# Green Gates Phase 3, St Asaph, Denbighshire – Preliminary Ecological Appraisal Report

A report for: Denbighshire County Council

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# **Report Validity and Confidentiality**

This report aims to provide baseline ecological data to Denbighshire County Council and has been prepared in order to provide baseline ecological information associated with an area of land at the former Green Gates Farm, near St Asaph, Denbighshire.

The report has been prepared by Biodiversity Advanced Ltd in line with the scope of works agreed with the client and in accordance with the specified purpose stated and to the applicable cost, time and other constraints. Works have been carried out in accordance with CIEEM guidelines and BS42020:2013. In preparing this report Biodiversity Advanced Ltd have relied upon information from the client / third parties which was not verified by Biodiversity Advanced Ltd except to the extent required by the scope of services, and Biodiversity Advanced does not accept responsibility for any omissions or inaccuracies in this information. Field data has been collected at the particular times stated and under the conditions given, and Biodiversity Advanced Ltd accepts no responsibility for subsequent changes.

This report has been prepared solely for the use by, and is confidential to the client and Biodiversity Advanced Ltd accepts no responsibility for its use by other persons. This report does not constitute legal advice.

This report is valid for a period of 24 months from the date of issue.

# **Report Issue Record**

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#### **Author Profile**

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**Dr Philip Fermor** is a highly qualified and enthusiastic habitat creation specialist with 30 years experience in the design and delivery of high-quality habitat restoration, rehabilitation and creation schemes throughout England and Wales. With a PhD in ecological engineering related to the creation of wetland habitats within former industrial land, Phil has extensive experience leading client teams towards biodiversity-positive outcomes, ensuring that costs are balanced with sustainable large-scale biodiversity gain opportunities. As a full member of CIEEM, a Chartered Environmentalist (CEnv) and a member of the British Hydrological Society, Phil promotes sustainable habitat design through the application of a detailed understanding of site-specific requirements (sediments, topography, hydrology, and existing biodiversity features) and local biodiversity strategies. His proven ability to work closely with commercial and corporate clients, third-sector organisations and government bodies, as well as having an in-depth understanding of business-needs and the science of the natural environment, is key to delivering successful biodiversity net gains.

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# **Executive Summary**

This report provides a Preliminary Ecological Appraisal for Green Gates Phase 3 land at St Asaph, Denbighshire. The site is owned and managed by Denbighshire County Council who propose to carry out habitat creation works at the site. This assessment therefore forms part of the baseline data collection for the site.

A desk study to determine the presence of statutory and non-statutory nature conservation sites within the Zone of Influence of the study site was completed using data from MAGIC and Cofnod. Records for protected and priority species were also provided by Cofnod and previous ecological data collected for the eastern part of the Green Gates site by Enfys Ecology and Marches Ecology was also reviewed.

The site is located 2.47km north north-east of Coedwigoedd Dyffryn Elwy / Elwy Valley Woods SAC / SSSI. This site is designated as it supports Tilio-Acerion forests of slopes, screes and ravines with an excellent lower plant assemblage. The closest non-statutory nature conservation site, a Wild Ground Reserve at Glascoed is located 0.36km west of the Phase 3 land. This reserve was designed to provide optimal habitat for great crested newts, and is a mitigation site associated with the St Asaph Business Park development immediately west of the Phase 3 land. No adverse impacts are anticipated on any nature conservation sites as a result of wetland habitat creation within the Green Gates Phase 3 site.

Habitats recorded within the site include hedgerows, improved grassland, running water, standing water (ponds), scattered scrub, scattered trees and tall ruderal. None of the habitats recorded at the site are considered to be irreplaceable habitats. The hedgerows, running water and ponds are all considered to be habitats of principal importance under the Environment (Wales) Act 2016. The mature scattered trees are also valuable wildlife habitats. In accordance with the ecological mitigation hierarchy, adverse impacts on these habitats should be avoided, or if this cannot be achieved, mitigated where possible and compensated if avoidance / mitigation cannot be achieved. It is recognised that wetland habitat creation proposals would result in changes to these habitats, although in general it is considered likely that the changes would enhance the habitats and the diversity of features.

Desk study, species surveys and assessments associated with the site have identified that the site has the potential to support the following protected and priority species:

- Foraging badgers (and potentially also badgers in their sett should they move into site prior to habitat works commencing).
- Roosting bats in some of the mature trees.
- Foraging and commuting bats, particularly along the watercourses, hedgerows and over the ponds.
- Nesting and nest-building birds within the scattered trees, hedgerows and scrub vegetation.
- Great crested newts (and other amphibians) using the ponds on site for breeding and the habitats for foraging and hibernating.
- Commuting otters using the watercourses.
- Polecats using the site for potentially breeding and foraging.
- Reptiles using the site for foraging, basking and hibernating.

Further survey work is required to confirm whether there would be impacts on the following species as a result of the wetland habitat creation: great crested newts, bats (if there are to be impacts on mature trees) and reptiles.

Any planning application associated with works at the Green Gates Phase 3 site should be accompanied by a Green Infrastructure Statement. The site offers a significant opportunity to integrate green infrastructure as part of a detailed habitat design.

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#### 1. Introduction

- 1.1 The study area at Green Gates Phase 3 comprises the western part of the former Green Gates Farm, a site which is owned by Denbighshire County Council. The farm now includes the recently established Denbighshire Tree Nursery, and it is understood that a new nature reserve is proposed for the eastern part of the site, which will support new woodland, scrub, ponds and species-rich grassland habitats. Initial proposals for the western (Phase 3) part of the site include wetland habitat creation including the creation of large waterbodies (requiring reduced-level excavation).
- 1.2 The site is located at national grid reference SJ 019 744 with the city of St Asaph to the east and St Asaph Business Park to the immediate west and south of the study area. The A55 is located along the northern boundary of the site. The study site is c.15ha in size and comprises three large fields with associated field boundaries, watercourses and ponds.
- 1.3 The proposed works at Green Gates Phase 3 include wetland habitat creation activities to create larger areas of open water, which will require reduced level excavation. This assessment is part of the baseline data collection, no habitat design proposals have yet been produced.
- 1.4 The following documents were made available to Biodiversity Advanced Ltd associated with this study:
  - 'Proposed Habitat Creation Works (Nature Reserve), Land at Greengates Farm, Cwttir Lane, St Asaph, Denbighshire – Preliminary Ecological Appraisal'. Report for Denbighshire County Council produced by Marches Ecology, 30<sup>th</sup> March 2023.
  - Drawing Topographic Survey. Ref: 15\_184-1818215.
  - ◆ Drawing Green Gates Farm ATR and Biodiversity Existing Statutory Undertakers Apparatus. Ref: H7/20701/D/13A. Dated 30-07-20.
- 1.5 The key objectives of this Preliminary Ecological Appraisal are to provide updated information to:
  - identify the likely ecological constraints associated with a project;
  - identify any mitigation measures likely to be required, following the ecological mitigation hierarchy;
  - identify any additional surveys that may be required to inform an Ecological Impact Assessment (EcIA); and,
  - identify the opportunities offered by a project to deliver ecological enhancement.
- 1.6 This report aims to provide general advice on ecological constraints associated with the site and includes recommendations for further work where necessary. The report itself is not intended to be submitted with a planning application for the site on its own. However, the information provided in this report will be utilised at an early part in the project to inform areas of ecological opportunities and constraints.
- 1.7 This Preliminary Ecological Appraisal Report (PEAR) has been produced in accordance with British Standard BS42020:2013 Biodiversity Code of practice for planning and development', CIEEM (2017a) 'Guidelines for Preliminary Ecological Appraisal', and CIEEM (2017b) 'Guidelines for Ecological Report Writing'.

# 2. Legislation, Planning Policy and Guidance

2.1 This chapter sets out the context of the ecological legislation, planning policy and best practice guidance which is relevant to this site at Green Gates Phase 3. A summary of the key elements of relevant legislation, planning policy and best practise guidance is given below.

#### 2.1 Legislation

- 2.2 Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. The Habitats Regulations 2019 consolidate and update the Habitats Regulations 2017 (as amended) and apply to the UK after European exit day. The Habitat Regulations 2019 are the principal means by which the EEC Council Directive 92/43 (the Habitats Directive) as amended is transposed into English and Welsh law.
- 2.3 The Habitats Regulations 2019 continue to place a duty upon the relevant government authority to identify sites of importance to the habitats and species listed in Annexes I and II of the Habitats Directive. Those sites which meet the criteria are designated as Sites of Community Importance (in conjunction with the European Commission) and are then identified as Special Areas of Conservation (SAC). In addition, the regulations place a duty upon the government to maintain a register of European protected sites designated as a result of EC Directive 79/409/EEC on the Conservation of Wild Birds (the Birds Directive). These sites are termed Special Protection Areas (SPA). The SACs and SPAs form a network of sites known as Natura 2000. The Habitats Directive embodies the precautionary principle which considers that projects can only be permitted after it has been ascertained that there will be no adverse effect on the integrity of the site. Projects may still be permitted if there are no alternatives, and there are imperative reasons of overriding public interest (known as IROPI).
- 2.4 The Habitats Regulations 2019 (as amended) also provide protection for individual species of fauna and flora of European conservation concern listed in Schedules 2 and 5 respectively. It is an offence to deliberately kill, injure, disturb or trade Schedule 2 species. Schedule 5 plant species are protected from unlawful destruction, uprooting or trade under the regulations.
- 2.5 The Wildlife and Countryside Act (WCA) 1981 (as amended). This legislation consolidates and amends pre-existing national wildlife legislation in order to implement the Bern Convention and the Birds Directive. It offers protection to a wider range of species, complimenting the Habitats Regulations 2019 (as amended). The Act also provides for the designation and protection of national conservation sites of value for their floral, faunal or geological features, termed Sites of Special Scientific Interest (SSSIs). Lists of protected species, both flora and fauna, are provided in the Schedules of the Act and details of the possible offences that apply to these species are given.
- 2.6 The Countryside and Right of Way (CRoW) Act 2000. This Act amends and strengthens existing wildlife legislation detailed in the WCA and applies to England and Wales. It provides increased powers for the protection and maintenance of SSSIs and places a duty on government departments to have regard for biodiversity.
- 2.7 The Natural Environment and Rural Communities (NERC) Act 2006. Under Section 40 of the NERC Act, all local authorities and public bodies in England and Wales have a duty to promote and enhance biodiversity in all of their functions. Sections 41 (England) and 42 (Wales) list habitats and species of principal importance to the conservation of biodiversity.

2.8 Well-Being of Future Generations (Wales) Act 2015. The Well-being of Future Generations Act became law in April 2015 and is concerned with improving the social, economic, environmental and cultural well-being of Wales. It will make the public bodies in Wales listed in the Act think more about the long-term, work better with people and communities and each other, look to prevent problems and take a more joined-up approach. To help public bodies achieve the same vision, the Act puts in place seven well-being goals. The Act recognises the importance of nature and its biodiversity and the Resilient Wales' goal will help with nature recovery objectives in Wales:

**Resilient Wales' goal** 'A nation which maintains and enhances a biodiverse natural environment with healthy functioning ecosystems that support social, economic and ecological resilience and the capacity to adapt to change (for example climate change).'

- 2.9 The Environment (Wales) Act 2016. This Act sets out the requirement for the 'sustainable management of natural resources' together with new ways of working to achieve this. Part 1 of the Act, including Sections 6 and 7, came into force on May 21, 2016. There are two elements relevant to biodiversity:
  - Section 6 Biodiversity and resilience of ecosystems duty. Section 6 introduced an enhanced biodiversity and resilience of ecosystems duty (the S6 duty) for public authorities in the exercise of functions in relation to Wales. The S6 duty requires that public authorities must seek to maintain and enhance biodiversity so far as consistent with the proper exercise of their functions and in so doing promote the resilience of ecosystems.
  - Section 7 Biodiversity lists and duty to take steps to maintain and enhance biodiversity. This section replaces the duty in Section 42 of the NERC Act 2006. The Welsh Ministers will publish, review and revise lists of living organisms and types of habitat in Wales, which they consider are of key significance to sustain and improve biodiversity in relation to Wales. The Welsh Ministers must also take all reasonable steps to maintain and enhance the living organisms and types of habitat included in any list published under this section, and encourage others to take such steps.

#### 2.2 Planning Policy

#### 2.2.1 National Planning Policy

- 2.10 Planning Policy Wales, Edition 11, Feb 2021. Planning Policy Wales (PPW) sets out the land use planning policies of the Welsh Government. It is supplemented by a series of Technical Advice Notes (TANs), Welsh Government Circulars, and policy clarification letters, which together with PPW provide the national planning policy framework for Wales. PPW, the TANs, MTANs and policy clarification letters comprise national planning policy.
- 2.11 The primary objective of PPW is to ensure that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the Well-being of Future Generations (Wales) Act 2015 and other key legislation and resultant duties such as the Socio-economic Duty. A well-functioning planning system is fundamental for sustainable development and achieving sustainable places.

2.12 The Key Planning Principles – Achieving the right development in the right place (p.17) include:

#### "Maximising environmental protection and limiting environmental impact

Natural, historic and cultural assets must be protected, promoted, conserved and enhanced. Negative environmental impacts should be avoided in the wider public interest. This means acting in the long term to respect environmental limits and operating in an integrated way so that resources and/ or assets are not irreversibly damaged or depleted. The polluter pays principle applies where pollution cannot be prevented and applying the precautionary principle ensures cost effective measures to prevent environmental damage."

- 2.13 Chapter 6 Distinctive and Natural Places covers environmental and cultural components of placemaking. This chapter sets out duties under the Biodiversity and Resilience of Ecosystems Duty (Section 6) associated with ensuring that development "should not cause any significant loss of habitats or populations of species, locally or nationally and must provide a net benefit for biodiversity".
- 2.14 In a recent letter from the Welsh Minister for Climate Change (dated 11 October 2023) to the Local Authorities Heads of Planning, she confirmed that a series of updates were proposed for inclusion in the next Planning Policy Wales (version 12) issue. The letter stated that:

"The main changes to policy can be summarised as follows:

**Green Infrastructure**: stronger emphasis on taking a proactive approach to green infrastructure covering cross boundary considerations, identifying key outputs of green infrastructure assessments, the submission of proportionate green infrastructure statements with planning applications and signposting Building with Nature standards.

**Net Benefit for Biodiversity and the Step-wise Approach**: further clarity is provided on securing net benefit for biodiversity through the application of the step-wise approach, including the acknowledgement of off-site compensation measures as a last resort, and, the need to consider enhancement and long-term management at each step. The use of the green infrastructure statement as a means of demonstrating the stepwise approach is made explicit. A simplified diagram of the policy approach has been developed (which will be further refined in the consolidated version of PPW12). The importance of strategic collaboration to identify and capture larger scale opportunities for securing a net benefit for biodiversity is recognised.

**Protection for Sites of Special Scientific Interest:** strengthened approach to the protection of SSSIs, with increased clarity on the position for site management and exemptions for minor development necessary to maintain a 'living landscape'. Other development is considered unacceptable as a matter of principle. Exceptionally, a planned approach may be appropriate where necessary safeguards can be secured through a development plan.

**Trees and Woodlands**: closer alignment with the stepwise approach, along with promoting new planting as part of development based on securing the right tree in the right place."

2.15 Planning Policy Wales Technical Advice Note 5: NATURE CONSERVATION AND PLANNING (September 2009). This Technical Advice Note provides advice about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. It brings together advice on sources of legislation relevant to various nature conservation topics which may be encountered by local planning authorities. Chapter 2 sets out the key principles of planning for nature conservation. Chapter 3 provides advice about the preparation and review of development plans, including the relevant statutory requirements. Chapter 4 addresses nature

conservation in development control procedures. Chapter 5 deals with the conservation of internationally and nationally designated sites and habitats and also covers local sites. Chapter 6 deals with the conservation of protected and priority species.

2.16 With respect to protected species, TAN (p.37) states that:

"6.2.1 The presence of a protected species is a material consideration when a local planning authority is considering a development proposal that, if carried out, would be likely to result in disturbance or harm to the species or its habitat. Local planning authorities should consult CCW before granting planning permission. They should consider attaching appropriate planning conditions or entering into planning obligations, under which the developer would take steps to secure the protection of the species and advise developers that they must comply with any statutory species protection requirements that may be relevant."

#### 2.2.2 Local Planning Policy

2.17 Denbighshire County Council Local Development Plan 2006 - 2021 (Adopted June 2013). This Local Development Plan includes policies specifically related to natural resources, which are relevant to protected species, such as great crested newts. The policy states that:

#### "Policy VOE 5 - Conservation of natural resources."

Development proposals that may have an impact on protected species or designated sites of nature conservation will be required to be supported by a biodiversity statement which must have regard to the County biodiversity aspiration for conservation, enhancement and restoration of habitats and species.

Where the overall benefits of a development outweigh the conservation interest of a locally protected nature site, mitigation and enhancement measures in or adjacent to these sites should be an integral part of the scheme.

If necessary, measures required to mitigate likely adverse effects on the qualifying features of statutory designated sites should be put in place prior to the commencement of development. Measures required to offset any likely adverse effects will be secured by planning conditions and/or planning obligations.

Planning permission will not be granted for development proposals that are likely to cause significant harm to the qualifying features of internationally and nationally designated sites of nature conservation, priority habitats, priority species, regionally important geodiversity sites, or to species that are under threat."

- 2.18 It is understood that Denbighshire County Council are currently working on Denbighshire's Replacement Local Development Plan. In December 2022, it was confirmed that the current adopted Denbighshire LDP 2006 2021 will remain the statutory development plan until it is replaced by a revised version of the LDP.
- 2.19 Denbighshire County Council have published a response to the recent letter from the Minister of Climate Change in relation to the requirements for planning applications within their county<sup>1</sup>. DCC confirm that one key change is the requirement for all planning applications to be submitted with a 'Green Infrastructure Statement'. A 'Green Infrastructure Statement' is now required

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<sup>&</sup>lt;sup>1</sup> Available at: <a href="https://www.denbighshire.gov.uk/en/planning-and-building-regulations/planning/update-to-chapter-6-of-planning-policy-wales.aspx">https://www.denbighshire.gov.uk/en/planning-and-building-regulations/planning/update-to-chapter-6-of-planning-policy-wales.aspx</a>

with all new applications and should describe how green infrastructure has been incorporated into the proposal.

- 2.20 Supplementary Planning Guidance Note Conservation and Enhancement of Biodiversity, July 2016. This document is one of a series of Supplementary Planning Guidance (SPG) notes amplifying Denbighshire Local Development Plan 2006 2021 (LDP) policies in a format which aims to guide the process, design and quality of new development. The Council's SPG notes are not part of the adopted LDP. However, SPGs can be treated as a material planning consideration when LPAs, Planning Inspectors and the WG determine planning applications and appeals. The SPG outlines the Council's expectations with regard to the biodiversity information to be submitted with a planning application, scope and standards of submitted ecological surveys; and briefly points out potential additional legal duties on developers as a result of obtaining planning consent.
- 2.21 Supplementary Planning Guidance Note Trees & Landscaping, July 2016. This document states that "Trees and hedgerows form an important part of our environment and in the delivery of sustainable development, the retention and the planting of new trees and hedges is crucial". The SPG provides guidance about tree and hedgerow survey, the design of development proposals in relation to trees and hedgerows, tree protection and new tree and hedgerow planting.

#### 2.3 Guidance and Best Practice Guidelines

- 2.22 BS42020:2013 Biodiversity Code of practice for planning and development. This British Standard gives recommendations and guidance for those in the planning and development and land use sectors whose work might affect or have implications for the conservation or enhancement of biodiversity. BS42020:2013 seeks to:
  - 1) promote transparency and consistency in the quality and appropriateness of ecological information submitted with planning applications and applications for other regulatory approvals;
  - 2) give planning authorities and other regulatory bodies greater confidence in the information when they consider proposals for development or land management that potentially affect biodiversity; and
  - 3) encourage proportionality and a good environmental legacy following development.

# 3. Methodology

#### 3.1 Desk Study

- 3.1 This report includes a desk study search which includes:
  - Site information related to the site and it's historical uses;
  - Data regarding designated (statutory and non-statutory) nature conservation sites within the zone of influence of the project;
  - Information related to the habitats recorded at and adjacent to the site; and,
  - Existing records indicating the presence of protected and priority species within the zone of influence of the project.
- 3.2 Desk study data was collated using the following resources:
  - MAGIC online search tool<sup>2</sup>, reviewed on 06-12-2023; and,
  - Data from Cofnod North Wales Environmental Information Service, provided by DCC on 01-12-2023.
- 3.3 It should be noted that different organisations use different ways of determining search radii. CIEEM (2017a) recommends a 1km search radius from the boundary of the development site. The following radii were utilised in the desk study search, from the edge of the study site:
  - 5km for records of European statutory sites (Natura 2000 network);
  - 2km for records of statutory designated nature conservation sites;
  - 1km for records of non-statutory designated nature conservation sites; and,
  - 1km for records of protected and priority species.

#### 3.2 Extended Phase 1 Habitat Survey

- 3.4 The Phase 1 Habitat Survey is a standardised system for classifying and mapping wildlife habitats in all parts of Great Britain, including urban areas (JNCC, 2010). The site was visited by an experienced surveyor who mapped the vegetation, using the ninety specified habitat types set out in the 'Handbook for Phase 1 Habitat Survey' (JNCC, 2010). A map of the habitats present within the site has been produced using standard colour codes.
- 3.5 The field survey was 'extended' to include an assessment of the possible presence of protected or priority species and consideration of the likely importance the habitat features present for such species.
- 3.6 The Extended Phase 1 Habitat Survey was completed on 11-12-2023. Fieldwork was completed by Dr Katy Read CEcol MCIEEM CEnv DipSM (Director, Biodiversity Advanced) and Dr Lynn Besenyei (Botanical Specialist).
- 3.7 Weather conditions recorded during the survey are detailed in Table 3.1.

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<sup>&</sup>lt;sup>2</sup> Available at: <a href="https://magic.defra.gov.uk/">https://magic.defra.gov.uk/</a>

Parameter	Conditions
Temperature	8°C
Precipitation	None
Cloud Clover	80 - 100%
Wind Speed (Beaufort Scale)	F1

Table 3.1: Weather Conditions During Survey on 11-12-2023

- 3.8 The survey included the land within the Phase 3 study area identified by Denbighshire County Council. The area surrounding the former Greengates Farm buildings was not included in the survey, and neither was the area including and surrounding the Denbighshire Tree Nursery.
- 3.9 There were no constraints to the completion of the survey. It is recognised that the survey was completed in December, which is outside of the optimal months for botanical survey. However, given the habitat's recorded onsite, and knowledge of the site's history and surveys from the adjacent land (which is part of the same landholding), it is considered that this is not a significant limitation to understanding the ecological baseline of the habitats present at the site.
- 3.10 All botanical species recorded at the site are included in Chapter 4. However, this should not be considered to be a complete list of all species which the site may support. The Phase 1 Habitat Survey list includes those species which were evident at the time of the site visit.

#### 4. Results

#### 4.1 Desk Study

#### 4.1.1 Site Information

- 4.1 It is understood from the client (Walley, *Pers. Comm.* 2023) that historically the site was tenanted out, and that the two western fields (Field 1 and Field 2) were used for grazing and training horses.
- 4.2 A tree nursery has been established by Denbighshire County Council at the Green Gates farm site. This area was outside of, but adjacent to the Phase 3 survey area. A metal deer-protection fence separated the tree nursery from the Phase 3 land. As part of establishing the tree nursery, two small ponds were installed as part of the surface water management system.
- 4.3 Previously collected data related to the habitats to the east of the Phase 3 land is available from the Enfys Ecology (2018) and the Marches Ecology (2023) reports, which identified the following habitats were recorded in the eastern part of the site: improved and semi-improved grassland fields with scrub, trees and hedgerows around the field boundaries; small areas of tall ruderal habitat; an area of wetter willow scrub; and small areas of hard standing.
- 4.4 Online aerial imagery tool Google Earth Pro was used to view historical aerial photographs of the site as part of this desk study review. This review of aerial data showed that the Phase 3 land has supported grassland-type habitats since 2006 (the oldest clear aerial imagery available on Google Earth Pro).
- 4.5 Enfys Ecology (2018) completed a Preliminary Ecological Appraisal and Protected Species Surveys of the land within the eastern part of the Green Gates Farm site in 2018. Their survey recorded the following habitats within this eastern part of the site: improved grassland; neutral semi-improved grassland; tall herb / ruderal; hedgerows, scattered trees and ditches. Enfys Ecology (2018) completed a series of protected species surveys at the site which identified:
  - The eastern site had low potential to support bat roosts and moderate potential for foraging / commuting bats. Bat transect surveys were completed which recorded common and soprano pipistrelle, noctule, Myotis sp. and lesser horseshoe bats.
  - No evidence of badgers was recorded during the 2018 surveys.
  - The site contained good habitat for nesting birds in the woodland, hedgerow and scattered trees.
  - No signs of otter or water vole (feeding signs, burrows, holts, spraints, or latrines) were recorded along the northern half of the stream. A full assessment of the stream was unable to be carried out due to overgrown vegetation, and health and safety issues (overhead powerlines and pylons) along the southern half of the stream.
  - Reptile surveys were completed in September 2018. No reptiles were recorded.
  - No invasive non-native species were recorded on site during the surveys.
- 4.6 Marches Ecology (2023) updated the habitat survey within the eastern part of the site and also recorded the following in relation to protected species:
  - Evidence of badger presence (badger tracks and 'push-throughs') were recorded in the southern part of the land that they surveyed to the east of the Phase 3 land.

4.7 Walley (2023) also provided information from internal surveys which DCC have completed at the Green Gates site and stated that "We completed GCN surveys of the ponds on site, including the new SUDs ponds, in 2022. Unfortunately, these were negative. The central pond has largely scrubbed over with willow, and the southern pond was very densely vegetated with grass".

#### 4.1.2 Nature Conservation Sites

- 4.8 The online MAGIC tool was used to determine the presence of statutory nature conservation sites within a search radius surrounding the site. Table 4.1 provides details of:
  - Habitats Sites within a 5km radius of the study site;
  - Statutory designated nature conservation sites within a 2km radius; and,
  - Non-statutory designated nature conservation sites within a 1km radius.
- 4.9 Mapped data with respect to the location of statutory nature conservation sites desk study is given in Appendix 1.

Site Name and Designation	Approximate Distance from Study Site	Description of Nature Conservation Site
<b>Habitats Sites (</b>		
Coedwigoedd Dyffryn Elwy / Elwy Valley Woods SAC (and SSSI)	2.47 km south south-west	This site supports Tilio-Acerion forests of slopes, screes and ravines for which this is considered to be one of the best areas in the United Kingdom. The Annex I habitats that are a primary reason for selection of this site are: 9180 Tilio-Acerion forests of slopes, screes and ravines * Priority feature. Elwy Valley Woods is one of three sites selected to represent <i>Tilio-Acerion</i> forest across its geographic range on the Carboniferous limestone of north Wales, and is an example of the habitat with an outstanding lower-plant flora. The canopy is quite varied: ash <i>Fraxinus excelsior</i> is the commonest tree, but there is also occasional small-leaved lime <i>Tilia cordata</i> and wild service-tree <i>Sorbus torminalis</i> . There is a rich, calcicolous understorey and ground flora, and rare bryophytes include <i>Bryum canariense</i> , <i>Cololejeunea rossettiana</i> , <i>Plagiochila britannica</i> , <i>Platydictya confervoides</i> and <i>Isothecium striatulum</i> . The woods have developed along steep valley-sides and ravines that are also important for their cave systems and Pleistocene fossil mammal assemblages.
		ation Sites (1km search)
Glascoed WGR	0.36km west	This is a Wild Ground nature reserve³ which includes a mosaic of 14 ponds, improved grasslands, ditch and 2 planted woodland compartments, some mature trees in pre-existing hedgerows, especially along the northern boundary. The site is known to support the following notable species:  Birds: redwing, fieldfares, swallow, house martins, meadow pipit, chaffinch, goldfinch, magpie, great tit, bullfinch, barn owl and song thrush.  Mammals: red fox, badger, brown long-eared bat, roe and fallow deer Butterflies: meadow brown and gatekeeper  Dragonflies: emperor dragonfly and broad-bodied chaser  Amphibians: great crested newt, smooth and palmate newt, common frog and common toad.
Gwynt-Y-Mor WGR	0.73km south	No information available. This site is another Wild Ground nature reserve. It is understood that the site includes ponds designed and managed for great crested newts.

**Table 4.1: Nature Conservation Sites within Zone of Influence (continues)** 

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<sup>&</sup>lt;sup>3</sup> See: <a href="https://www.groundworknorthwales.org.uk/wild-ground/nature-reserves/glascoed-nature-reserve/">https://www.groundworknorthwales.org.uk/wild-ground/nature-reserves/glascoed-nature-reserve/</a>

Site Name and Designation	Approximate Distance from Study Site	Description of Nature Conservation Site
Non-Statutory I	Nature Conserva	ation Sites (1km search)
Denbighshire D032 - Coed Cord block to NW and Coed y Saeson (3 areas) WS	0.73km south	No information available. This site overlaps in part, and is adjacent to Gwynt-Y-Mor Wild Ground site.
Key:		

**WS** – Wildlife Site

**SAC** – Special Area of Conservation

**SSSI** – Site of Special Scientific Interest

WGR - Wild Ground Reserve

Table 4.1 (continued): Nature Conservation Sites within Zone of Influence

The desk study data showed six areas of ancient woodland (both ancient semi-natural woodland 4.10 and plantation on ancient woodland site) within the 1km radius desk study search area. The closest of these was located c.0.40km to the west of the study site, between St Asaph Business Park and the adjacent farmland to the west.

#### 4.1.3 Protected and Priority Species

4.11 Cofnod provided records of protected and priority species within 1km of the edge of the study site. These data are summarised in Table 4.2. In line with the terms associated with the provision of desk study data, the raw data is not presented in this report.

Species	Protection	Number of Records	Approximate Closest Record from Study Site	Notes
Amphibians				
Common toad Bufo bufo	E(W)A S.7 UKBAP, LBAP WCA Sch.5	58	0m. On-site.	Records from 1968 to 2023. On-site records from ponds in centre of southern field.
Great crested newt	HabRegs SchII E(W)A S.7 UKBAP, LBAP WCA Sch5 Sect 9.4	135	0m. On-site.	Records from 1972 to 2023. On-site records from ponds in centre of southern field.
Palmate newt Lissotriton helveticus	WCA Sch.5	41	0m. On-site.	Records from 2006 to 2023. On-site records from ponds in centre of southern field.
Smooth newt Lissotriton vulgaris	LBAP WCA Sch.5	88	0m. On-site.	Records from 1999 to 2023. On-site records from ponds in centre of southern field.
Reptiles				
Grass snake Natrix helvetica	WCA Sch5 Sect 9.1 E(W)A S.7 UKBAP, LBAP	7	2m. Along southern edge of study site.	Records from 2003 to 2022. Recorded along southern edge of study site in 2011 and 2021.
Mammals				
Badger Meles meles	PBA LBAP	28	c.165m north north-east	Records from 1971 to 2021. On-site records (Marches Ecology, 2022) included evidence and badgers were visually captured on camera trap.
Brown hare Lepus europaeus	E(W)A S.7 UKBAP, LBAP	2	812m north north-east.	Records from 2005.

Table 4.2: Protected and Priority Species Records within Zone of Influence (continues)

Species	Protection	Number of Records	Approximate Closest Record from Study Site	Notes
Brown long-eared bat <i>Plecotus</i> auritus	E(A)A S.7 HabRegs SchII WCA Sch5 Sect 9.1 UKBAP, LBAP	2	426m south- east	Records from 1968 to 1985.
Hedgehog Erinaceus europaeus	E(W)A S.7 UK BAP	5	270m south on Glascoed Road	Records from 2021. Dead and alive individuals recorded.
Lesser horseshoe bat <i>Rhinolophus</i> hipposideros	E(W)A S.9 HabRegs SchII WCA Sch5 Sect 9.1 UKBAP, LBAP	3	217m	Records from 2018. Closest record from Green Gates farmland to the west.
Myotis bat Myotis sp.	E(W)A S.7 HabRegs SchII WCA Sch5 Sect 9.1	6	143m west.	Records from 2009 to 2018. Closest record from Green Gates farmland to the west.
Noctule bat Nyctalus noctula	E(W)A S.9 HabRegs SchII WCA Sch5 Sect 9.1 UKBAP, LBAP	11	143m west.	Records from 1998 to 2018. Closest record from Green Gates farmland to the west.
Otter Lutra lutra	E(W)A S.9 HabRegs SchII WCA Sch5 Sect 9.4 UKBAP, LBAP	2	Within 1km square to east	Records from 1991 to 2002. 1km radius data only – specific location not known.
Pipistrelle bat Pipistrellus pipistrellus	E(W)A S.9 HabRegs SchII WCA Sch5 Sect 9.1 LBAP	13	143 m west.	Records from 1987 to 2018. Closest record from Green Gates farmland to the west.
Polecat <i>Mustela</i> putorius	E(W)A S.7	2	0m. On-site	Records from 2007 to 2021. On-site record from Denbighshire Tree Nursery visually captured on camera trap.
Soprano pipistrelle Pipistrellus pygmaeus	E(W)A S.9 HabRegs SchII WCA Sch5 Sect 9.1 UKBAP, LBAP	10	143 m west.	Records from 1998 to 2018. Closest record from Green Gates farmland to the west.
Water vole Arvicola amphibius	E(W)A S.7 WCA Sch5 Sect 9.4 UK BAP, LBAP	1	457m west.	Record from 2016.
Whiskered bat Myotis mystacinus	HabRegs SchII WCA Sch5 Sect 9.4	1	Within 1km square to east	Record from 1987. 1km radius data only – specific location not known.

#### Key:

**HabRegs SchII** – The Conservation of Habitats and Species Regulations 1999. Schedule II - European protected species of animal.

LBAP - Denbighshire Biodiversity Action Plan Priority Species

**E(W)A S.7** - The Environment (Wales) Act 2016. Section 41 (England) - Species 'of principal importance for the purpose of conserving biodiversity'.

PBA - Protection of Badgers Act 1992.

**WCA Sch5** - Wildlife and Countryside Act 1981 (as amended). This section prohibits sale, barter, exchange, transporting for sale and advertising to sell or to buy.

**WCA Sch5 Sect 9.1** – Wildlife and Countryside Act 1981 (as amended). Schedule 5, Section 9.1 - animals protected from intentional killing and injuring.

**WCA Sch5 Sect 9.4** – Wildlife and Countryside Act 1981 (as amended). Schedule 5, Section 9.4 – (a) animals which are protected from intentional damage or destruction to any structure or place used for shelter or protection. (b) animals which are protected from intentional disturbance while occupying a structure or place used for shelter or protection. (c) animals which are protected from their access to any structure or place which they use for shelter or protection being obstructed.

**UK BAP** – UK Biodiversity Action Plan Priority Species

Table 4.2 (continued): Protected and Priority Species Records within Zone of Influence

4.12 In addition to the species identified in Table 4.2 as being recorded within the study site, a number of records of invertebrates were returned from the study site including: southern hawker *Aeshna* 

cyanea; emperor dragonfly *Anax imperator*; azure damselfly *Coenagrion puella*, blue-tailed damselfly *Ischnura elegans*; and, large red damselfly *Pyrrhosoma nymphula*.

- 4.13 The desk study data also provided a large number of records of birds, including those of conservation concern, from within the 1km search radius. Particularly notable species include:
  - Species recorded on-site: buzzard; raven; great spotted woodpecker; and red kite.
  - Birds of Conservation Concern (BoCC) Red list species: cuckoo; grasshopper warbler; greenfinch; fieldfare; herring gull; house sparrow; house martin; lapwing; lesser redpoll; linnet; marsh tit; merlin; mistle thrush; skylark; spotted flycatcher; starling; tree sparrow; twite;
  - Birds of Conservation Concern (BoCC) Amber list species: black headed gull; black redstart; bullfinch; common sandpiper; dipper; dunnock; green sandpiper; sedge warbler; short-eared owl; song thrush; snipe; tawny owl; whitethroat; wheatear; willow warbler; woodcock; whooper swan; wren;

#### 4.1.4 Invasive Non-Native Species

4.14 Cofnod provided desk study records of non-native invasive species within 1km of the edge of the study site. These data are summarised in Table 4.3. In line with the terms associated with the provision of desk study data, the raw data is not presented in this report.

Invasive Species	Number of Records	Approximate Closest Record from Study Site	Notes
American mink Neovison vison	1	West of site	Record from 2016. Seen on bank of River Elwy, upstream of St Asaph, N Wales
American skunk cabbage Lysichiton americanus	2	291m	Records from 2022.
Canada goose <i>Branta</i> canadensis	18	316m	Records from 2008 to 2022.
Giant hogweed <i>Heracleum</i> mantegazzianum	1	129m	Record from 2004.
Himalayan balsam <i>Impatiens</i> glandulifera	3	60m	Records from 2013 to 2021.
Japanese knotweed <i>Fallopia</i> japonica	1	745m	Record from 2015, St Asaph.
Japanese rose Rosa rugosa	1	745m	Record from 2015.
Montbrecia Crocosmia pottsii x aurea = C. x crocosmiiflora	1	270m	Record from 2015, St Asaph.
Water fern Azolla filiculoides	3	105m west	Records from 2008 to 2012.
White stonecrop Sedum album	2	796m	Records from 2016.

Table 4.3: Non-Native Invasive Plant Species Records within Zone of Influence

#### 4.2 Extended Phase 1 Habitat Survey

- 4.15 An Extended Phase 1 Habitat Survey of the site was completed by Dr Katy Read CEcol MCIEEM CEnv DipSM (Director, Biodiversity Advanced) and Dr Lynn Besenyei (Botanical Specialist) on 11-12-2023. Photographs taken during the site visit are presented in Appendix 2. A Phase 1 Habitat Survey plan (Drawing Ref: D-BA188-01-01) is included in Appendix 3.
- 4.16 During the survey the following habitats (listed in alphabetical order) were recorded within the survey area:
  - Dense scrub;
  - Fences;
  - Hedgerows;
  - Improved grassland;
  - Running water;
  - Scattered scrub;
  - Scattered trees;
  - Standing water (ponds); and,
  - Tall ruderal.
- 4.17 Dense scrub. A small area of dense scrub was noted to the south-east of Field 3, extending alongside the watercourse that forms the western boundary of the Phase 3 study area. The scrub was dominated by bramble *Rubus fruticosus* and was inaccessible during the survey due to the density of the vegetation. This area was therefore surveyed from the northern edge only.
- 4.18 Fences. Post and stock-wire fencing was present around most of the fields boundaries. In general, this was in poor condition, with sections of fencing missing or damaged. Vegetation from the adjacent habitats (such as bramble and blackthorn scrub) was growing through the fences along most boundaries. A heras fence had been erected around the former Green Gates farm buildings / hard standing area. This was in good condition with no vegetation growing on it. A metal deerproof fence was present along the eastern edge of the Phase 3 area, where it abuts and surrounds the Tree Nursery area.
- 4.19 Hedgerows. Three hedgerows are associated with the Phase 3 land at Green Gates. The first (H1) is located outside of the perimeter fence along the northern edge of Field 1 and adjacent to the A55 road. The second (H2) is located between Fields 1 and 2, along the field boundary. The third extends along Watercourse 1.
  - <u>H1</u> (see Plate A2.1) is a species-poor intact hedgerow which extends along the northern boundary of Field 1. This hedgerow appears to have been previously managed at 2m high, although no management works appear to have been carried out recently. The hedgerow was dominated by blackthorn *Prunus spinosa*, with bramble, hawthorn *Crataegus monogyna* and dog rose *Rosa canina* also present in smaller quantities.
  - <u>H2</u> is a species-poor intact hedgerow between Field 1 and Field 2, along the field boundary. This hedgerow was approximately 4m in height and was encroaching out into the fields where the hedgerow had not been recently cut. Species were dominated by blackthorn, with bramble and occasional hawthorn. A large oak tree was present towards the western end of the hedgerow.
  - $\underline{\text{H3}}$  is a dense hedgerow comprised mostly of blackthorn, with some hawthorn, dog rose. Occasional mature oak and ash trees were noted at irregular intervals along the length (some were on the same ditch bank as the hedgerow, others were on the opposite bank). The hedgerow

completely shades the watercourse, and scrub extends out from the hedgerows into both Fields 2 and 3. There are trees associated with this hedgerow in places (see scattered trees).

4.20 Improved Grassland. This was the dominant habitat in the Phase 3 study area. The three fields are discussed below:

<u>Field 1</u>. This was the most northerly of the fields within the Phase 3 land (see Plate A2.2). The grassland had a thick sward approximately 0.30m high. Species recorded included cocksfoot *Dactylis glomerata*, common bent *Agrostis capillaris*, Yorkshire fog *Holcus lanatus*, red clover *Trifolium pratense*, creeping thistle *Cirsium arvense*, creeping buttercup *Ranunculus repens*, ribwort plantain *Plantago lanceolata*, broad-leaved dock *Rumex obtusifolius*, tormentil *Potentilla erecta*, a *Geranium* sp., dandelion *Taraxacum officinale*, cleavers *Galium aparine*, and common mouse-ear *Cerastium fontanum*.

<u>Field 2</u>. Field 2 (see Plate A2.3) was the largest of the three fields, located in the central and south-western part pf the Phase 3 land. The sward was thick and approximately 0.30m high. Species in this field included cocksfoot, couch grass *Elymus repens*, creeping buttercup, creeping thistle, red clover, broad-leaved dock, meadow foxtail *Alopecurus pratensis*, creeping bent *Agrostis stolonifera*, common bent, and Yorkshire fog.

<u>Field 3</u>. This field was located in the south-eastern part of the Phase 3 study area and comprised a similar sward to that found in Fields 1 and 2 (see Plate A2.4). Species recorded in this field included common bent, perennial rye grass *Lolium perenne*, creeping thistle, broad-leaved dock, cocksfoot and meadow foxtail.

Piles of grass cuttings were noted within the study area, presumably collected from grassland management activities within the Green Gates site, see TN1.

4.21 Running Water. Two watercourses were recorded within / adjacent to the Phase 3 study area.

<u>Watercourse 1</u>. This flowed between Field 2 and Field 3 in a northerly direction (see Plate A2.5), outfalling into Watercourse 2 at the north-eastern corner of Field 3. During the survey there was approximately 0.20m depth of water in the base of the channel. The watercourse was located within a channel, approximately 0.5m wide, located beneath an overgrown hedgerow / scrub and trees along the whole length. The watercourse was visible only in areas where the overhanging vegetation was less dense. There was no emergent vegetation present at the time of the survey.

<u>Watercourse 2</u>. This flowed along the eastern edge of Field 3 in a northerly direction (see Plate A2.6). During the survey there was up to 0.50m depth of water in the base of the channel. The watercourse was located within a channel, approximately 2m wide. This channel had sections which were heavily shaded by the overgrown hedgerow / scrub and trees, and other sections where vegetation had been managed to allow access to the watercourse. The majority of mature trees along the length of this watercourse were located on the eastern bank of the watercourse i.e. outside of the Phase 3 study area. There was no emergent vegetation present at the time of the survey.

4.22 Scattered Scrub. This habitat was recorded along the western boundaries of Fields 1 and 2, and along the southern boundary of Field 3. The scattered scrub is encroaching into the Phase 3 study area from the hedgerow, scrub and scattered trees along the field boundaries. The scattered scrub formed slightly denser pockets in some areas, particularly where bramble is growing out from the adjacent habitats. Other species included blackthorn, dog rose, hawthorn and goat willow.

- 4.23 Scattered Trees. The Phase 3 study area site supports a number of scattered trees, although the majority of the scattered trees are located outside of the Phase 3 land, but overhang it from the adjacent areas. Within the Phase 3 land, scattered oak *Quercus robur* trees were recorded along the line of Watercourse 1, between Fields 2 and 3. A yew *Taxus baccata* tree was also present along this field boundary. A mature oak was present at the western end of the hedgerow that extended between Fields 1 and 2. Most of these trees were semi-mature to mature, and potentially provided suitable bat roosting opportunities.
- 4.24 Standing Water (Ponds). Three areas of standing water were recorded within the Phase 3 study area during the site visit. All three of these areas are considered to be ephemeral standing waterbodies. Whilst they are shown on OS base mapping as ponds, all three of the areas are considered likely to dry out during the summer months due to the nature of the features. The three 'ponds' are described below:

<u>Pond A</u>. This ephemeral pond is located in the north-eastern corner of Field 2 at grid reference SJ 02026 74484 (see Plate A2.7). The pond contained approximately 0.3m depth of water during the site visit on 11-12-2023. No aquatic vegetation was noted in this pond, and the depression was covered with creeping bent grass.

<u>Pond B</u>. This pond is located in the centre of Field 2 at grid reference SJ 01919 74396 (see Plate A2.8). The pond is a shallow depression at the base of an overhead electricity pylon. The pond supported approximately 0.40m depth of water. The centre of the pond was dominated by goat willow *Salix caprea* scrub, and some marginal plants recorded around the edges including hard rush *Juncus inflexus* and great willowherb *Epilobium hirsutum*. No aquatic species were recorded in this pond. Deer-damage was noted on the willow trees in the centre of the ephemeral waterbody.

<u>Pond C</u>. This is another ephemeral pond located in the southern part of Field 2 at grid reference SJ 01869 74310 (see Plate A2.9). This depression contained water up to approximately 0.40m deep. No aquatic vegetation was recorded in the pond, although grassland and marginal species were recorded which included hard rush, jointed rush *Juncus articulatus*, a sedge *Carex* sp., creeping bent, cocksfoot, creeping buttercup and marsh bedstraw *Galium palustris*.

- 4.25 Tall Ruderal. Tall ruderal habitats were present along the southern edge of Field 2 between the field boundary and the improved grassland habitats. Species recorded in this habitat included great willowherb, hogweed *Heracleum sphondylium*, creeping thistle, creeping buttercup, nettle *Urtica dioica*, and cleavers.
- 4.26 During the site visit on 11-12-2023, the bird species set out in Table 4.4 were recorded on site.

Common Name	Scientific Name	Conservation Status (BoCC)
Blackbird	Turdus merula	-
Blue tit	Cyanistes caeruleus	-
Buzzard	Buteo buteo	-
Crow	Corvus corone	-
Grey heron	Ardea cinerea	-
Long-tailed tit	Aegithalos caudatus	-
Kestrel	Falco tinnunculus	-
Magpie	Pica pica	-
Redwing	Turdus iliacus	Not assessed
Robin	Erithacus rubecula	-
Key:		
BoCC: Birds of Conservation	n Concern 5: the Red List Birds (2021)	

Table 4.4: Bird Species Recorded on Site on 11-12-2023

- 4.27 Numerous mammal tracks were recorded within the Phase 3 study area. Most of these were attributed to deer, with deer-hoof prints evident in the mud along these tracks. Whilst these tracks extended around each of the fields, target note TN2 shows the locations of the tracks where they were recorded around the edge of the Phase 3 land.
- 4.28 During the survey a significant number of holes, likely created by voles, were recorded throughout the improved grassland habitats in Fields 1, 2 and 3, and a number of field voles *Microtus agrestis* were seen during the site visit on 11-12-2023.
- 4.29 Habitats adjacent to the site included open fields to the east of the watercourse which flows along the eastern boundary of the Phase 3 land. This area is proposed for establishment as a nature reserve with woodland and scattered trees, species-rich grassland, ponds, scrub and hedgerows. The Denbighshire Tree Nursery is located adjacent to the northern part of the Phase 3 land, comprising polytunnels, equipment storage areas, and tree growing zones.
- 4.30 To the west of the Phase 3 land is a wooded belt with the St Asaph Business Park to the west of that. Commercial development exists to the west of the Field 1, with proposed development plots (yet to be build out) to the west of Field 2. St Asaph Business Park (and the adjacent Glascoed Nature Reserve to the west of the Business Park) is known to support a medium–large population of great crested newts within ponds both at the Business Park and in the nature reserve.
- 4.31 The A55 forms the northern boundary of the Phase 3 land, and to the south is an electricity substation and an area of car parking and offices south of a woodland belt. Ponds are present in the land to the south, considered to have been created as part of great crested newt *Triturus cristatus* mitigation projects associated with commercial development.

#### 5. Discussion

This chapter provides a discussion associated with the baseline ecology at the Green Gates Phase 3 land. The discussion is based on the desk study data reviewed as part of this appraisal, information regarding habitats recorded during the site visit, consideration of the site's potential to support protected and priority species, and the potential proposals for the site.

#### **5.1** Nature Conservation Sites

- 5.2 The proposed development is identified as being 2.47km north north-east of the Coedwigoedd Dyffryn Elwy / Elwy Valley Woods SAC. This is a nature conservation site of both International and National importance, designated for its forests with an outstanding lower plant flora. There are not anticipated to be any direct or indirect impacts on this SAC from potential habitat creation activities within the project area, either alone or in combination with other projects and plans.
- 5.3 The desk study identified a few non-statutory nature conservation site including Wild Ground Reserves (WGR) and Wildlife Sites (WS) within a 1km radius of the study site. The closest is Glascoed Wild Ground Reserve, located 0.36km west, to the west of the St Asaph Business Park. This nature reserve was established as mitigation for the potential impacts of the creation of the Business Park on great crested newts. The reserve contains specifically design and managed aquatic and terrestrial habitats for great crested newts including ponds, grassland, woodland, hedgerows and scrub. Habitat creation works within the Phase 3 land are not considered to have an adverse effect on the Glascoed WGR, either during construction or operation.

#### 5.2 Habitats

- 5.4 This section of the report considers the likely impact of habitat creation activities on the habitats recorded within the site during the survey. None of the habitats within the site are listed as 'habitats of principal importance' under the Environment (Wales) Act 2016, Section 7.
- 5.5 Table 5.1 presents a summary of the potential impact of the proposed habitat creation works (during both construction and operation) on habitats within the site in the absence of mitigation and compensation.

Habitat	Wales Habitat of Principal Importance	Potential Impacts
Fences	×	No significant impact. Fences may be replaced.
Hedgerows (intact, species-poor)	<b>√</b>	Hedgerows likely to be retained, minimal impacts.
Improved grassland	*	Potential loss of this habitat due to habitat creation works.
Running water (streams)	×	Potential changes to streams due to habitat creation works. Potential for construction impacts from pollution incidents. Potential long-term changes to stream route and design – potential to enhance running water habitats on site as a result of project.
Dense and scattered scrub	*	Potential changes to these habitats due to habitat creation works. However, scrub habitat likely to continue to be represented on site.
Scattered trees	×	Whilst not Habitats of Principal Importance, the mature and semi- mature trees at the site provide a valuable ecological resource. No specific removal of trees proposed, although it is recognised that trees may be lost as a result of habitat creation activities in the long-term.
Standing water (ponds)	<b>V</b>	Potential changes to pond habitats as a result of habitat creation works. As ponds are currently ephemeral, ponds are likely to be enhanced as a result of the project.
Tall ruderal	*	Potential changes to this habitat as a result of habitat creation works.  Not considered to be a significant impact.

**Table 5.1: Summary of Potential Impacts on Habitats** 

- Table 5.1 illustrates that the key baseline habitats within the Phase 3 study site include the ponds and the hedgerows. The mature scattered trees found within the area are also considered to be valuable existing habitats and should be retained where possible. It is recognised that habitat creation plans have not yet been developed, and the long-term aspiration for the site has not been fully established, although a number of options are currently being considered by DCC including the inclusion of a new Active Travel Route within Field 1 and potentially the inclusion of a biodiversity hub (potentially comprising a wooden-built modular classroom) within the site (although not necessarily within the Phase 3 land).
- 5.7 The local context of the site, and the creation of a new nature reserve in the eastern part of the site all support the desire for habitat enhancement activities within the Phase 3 land. It is known that the local area supports a large population of great crested newts, using numerous ponds for breeding and the rural and semi-rural habitats within the locality for commuting, foraging and hibernating.
- 5.8 It is therefore concluded that the habitats currently present at the site do not form a significant constraint in relation to broader habitat creation activities, but that any designs should focus on the opportunities associated with retention and enhancement of existing ecologically valuable habitats (ponds, hedgerows and mature scattered trees) as part of the scheme development.

#### 5.3 Species

#### **Amphibians including Great Crested Newts**

5.9 Desk study data for amphibians included records for great crested newt, common toad, smooth newt and palmate newt from Ponds B and C within Field 2 in the Phase 3 land. The area surrounding the study site is also known to support medium – large populations of great crested newts, with two Wild Ground nature reserves specifically managed for great crested newts within 1km of the Phase 3 land. Walley (2023, *Pers. Comm.*) confirmed that DCC had completed surveys of the ponds within the Phase 3 land in 2022, and great crested newts were not recorded during these surveys. The survey methodology and scope of these 2022 surveys is not known. Despite

the lack of evidence of the species in 2022, the ponds are known to historically support great crested newts, and other amphibians. As these ponds would be impacted by the habitat creation proposals, it is recommended that a great crested newt population assessment survey be completed in spring 2024.

- 5.10 The habitats within the Phase 3 land provide good terrestrial foraging, commuting and hibernation habitat for great crested newts. Given the known presence of great crested newts within land surrounding the Phase 3 land, it is considered likely that this species will be present within the habitats at the site, and as such could be impacted by any proposed habitat creation works. Adverse effects are most likely to occur during the construction phase if the works involve use of machinery to create habitat features.
- 5.11 As great crested newts are a European Protected Species, and a species of principle importance for biodiversity in Wales, great crested newts are therefore a material consideration in relation to the proposed habitat creation works. There is also potential for the site to be used by common toad, common frog and smooth and palmate newt individuals for breeding, foraging, commuting and hibernating. Whilst it is recognised that DCC hold an 'organisation-wide' great crested newt licence associated with their management activities, given the potential impacts of the scheme on known great crested newt breeding ponds, it is considered likely that a GCN licence would be required from Natural Resources Wales prior to commencement of any habitat creation activities. Recommendations related to amphibians are given in Chapter 6.

#### **Bats**

- 5.12 The desk study and Enfys Ecology (2018) bat surveys identified a total of 7 no. bat species using the land to the east of the Phase 3 study area at Green Gates. Species included common and soprano pipistrelle, lesser horseshoe, Whiskered bat, brown long-eared bats, noctule and *Myotis* sp. No evidence of bats roosting at the site has been recorded (although it is not known if bat surveys of the Green Gates farm buildings have been completed), however, the eastern part of the site was considered to provide moderate potential for foraging and commuting bats. As the habitats in the Phase 3 part of the site are similar to those recorded in the eastern part of the site, the same assessment conclusions are likely.
- 5.13 The mature trees within, and adjacent to, the Phase 3 land could provide bat roosting opportunities, and if any trees are likely to be impacted by habitat creation proposals, it is recommended that a Preliminary Ground Level Bat Roost assessment be completed in accordance with Bat Conservation Trust 'Bat Surveys for Professional Ecologists Good Practice Guidelines' 4<sup>th</sup> edition (Collins, 2023). If any tree loss is proposed, further emergence surveys may subsequently be required.

#### **Badgers**

- 5.14 Desk data was provided by Cofnod which recorded badger records, the closest of which was from 165m north (i.e. north of the A55 which would form significant barrier to badger movement). Marches Ecology (2022) recorded evidence of badgers using a 'push through' in the southwestern corner of the eastern land at Green Gates, and badgers have also been recorded on a camera-trap set up at the site.
- 5.15 No badger setts or evidence of use of the Phase 3 land by badgers was recorded during the site visit on 11-12-2023, however, badgers are known to use the site at Green Gates and therefore their presence cannot be discounted. Badgers are a mobile species, and given the habitats present at the site, and the presence of suitable adjacent habitats, badgers are a material consideration

with respect to the proposed habitat creation works during the construction phase. Recommendations are included in Chapter 6.

#### **Birds**

5.16 The desk study data recorded numerous records of conservation-priority bird species, reflecting the site's location in a semi-rural area, located less than 7km from the North Wales coast at Rhyl. During the survey, relatively common species were recorded on site. The site provides nesting and feeding habitat for a range of bird species in the hedgerow, scattered scrub and tree habitats. In addition, the extensive presence of voles on the site provide good feeding grounds for local raptors and owls. Nesting and nest-building birds are protected from harm (see Appendix 4) and as such, mitigation in the form of timing controls related to vegetation clearance will be required. Nesting and nest-building birds are a material consideration. A recommendation is included in Chapter 6.

#### **Brown Hare**

5.17 Records of brown hare were provided by the desk study search from c.0.8 km north of the Phase 3 study area. No brown hare were seen within the site during the visit on 11-12-2023. This species generally lives in open exposed habitats (like those found in the fields in the Phase 3 land), making a small depression in the ground among long grass known as a form, rather than living in a burrow. The Phase 3 land currently provides good brown hare habitat, due to the long sward recorded in the improved grassland. The creation of wetland habitats within the study site would potentially reduce the area of longer-grassland habitat for this species, although this is not considered to be a significant constraint to habitat creation.

#### Hedgehog

5.18 Five records of hedgehog were provided by the desk study search. The habitats within the Phase 3 study site provide suitable foraging, breeding and hibernation habitat for hedgehogs. The creation of wetland habitats within the study site would potentially reduce the area of longer-grassland habitat for this species, although it would provide a more complex mosaic of habitats which could still be used by hedgehogs. The proposal to create habitats within the Phase 3 land is not therefore considered to be a significant constraint to habitat creation.

#### **Otters**

- 5.19 Desk study data identified an old record of otter to the east of the site, associated with the River Elwy at St Asaph. The watercourses on the site, particularly Watercourse 2, are fast-flowing and could be used by otter for commuting. No evidence of otter holts or otter presence at the site was recorded during the site visit on 11-12-2023, although their occasional presence cannot be discounted.
- 5.20 Mitigation measures during any habitat creation activities involving construction vehicles will be required to ensure that the watercourses are not polluted, and that there is no risk to otter individuals that may be moving through the area. A recommendation is included in Chapter 6.

#### **Polecat**

5.21 Polecat have been recorded on the camera traps set out at the Green Gates farm site. Their presence on site is therefore confirmed. Polecat are protected under the Wildlife and Countryside Act, 1981 (as amended) and their numbers are now increasing in rural Wales. Polecats live in lowland wooded habitats, marshes, along riverbanks, or even in farm buildings or dry stone walls. They particularly prey on rabbits and may be found in rabbit burrows. It is not known if the species is breeding at the site at Green Gates. Polecat young are born between May and June, and as such, any vegetation clearance which may result in potential damage to breeding polecats (which may be using rabbit burrows) should be avoided. A recommendation is included in Chapter 6.

#### **Reptiles**

- 5.22 The desk study provided records of grass snake from the southern boundary of the study site. Reptile surveys of the land in the eastern part of the Green Gates landholding were completed in 2018 by Enfys Ecology (2018), but no reptiles were recorded. Since 2018, when it is understood that the site was tenanted out to a local farmer, the habitat management at the site is considered likely to have changed (to be less intensive) and as such, the site may now offer greater potential for use by reptiles (evident from the recent records of grass snake at the site boundary).
- 5.23 The habitats within the Phase 3 land are considered to provide good basking, foraging and hibernation opportunities for reptiles such as grass snake, slow worm and potentially common lizard. The piles of grass cuttings (see target notes TN1) could act to provide optimal breeding locations for grass snake in particular. As part of the baseline data collection for this site it is recommended that baseline reptile surveys be completed at the site. A recommendation is therefore included in Chapter 6.

#### **Water Voles**

5.24 One record of water vole was provided by desk study. The watercourses within and adjacent to the Phase 3 land are both heavily shaded by overhanging vegetation and do not contain any aquatic vegetation. They are therefore not considered to provide optimal habitat for water vole.

#### **Non-Native Invasive Species**

5.25 There were no records of invasive non-native species (INNS) from the study site provided by the desk study, although both plant and animal INNS have been recorded within the 1km desk study search radius. No non-native plant species were recorded within the study site during the site visit completed on 11-12-2023, although it is recognised that the survey was not carried out at the optimal time of year for botanical surveys, and some species may not be visible during the winter months. Invasive non-native species are not therefore a significant consideration in relation to the proposed habitat creation works, although a biosecurity risk assessment / method statement should be produced as part of the detailed habitat designs.

#### **Other Species**

5.26 Based on the desk study data collected and habitat surveys of the site, the site is not considered to be of significance to other protected and priority species (specifically dormouse, red squirrel and white-clawed crayfish) included within the legislation set out in Chapter 2.

## 6. Recommendations

- 6.1 The recommendations provided in this Chapter are based on the information made available to Biodiversity Advanced Ltd at the time of production of the Preliminary Ecological Appraisal Report. If further information is provided or the proposals for the site change, these recommendations should be reviewed and revised. As detailed habitat creation proposals for the site are currently not known, a precautionary approach has been adopted.
- 6.2 The ecological mitigation hierarchy (avoid, mitigate, compensate, enhance) should be adhered to as part of the habitat design and delivery of any scheme at the site which has the potential to impact on nature conservation sites, protected and priority habitats or species.

#### **Nature Conservation Sites**

6.3 No constraints have been identified in relation to nature conservation sites in the potential Zone of Influence of the habitat creation works at Green Gates Phase 3. No recommendations are therefore provided.

#### **Habitats**

- 6.4 **Ponds, Hedgerows, Running Water and Scattered Trees.** These habitats are the most ecologically valuable within the Phase 3 study area, and where possible should be retained and enhanced as part of any wetland habitat creation scheme for the site. It is understood that the proposals may include enhancement / creation of wetland habitats, and that there would be changes to the watercourses and ponds within the site. These potential changes are not considered to be a constraint to the scheme, but instead should be seen as an opportunity to enhance the existing habitats.
- 6.5 It is understood that the habitat creation scheme may be a dynamic proposal, which would create a more complex mosaic of habitats within the site, potentially enhancing the overall habitat diversity of the Phase 3 land.
- 6.6 **Green Infrastructure Statement**. In accordance with Denbighshire County Council's planning policy requirements, any planning applications for habitat creation (or other works) at the site should include a Green Infrastructure Statement. The project clearly offers considerable opportunities for green infrastructure enhancements, and these should be explored further as part of the feasibility / design works for the habitat creation project.

#### **Species**

- 6.7 Amphibians including Great Crested Newts. As the presence of great crested newts within the ponds within the Phase 3 land has previously been confirmed, it cannot be definitely concluded that this species are no longer present within these ponds from the surveys completed by DCC in 2022. A great crested newt population survey should be carried out using standard survey methodologies. The survey should be completed between March and June with 3 no. visits between mid April and mid May.
- 6.8 Any works to the ponds should be completed in accordance with a Method Statement which has been approved by Natural Resources Wales under a European Protected Species licence. It is recommended that liaison with Natural Resources Wales species specialist takes place as part of the detailed design phase of this project.

- 6.9 In order to ensure that there is no risk to great crested newt, common toad (and smooth and palmate newt) individuals, details of a proposed vegetation clearance methodology should be set out as part of a detailed habitat design.
- 6.10 **Badgers.** Badgers are a mobile species and whilst there is currently no evidence of badgers using the Phase 3 land, prior to any habitat creation works commencing which involve excavation or other intrusive work, a pre-works badger survey should be completed to ensure that no setts have been excavated at the site. Measures to protect badger individuals from harm during construction should include the covering of trenches and / or the installation of ramps in any open excavations over night.
- 6.11 Bats. If the proposed habitat creation works will impact any of the mature scattered trees within the Phase 3 study site, a Preliminary Ground Level Roost Assessment should be carried out in accordance with Bat Conservation Trust 'Bat Surveys for Professional Ecologists: Good Practice Guidelines' (Collins, 2023). Further information related to bat use of the trees may also be required from subsequent emergence surveys.
- 6.12 During any habitat construction works, there should be no artificial lighting of the watercourses, hedgerows and ponds to ensure that any lighting does not result in adverse effects on foraging and commuting bats.
- 6.13 **Birds.** Trees, scrub and hedgerows within the site are likely to contain nesting birds between 1<sup>st</sup> March and 31<sup>st</sup> August inclusive. Any clearance of trees or scrub or removal of hedgerow sections should be completed outside of the peak nesting season above to ensure that there is no risk to nesting and nest-building birds. If this cannot be achieved, a survey must be undertaken by a competent ecologist to assess the nesting bird activity on site during this period and vegetation clearance should only commence once it is concluded that nesting birds are not present.
- 6.14 Otters. In order to ensure that construction activities associated with habitat creation works do not result in any risk to otters which may be commuting through the site along the watercourses within and adjacent to Phase 3, details of construction controls (e.g. pollution prevention, material storage and management of excavations within 10m of the watercourse banks) to protect otters should be set out as part of detailed habitat creation proposals.
- 6.15 **Polecat.** Any vegetation clearance of areas which could be used by polecat for breeding (including rabbit burrows) should be avoided between May and June.
- 6.16 **Reptiles.** In order to ensure that there is no risk to reptile individuals, details of a proposed vegetation clearance methodology to protect reptiles should be provided as part of detailed habitat design plans. In addition, a baseline reptile survey of the Phase 3 land is recommended to provide pre-habitat creation data and to inform the detailed habitat design works.

### 7. Conclusions

- 7.1 This report provides a Preliminary Ecological Appraisal associated with proposals for wetland habitat creation (involving reduced level excavation) at Green Gates Phase 3, near St Asaph, Denbighshire. The Green Gates site is owned and managed by Denbighshire County Council and currently includes the Denbighshire Tree Nursery, and there are proposals for a new nature reserve on the land in the eastern part of the site. This assessment considered the land in the Phase 3 area, in the western part of the site.
- 7.2 A desk study to determine the presence of statutory and non-statutory nature conservation sites within the Zone of Influence of the proposed development was completed using data from MAGIC and Cofnod (North Wales Environmental Information Service). Records for protected and priority species were also collated from Cofnod. Previous ecological data collected for the eastern part of the site by Enfys Ecology (2018) and Marches Ecology (2022) was also reviewed.
- 7.3 The site is located 2.47km north north-east of Coedwigoedd Dyffryn Elwy / Elwy Valley Woods SAC / SSSI. This site is designated as it supports Tilio-Acerion forests of slopes, screes and ravines with an excellent lower plant assemblage. The closest non-statutory nature conservation site, a Wild Ground Reserve at Glascoed is located 0.36km west of the Phase 3 land. This reserve was designed to provide optimal habitat for great crested newts, and is a mitigation site associated with the St Asaph Business Park development immediately west of the Phase 3 land. No adverse impacts are anticipated on any nature conservation sites as a result of wetland habitat creation with the Green Gates Phase 3 site.
- 7.4 Habitats recorded within the site include hedgerows, improved grassland, running water, standing water (ponds), scattered scrub, scattered trees and tall ruderal. None of the habitats recorded at the site are considered to be irreplaceable habitats. The hedgerows, running water and ponds are all considered to be habitats of principal importance under the Environment (Wales) Act 2016. The mature scattered trees are also valuable wildlife habitats. In accordance with the ecological mitigation hierarchy, adverse impacts on these habitats should be avoided, or if this cannot be achieved, mitigated where possible and compensated if avoidance / mitigation cannot be achieved. It is recognised that wetland habitat creation proposals would result in changes to these habitats, although in general it is considered likely that the changes would enhance the habitats and the diversity of features.
- 7.5 Desk study, species surveys and assessments associated with the site have identified that the site has the potential to support the following protected and priority species:
  - Foraging badgers (and potentially also badgers in their sett should they move into site prior to habitat works commencing).
  - Roosting bats in some of the mature trees.
  - Foraging and commuting bats, particularly along the watercourses, hedgerows and over the ponds.
  - Nesting and nest-building birds within the scattered trees, hedgerows and scrub vegetation.
  - Great crested newts (and other amphibians) using the ponds on site for breeding and the habitats for foraging and hibernating.
  - Commuting otters using the watercourses.
  - Polecats using the site for potentially breeding and foraging.
  - Reptiles using the site for foraging, basking and hibernating.

- 7.6 Further survey work is required to confirm whether there would be impacts on the following species as a result of the wetland habitat creation: great crested newts, bats (if there are to be impacts on mature trees) and reptiles.
- 7.7 Any planning application associated with works at the Green Gates Phase 3 site should be accompanied by a Green Infrastructure Statement. The site offers a significant opportunity to integrate green infrastructure as part of a detailed habitat design.

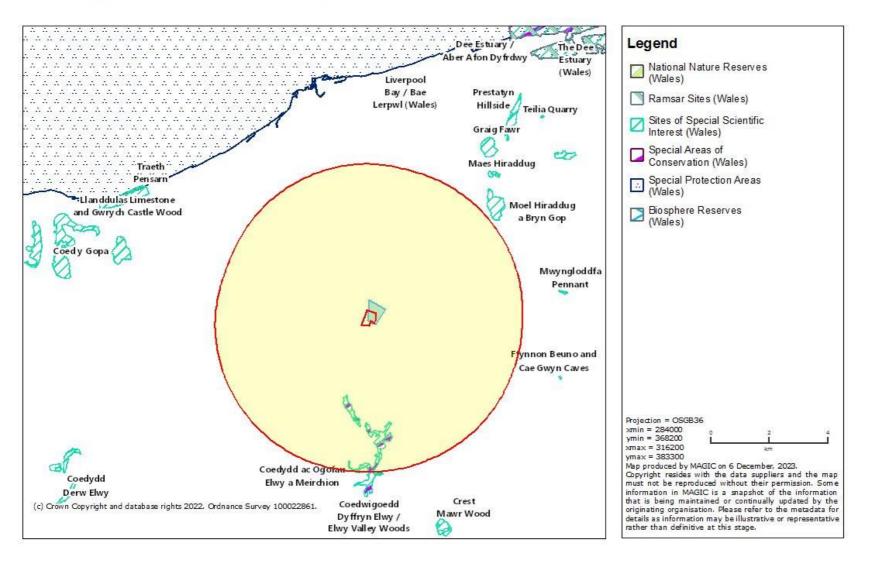
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# **Appendix 1: Desk Study Data**



## **Green Gates Phase 3**



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# **Appendix 2: Photographs**

Plates A2.1 to A2.10 were taken during the site visit on 11-12-2023.



Plate A2.1: Hedgerow H1 on northern boundary of Field 1 (looking east)



Plate A2.2: Field 1 (looking west)



Plate A2.3: Field 2 (looking north)



Plate A2.4: Field 3 (looking north)



Plate A2.5: Watercourse 1



Plate A2.6: Watercourse 2 (looking north)



Plate A2.7: Pond A (looking north-east)



Plate A2.9: Pond C (looking north).

Note – willow scrub at Pond B in distance,
at base of electricity pylon.



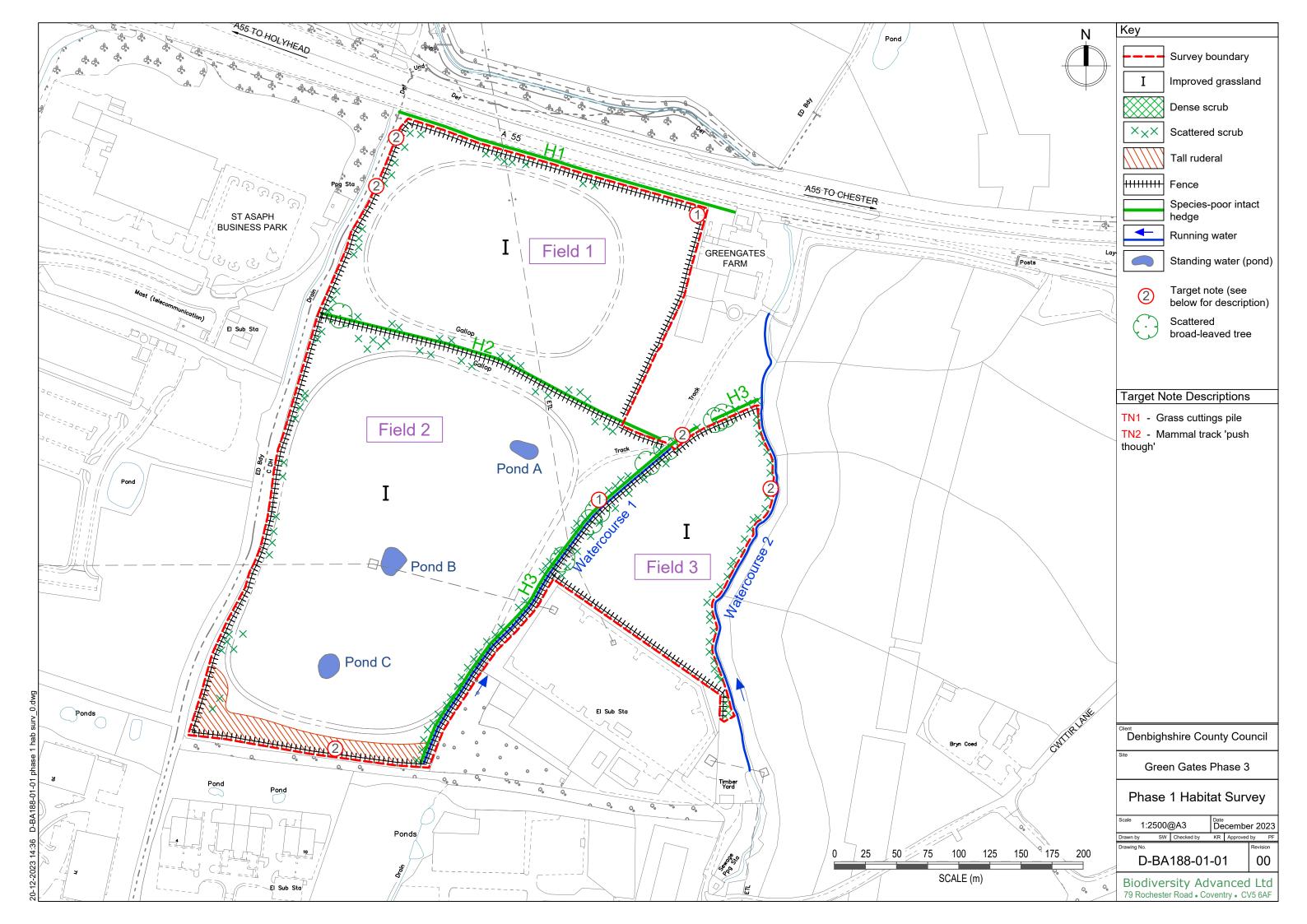
Plate A2.8: Pond B (looking north)



Plate A2.10: Tall ruderal habitats within adjacent trees to west of site.
Photo taken in Field 2 (looking north).

# **Appendix 3: Phase 1 Habitat Survey Map**

Drawing D-BA188-01-01 Phase 1 Habitat Survey



# **Appendix 4: Protected and Priority Species Legislation**

#### **Badgers**

The Protection of Badgers Act 1992 protects badgers and their setts. It was based primarily on the need to protect badgers from baiting and deliberate harm or injury rather than conservation concerns. The Act set out the following criminal offences:

- 1) To intentionally or recklessly interfere with a sett which includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett, or obstructing access to it. A 'sett' is defined in the legislation as 'any structure or place that displays signs indicating current use by a badger'.
- 2) To wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so.

#### **Bats**

In Britain all bat species and their roosts are legally protected, by both domestic (Wildlife and Countryside Act, 1981 as amended) and international (Conservation of Habitats and Species Regulations 2017) legislation. The following actions are considered to be a criminal offence:

- 1) Deliberately take, injure or kill a wild bat.
- 2) Intentionally or recklessly disturb a bat in its roost or deliberately disturb a group of bats.
- 3) Damage or destroy a place used by bats for breeding or resting (roosts) (even if bats are not occupying the roost at the time).
- 4) Possess or advertise/sell/exchange a bat of a species found in the wild in the EU (dead or alive) or any part of a bat.
- 5) Intentionally or recklessly obstruct access to a bat roost.

#### **Great Crested Newts**

Great crested newts are protected under the Wildlife and Countryside Act 1981 (as amended), Schedule 5 and listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended). Under the Habitats Regulations, it is an offence if you:

- Deliberately capture, injure or kill any wild animal of an EPS
- Deliberately disturb wild animals of any such species
- Deliberately take or destroy the eggs of such an animal, or
- Damage or destroy a breeding site or resting place of such an animal

Disturbance includes, but is not limited to, any disturbance which is likely:

- to impair their ability
  - o To survive, to breed or reproduce, or to rear or nurture their young, or
  - In the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- To affect significantly the local distribution or abundance of the species to which they belong.

#### **Hedgehogs**

Hedgehogs have some degree of legal protection in the UK.

- 1) They are listed on Schedule 6 of the Wildlife and Countryside Act 1981 (as amended) which makes it illegal to kill or capture wild hedgehogs, with certain methods listed.
- 2) They are listed under the Wild Mammals Protection Act (1996), which prohibits cruel treatment of hedgehogs.
- 3) They are a species of 'principal importance' under the Environment (Wales) Act 2016.

#### **Nesting Birds**

All birds, their nests and eggs are protected by law and it is thus an offence, with certain exceptions, to:

- 1) Intentionally kill, injure or take any wild bird.
- 2) Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built.
- 3) Intentionally take or destroy the egg of any wild bird.
- 4) Use traps or similar items to kill, injure or take wild birds.
- 5) 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 dependent young of such a bird.

Penalties that can be imposed for criminal offences in respect of a single bird, nest or egg contrary to the Wildlife and Countryside Act 1981 (as amended) is an unlimited fine, up to six months imprisonment or both.

#### **Otters**

The Eurasian otter is the only native UK otter species. It is fully protected as a European Protected Species (EPS) under the Conservation of Habitats and Species Regulations 2019 (as amended) and is also protected under Sections 9 and 11 of the Wildlife and Countryside Act 1981 (as amended). The following are considered to be a criminal offence:

- 1) capture, kill, disturb or injure otters (on purpose or by not taking enough care);
- 2) damage or destroy a breeding or resting place (deliberately or by not taking enough care);
- 3) obstruct access to their resting or sheltering places (deliberately or by not taking enough care); and,
- 4) possess, sell, control or transport live or dead otters, or parts of otters.

If found guilty of an offence there is an unlimited fine and up to 6 months in prison.

#### **Reptiles**

All reptiles are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This legislation makes it an offence to intentionally kill or injure a reptile. If found guilty of an offence there is an unlimited fine and up to 6 months in prison.

Smooth snake and sand lizard are protected under the Conservation of Habitats and Species Regulations 2019 (as amended).