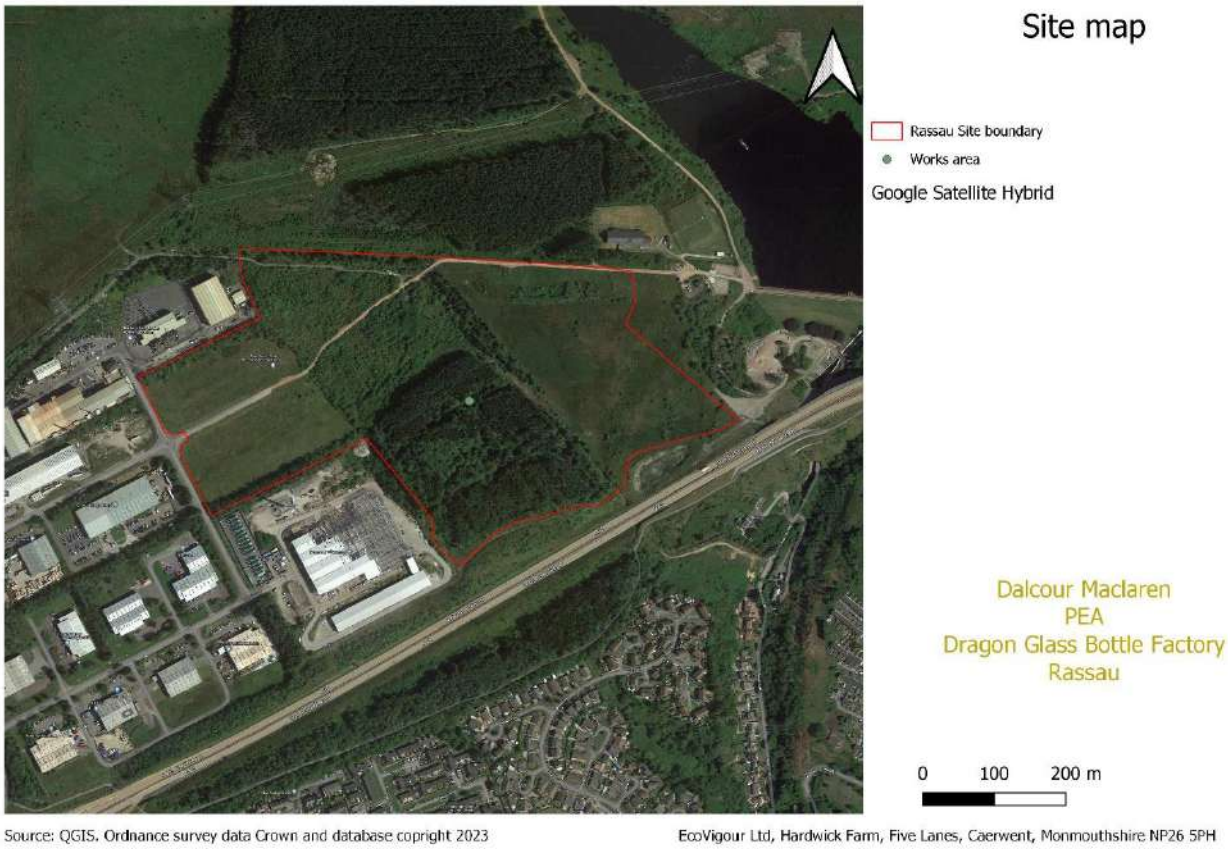

Figure 1: General Project Layout

2.3 WORKS REQUIRED

2.3.1 The project requires the removal of vegetation on large portions of the site, following this earth removal and compaction as well as a large foundation to support industrial machinery will be required. These works will broadly involve:

- Vehicle and Personnel access and movement.
- Clearance of vegetation and earth movement.
- Establishing a compound for construction teams.
- Materials storage and security measures.
- Construction of 17 estimated buildings and associated structures.

3 METHODOLOGY

3.1 DESK STUDY

3.1.1 A desk study was conducted to assist with the overall site assessment. This desk study included a review of the following documents:

- CiNER Glass Limited – Dragon Glass Bottle Manufacturing Facility – Preliminary Ecological Appraisal – Arup – 17th April 2020 – DRAGON-ARUP-ENVE-XX-RP-YE-000001;
- CiNER Glass Limited – Dragon Glass Bottle Manufacturing Facility –Badger and Otter Survey Report – Arup – 15th Oct 2020 – DRAGON-ARUP-ENVE-XX-RP-YE-000002;
- CiNER Glass Limited – Dragon Glass Bottle Manufacturing Facility – Bat Activity Survey Report – Arup – 10th Dec 2020 – DRAGON-ARUP-ENVE-XX-RP-YE-000003;
- CiNER Glass Limited – Dragon Glass Bottle Manufacturing Facility – Bat Roost Survey Report – Arup – 20th Nov 2020 – DRAGON-ARUP-ENVE-XX-RP-YE-000004;
- CiNER Glass Limited – Dragon Glass Bottle Manufacturing Facility – Amphibian Survey Report – Arup – 13th Oct 2020 – DRAGON-ARUP-ENVE-XX-RP-YE-000005;
- CiNER Glass Limited – Dragon Glass Bottle Manufacturing Facility – Reptile Survey Report – Arup – 20th Nov 2020 – DRAGON-ARUP-ENVE-XX-RP-YE-000006;
- Land at Rassau Industrial Estate – Vegetation Survey – Sturgess Ecology – July 2020 – DRAGON-ARUP-ENVE-XX-RP-YE-000009;
- Land at Rassau Industrial Estate – Fungi Survey – Sturgess Ecology – July 2020 – DRAGON-ARUP-ENVE-XX-RP-YE-000010
- Rassau, Blaenau Gwent – Invertebrate Survey – David Boyce - Oct 2020 – DRAGON-ARUP-ENVE-XX-RP-YE-000011;
- CiNER Glass Limited – Dragon Glass Bottle Manufacturing Facility – Breeding Bird Survey – Arup – 20th Aug 2020 – DRAGON-ARUP-ENVE-XX-RP-YE-000012.

3.1.2 Statutory and non- statutory designated sites within 2km of the site boundary were identified. Broad habitat boundaries and types were identified from online aerial imagery.

3.1.3 The relevance of the reasons for designation of the protected sites within 2km of the site boundary has been considered during subsequent assessment of whether the proposed works will have any impact upon the biological integrity of such sites.

The desk study also included the following sources:

- Defra's Multi-Agency Geographic Information for the Countryside (MAGIC) website;
- Online aerial imagery resources;
- Natural England (NE);
- Joint Nature Conservation Committee (JNCC) and
- A review of OS mapping for waterbodies within 250-500 metres of the site.
- Previous survey results from Dalcour Maclaren

Note: Records outlined below are not for the public domain and should not be forwarded to unauthorised third parties. The records below are intended for project purposes only.

3.2 WALKOVER SURVEY

3.2.1 The walkover was conducted by Charles Ryder an experienced EcoVigour Ltd Ecologist. The survey was conducted using methods outlined in the Joint Nature Conservation Committee (JNCC)'s 'Handbook for Phase 1 Habitat Survey – A Technique for Environmental Audit' (JNCC, 2010). The survey consisted of a visual survey of the site, identifying the broad habitat types present, identifying the suitability of the site to support protected and priority species.

3.2.2 Incidental observations of protected and/or priority species and the potential for such species to occur on site (and in the surrounding landscape where relevant) were also noted, however no specific protected/priority species surveys were undertaken as part of this preliminary ecological assessment.

3.2.3 A search for plant species as included in Schedule 9 of the Wildlife and Countryside Act (1981) as amended, was made during the survey. Under the Act it is an offence to spread, or cause the spread of, these species.

3.3 LIMITATIONS

3.3.1 Third party biological records do not represent a full species list for the area. The absence of records does not necessarily indicate absence of a species or habitat but rather that these have not been recorded or are perhaps under-recorded within the search area. The results of the survey and assessment undertaken by EcoVigour Ltd are representative at the time of survey.

3.3.2 This document does not contain a comprehensive list of botanical species on site with only plant species characteristic of each habitat and any incidental observations of notable plant species recorded. In addition, many plant species are only evident at certain times of the year; therefore, some plant species may have been undetected. No targeted ecological surveys were undertaken as part of this assessment to determine the presence of specific species.

3.3.3 Access to some areas of the site was impeded by dense vegetation. Access into the western most plot was limited due to grazing horses.

4 RESULTS

4.1 DESIGNATED SITES

4.1.1 There are 6 statutory designated sites within 2km of the site boundary.

Table 2: Statutory designated sites within 2km of the works area.

Site Name	Designation	Reason for Designation	Distance (m)
Beaufort Hills Pond and Woodland	LNR	Biological	900m SE
Mynydd LLangatwg	SSSI	Biological and Geological	900m NE
USK Bat sites	SAC	Biological, LHS bats	900m NE
Mynydd LLangynidr	SSSI	Geological	1500m NW
Sirhowy Hill Pond and Woodland	LNR	Biological	1800m SW
Parc Nant-y-Waun	LNR	Biological	1900m SE

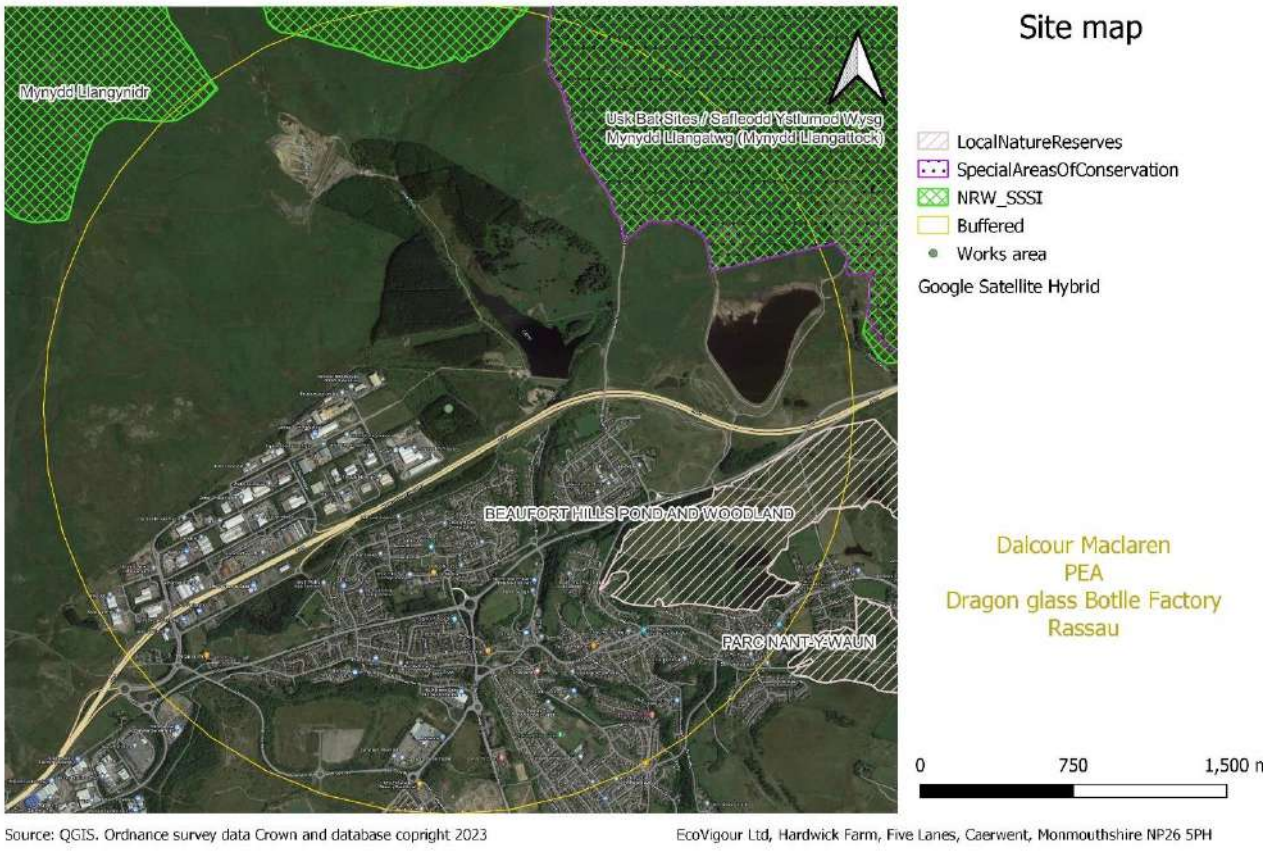

Figure 2: Statutory Designated Sites within 2km of the works area.

4.1.2 There are 20 non-statutory designated site within 2km of the site boundary.

Table 3: Non-statutory sites

Site Name	Designation	Reason for Designation	Distance (m)
Rassau Pond	SINC	Open Water	100m S
Ebbw River North Section	SINC	Open standing water	101m E
Garnlydan	SINC	Mosaic habitats, acid grassland, open water, bog, flushes, fen, reed beds and swamps, heathland and grass heath communities.	640m E
Ebbw Watercourse	SINC	Fish, likely otter, and dipper breeding sites	670m S
Beaufort Hills Ponds and Woodland	SINC	Mosaic habitats	834m SE
Land at park View, Beaufort	SINC	Marshy and neutral grasslands	868m SE
Land to the rear of Glyndwr Road, Rassau	SINC	Neutral grasslands	979m S
Rhyd y Blew	SINC	Breeding and overwintering bird habitat	1160m SW
Nant y Croft, Rassau	SINC	Neutral Grasslands	1302m SW
Highway Verge Bryn Serth	SINC	Mosaic habitats	1341m SW
Bryn Serth	SINC	Mosaic habitats, swamp, grasslands, heathlands and open water. Notable mammal species	1420m SW
Hurgan Fields Grassland	SINC	Mosaic habitats, swamp, grasslands, heathlands	1495m SE
Pond Group 1	SINC	Standing open water	1596m SE
Clydach Watercourse	SINC	Riverine habitat supporting dipper breeding site, fish, and potentially otter	1615m NE
Waun y Pound	SINC	Mosaic grassland habitat	1744m SW
Land off Parkhill crescent	SINC	Brownfield site supporting various grassland communities	1764m SE
Sirhowy Hill Woodland and Cardiff Pond	SINC	Mosaic grassland habitats	1810m S
Bryn Farm, Brynmawr	SINC	Mosaic habitats	1832m E
Parc Nant-y-Waun	SINC	Mosaic habitats	1896m SE
Pond Group 2	SINC	Mosaic habitats, standing water	1916m E

4.1.3 The area has several nearby sites of nature conservation interest, however only two are within 250m, Rassau pond and Ebbw River North. The large scale nature of the works has the potential to negatively impact these sites so a pollution control plan will be required as well as suitable contamination protection for water drainage on site.

4.2 ANCIENT WOODLAND

4.2.1 There is 1 Ancient Semi Natural Woodland (ASNW) and 1 unknown category Ancient Woodland site within 2km of the project area, of which the closest is 1330m metres South of the works area.

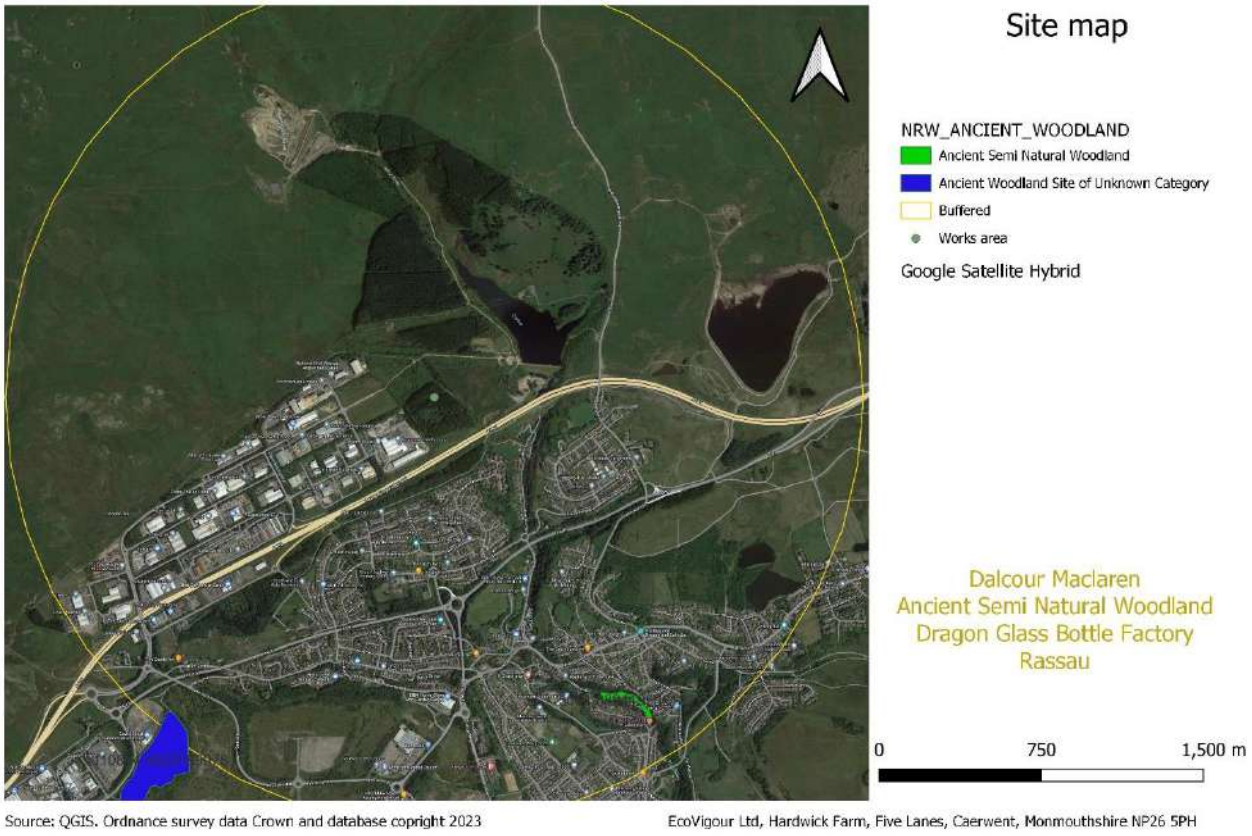

Figure 3: Ancient Semi Natural woodlands within 2km of the site.

4.1 WATERBODIES AND WATERCOURSES

4.1.1 There is one large waterbody within 250-500m, Carno Reservoir which runs 160m from the site boundary. It is feasible for otter or water vole to be using this water body however no evidence of this was found during the site survey or during previous surveys. In addition, this reservoir is fed by the Ebbw river and its tributaries, and the Cwm Nantmelyn stream runs along the site boundary feeding into drainage ditches across the site, into the attenuation lagoon at the Southeast of the site boundary. A number of smaller water bodies can be found throughout the area unconnected to watercourses within the site.

4.1.2 It is likely that surface runoff from the site flows into the Cwm Nantmelyn watercourse and subsequently into the Ebbw River.

4.2 SURVEY FIGURES

4.2.1 The figures below provide a visual summary of the walkover. This is not an extensive collection of the images collected from the survey. Additional images are available upon request.

Figure 4: Compacted ground self seeding with willow and wetland/acid grassland mosaic habitat.

Figure 5: East facing view of conifer plantation at site of borehole GI works.

Figure 6: East facing view of A465 and drainage culvert fed by artificial ditch.

Figure 7: Marshy grassland dominating the Eastern section of the site, and exposed peat.

Figure 8: Locally rare fungal species identified on site, preservation efforts undertaken include felling and attaching to new substrate tree outside of works area.

Figure 9: Artificial drainage ditch running along edge of conifer plantation delineating the juncus grassland and woodland sections of the site.

Figure 10: Rhododendron ponticum growing on site adjacent to conifer plantation.

4.3 COMBINED FIELD SURVEY AND DATA SUMMARY

4.3.1 **Habitat and Target Notes**: A full updated Phase I survey of the entire survey area has not been undertaken to date. A UKHAB assessment has been undertaken within the works area shown below (Figure 11).

Habitat within the works area is predominantly immature willow woodland, conifer plantation and compacted ground recovering into mosaic bog (low spots which hold water, forming ephemeral wet areas), grassland and shrub. Immediately surrounding the site is the Rassau industrial estate, with large commercial warehouses and production facilities, with the village of Rassau to the South. (Figure 11). A mix of mature and immature trees observed within the site include willow, Sikta spruce, Pine species, Larch, Rhododendron and Bay Laurel. Scrub species include gorse, There are a large assemblage of acid grassland species, as well as bog typical species such as tussock cotton grass, lady's smock, broad leaved marsh orchid, coltsfoot, birds foot trefoil and Juncus sp.

The area outside the survey area is a mix of woodland and shrub, providing good connectivity of habitat along the A465 and Carno Reservoir.

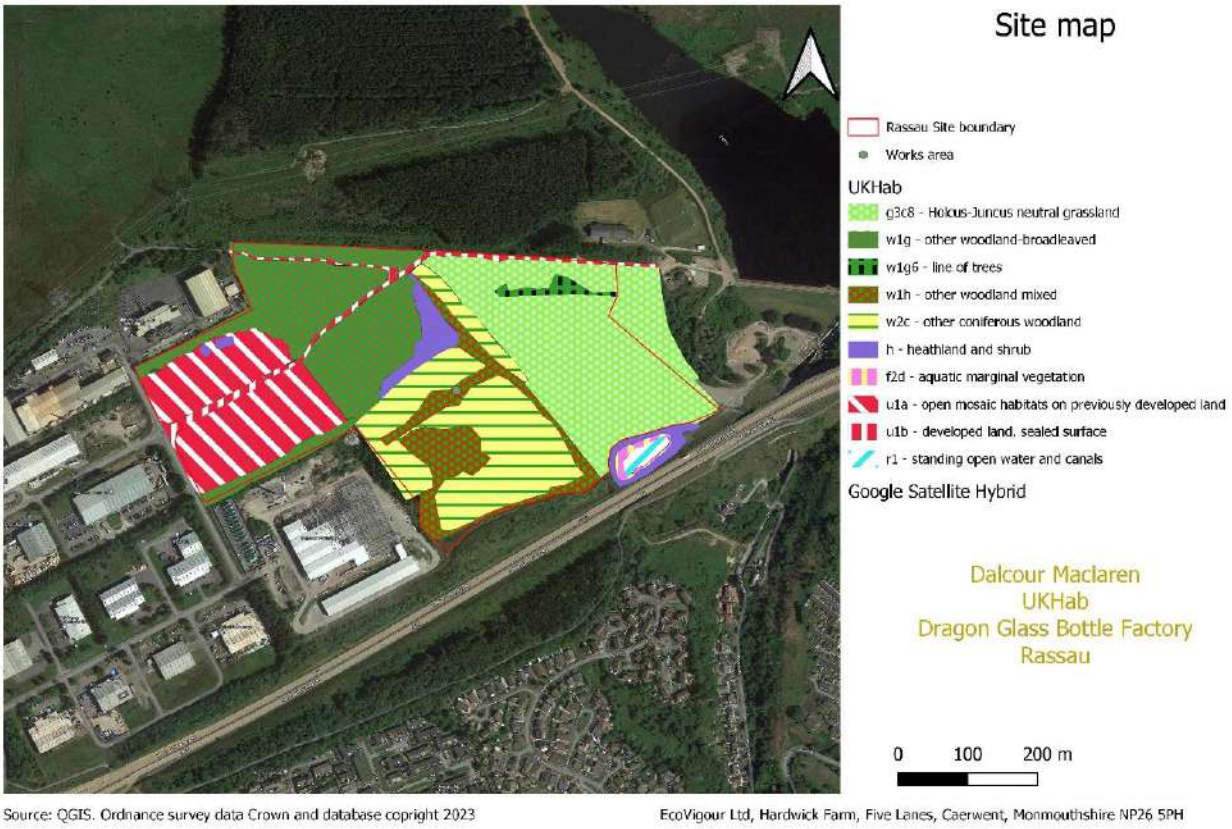

Figure 11: UK Hab Data and Target Notes

Table 4: UK Hab codes for site

Habitat Description	Phase 1 Classification	UKHab Classification
Other woodland mixed	A1.1.1	W1g
Other woodland broadleaved	A1.1.1	W1f
Line of trees	A1.1.1	W1g6
Other coniferous woodland	A1.2.2	W2c
Developed land. Sealed surface	J4	U1b
Open mosaic habitat on previously developed land	J1.3	U1a
Standing open water	G1.4	R1
Juncus sp marshy grassland	B4	G3c8
Aquatic marginal vegetation	F2.2	F2d
Scrub	A2	h

4.3.2 **Bird Species** - The survey was undertaken within the traditional bird breeding season (March – August inclusive). Habitat within the site is optimal i.e. surrounding vegetation is a mix of mature and immature as well as exposed banks. Surrounding vegetation is optimal, including trees throughout the central and southern portions of the site and boundary of the site. Bird species noted during the site walkover include wood pigeon, carrion crow, blue tit, great tit and song thrush. Previous surveys have noted 34 breeding bird species using the site, in addition to flyover by one schedule 1 species provided below.

Table 5: Bird species recorded in prior surveys

Species	Breeding confirmed	Status
Marsh tit *Poecile palustris*	Confirmed	Red List
Willow warbler *Phylloscopus trochilus*	Confirmed	Red List
Whitethroat *Sylvia communis*	Confirmed	Red List
Goldcrest *Regulus regulus*	Confirmed	Amber List
Song thrush *Turdus philomelos*	Confirmed	Amber List S7PS
Mistle thrush *Turdus viscivorus*	Confirmed	Amber List
Tree pipit *Anthus trivialis*	Confirmed	Amber List
Bullfinch *Pyrrhula pyrrhula*	Confirmed	Red List
Greenfinch *Chloris chloris*	Confirmed	Amber List
Lesser redpoll *Acanthis cabaret*	Confirmed	Amber List
Swift *Apus apus*	Not confirmed	Green List
Woodpigeon *Columba palumbus*	Confirmed	Green List
Moorhen *Gallinula chloropus*	Not confirmed	Green List
Herring gull *Larus argentatus*	Not confirmed	Green List
Lesser black-backed gull *Larus fuscus*	Not confirmed	Green List
Buzzard *Buteo buteo*	Not confirmed	Green List
Jay *Garrulus glandarius*	Confirmed	Green List
Magpie *Pica pica*	Not confirmed	Green List
Carrion Crow *Corvus corone*	Not confirmed	Green List
Coal Tit *Periparus ater*	Confirmed	Green List
Blue Tit *Cyanistes caeruleus*	Confirmed	Green List
Great tit *Parus major*	Confirmed	Green List
Swallow *Hirundo rustica*	Not confirmed	Green List
Chiffchaff *Phylloscopus collybita*	Confirmed	Green List
Blackcap *Sylvia atricapilla*	Confirmed	Green List
Wren *Troglodytes troglodytes*	Confirmed	Green List
Blackbird *Turdus merula*	Confirmed	Green List
Robin *Erithacus rubecula*	Confirmed	Green List
Stonechat *Saxicola rubicola*	Confirmed	Green List
Dunnock *Prunella modularis*	Confirmed	Green List
Meadow pipit *Anthus pratensis*	Not confirmed	Green List
Chaffinch *Fringilla coelebs*	Confirmed	Green List
Crossbill	Not confirmed	Green List
Goldfinch *Carduelis carduelis*	Confirmed	Green List
Siskin *Spinus spinus*	Confirmed	Green List

4.3.3 Due to the nesting bird surveys being older than 2 years, it is recommended that an updated nesting bird survey be undertaken prior to vegetation clearance.

4.3.4 No evidence of ground nesting birds was identified during the site walkover.

4.3.5 **Bat Species** – No features with bat potential were identified during the survey, however during the Arup Bat Roost Surveys in 2020, three trees were identified with potential to support roosting bats (Figure 12). Two of these are low potential but one high potential tree was identified outside the site area to the east. This is outside the mitigation area and is unlikely to be impacted by the proposed development. Due to substantial growth of vegetation surrounding these trees, they could not be identified during the walkover survey.

4.3.6 The presence of crevice dwelling species of bat cannot be ruled out as they are opportunistic and will utilise the smallest of features. The previous survey data indicates that lesser horseshoe, Daubentons, brown long eared, natterers, noctules and myotis sp were using the surrounding 2km area. During the bat transect surveys common & soprano pipistrelles, Myotis species, Nyctalus species, Plecotus species, serotine and lesser horseshoe bats were also recorded. This relative diversity of bat activity suggests the area supports a number of foraging bats and therefore improves likelihood of transient roosts.

4.3.7 Records for bats were found in previous survey data searches, however these records and surveys are now more than 2 years old, and trees indicated for bat potential have not been readily located during standard site walkover. This is likely due to regrowth of large stands of willow obscuring previously mature trees. An updated PRA of the woodlands will be required for roosting bat information.

Figure 12: Locations of Trees with potential for use by roosting bats – Bat Roost Survey – Arup Nov 2020

4.3.8 **Common Mammal Species** – Species records within the LERC data set in this region include: Hedgehog and Badger have been recorded within the site. Otter have been recorded in the area, however this is restricted to the river corridor.

4.3.9 No evidence of badgers was identified within the survey area, but it is likely that this species is present within the nearby woodlands, with previous setts identified and monitored in 2020.

4.3.10 **Priority Mammal Species** – In terms of priority species, none were noted during the survey. Previous data searches identified dead otters within 2km but unrelated to the works area. Surveys confirmed no otter presence but noted habitat suitability within the wider region surrounding the site, notably the Carno reservoir. The survey results remain valid for up to three years, including the time of this report.

4.3.11 **Common Amphibian and Reptile Species** – Common amphibian and reptile records appear in minimal diversity within the dataset with only common lizard recorded. Records of GCN have not been identified within the search.

4.3.12 During surveys of the area, common toad and common lizard were found, with two of each individual. It is possible there is habitat in the wider area suitable to support a viable newt population. It was noted that smooth and palmate newt were present in previous surveys. The habitat within the site itself and around the site is of high suitability for newts and common amphibians.

4.3.13 **Invasive non-native plant species –** Invasive Non-Native Species (INNS) have been identified within the survey

4.3.14 There is one schedule 9 invasive species within the 2km search area, Rhododendron ponticum, which is within the conifer woodland at the boundary to marshy grassland (Figure 10, 11). Instances of INNS are clustered along the built-up areas of the surrounding villages, presenting negligible risk of spread or contamination into the area.

5 ASSESSMENT AND RECOMMENDATIONS

This section provides a broad assessment of the information gathered and scopes out potential ecological vectors before remaining considerations and actions are proposed in the following recommendations and opportunities sections below.

5.1 DESIGNATED SITES

5.1.1 The proximity of the designated sites to the works area represents a negligible risk, however care must be taken to avoid contamination of suspended solids, fuels or pollutants into the Carno reservoir, and Cwm Nantmelyn stream. This includes but is not limited to; use of adequate silt mitigation, plant nappies, spill kits, no refuelling on the ground and should take place on the sealed surface adjacent to the site, appropriate storage containers for fuel and biosecurity protocols on site. Additional pollution control will likely be required alongside silt trapping methods due to the drainage found throughout the site.

5.2 HABITATS

5.2.1 Vegetation clearance will be required to access parts of the site, and some has already been undertaken for ground investigations. For the footprint of the proposed plant, a significant portion of the willow woodland habitat will be cleared, representing a loss of habitat for reptiles, amphibians, mammals and birds. The presence of mosaic habitats supporting populations of soft rush and purple moor grass represent good habitat for a number of mammal, ground nesting bird, invertebrate and plant species and requires appropriate biodiversity net gain measures to be implemented, as part of the landscape proposals for the development.

5.3 PROTECTED SPECIES - BATS

5.3.1 All British bats and any place used for shelter or protection or breeding site or resting place (their roosts) are fully protected by law under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended).

5.3.2 Together these protect bats from:

- Selling, offering for sale, possessing or transporting for the purpose of the sale or publishing advertisements to buy or sell a protected species.
- Deliberate, intentional or reckless killing, injury or taking of bats.
- Damage to or destruction of or, obstruction of access to any place of shelter, breeding (roost) or rest.
- Disturbance of an animal occupying a structure or place.
- The deliberate disturbance of any bat species in such a way as to be significantly likely to affect;
  - their ability to survive, hibernate, migrate, breed, or rear or nurture their young; or
  - the local distribution or abundance of that species.

5.3.3 No features with potential to be utilised by roosting bats were identified on site. The trees were in good condition and semi-mature and there are no buildings or other structures within the site. However previous surveys have identified 3 trees with potential for roosting bats, and nearby facilities have confirmed bat roosts. Therefore due to the time which has elapsed since the last surveys and to prevent destruction of potential bat roosts and excessive disturbance, an updated Preliminary roost assessment (PRA) will be required. This should review trees previously identified and review the status of trees within the site.

5.4 BADGERS

5.4.1 The Protection of Badgers Act 1992 (as amended) is the main legislation protecting badgers and their habitat in the United Kingdom. Under the Act it is illegal to:-

- Wilfully kill, injure or take a badger or attempt to do so.
- Cruelly ill-treat a badger.
- Interfere with a sett by doing any of the following:
  - (i) damage a badger sett or any part of it,
  - (ii) destroy a badger sett,
  - (iii) obstruct access to a badger sett,
  - (iv) cause a dog to enter a sett,
  - (v) disturb a badger while it is occupying a sett,

5.4.2 There are records for badger within previous desk studies and surveys, and surrounding habitats are suitable. No evidence of badgers was found within the proposed works area, however historic badger setts are known to be within the site.

5.4.3 It is likely that there are badgers in the wider area, who may enter the site at night and hence construction best practice should be employed for these works i.e. excavations backfilled at the end of the shift or a means of escape included within the excavation, no food waste left on site which could encourage badgers into the works area.

5.4.4 Ecological supervision is required during the clearance of dense scrub which could hide a badger sett.

5.4.5 If badger setts are discovered, the area should be reassessed for badger setts or evidence of movement. This could include the use of PIR activated IR Cameras to monitor their use.

5.5 BIRD SPECIES

5.5.1 The Wildlife and Countryside Act 1981 (as amended) is the principal legislation affording protection to UK wild birds. All birds, their nest and eggs are protected by law under this legislation, it is an offence (with certain exceptions), to recklessly or intentionally:

- Intentionally kill, injure or take any wild bird.
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built.
- Intentionally take or destroy the egg of any wild bird.
- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependant young of such a bird.

5.5.2 **Note**: Nesting birds found outside of nesting season are protected by the same level of protection as that within the standard nesting period.

5.5.3 No birds nests were identified during the survey, however surrounding habitat is optimal.

5.5.4 Following best practice, if vegetation clearance is required during the main bird breeding season, any vegetation scheduled to be removed must be checked by an ecologist for active nests no more than 48 hours prior to the start of works.

5.5.5 If nests are present, then a minimum 5m exclusion zone should be established around the nest(s) and no de-vegetation or other heavy machinery work should be carried out within the exclusion zone(s) until it is confirmed that the nest(s) is completed and that the young have fledged. A full nesting bird survey of the area will be required prior to works commencing.

5.6 GREAT CRESTED NEWT

5.6.1 There are no records of this species within the 2km record buffer. As a precaution, this species should feature in toolbox talks, but the likelihood of it being encountered is considered negligible due to distance from suitable ponds and negative survey results previously undertaken.

5.7 COMMON REPTILES & AMPHIBIANS

5.7.1 The presence of reptiles and amphibians was visually confirmed during the ecological assessment (presence or absence surveys have not been undertaken). The limited available records within the wider habitat, is likely due to limited footfall or persons inclined to submit recordings, then any indication of limited populations.

5.7.2 Habitat within the site is optimal for common reptiles and amphibians, due to the wet woodland, deadfall and stream running through the works area. Ground cover vegetation is sub-optimal in the areas of hard surfaced land, with sparse ground cover vegetation on the former compacted land. However, the areas of self seeded willow within the proposed works area have shown presence of common lizard and common toad.

5.7.3 A reptile survey was undertaken by Ecologists from Arup in 2020, which included the laying of refugia and seven subsequent survey visits. This survey identified a good population of common lizards – *zootoca vivipara*, thought to be a breeding population, within the site. The majority of the reptiles were identified in western section of the site as this contains more open grassland.

5.7.4 All commonly occurring reptile species (common lizard, slow worm, grass snake and adder) are protected by UK law, making it an offence to injure or kill them. Care must be taken to avoid killing or injuring reptiles & amphibians. All commonly occurring reptile species (common lizard, slow worm, grass snake and adder) are protected by UK law, making it an offence to injure or kill them. Care must be taken to avoid killing or injuring reptiles & amphibians. All reptile species are partially protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This legislation protects reptiles from:

- Reckless or intentional killing and injury.
- Selling, offering for sale, possessing or transporting for the purpose of the sale or publishing advertisements to buy or sell a protected species.

5.7.5 Where these animals are confirmed as present on land that is to be affected by development, guidance recommends that:

- The animals should be protected from injury or killing during construction operations;
- Mitigation should be provided to maintain the conservation status of the species locally.

5.7.6 A Reptile Mitigation Strategy has been prepared by Arup and is to be implemented during summer 2023. This takes the form of the fencing of development areas, laying refugia and trapping reptiles. Captured reptiles will be transported to a receptor site east of the development site.

5.7.7 Vegetation clearance will be undertaken using a two stage clearance methodology, as described in the Reptile Mitigation Strategy.

5.7.8 If any non-protected amphibian species are found during the works, then these will be moved to safety by the supervising ecologist. Currently reptile fencing is to established in several distinct sections, with the aim of establishing the population of reptiles within the site and safely removing them from the works area.

5.8 OTHER PROTECTED SPECIES

5.8.1 Hedgehogs are protected in England under Schedule 6 of the Wildlife and Countryside Act (1981) and are also listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006). Wales under the Environment (Wales) Act 2016. This species has not been confirmed but is likely present within the wider urban area.

5.8.2 The Wild Mammals Protection Act (1996) makes it an offence to crush or asphyxiate any wild mammal. This may apply during site clearance works, particularly where burrowing mammals such as rabbit and fox are present, as such animals could be crushed or asphyxiated in their burrows by heavy machinery. No features pertaining to common mammals has been identified within the likely access routes or the structure itself.

5.8.3 Vegetation clearance will be undertaken as described in 5.7.4 above and this process will be used to prevent injury / mortality to hedgehog and other small mammals.

5.9 INVASIVE SPECIES

5.9.1 Rhododendron ponticum was identified growing on site boundary adjacent to conifer plantation. No works should be undertake to this plant while it is in seed (August – September). When not in seed, this bush can be cut down and chipped with other vegetation. Stumps should be treated with a glyphosate herbicide, with this either painted on or using eco-plugs if the stump is big enough. If it is required to undertake excavation within this area, the plants root system should be excavated, along with surrounding soils, to ensure that the seed load is collected.

5.9.2 Biosecurity measures should be employed when working around this plant, to ensure seeds / roots are not spread.

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