THE ENVIRONMENT PARTNERSHIP









Hydro Aluminium

Wrexham Industrial Estate

Ecological Desk Study

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The conclusions and recommendations contained in this document are based upon information gathered by TEP and provided by third parties. Information provided by third parties and referred to herein has not been independently verified by TEP, unless otherwise expressly stated in the document.

Nothing in this report constitutes legal opinion. If legal opinion is required, the advice of a qualified legal professional should be secured.

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1.0 Introduction

1.1 The Environment Partnership (TEP) was commissioned by Portal Construction NW Ltd in February 2023, to complete an Ecological Desk Study to inform and support an EIA Screening Opinion for land known as Hydro Aluminium located in Wrexham Industrial Estate (hereafter referred to as 'the site').

Site Location

1.2 The location of the site is illustrated in Figure 1. The approximate central grid reference of the site is SJ 37557 49230.

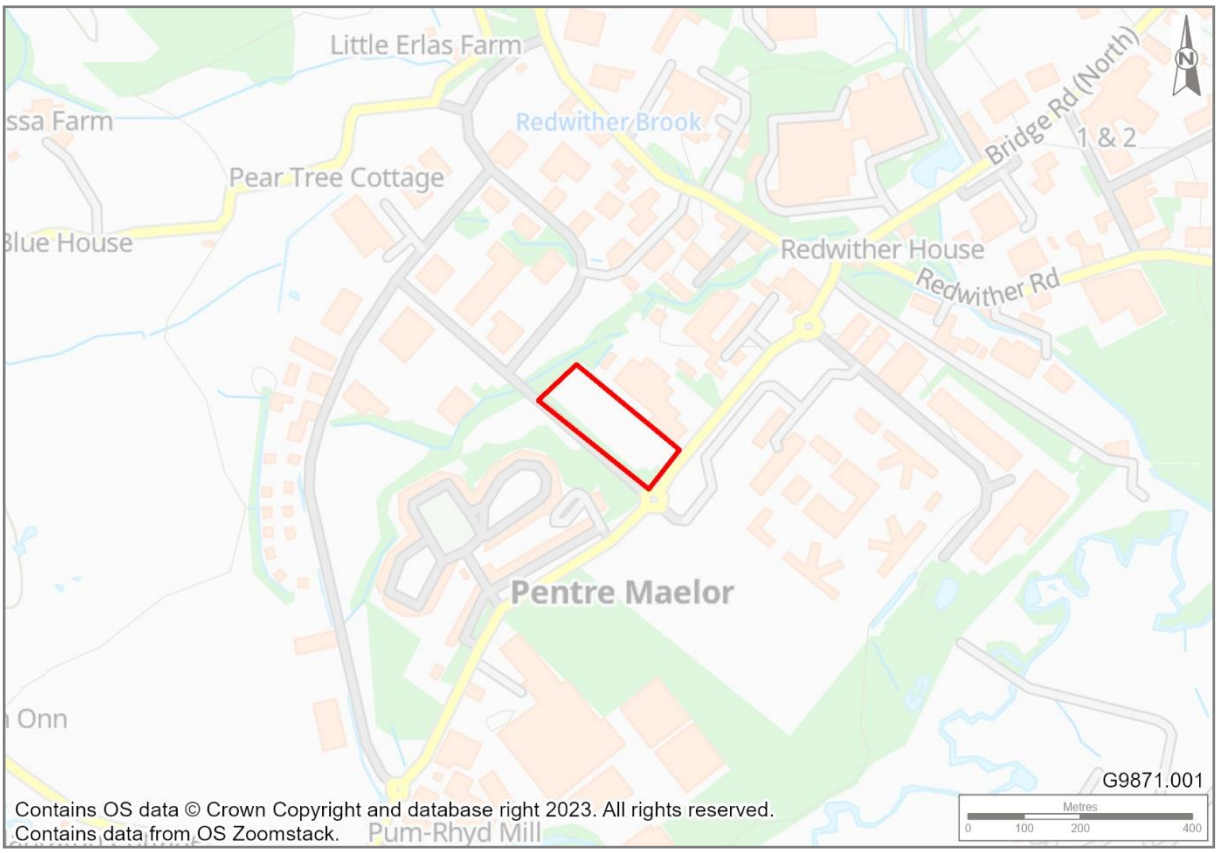


Figure 1: Site location

Context

1.3 The site is located within the administrative area of Wrexham County Borough Council. It is designated as the Clywedog Road East site within Wrexham Industrial Estate, which is allocated for Employment by Policy E1 in the Wrexham Unitary Development Plan (adopted February 2005).

2.0 Methods

Scope and Data Sources

2.1 The ecological Zone of Influence (ZOI) is an area defined by the ecological assessment within which valued ecological features may be subject to significant biophysical changes as a consequence of the proposed development under assessment.

2.2 For the purposes of this assessment, the preliminary ZOIs within which ecological features were searched for as part of this desk study were varied according to the geo-spatial and/or legal significance of the feature.

2.3 Table 1 summarises the scope and the preliminary ZOIs applied for this desk study. The preliminary ZOIs were applied by extending search radii of the respective distances from the site boundary.

Table 1: Scope and preliminary ecological Zones of Influence (ZOI)

Feature	Scope	Key Source(s)	ZOI
Statutory wildlife sites:	Ramsar sites Proposed Ramsar sites Special Areas of Conservation (SAC) Possible SAC SAC with marine components Special Protection Areas (SPA) Potential SPA Marine Conservation Zones	Natural Resources Wales (NRW) (public sector information) Natural England (public sector information)	10km
	Sites of Special Scientific Interest (SSSI) National Parks National Nature Reserves (NNR) Marine Nature Reserves (MNR)	NRW Natural England	5km
	Local Nature Reserves (LNR) Country Parks	NRW DataMapWales	2km
Non-statutory wildlife sites:	County Wildlife Sites (CWS) Local Wildlife Sites (LWS) Sites of Importance for Nature Conservation (SINC)	Cofnod Records Centre Wrexham Unitary Development Plan[1] Wrexham Unitary Development Plan Proposals Map 2 (Side 2)[2]	2km
Notable habitats:	Ancient Woodland Habitats of principal importance Main rivers Habitat Network / Nature Recovery Network	DataMapWales North Wales Environmental Information Service (Cofnod)	500m

[1] Wrexham County Borough Council (2005). Wrexham Unitary Development Plan. [Online] Available at: *https://www.wrexham.gov.uk/sites/default/files/2020-05/udp-statement.pdf* [Accessed 17th March 2023].

[2] Wrexham County Borough Council (2005). Wrexham Unitary Development Plan Policies Map 2 (Side 2). [Online] Available at: *https://www.wrexham.gov.uk/sites/default/files/2021-03/map2_inset2_inset3.pdf* [Accessed 17th March 2023].

Feature	Scope	Key Source(s)	ZOI
Protected or notable species:	Pre-existing records for protected or notable species[3], non-native invasive species	Cofnod	2km
Policy and Related Guidance	Land allocations and relevant environment / biodiversity policy	Wrexham County Borough Council Planning Policy and Proposals Map	As applicable to site

2.4 An absence of records does not indicate the absence of protected species from the search area.

[3] Notable and protected species records may include those listed under any of the following:

- Protected species listed under Schedule 2 (animals) or Schedule 5 (plants) under the Conservation of Habitats and Species Regulations 2017 (EPS);
- Protected bird species under Schedule 1 of the Wildlife and Countryside Act 1981, as amended (WCA1);
- Protected animal species under Schedule 5 of the Wildlife and Countryside Act 1981, as amended (WCA5);
- Protected plant species under Schedule 8 of the Wildlife and Countryside Act 1981, as amended (WCA8);
- Invasive non-native plant species under Schedule 9 of the Wildlife and Countryside Act 1981, as amended (WCA9);
- Invasive Alien Species (Enforcement and Permitting) Order 2019 (IAS);
- Protection of Badgers Act 1992 (PBA);
- Species of principal importance (SPI) under Section 7 of the Environment (Wales) Act 2016 (S7);
- Red and Amber listed Birds of Conservation Concern (UK) (BRd/BAm); and
- Local Biodiversity Action Plan Species (LBAP).

3.0 Legislation and Policy

3.1 This section details legislation and planning policy which may have relevance to the site. Only legislation and policy of key relevance to biodiversity are included.

Relevant Legislation

International Conventions

3.2 The UK is a Contracting Party to numerous environmental conventions, the commonest form of international agreements to encourage a coordinated response to managing the environment. Key environmental conventions ratified in the UK include:

- The Convention on Wetlands of International Importance especially as Waterfowl Habitat ('Ramsar Convention'[4] or 'Wetlands Convention') - provides the only international mechanism for protecting sites of global importance;
- The Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention[5]) - imposes legal obligations on contracting parties, protecting over 500 wild plant species and more than 1,000 wild animal species;
- The Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention[6] or CMS) - provides strict protection for endangered migratory species. The UK has currently ratified four legally binding Agreements under the convention relating to bats (EUROBATS), African-Eurasian migratory birds (AEWA), small cetaceans in the Baltic, Irish and North Seas (ASCOBANS) and albatrosses and petrels (ACAP) in addition to five Memorandum of Understanding (MoU) and is non-party range state to a further Agreement and a further MoU;
- The Convention Concerning the Protection of the World Cultural and Natural Heritage (UNESCO World Heritage Convention) - seeks to protect both cultural and natural heritage;
- The Convention on Biological Diversity (Biodiversity Convention[7] or CBD) - provides a legal framework for biodiversity conservation. Within the UK, delivery of the CBD and the Strategic Plan for Biodiversity 2011-2020[8] is guided by the UK Post-2010 Biodiversity Framework[9].

[4] Convention on Wetlands of International Importance especially as Waterfowl Habitat, Ramsar, 2.2.1971 *https://www.ramsar.org/*

[5] Convention on the Conservation of European Wildlife and Natural Habitats. Bern, 1979 *https://www.coe.int/*

[6] Convention on the Conservation of Migratory Species of Wild Animals, Bonn, June 1979 *https://www.cms.int/*

[7] Convention on Biological Diversity, Rio de Janeiro, June 1992*https://www.cbd.int/*

[8] In October 2010, at the 10th Conference of the Parties to the CBD in Nagoya, Japan, the Parties adopted a new 'Strategic Plan for Biodiversity 2011–2020' along with its 20 'Aichi targets'. *https://www.cbd.int/sp/*

[9] The framework is overseen by the Environment Departments of the four UK governments working through the Four Countries' Biodiversity Group. It demonstrates how the UK, through each of the four countries, contributes to achieving the 'Aichi targets', and identifies the activities required to complement the individual country biodiversity strategies *https://jncc.gov.uk/our-work/uk-post-2010-biodiversity-framework/*

3.3 The legal obligations of the multiple Conventions to which the UK is a Contracting Party are enacted through a suite of national environmental legislation. The most relevant are described in the following paragraphs.

Conservation of Habitats and Species Regulations

3.4 The Conservation of Habitats and Species Regulations 2017[10] (2017 Regulations) transposed the land and marine aspects of the Habitats Directive (Council Directive 92/43/EEC) and certain elements of the Wild Birds Directive (Directive 2009/147/EC) (known as the Nature Directives) into domestic law.

3.5 The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019[11] (2019 Regulations) amends the 2017 Regulations to make them operable following the withdrawal of the United Kingdom from the European Union (EU). Most of the changes involve transferral of functions from European Commission to the appropriate authorities in England and Wales, also extending to Scotland and Northern Ireland and applies to Scotland and Northern Ireland (including the adjacent territorial sea to a limited degree), as regards reserved and excepted matters respectively. It also amends Section 27 of the Wildlife and Countryside Act 1981 to maintain existing protections and enforcement for species of wild birds.

3.6 All other processes or terms in the 2017 Regulations remain unchanged and existing guidance and obligations (of a competent authority) remain relevant.

National Site Network

3.7 Under the 2019 Regulations, Special Areas of Conservation (SAC) and Special Protection Areas (SPA) in the UK no longer form part of the EU's 'Natura 2000' ecological network, but instead (along with new SACs and SPAs designated under the 2019 Regulations) form the new National Site Network (NSN). Ramsar sites[4] do not form part of the NSN but remain protected in the same way as SACs and SPAs.

3.8 Proposals which may significantly affect a site belonging to the NSN and which are not connected with or necessary to the management of that site require (by Regulations 63 and 64 of the 2017 Regulations, as amended by Regulations 24 and 25 of the 2019 Regulations, respectively) competent authorities to undertake an Appropriate Assessment of the implications of the plan or project in view of that site's conservation objectives. This process is commonly referred to as a 'Habitats Regulations Assessment' (HRA). The assessment must consider the potential effects both of the plan/project itself and in combination with other plans or projects. Where an adverse effect on the site's integrity cannot be ruled out, and where there are no alternative solutions, the plan or project can only proceed if there are imperative reasons of over-riding public interest (IROPI) and if the necessary compensatory measures can be secured.

[10] Conservation of Habitats and Species Regulations 2017 (SI 2017/1012) *https://www.legislation.gov.uk/uksi/2017/1012/*

[11] Conservation of Habitats and Species Regulations 2019 (SI 2019/579) *https://www.legislation.gov.uk/uksi/2019/579/*

Protected Species

3.9 Certain animals and their breeding sites or resting places are protected under Regulation 43 of the 2017 Regulations, which makes it illegal to:

- Deliberately capture, injure or kill any such animal or to deliberately take or destroy the eggs of such an animal;
- Deliberately disturb such an animal; and
- Damage or destroy a breeding site or resting place of such an animal.

3.10 Disturbance is defined in the 2017 Regulations as an activity which is likely to impair a species' ability to survive, to breed or reproduce, to rear or nurture young or, in the case of animals hibernating or migratory species, to hibernate, migrate or which may affect significantly the local distribution or abundance; of the species.

3.11 A bat's resting place is known as a roost site. Because bats tend to be faithful to roost sites but their biology is such that different roost site characteristics are preferred at different times of the year by different species for different functions, a bat roost is considered to be afforded protection even when it is not occupied.

3.12 Certain plant species are protected under Regulation 47 of the 2017 Regulations against deliberate picking, collecting, cutting, uprooting or destruction. It is also an offence to be in possession or control and to transport any live or dead plant or part of a plant of such a species which has been taken in the wild.

3.13 The 2017 Regulations (Regulation 55) enables a relevant licensing body to grant a licence for certain activities that may affect animal or plant species protected by the above provisions. The purpose must conform to one of those listed under Regulation 55(2). For most development related activities, the purpose normally relates to Regulation 55(2)(e) 'preserving public health or public safety or other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequence of primary importance for the environment' – commonly known as the IROPI test. Regulation 55(9) introduces two further tests that the licensing body must consider:

- There is no satisfactory alternative; and
- The favourable conservation status of the species concerned will be maintained and/or enhanced.

3.14 Under Regulation 9(1) of the 2017 Regulations (as amended), competent authorities "must exercise their functions which are relevant to nature conservation… so as to secure compliance with the requirements of the Directives". Regulation 9(3) requires a competent authority, in exercising any of its function, to "have regard to the requirements of the Directives so far as they be affected by the exercise of those functions." Local planning authorities must therefore consider the above three 'tests' when determining if planning permission should be granted for developments likely to cause an offence under the Regulations.

Wildlife and Countryside Act 1981

3.15 The Wildlife and Countryside Act 1981 (as amended)[12] (WCA) is a major legal instrument for wildlife protection in the UK. In respect of habitats and flora, the WCA protects important habitats and/or species as Sites of Special Scientific Interest (SSSI). The designation of UK Ramsar sites[4] has usually been underpinned through prior notification of these areas as SSSI and accordingly they receive statutory protection under the WCA.

3.16 The obligations of the Bern Convention[5] (the protection of wild plant and animal species and their natural habitats) are transposed into law for England and Wales[13] by the WCA. The legal requirement for the protection of migratory species listed by the Bonn Convention[6] is also provided by the WCA.

3.17 All wild birds (as defined by the WCA and with exception to species listed in Schedule 2) are protected under the WCA, which makes it illegal to:

- Intentionally kill, injure or take any wild bird;
- Take, damage or destroy the nest (whilst being built or in use) of any wild bird; or
- Take or destroy the eggs of any wild bird.

3.18 Special penalties are available for offences related to birds listed in Schedule 1, for which there are additional offences of disturbing these birds at their nests, or their dependent young. The Secretary of State may also designate Areas of Special Protection (subject to exceptions) to provide further protection to birds. The WCA also prohibits certain methods of killing, injuring, or taking birds, restricts the sale and possession of captive bred birds, and sets standards for keeping birds in captivity.

3.19 Certain animal species (listed under Schedule 5) of the WCA receive protection which makes it illegal (with certain exceptions) to:

- Intentionally kill, injure or take any such animal;
- Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any such animal;
- Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.

3.20 Plant species listed under Schedule 8 of the WCA are protected from unauthorised intentional picking, uprooting and destruction. It is an offence to plant or otherwise cause to grow in the wild any plant that is included in Schedule 9.

[12] Wildlife and Countryside Act 1981 c. 69 *https://www.legislation.gov.uk/ukpga/1981/69/*

[13] In Scotland by the Nature Conservation (Scotland) Act 2004 (as amended) and in Northern Ireland by Wildlife (Northern Ireland) Order 1985 and the Nature Conservation and Amenity Lands (Northern Ireland) Order 1985.

Countryside and Rights of Way Act 2000

3.21 Part III of the Countryside and Rights of Way Act 2000[14] (CROW) deals specifically with wildlife protection and nature conservation. It requires that Government Departments have regard for the conservation of biodiversity, in accordance with the CBD. In addition, it requires that The Secretary of State publishes a list of living organisms and habitat types that are considered to be of principal importance in conserving biodiversity.

3.22 CROW also amends the WCA, expanding the terms of offences to include reckless activity. It increases the legal protection of threatened species, by also making it an offence to "recklessly" obstruct access to a sheltering place used by an animal listed in Schedule 5 of the WCA or "recklessly" disturb an animal occupying such a structure or place.

Environment (Wales) Act 2016

3.23 Section 6 of the Environment Act places a duty on public authorities to 'seek to maintain and enhance biodiversity' so far as it is consistent with the proper exercise of those functions. In so doing, public authorities must also seek to 'promote the resilience of ecosystems'.

3.24 Section 7 of the Environment (Wales) Act requires The Welsh Ministers to 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. This is known as the S7 list.

Hedgerows Regulations 1997

3.25 Important hedgerows are protected from removal by the Hedgerows Regulations[15] (as amended). Regulation 3 defines the hedgerows to which the Regulations apply. Regulation 4 sets out the criteria for identifying "important hedgerows" including ecological, landscape or historical/cultural reasons. Under the Hedgerows Regulations it is against the law to remove or destroy certain hedgerows without permission from the local planning authority. Works to "important hedgerows" are exempt under the Hedgerows Regulations if planning consent is granted which allows their removal.

3.26 The identification of important hedgerows also provides an additional means to value hedgerows aside from their botanical value (e.g. species richness) as the assessment of importance also includes characteristics relating to maturity and structure (e.g. associated features, connectivity, integrity) which will affect the functional value of the hedgerow.

[14] Countryside and Rights of Way Act 2000 c. 37 *https://www.legislation.gov.uk/ukpga/2000/37/*

[15] The Hedgerow Regulations 1997 (SI 1997/1167) *https://www.legislation.gov.uk/uksi/1997/1160/*

Protection of Badgers Act 1992

3.27 Badgers and their setts receive statutory protection under the Protection of Badgers Act 1992 (PBA)[16]. This makes it an offence to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or to intentionally or recklessly interfere with a sett.

3.28 Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it. A badger sett is defined in the legislation as "any structure or place, which displays signs indicating current use by a badger."

Relevant Policy

Planning Policy Wales Edition 11 (2021)

3.29 Planning Policy Wales (Edition 11, February 2021) delivers land use planning policy for Wales and provides a framework for the effective preparation of local planning authorities' development plans. This is supplemented by 21 topic based Technical Advice Notes (TANs). Technical Advice Note 5- Nature Conservation and Planning is a key TAN in relation to nature conservation and biodiversity.

3.30 TAN 5 states that the town and country planning system in Wales should:

- Work to achieve nature conservation objectives through a partnership between local planning authorities, NRW, the Environment Agency Wales, voluntary organisations, developers, landowners and other key stakeholders;
- Integrate nature conservation into all planning decisions looking for development to deliver social, economic and environmental objectives together over time;
- Ensure that the UK's international and national obligations for site, species and habitat protection are fully met in all planning decisions;
- Look for development to provide a net benefit for biodiversity conservation with no significant loss of habitats or populations of species, locally or nationally;
- Help to ensure that development does not damage, or restrict access to, or the study of, geological sites and features or impede the evolution of natural processes and systems especially on rivers and the coast;
- Forge and strengthen links between the town and country planning system and biodiversity action planning particularly through policies in local development plans and the preparation of supplementary planning guidance that adds value to Local Biodiversity Action Plans (LBAPs) by highlighting the ways in which the planning system can help to deliver the objectives of LBAPs in practical ways; and
- Plan to accommodate and reduce the effects of climate change by encouraging development that will reduce damaging emissions and energy consumption and that help habitats and species to respond to climate change.

[16] Protection of Badgers Act 1992 c. 51 *https://www.legislation.gov.uk/ukpga/1992/51/*

Local Planning Policy

Natural Resources Wales Area Statements

3.31 NRW has developed seven Area Statements covering different areas of Wales. These statements are seen as a collaborative response to the Natural Resources Policy, published by the Welsh Government in 2017.

3.32 The following sections of the Area Statement relate to biodiversity and nature conservation in Northeast Wales:

- Promoting the resilience of ecosystems in maintaining and enhancing biodiversity[17].

Wrexham Unitary Development Plan 1996 – 2011 (adopted 14th February 2005)

3.33 The Wrexham Unitary Development Plan (UDP) is the adopted development plan for the Borough and sets out the council's spatial vision for the 15-year period from 1996 until 2011.

3.34 The following policies in the Wrexham UDP are of relevance to biodiversity and/or the site's allocation:

Strategic Policies

- Policy PS2: Development must not materially detrimentally affect countryside, landscape/townscape character, open space, or the quality of the natural environment.
- Policy PS11: Encouragement will be given to proposals which improve the biodiversity value of sites and to the establishment of local nature reserves where the nature conservation and landscape interest of the land will be protected and enhanced.

Specific Policies

- Policy GDP1: Development Objectives
- Policy EC4: Hedgerows, Trees and Woodland
- Policy EC6: Biodiversity Conservation

Relevant Local Planning Guidance Notes

- LPGN 17: Trees and Development
- LPGN 29: Employment Development and Nature Conservation
- LPGN 30: Design
- LPGN 32: Biodiversity and Development

[17] Natural Resources Wales. Promoting the resilience of ecosystems in maintaining and enhancing biodiversity. [Online] Available at: *https://naturalresources.wales/about-us/area-statements/north-east-wales-area-statement/promoting-the-resilience-of-ecosystems-in-maintaining-and-enhancing-biodiversity/?lang=en* [Accessed 17th March 2023].

Wrexham Local Development Plan 2 (LDP2) 2013 – 2028

3.35 The Wrexham Local Development Plan 2 (LDP2)[18] is a long-term land use and development strategy focused on achieving sustainable development. The LDP2 is currently being prepared by Wrexham County Borough Council and will replace the current adopted UDP.

Local Planning Guidance Notes

3.36 Wrexham County Borough Council have approved a series of local planning guidance notes to support their Development Plan policy.

3.37 The planning guidance notes of relevance to biodiversity and/or the site's allocation include:

- Employment Development and Nature Conservation[19]; and
- Biodiversity & Development[20].

Local Biodiversity Action Plans (LBAP)

3.38 The following habitats are identified within LBAPs by Wrexham Borough Council:

- Derelict and Industrial Land
- Garden
- Linear aquatic habitats (rivers, streams, canals)
- Ponds
- Upland moorland
- Woodland
- Lowland raised bog
- Lowland wood-pasture and parkland
- Wet woodland

3.39 The following species are identified within LBAPs by Wrexham Borough Council:

- Great crested newt *Triturus cristatus*
- Barn owl *Tyto alba*
- Song thrush *Turdus philomelos*
- Badger *Meles meles*
- Otter *Lutra lutra*

[18] Wrexham County Borough Council. Wrexham Local Development Plan 2 (LDP2) 2013 to 2028. [Online] Available at: *https://www.wrexham.gov.uk/service/development-plans-and-other-planning-policy/wrexham-local-development-plan-2-ldp2-2013-2028* [Accessed 17th March 2023].

[19] Wrexham County Borough Council (2009). Local Planning Guidance Note 29: Employment Development and Nature Conservation. [Online] Available at: *https://www.wrexham.gov.uk/sites/default/files/2020-05/lpg-29e.pdf* [Accessed 17th March 2023].

[20] Wrexham County Borough Council (2011). Local Planning Guidance Note 32: Biodiversity & Development. [Online] Available at: *https://www.wrexham.gov.uk/sites/default/files/2020-05/lpg-32e.pdf* [Accessed 17th March 2023].

- Lesser horseshoe bat *Rhinolophus hipposideros*
- Black poplar *Populus nigra*

4.0 Wildlife Sites

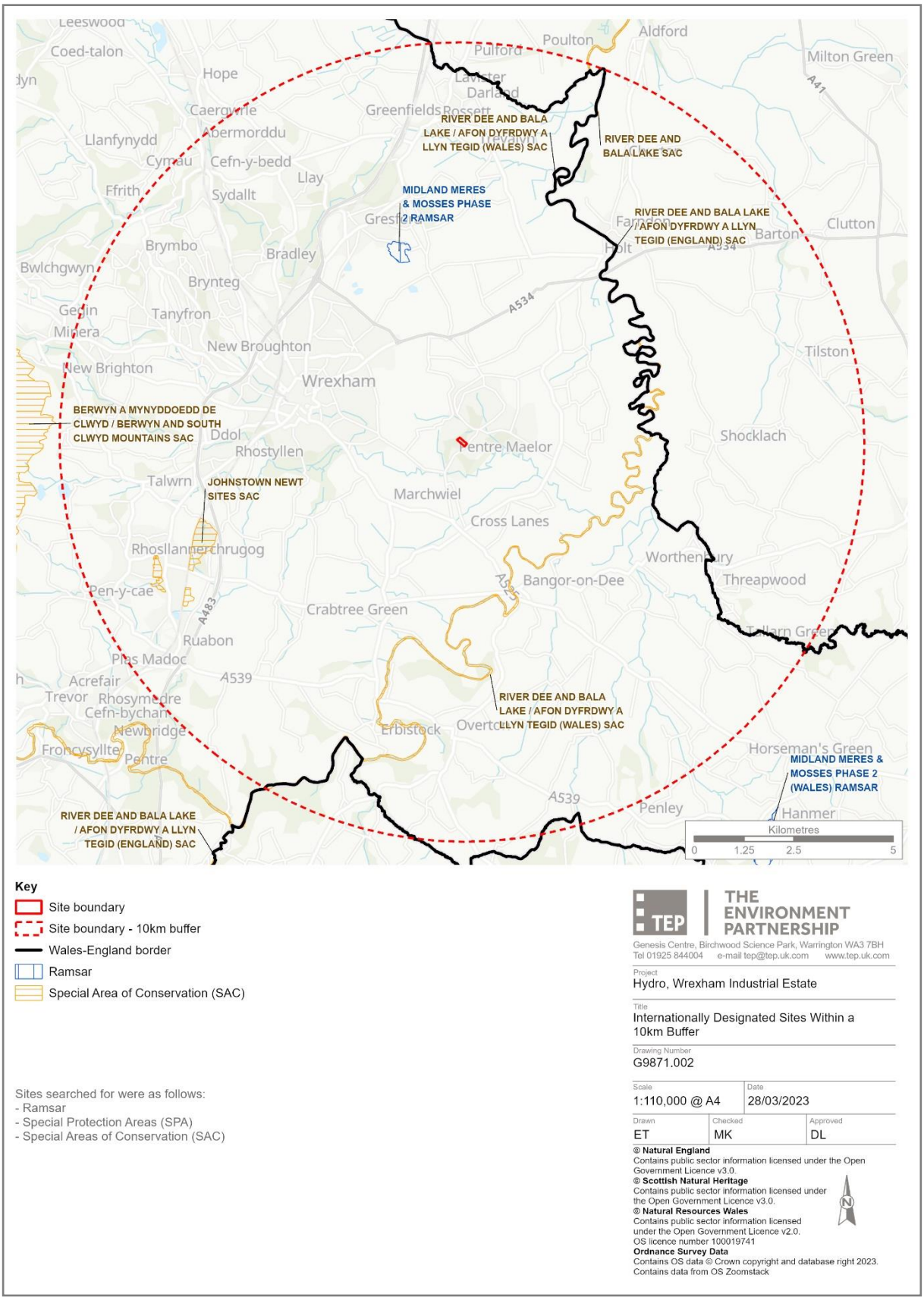
Statutory Sites

4.1 There are four internationally significant statutory wildlife designations within 10km of the site (Figure 2) and four nationally significant statutory wildlife sites within 5km of the site (Figure 3). These are detailed in Table 2 below. Links to citations are also provided.

Table 2: Statutory wildlife sites

Site Name	Designation & Citation Link	Location Relevant to Site	Reason for Site Designation
Statutory wildlife sites of international significance within 10km of the site (Figure 2)			
River Dee and Bala Lake / Afon Dyfrdwy a Llyn Tegid (Wales)	SAC – *Citation*	4.0km east	Annex I Habitats (Primary): ■ Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho Batrachion* vegetation Annex II Species (Primary): ■ Atlantic salmon *Salmo salar;* ■ Floating water-plantain *Luronium natans*; Annex II Species (Qualifying): ■ Sea lamprey *Petromyzon marinus;* ■ Brook lamprey *Lampetra planeri;* ■ Bullhead *Cottus gobio;* ■ Otter *Lutra lutra.*
River Dee and Bala Lake (England)	SAC – *Citation*	4.3km east	Annex I Habitats (Primary): ■ Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho Batrachion* vegetation Annex II Species (Primary): ■ Atlantic salmon*;* ■ Floating water-plantain; Annex II Species (Qualifying): ■ Sea lamprey*;* ■ Brook lamprey*;* ■ Bullhead*;* ■ Otter*.*
Midland Meres & Mosses Phase 2 (Wales)	Ramsar – *Citation*	4.7km northwest, beyond the A534	The site's primary interest is its wide range of lowland wetland types and successional stages within a distinct biogeographical area. Nationally important flora: ■ *Higher plants - Calamagrostis stricta, Carex elongate, Cicuta virosa* and *Thelypteris palustris.* ■ *Lower plants - Sphagnum pulchrum* and *Dicranum undulatum.* Bird species occurring at levels of national importance: *Peak counts in spring/autumn* ■ Northern shoveler *Anas clypeata.* *Peak counts in winter*

Site Name	Designation & Citation Link	Location Relevant to Site	Reason for Site Designation
			■ Great cormorant *Phalacrocorax carbo carbo, g*reat bittern *Botaurus sterraris stellaris* and *w*ater rail *Rallus aquaticus.* Nationally important invertebrates: ■ *Limnophila heterogyna, Atylotus plebeius, Hagenella clathrata, Limnophila fasciata, Carorita limnaea, Glyphipteryx lathamella, Trichiosoma vitellinae, Eilema serica, Brachythops wusteneii, Pachinematus xanthocarpos, Sittcus floricola, Lampronia fuscatella* and *Hybomitra lurida.*
Johnstown Newt Sites	SAC – *Citation*	6.5km southwest, beyond the River Clwedog, the A525 and the A483	■ Supports one of the largest known populations of great crested newts *Triturus cristatus* in Great Britain. ■ Good populations of the widespread amphibian species are also present. Annex II Species (Primary): ■ Great crested newt.
Statutory wildlife sites of national significance within 5km of the site (Figure 3)			
Afon Dyfrdwy (River Dee)	SSSI - *Citation*	3.4km east	■ The Afon Dyfrdwy is of special geological and biological interest. ■ Supports populations of floating water-plantain, slender hare's-ear *Bupleurum tenuissimum*, sea barley *Hordeum marinum*, hard-grass *Parapholis strigosa*, otter, Atlantic salmon, bullhead, brook lamprey, river lamprey *Lampetra fluviatilis*, sea lamprey, club-tailed dragonfly *Gomphus vulgatissimus* and other aquatic invertebrates.
Sontley Marsh	SSSI - *Citation*	3.5km southwest, beyond the River Clywedog and the A525	■ Sontley Marsh is of special botanical interest. ■ One of the best wetland examples in Clwyd of the "southern mesotrophic mire" type more characteristic of south-west Wales and, in North Wales, largely restricted to Ynys Môn, Dwyfor and Clwyd.
River Dee (England) SSSI	SSSI - *Citation*	4.3km east	■ The River Dee is notified for its nationally important transition through a range of river types from mesotrophic to eutrophic. ■ It is also notified for Atlantic salmon, otter, club-tailed dragonfly and fluvial geomorphology.
Vicarage Moss	SSSI - *Citation*	4.7km northwest, beyond the A534	■ Vicarage Moss is of special geomorphological and botanical interest. ■ Vicarage Moss is the largest example of a basin mire in Clwyd, the vegetation being distinctly zoned, particularly in the isolated mire occupying a subsidiary kettle hole to the south.



Key

- Site boundary
- Site boundary - 10km buffer
- Wales-England border
- Ramsar
- Special Area of Conservation (SAC)

Sites searched for were as follows:
- Ramsar
- Special Protection Areas (SPA)
- Special Areas of Conservation (SAC)

THE ENVIRONMENT PARTNERSHIP
Genesis Centre, Birchwood Science Park, Warrington WA3 7BH
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project: Hydro, Wrexham Industrial Estate

Title: Internationally Designated Sites Within a 10km Buffer

Drawing Number: G9871.002

Scale	Date
1:110,000 @ A4	28/03/2023

Drawn	Checked	Approved
ET	MK	DL

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Figure 2: Statutory wildlife sites of international significance within 10km of the site

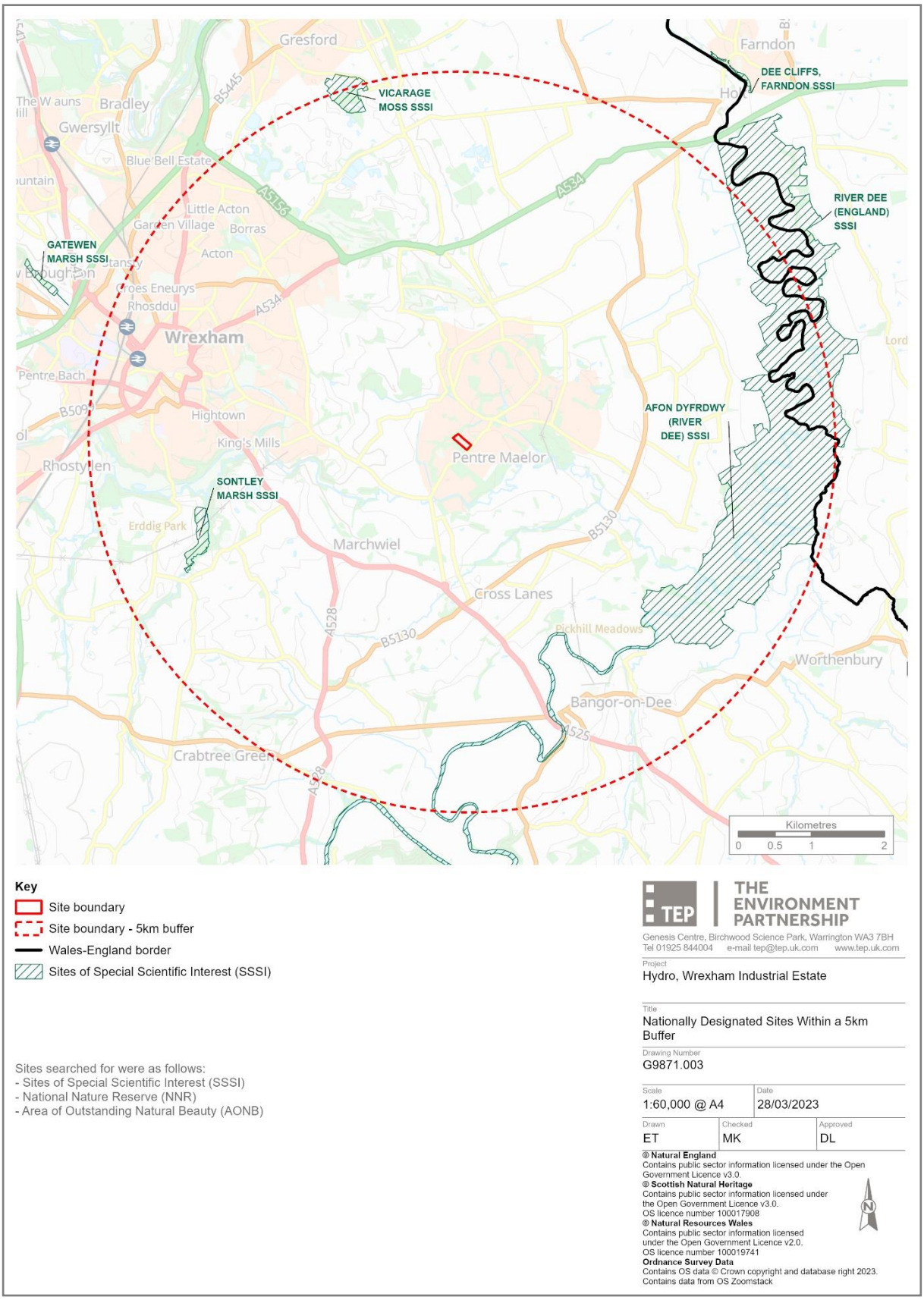


Figure 3: Statutory wildlife sites of national significance within 5km of the site

4.2 There are no statutory wildlife sites of regional / local significance within 2km of the site (Figure 4).

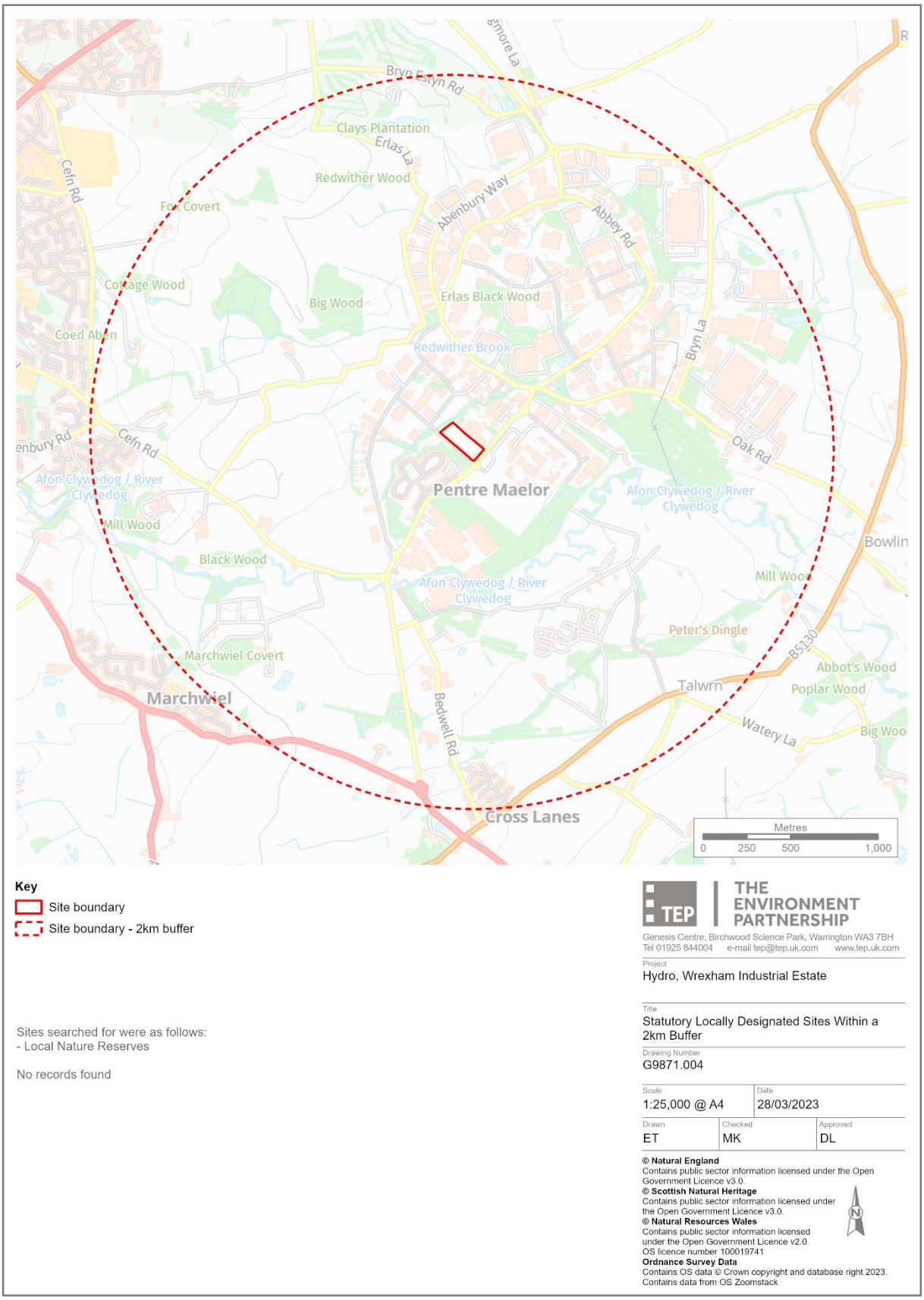


Figure 4: Statutory wildlife sites of regional/local significance within 2km of the site

Non-Statutory Wildlife Sites

4.3 There are four non-statutory locally designated wildlife sites within 2km of the site. These are summarised in **Error! Reference source not found.**3 below.

Table 3: Non-statutory local wildlife sites within 2km of the site

Site Name and Map Reference	Designation	Location Relevant to Site	Site Description and Key Interest Feature(s)
Wrexham Industrial Estate (Ref: 3)	LWS – *Citation*	0.73km north	A series of sites within the industrial estate which includes unmanaged grassland and ancient broadleaved woodland.
Cefn Park (Ref: 1)	LWS – *Citation*	0.82km northwest	A series of semi-natural broadleaved woodlands and fen habitats within Cefn Park Estate.
Peter's Dingle (Ref: 2)	LWS – *Citation*	1.57km southeast	Semi-natural broadleaved woodland, comprised of ash *Fraxinus excelsior*, sycamore *Acer pseudoplatanus* and dog's mercury *Mercurialis perennis*, along a brook.
Marchwiel Marsh (Ref: 4)	LWS – *Citation*	1.97km southwest	A marshy grassland dominated by rushes *Juncus* sp..



Figure 5: Non-statutory wildlife sites within 2km of the site (map provided by Cofnod)

5.0 Notable Habitats

Habitats of Principal Importance (HPI)

5.1 No notable habitat types identified on NRW priority habitat inventories are present within the site (Figure 6). However, an area of Ancient Semi Natural Woodland is present adjacent to the northwest boundary of the site.

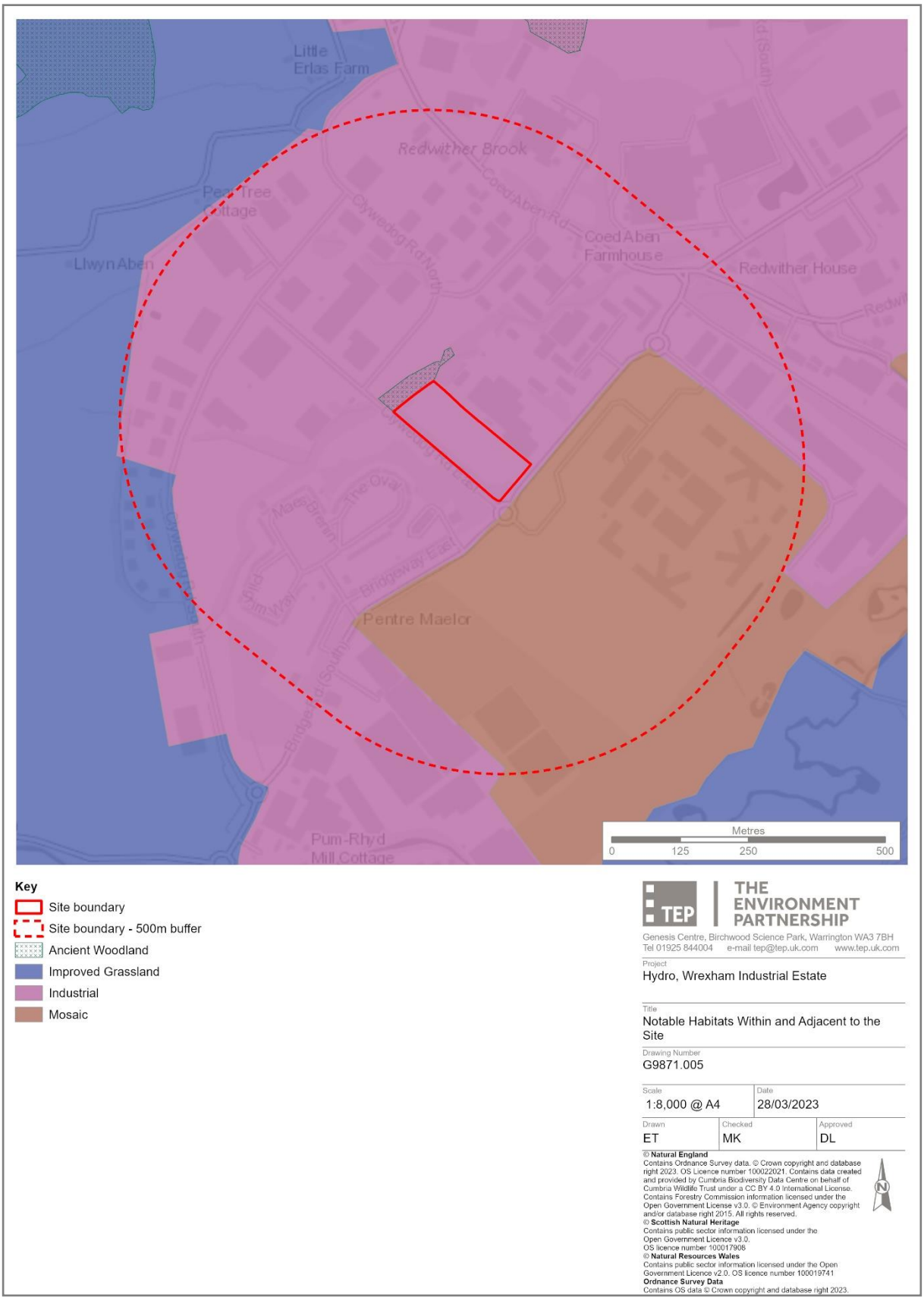


Figure 6: Notable habitats

6.0 Protected and Notable Species

Species Records

6.1 1,908 species records were returned from Cofnod for within 2km of the site. Records from within the last decade are summarised in Table 4. Birds are highly mobile, and the location of badger records are confidential; therefore, the precise locations of bird and badger records have not been provided.

Table 4: Summary of pre-existing species records returned by Cofnod

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
Amphibians			
Common toad *Bufo bufo*	SPI	17	0.32km south
Great crested newt *Triturus cristatus*	EPS, WCA5, SPI, LBAP	45	0.32km south
Birds			
Barn owl *Tyto alba*	WCA1, LBAP	5	Within 2.00km
Black-headed gull *Chroicocephalus ridibundus*	BAm	3	Within 2.00km
Bullfinch *Pyrrhula pyrrhula*	SPI, BAm	7	Within 2.00km
Cetti's warbler *Cettia cetti*	WCA1	1	Within 2.00km
Crossbill *Loxia curvirostra*	WCA1	1	Within 2.00km
Cuckoo *Cuculus canorus*	SPI, BRd	1	Within 2.00km
Dunnock *Prunella modularis*	SPI, BAm	1	Within 2.00km
Fieldfare *Turdus pilaris*	WCA1, BRd	2	Within 2.00km
Goshawk *Accipiter gentilis*	WCA1	1	Within 2.00km
Great black-backed gull *Larus marinus*	BAm	1	Within 2.00km
Greenfinch *Chloris chloris*	BRd	1	Within 2.00km
Grey wagtail *Motacilla cinerea*	BAm	4	Within 2.00km
Herring gull *Larus argentatus*	SPI, BRd	7	Within 2.00km
Hobby *Falco subbuteo*	WCA1	1	Within 2.00km
House martin *Delichon urbicum*	BRd	3	Within 2.00km

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
House sparrow *Passer domesticus*	SPI, BRd	2	Within 2.00km
Kestrel *Falco tinnunculus*	BAm	13	Within 2.00km
Kingfisher *Alcedo atthis*	WCA1	1	Within 2.00km
Lesser black-backed gull *Larus fuscus*	BAm	3	Within 2.00km
Lesser redpoll *Acanthis cabaret*	SPI, BRd	1	Within 2.00km
Linnet *Linaria cannabina*	SPI, BRd	1	Within 2.00km
Little ringed plover *Charadrius dubius*	WCA1	1	Within 2.00km
Mallard *Anas platyrhynchos*	BAm	1	Within 2.00km
Meadow pipit *Anthus pratensis*	BAm	2	Within 2.00km
Mistle thrush *Turdus viscivorus*	BRd	4	Within 2.00km
Moorhen *Gallinula chloropus*	BAm	1	Within 2.00km
Peregrine *Falco peregrinus*	WCA1	3	Within 2.00km
Redwing *Turdus iliacus*	WCA1, BAm	3	Within 2.00km
Reed bunting *Emberiza schoeniclus*	SPI, BAm	1	Within 2.00km
Rook *Corvus frugilegus*	BAm	4	Within 2.00km
Sedge warbler *Acrocephalus schoenobaenus*	BAm	3	Within 2.00km
Skylark *Alauda arvensis*	SPI, BRd	2	Within 2.00km
Song thrush *Turdus philomelos*	SPI, BAm, LBAP	4	Within 2.00km
Sparrowhawk *Accipiter nisus*	BAm	2	Within 2.00km
Starling *Sturnus vulgaris*	SPI, BRd	2	Within 2.00km
Stock dove *Columba oenas*	BAm	1	Within 2.00km
Swift *Apus apus*	BRd	4	Within 2.00km
Whitethroat *Sylvia communis*	BAm	5	Within 2.00km
Willow warbler	BAm	2	Within 2.00km

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
Phylloscopus trochilus			
Woodcock *Scolopax rusticola*	BRd	3	Within 2.00km
Woodpigeon *Columba palumbus*	BAm	5	Within 2.00km
Wren *Troglodytes troglodytes*	BAm	3	Within 2.00km
Fish			
European eel *Anguilla anguilla*	SPI	2	1.08km north
Invertebrates			
Blood-vein *Timandra comae*	SPI	1	0.55km southeast
Cinnabar *Tyria jacobaeae*	SPI	1	0.80km northeast
Dingy skipper *Erynnis tages*	SPI	69	0.27km south
Grizzled skipper *Pyrgus malvae*	SPI	55	0.31km east
Latticed heath *Chiasmia clathrata*	SPI	4	0.47km south
Shaded broad-bar *Scotopteryx chenopodiata*	SPI	1	1.17km northeast
Small heath *Coenonympha pamphilus*	SPI	33	0.44km north
Mammals			
Brandt's bat *Myotis brandtii*	EPS, WCA5	2	0.86km northeast
Brown long-eared bat *Plecotus auritus*	EPS, WCA5, SPI	2	0.40km northeast
Common pipistrelle *Pipistrellus pipistrellus*	EPS, WCA5	7	0.43km northeast
Daubenton's bat *Myotis daubentonii*	EPS, WCA5	1	0.75km northeast
Eurasian badger *Meles meles*	[redacted]	[redacted]	[redacted]
Eurasian otter *Lutra lutra*	EPS, WCA5, SPI, LBAP	3	0.73km northeast
Myotis bat *Myotis sp.*	EPS, WCA5	2	0.75km northeast
Noctule *Nyctalus noctula*	EPS, WCA5, SPI	4	0.75km northeast
Polecat *Mustela putorius*	SPI	2	1.68km northeast
Soprano pipistrelle *Pipistrellus pygmaeus*	EPS, WCA5, SPI	3	1.05km north
West European hedgehog	SPI	3	0.44km northeast

Name of Species	Relevant Legislation / Status	Number of records	Nearest record
Erinaceus europaeus			
Plants			
Bluebell *Hyacinthoides non-scripta*	WCA8	1	0.86km northeast
Canadian waterweed *Elodea canadensis*	WCA9	1	1.08km north
Himalayan balsam *Impatiens glandulifera*	WCA9, IAS	2	1.12km east
Japanese knotweed *Fallopia japonica*	WCA9	3	0.43km northeast
Montbretia *Crocosmia pottsii x aurea = C. x crocosmiiflora*	WCA9	1	1.60km northeast
Pennyroyal *Mentha pulegium*	WCA8, SPI	1	1.41km northeast
Water fern *Azolla filiculoides*	WCA9	1	1.63km northeast
Reptiles			
Common lizard *Zootoca vivipara*	WCA5, SPI	1	1.42km northeast
Grass snake *Natrix helvetica*	WCA5, SPI	2	0.72km northeast

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