

Preliminary Ecological Appraisal and Biodiversity Enhancement Strategy

The Construction Hub Academy Pen-y-Fan Industrial Estate

12th August 2026



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Contents

1	Introduction	1
1.1	Brief and Site location	1
1.2	Scope of the Study	1
2	Site Setting	2
2.1	Site Location	2
2.2	Site Description.....	2
2.3	Proposed Works.....	2
3	Methodology.....	4
3.1	Scope of the PEA	4
3.2	Desk Study.....	5
3.3	Field Study.....	6
3.4	Assessment of Ecological Value	9
3.5	Limitations	10
4	Baseline Ecological Conditions, Evaluation and Development Impacts	11
4.1	Statutory Nature Conservation Designated Sites	11
4.2	Non-Statutory Nature Conservation Designated Sites	11
4.3	Habitats and Vegetation.....	12
4.4	Invasive Plant Species	17
4.5	Summary of Ecological Value and Impact Assessment of Habitats	17
5	Protected and Notable Species	19
5.1	Notable Plant Species	19
5.2	Birds.....	19
5.3	Bats.....	20
5.4	Great Crested Newt	22
5.5	Dormouse	24
5.6	Badger.....	25
5.7	Reptiles.....	26
5.8	Invertebrates	27
5.9	Hedgehog	28
6	Required Actions and Conclusions	30

6.3 Precautionary Measures	30
6.4 Longevity of Report	32
Plan 1 – Habitats and Vegetation	33
Plan 2 – 500m Pond Search	34
Plan 3 – Detailed Soft Landscape Proposals	35
Plan 4 - Biodiversity Enhancement Plan.....	36
Appendix 1 - Summary of Legislation and Policy	38
Appendix 2 – Protected Species Legislation Relevant to Site	41
Appendix 3 – Definitions of Site Value	43

1 Introduction

1.1 Brief and Site location

Ark Ecology Ltd was commissioned by Construction Hub Ltd. to undertake a Preliminary Ecological Appraisal (PEA) of land at the Construction Hub Training Academy, Pen-y-Fan Industrial Estate, Blackwood, NP11 3XG. The purpose of the PEA is to establish the baseline ecological conditions of the site and provide recommendations to support the planning application for a new training centre. This report relates only to the development site (hereafter the Site).

A separate report will address the restoration of the adjacent Valentec Nature Reserve Site of Importance for Nature Conservation (SINC). While mandatory Biodiversity Net Gain (as required in England under Schedule 7A of the Town and Country Planning Act 1990) does not apply in Wales, Planning Policy Wales (Edition 12, 2024) requires development to deliver a Net Benefit for Biodiversity and to maintain and enhance ecosystem resilience in accordance with Section 6 of the Environment (Wales) Act 2016. Accordingly, this PEA identifies proportionate opportunities for habitat creation and ecological enhancement within the Site to contribute positively to local biodiversity and green infrastructure objectives.

1.2 Scope of the Study

The study comprised the following:

- A desk study to identify existing information on statutory and non-statutory sites of nature conservation interest, and records of notable or protected habitats or species within the site and its surrounding area. This included a review of data obtained from the South-East Wales Biodiversity Records Centre (SEWBReC), as well as publicly available datasets.
 - A UKHAB/ PEA survey of the site, extended to search for evidence of, and potential for, protected fauna.
 - An assessment of the ecological value of habitats and features within the Site and an appraisal of the Site's role within the wider ecological network, including consideration of habitat connectivity and adjacent ecological receptors.
 - Identification of potential ecological constraints associated with the proposed development and an assessment of likely ecological impacts, including the identification of appropriate avoidance, mitigation and precautionary measures where required.
 - Consideration of opportunities for biodiversity enhancement and green infrastructure provision, in accordance with Planning Policy Wales and the Caerphilly County Borough Local Development Plan,
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2 Site Setting

2.1 Site Location

The Site is centred on Ordnance Survey grid reference ST1961399801 (nearest postcode NP11 3XG) on the Pen-y-Fan Industrial Estate. It occupies approximately 1.42 ha. The site location is shown in Figure 1 below.



Figure 1 – Site Location

2.2 Site Description

The Site is situated within an industrial and semi-rural context, bounded by Manmoel Road to the west and Parkway to the east. Industrial units and hardstanding are present immediately to the north and south, with areas of semi-natural habitat and open land present in the wider surrounding area. The Valentec Nature Reserve SINC lies 54m to the south of the Site boundary.

2.3 Proposed Works

The proposals comprise the retention, formalisation and ongoing operation of the Construction Hub Training Academy, together with limited additional works to facilitate safe access, circulation and long-term site management (see Plan 5).

The Site has already been subject to substantial clearance and earthworks prior to the submission of the current planning application. These works have resulted in the creation of areas of hardstanding, sealed surfaces, unsealed compacted ground, access tracks and training areas, and the installation of temporary and permanent infrastructure associated with construction plant training activities. The Site is currently in active use as a machine and plant training facility.

The proposed development seeks to regularise the existing use of the Site, retain the established training infrastructure, and deliver a defined site layout supported by appropriate access arrangements, boundary treatments and green infrastructure.

Moving forward, the proposals include:

- Continued use of the Site as a construction and plant training facility, including the retention of existing hardstanding, access routes and operational areas.
- Removal of limited areas of mixed scrub and individual trees to the north-east of the Site to facilitate revised access arrangements, noting that the existing southern access (which crossed land within the SINC) will be closed and restored as part of a separate scheme. This is shown in Plan 3.
- Retention of the line of mature trees along the western boundary, which lie outside the red line boundary but whose Root Protection Areas (RPAs) extend into the Site and will be respected in the final layout.
- Implementation of a green infrastructure and biodiversity enhancement strategy within the Site, including:
 - A 7m wide woodland belt along the southern boundary;
 - A 7m wide woodland planting along the western boundary, reinforcing existing off-site tree cover;
 - A 7m wide planting buffer along the northern boundary;
 - Wildflower meadow areas with scattered native tree planting;
 - Ornamental tree planting on verges; and
 - An attenuation pond with wetland wildflower planting.
- Measures to improve habitat connectivity across and around the Site, providing ecological buffering and visual screening and contributing to local biodiversity enhancement in accordance with local planning policy.

No further expansion of the Site footprint is proposed.

3 Methodology

3.1 Scope of the PEA

This Preliminary Ecological Appraisal (PEA) has been undertaken in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) *Guidelines for Preliminary Ecological Appraisal* (CIEEM, 2017)¹. The assessment has also had regard to relevant definitions and principles set out within the CIEEM *Guidelines for Ecological Impact Assessment in the UK and Ireland* (CIEEM, 2024)², applied proportionately and where relevant.

The purpose of the PEA is to identify baseline ecological conditions, establish the presence or potential presence of protected and notable species and habitats, identify ecological constraints, and determine the need for further survey, mitigation or enhancement measures in relation to the proposed development.

The assessment has focused on identifying Important Ecological Features (IEFs) within the Site and its Zone of Influence (Zol). In accordance with CIEEM guidance, IEFs may include:

- Section 7 of the Environment (Wales) Act 2016 (Habitats and Species of Principal Importance for Wales).
- Legally protected species.
- Red Listed or rare species (based on Red Data Book lists, Birds of Conservation Concern and species considered to be nationally rare/scarce).

The Zone of Influence (Zol) is defined as the area over which the proposed development could reasonably be expected to give rise to ecological effects. The Zol varies depending on the ecological feature considered; however, for this Site it generally comprises the land within the red line boundary and immediately adjacent habitats that may be affected through direct impacts, disturbance, hydrological change, or loss of connectivity.

¹ CIEEM (2017) *Guidelines for Preliminary Ecological Appraisal*, 2nd edition. Chartered Institute of Ecology and Environmental Management, Winchester.

² CIEEM (2017). *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*. Version 1.3, September 2024. Chartered Institute of Ecology and Environmental Management, Winchester, UK.

3.2 Desk Study

3.2.1 Protected Sites, Habitats and Species

Existing information on designated sites and protected species was obtained from the sources detailed in Table 1 below.

Source	Data	Radius of Search
MAGIC	Statutory and non-statutory nature conservation designated sites	Ramsar/Special Area of Conservation (SACs)/Special Area of Protection (SPAs)/Site of Special Scientific Interest (SSSIs) National Nature Reserves (NNRs), Local Nature Reserves (LNRs) -2km
		Ancient Semi-Natural Woodland, (ASNW), Restored Ancient Woodland Sites (RAWS) and Plantation on Ancient Woodland Sites (PAWS) - 1km
		SACs/SSSIs(designated for bats) - 10km
SEWBREC	Protected species records	1km.
	Non-Statutory Designated Sites (SINCs)	1km

Table 1 – Sources of Information

All available records of bat roosts, badger, dormouse, amphibians and reptiles were considered. For other species, only records collected within the last 10 years were considered relevant.

3.2.2 Landscape Context

The Site and its wider landscape context were assessed using aerial imagery, Ordnance Survey mapping and SEWBReC information.

The presence of off-site habitats and ecological features that may contribute to ecological connectivity or influence the Site's ecological value (for example ponds, woodland blocks, hedgerows and designated sites) was identified. Where relevant, such features have been considered within the assessment of impacts presented in Section 4.

3.2.3 Ancient Woodland

Although ancient woodland is not a designated site as such, it is often listed as a designated site due to its ecological significance and associated protection. Ancient woodland has therefore been included within the non-statutory designated site section of this report.

3.2.4 Planning Authority

The Caerphilly County Borough Council (CCBC) planning portal was reviewed to identify any previously submitted ecological information relating to the Site or its immediate surroundings. Relevant consultation responses, pre-application advice and ecological comments issued by the Local Planning Authority and its consultees have been considered where available.

3.3 Field Study

3.3.1 Personnel

The field survey was undertaken in good weather on the 11th of December 2025 by Daniel Falvey MCIEEM.

3.3.2 Vegetation and Habitats

The vegetation and habitat types present within the survey area were categorised and mapped in accordance with the standard³ The UK Habitat Classification (version 2) codes (UKHab 2023)⁴. Dominant and conspicuous plant species were recorded for each habitat. Target notes were used to record information on features of ecological interest, such as evidence of, or habitats with potential to support, protected species, or where any features of interest too small to map were recorded. Following the completion of the survey, a colour-coded habitat plan was digitised to show the extent and distribution of the different habitat types present within the site (see Plan 1).

Habitats of Principal Importance listed under Section 7 of the Environment (Wales) Act 2016 were consulted to provide a Welsh ecological policy context for the Site and to inform the appraisal of habitat value and the consideration of potential protected and notable species.

Invasive plant species listed on Schedule 9⁵ of the Wildlife and Countryside Act 1981 (as amended), such as Himalayan balsam (*Impatiens glandulifera*), giant hogweed (*Heracleum mantegazzianum*) and Japanese knotweed (*Fallopia japonica*) were also noted during the survey, if present.

³ Some additional categories were also used if applicable e.g. broadleaved trees indicated by green filled circles rather than using secondary codes.

⁴ UKHab Ltd (2023). *UK Habitat Classification Version 2.0*. Version 2.01, July 2023. UKHab Ltd.

⁵ Schedule 9 species of plants and animals are ones that do not naturally occur in Great Britain but have become established in the wild and represent a threat to the natural fauna and flora.

3.3.3 Protected and Notable Species

Evidence of, and habitats with, potential to support protected or notable species were noted, especially species meeting any of the following criteria:

- Listed under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species (Amendment) (EU Exit) [‘CHSAEU’] Regulations 2019;
- Listed under Section 7 of the Environment (Wales) Act 2016 as habitats or species of principal importance for the purpose of maintaining and enhancing biodiversity in Wales.
- Listed as a local priority for conservation, for example in the relevant Local Biodiversity Action Plan (LBAP);
- Red Listed using International Union for the Conservation of Nature (IUCN) criteria (e.g. in one of the UK Species Status Project⁶ reviews, in the Species of Conservation Concern Red, Amber or Near Threatened List⁷ or, where a more recent assessment of the taxonomic group has not yet been undertaken, listed in a Red Data Book);
- Listed as a Nationally Rare or Nationally Scarce species (e.g. in one of the Species Status Project reviews) or listed as a Nationally Notable species where a more recent assessment of the taxonomic group has not yet been undertaken; and/or
- Endemic to a geographic location (it is appropriate to recognise endemic sub-species, phenotypes, or cultural behaviours of a population that are unique to a particular place).

Only those species with a reasonable likelihood of being present within the Site, based on habitat availability, desk study information and field survey observations, are considered further within this report.

The assessment of protected and notable species was undertaken using a combination of desk study data, habitat appraisal and field signs observed during the PEA survey, as described in the sections below.

3.3.3.1 Birds

Any birds observed during the field survey were recorded, along with features capable of supporting nesting birds (e.g. retained trees, scrub, hedgerows, buildings and boundary vegetation). The Site was also assessed for its actual and potential suitability to support species listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).

A comprehensive breeding bird survey was not undertaken, as this was beyond the scope of the Preliminary Ecological Appraisal.

⁶ The Species Status project is the successor to the JNCC's Species Status Assessment project, providing up-to-date assessments of the threat status of various taxa using the internationally accepted Red List guidelines (<http://jncc.defra.gov.uk/page-1773>).

⁷ Eaton *et al.* (2015) Birds of conservation concern 4: the population status of birds in the UK, Channel Islands and Isle of Man. *British Birds* 108: 708-746.

3.3.3.2 Bats

A preliminary assessment of the value of the site for bats (and any potential roost sites therein) was made in accordance with Table 4.1 of the Bat Surveys for Professional Ecologists (Collins, 2023)⁸. The assessment was based on the relative abundance and quality of habitat features within the site, and surrounding landscape, suitable for roosting, foraging and commuting bats.

Landscape features suitable for foraging and commuting bats include linear landscape features such as watercourses, transport corridors (e.g. roads, sunken lanes railways), walls, hedgerows, coppice, woodland fringe, tree lines, ditches and areas of scrub and pasture.

3.3.3.3 Great Crested Newts

The site was assessed for its potential to support Great Crested Newt (*Triturus cristatus*), a European Protected Species listed under the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended). A desk-based search and aerial imagery review were undertaken to identify any waterbodies within a 500 m radius of the site boundary, in line with standard guidance⁹. Four ponds were identified within 500m and are shown on Plan 2.

3.3.3.4 Dormouse

The Site was assessed for its potential to support hazel dormouse (*Muscardinus avellanarius*), a European Protected Species listed under the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended).

The assessment was undertaken through a combination of desk study information, review of aerial imagery and habitat appraisal during the field survey. Attention was given to the presence and condition of habitats typically associated with dormice, including hedgerows, scrub, woodland edge, and areas of dense, connected shrub cover capable of providing foraging, nesting and commuting opportunities.

No targeted dormouse surveys were undertaken as part of this Preliminary Ecological Appraisal.

⁸ Collins, J. (Ed.) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines* (4th Edition). Bat Conservation Trust, London.

⁹ Langton, T.E.S., Beckett, C.L., and Foster, J.P. (2001), *Great Crested Newt Conservation Handbook*, Froglife, Halesworth.

3.3.3.5 Otters, Water Voles and White-Clawed Crayfish

There are no habitats on site that support these species. These species are not mentioned any further in this report.

3.3.3.6 Badgers

A targeted survey for this species was not undertaken. However, a walkover survey was undertaken to assess the suitability of the site to support badgers (*Meles meles*) and to search for evidence of badger activity including setts, latrines, foraging signs, footprints, snuffle holes, paths, and hairs. Particular attention was paid to woodland edges, field boundaries, and areas of dense vegetation where setts are typically located. Any setts encountered were classified based on their size, structure, and evidence of current use. The survey also considered the site's connectivity to the wider landscape and its potential to support badger foraging and commuting activity.

3.3.3.7 Reptiles

Habitats were assessed for their potential to support reptiles. The survey considered factors such as vegetation structure, sun exposure, refugia (e.g. logs, rubble, tussocks), and habitat connectivity. Suitable features such as unmanaged grassland, scrub edges, and mosaic habitats were identified as offering potential basking, foraging, and shelter opportunities for common reptile species. No targeted presence/absence surveys were undertaken.

3.3.3.8 Invertebrates

The habitats on site were assessed for their suitability for invertebrates. A targeted survey for this species group was not undertaken. The habitats on site are common with no notable plant species recorded. The site is likely to support common assemblages of invertebrates but no species or populations of significance. Invertebrates are not mentioned any further in this report.

3.3.3.9 Other Species

General habitat suitability and incidental sightings of other animal species such as hedgehog were also noted.

3.4 Assessment of Ecological Value

The ecological value of habitats and features within the Site has been provisionally assessed to inform the Preliminary Ecological Appraisal and to identify ecological constraints, sensitivities and opportunities for mitigation and enhancement.

The assessment has followed the principles of ecological valuation set out within the Chartered Institute of Ecology and Environmental Management (CIEEM) guidance, including the geographic frame of reference commonly applied to

ecological features (i.e. international, national, regional, county, local and site-level value). This approach has been applied proportionately and at a level appropriate to a PEA, rather than a full Ecological Impact Assessment.

Ecological value has been assigned based on factors including habitat type, extent, condition, connectivity, presence or potential presence of protected or notable species, and the Site's role within the wider ecological network. The purpose of this valuation is to guide the assessment of potential effects, inform design evolution, and identify appropriate mitigation and enhancement measures.

No formal assessment of impact significance has been undertaken at this stage.

3.5 Limitations

General Temporal Limitations

Ecological surveys provide a snapshot of conditions at the time of survey only. Species presence, habitat condition and habitat usage can change over time due to seasonal variation, land management practices and external influences.

At the time of the survey, the Site had been subject to extensive vegetation clearance and ground disturbance prior to the commissioning of this PEA. As a result, the availability of habitats capable of supporting protected and notable species was reduced, and the current ecological value of the Site is likely to be lower than under previous site conditions.

The assessment has therefore relied on a combination of desk study information, aerial imagery, and professional judgement to consider the potential for species and habitats that may have been present prior to clearance or may recolonise in the future.

No protected species presence/absence surveys or population assessments were undertaken as part of this PEA.

4 Baseline Ecological Conditions, Evaluation and Development Impacts

This section describes the baseline ecological conditions of the Site and provides an evaluation of on-site habitats and the actual or potential presence of protected and notable species. It identifies the likely ecological constraints associated with the Site and considers the potential effects of the proposed development on ecological features.

Given the scope of this Preliminary Ecological Appraisal, the assessment focuses on identifying baseline conditions and potential risks to ecological receptors. Detailed assessment of impact significance and cumulative effects would be addressed through subsequent stages of ecological assessment, should these be required.

A summary of the relevant legislation and planning policy relating to protected sites, habitats and species is provided in Appendices 1 and 2.

4.1 Statutory Nature Conservation Designated Sites

Statutory Sites (SACs or SSSIs) Designated for Bats within 10km of Site

There are no statutory sites designated for bats within 10km of the site.

SACs, SSSIs and LNRs within 2km of Site

There are no statutory sites designated for wildlife within 2km of the site.

4.2 Non-Statutory Nature Conservation Designated Sites

A review of non-statutory nature conservation designations identified several Sites of Importance for Nature Conservation (SINCs) within 1 km of the Site boundary.

The following SINCs are located within 1 km of the Site:

- **Valentec Nature Reserve SINC**, North of Croespenmaen (c. 54 m south);
 - **Pen-y-Fan Pond and Meadows SINC**, West of Pentwyn (c. 383 m north);
 - **Pen-y-Fan Industrial Estate Woodland SINC**, Oakdale (c. 377 m south-east);
 - **Crumlin Old Farm Meadows SINC**, Crumlin (c. 733 m south-east);
 - **Pant Glas Meadow SINC**, Trinant (c. 822 m east);
 - **Nant Gau and Darran Woodlands SINC**, North of Oakdale (c. 757 m south-west).
-

Of these sites, the Valentec Nature Reserve SINC lies approximately 54m south of the site boundary and has the potential to be influenced by activities associated with the Site. This SINC is designated for its species-rich grassland, scrub and wetland habitats.

It is noted that a small area of the Valentec Nature Reserve SINC has already been partially cleared to facilitate access arrangements associated with the Site. The restoration and enhancement of this area will be addressed in a separate ecological report and falls outside the scope of this Preliminary Ecological Appraisal.

The proposed development within the red line boundary will not result in any further direct or indirect impacts on the Valentec Nature Reserve SINC. Works associated with this application are limited to small-scale scrub clearance within the north-eastern part of the Site and do not extend into or affect the SINC.

The remaining SINC within 1 km are separated from the Site by existing industrial development, road infrastructure and/or intervening land uses. There are no direct habitat linkages between these sites and the Site, and no pathways by which the proposed development would reasonably be expected to result in direct or indirect effects. These sites are therefore not considered further within this assessment.

Ancient Woodland Sites

A review of the Natural Resources Wales Ancient Woodland Inventory identified the following woodland features within 1 km of the Site:

- Six areas of Ancient Semi-Natural Woodland (ASNW);
- One Plantation on Ancient Woodland Site (PAWS);
- One Ancient Woodland Site of Unknown Category;
- One NRW Priority Area (Woodland – PAWS).

All of these woodland sites are located to the west of the Site and are physically and functionally disconnected from it. They are separated from the Site by existing development, transport corridors and intervening land uses, and there are no hydrological, ecological or landscape linkages that would be affected by the proposed development.

Accordingly, no likely significant effects on ancient woodland or priority woodland sites are anticipated, and these features are not considered further within this Preliminary Ecological Appraisal.

4.3 Habitats and Vegetation

Each habitat within the zone of influence is described in the sections below.

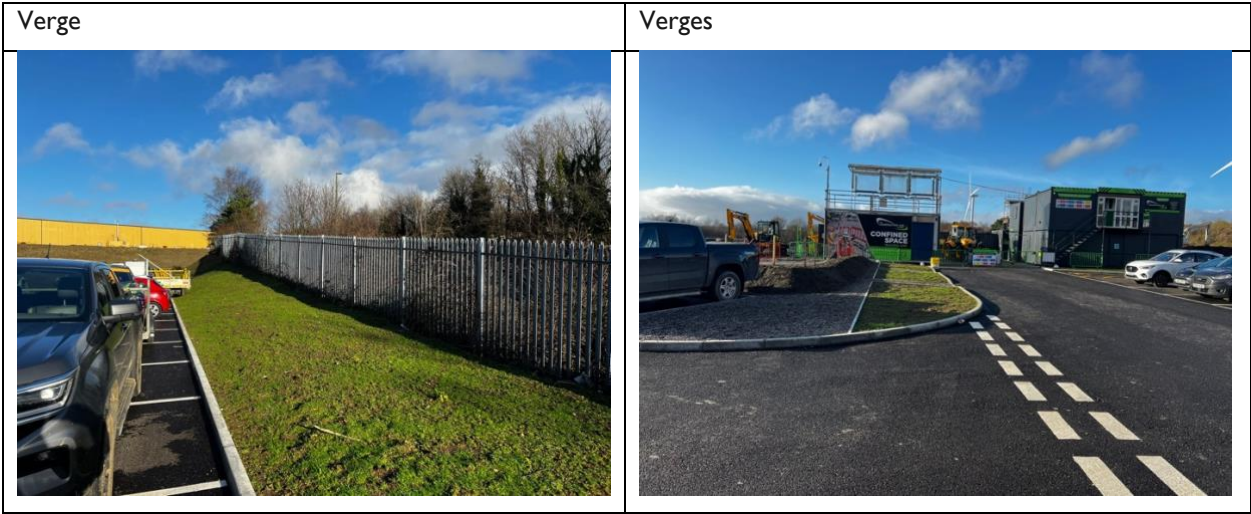
4.3.1 Modified Grassland (g4)

Areas of modified grassland are present across the Site, primarily associated with recently formed verges, roadside margins and areas of re-instatement following groundworks. These areas appear to have been recently seeded and are characterised by a species-poor sward with variable establishment and patches of exposed bare ground.

The grassland is dominated by perennial rye-grass (*Lolium perenne*), with frequent ruderal and disturbance-tolerant species including willowherb (*Epilobium* sp.), wavy bittercress (*Cardamine flexuosa*), common daisy (*Bellis perennis*) and bristly oxtongue (*Helminthotheca echinoides*). Areas of bare earth are present throughout, reflecting recent creation and ongoing disturbance.

Along the roadside verge adjacent to Parkway, the modified grassland is slightly more established and includes additional species such as common dandelion, yarrow, ribwort plantain, creeping buttercup, meadow buttercup and creeping thistle.

Overall, this habitat is of low ecological value, typical of recently disturbed or landscaped ground, with limited botanical diversity and low potential to support notable plant species.



4.3.2 Developed Land; Sealed Surface

Areas of developed land comprising sealed surfaces are present within the Site and include the car park, access roads and areas of hardstanding. These surfaces consist of impermeable materials associated with the industrial estate and training facilities.

This habitat offers negligible ecological value, providing no habitat for flora and limited value for fauna beyond incidental use by common, urban-tolerant species.



4.3.3 Artificial Unvegetated; Unsealed Surface

Areas of developed land comprising unsealed surfaces are present across the Site, including bare earth associated with the training centre footprint and other unsealed areas resulting from recent clearance and groundworks.

These areas are largely unvegetated or sparsely colonised by early successional species and are subject to ongoing disturbance. The habitat is transitional in nature and is expected to change depending on future site management and development.

The unsealed surfaces are of negligible ecological value, with limited potential to support protected or notable species in their current condition.



4.3.4 Mixed Scrub with Scattered Trees

A band of mixed scrub with scattered trees is present along the eastern boundary of the Site between Parkway and the developed area. The scrub layer is dominated by bramble (*Rubus fruticosus* agg.), with trees and shrubs including silver birch (*Betula pendula*), Scots pine (*Pinus sylvestris*), pedunculate oak (*Quercus robur*), common ash (*Fraxinus excelsior*), goat willow (*Salix caprea*), alder (*Alnus glutinosa*) and blackthorn (*Prunus spinosa*).

This habitat provides some limited value for nesting birds and foraging opportunities for common species but is fragmented and constrained by adjacent infrastructure. Overall, it is of local ecological value.



4.3.5 Derelict/ Vacant Land (off-site)

There is an area of derelict land, it lies on highways land off-site to the south-west of the site. This area appears to be subject to intermittent vehicle use, with evidence that cars occasionally encroach onto the land. Vegetation reflects disturbance and a lack of active management.

The habitat is characterised by tall ruderal species including bracken (*Pteridium aquilinum*), creeping thistle, prickly sow-thistle (*Sonchus asper*), common fumitory (*Fumaria officinalis*), common nettle (*Urtica dioica*), cock's-foot (*Dactylis glomerata*), willowherb, foxglove (*Digitalis purpurea*) and yarrow.

This habitat provides limited foraging and shelter opportunities for common wildlife but is species-poor and heavily influenced by disturbance. It is of low ecological value.



4.3.6 Line of Trees (Off-site Western Boundary)

A line of mature trees is present along the western boundary but lie off-site on highways land, located outside the red line boundary. This linear feature forms part of the wider landscape structure but is not within the development footprint.

The tree canopy comprises pedunculate oak, common ash, silver birch, goat willow, hazel (*Corylus avellana*), hawthorn (*Crataegus monogyna*) and holly (*Ilex aquifolium*). The trees are mature, reaching approximately 20 m in height, with diameter at breast height measurements ranging between approximately 350 mm and 450 mm.

The understorey includes honeysuckle (*Lonicera peridymenum*), male fern (*Dryopteris filix-mas*), ivy (*Hedera helix*), crab apple (*Malus sylvestris*), common nettle, herb-robert (*Geranium robertianum*), bramble and occasional cotoneaster (*Cotoneaster* sp.).

This tree line provides localised habitat connectivity and potential for nesting birds and foraging bats. As it is located off-site, it will not be directly affected by the proposed development, although root protection areas are relevant to design considerations. The habitat is considered to have local value.

Line of trees	Line of trees
	

4.4 Invasive Plant Species

None recorded.

4.5 Summary of Ecological Value and Impact Assessment of Habitats

The habitats present within the Site comprise modified grassland, mixed scrub with scattered trees, derelict land, and areas of developed land with sealed and unsealed surfaces. A line of trees is present along the western boundary but lies outside of the red line boundary on highways land.

None of the habitats within the Site meet criteria for designation at international, national, regional, county/district or high local level. The nearby Valentec Nature Reserve Site of Importance for Nature Conservation (SINC) is excluded from this assessment and is addressed in a separate report.

Most on-site habitats will be retained within the proposed development. Limited habitat loss will occur where small areas of mixed scrub with trees and adjacent modified grassland along the north-eastern boundary are required to be cleared to facilitate access arrangements. These habitats provide localised ecological function, including limited nesting and foraging opportunities for some species; however, they are fragmented, disturbed and well represented in the surrounding landscape.

The removal of these habitats is not anticipated to result in significant adverse ecological effects. The proposed biodiversity enhancement strategy and green infrastructure statement includes measures such as woodland and hedgerow planting along Site boundaries; this will provide replacement habitat and enhance habitat structure and connectivity within and beyond the Site.

Areas of developed land with sealed surfaces are of negligible ecological value and their presence or modification will have no ecological consequence.

Overall, the proposed development is not expected to give rise to significant adverse ecological impacts, subject to the implementation of appropriate avoidance, protection and enhancement measures.

5 Protected and Notable Species

5.1 Notable Plant Species

No national, regional or locally significant plant species were recorded.

5.2 Birds

Desk Study Results

The desk study identifies a range of bird species in the wider area, including Schedule 1 species, Section 7 species, and Birds of Conservation Concern (Wales) red- and amber-listed species. Some species fall within more than one conservation category, reflecting overlapping legal and conservation frameworks. These records primarily reflect the wider landscape context and do not necessarily indicate regular or frequent use of the Site.

Conservation Status	Species within Search Area
Schedule 1 (Wildlife and Countryside Act 1981)	barn owl (<i>Tyto alba</i>), peregrine (<i>Falco peregrinus</i>), red kite (<i>Milvus milvus</i>), kingfisher (<i>Alcedo atthis</i>)
Section 7 Species (Environment Wales Act 2016)	dunnock (<i>Prunella modularis</i>), skylark (<i>Alauda arvensis</i>), song thrush (<i>Turdus philomelos</i>), house sparrow (<i>Passer domesticus</i>), starling (<i>Sturnus vulgaris</i>), reed bunting (<i>Emberiza schoeniclus</i>), linnet (<i>Linaria cannabina</i>), bullfinch (<i>Pyrrhula pyrrhula</i>), cuckoo (<i>Cuculus canorus</i>), tree pipit (<i>Anthus trivialis</i>), lesser spotted woodpecker (<i>Dryobates minor</i>), kestrel (<i>Falco tinnunculus</i>), herring gull (<i>Larus argentatus</i>), black-headed gull (<i>Chroicocephalus ridibundus</i>)
Red List	starling (<i>Sturnus vulgaris</i>), cuckoo (<i>Cuculus canorus</i>), tree pipit (<i>Anthus trivialis</i>), linnet (<i>Linaria cannabina</i>), kestrel (<i>Falco tinnunculus</i>).
Amber List	bullfinch (<i>Pyrrhula pyrrhula</i>), skylark (<i>Alauda arvensis</i>), house sparrow (<i>Passer domesticus</i>).

Field Survey Results and Evaluation

A small number of common bird species were recorded during the field survey, including carrion crow (*Corvus corone*) and woodpigeon (*Columba palumbus*). The Site includes limited habitat suitable for nesting birds, primarily within areas of mixed scrub and scattered trees, and within off-site boundary trees.

The modified grassland and unsealed developed land are subject to frequent disturbance and offer negligible suitability for ground-nesting birds.

Overall, the Site is assessed as being of local value for birds, supporting a typical assemblage of common and widespread species.

Impact Assessment of Proposed Development on Birds

Most habitats suitable for birds will be retained. A small area of mixed scrub and adjacent grass verge to the north-east will be removed to facilitate access. This loss is not considered significant given the limited extent of habitat affected and the availability of similar habitat in the surrounding area.

Vegetation clearance has the potential to affect nesting birds if undertaken during the breeding season (March–August inclusive). To avoid an offence under the Wildlife and Countryside Act 1981 (as amended), vegetation clearance should be undertaken outside of the breeding season or preceded by a nesting bird check undertaken by a suitably qualified ecologist.

5.3 Bats

Desk Study Results

The desk study identified records of several bat species within the wider area, including lesser horseshoe bat (*Rhinolophus hipposideros*), greater horseshoe bat (*Rhinolophus ferrumequinum*), common pipistrelle (*Pipistrellus pipistrellus*) and noctule (*Nyctalus noctule*). These records largely relate to known roost sites and activity associated with buildings, culverts and former industrial structures in the surrounding landscape, particularly at Navigation Colliery, Crumlin, and Pen-y-Fan Pond, and do not indicate regular use of the Site itself.

The nearest bat record to the Site is a single adult lesser horseshoe bat recorded in 2023 at a culvert at Pen-y-Fan Pond, located 632m to the north of the Site. This record is not ecologically connected to the site and it's not clear if this is a roost or flight record.

The remaining records are over 1km from the site. These comprise several confirmed and suspected roost records, including night roosts and day roosts of lesser and greater horseshoe bats within buildings at Navigation Colliery, Crumlin, and a small maternity roost of common pipistrelle. A small number of records relate to bat activity only, including noctule. All roost and activity records are associated with off-site features, and no roosts are present within the Site.

Field Survey Results and Evaluation

The Site exhibits a clear contrast in suitability for bats across different areas. The central and majority portion of the Site, comprising hardstanding, bare ground, short sward grassland and disturbed training areas, is of negligible suitability for bats. These areas lack structural diversity, shelter, and prey availability, and do not provide meaningful foraging or commuting opportunities.

In contrast, the western and eastern Site boundaries provide moderate suitability for bat foraging and commuting. Along the western boundary, the retained off-site line of mature trees with associated understorey vegetation forms a continuous linear feature connected to the wider landscape. This feature provides shelter, navigational cues and foraging opportunities and is likely to be used by commuting and foraging bats moving through the area.

Similarly, the mixed scrub and scattered trees along the eastern boundary adjacent to Parkway provide structural diversity and localised foraging habitat, albeit within a more constrained and disturbed context. While this habitat is narrower and partially influenced by road infrastructure, it nevertheless offers shelter and edge habitat that could be used by small numbers of bats for commuting and opportunistic foraging.

No buildings or trees with bat roost potential were identified within the Site or within the areas affected by the proposed works. Overall, the Site is assessed as being of local value for bats, with moderate suitability for foraging and commuting limited to boundary habitats, and negligible suitability across the central operational areas.

Impact Assessment of Proposed Development

The proposed development will primarily affect areas of negligible suitability for bats within the central part of the Site and will not result in the loss of roosting habitat. Boundary vegetation providing foraging and commuting value will be largely retained, including the off-site western tree line, which represents the most functionally important bat habitat in the vicinity.

A small area of mixed scrub along the eastern boundary will be lost to facilitate access arrangements; however, this habitat is limited in extent and its removal is not anticipated to result in significant adverse effects on bat foraging or commuting activity at the local scale.

Proposed biodiversity enhancement measures, including the creation of woodland, scrub and hedgerow planting along Site boundaries, will strengthen habitat connectivity and provide improved foraging and commuting opportunities for bats over time.

Overall, the proposed development is not expected to result in significant adverse impacts on bats, and no further survey or mitigation is required beyond standard precautionary measures during construction.

5.4 Great Crested Newt

Desk Study Results

The desk study identified records of common amphibian species within the wider area, including palmate newt (*Lissotriton helveticus*) and common frog (*Rana temporaria*). In addition, common frog and common toad (*Bufo bufo*) have been recorded within the Valentech Nature Reserve SINC to the south of the Site (in 2007).

No records of great crested newt (*Triturus cristatus*) were returned within 1 km of the Site from the SEWBRc data search. While the Valentech Nature Reserve SINC citation notes the potential for great crested newt, there are no confirmed records of this species associated with the SINC or the surrounding area.

Field Survey Results and Evaluation

No ponds or waterbodies are present within the Site. One pond is located approximately 172 m to the south of the Site boundary (see Plan 2), forming part of the Valentec Nature Reserve SINC. No additional ponds were identified within the Site itself. Three further ponds are present within 500 m; however, these are located beyond significant barriers to dispersal, including roads and built infrastructure.

Terrestrial habitat within the Site is generally of negligible suitability for amphibians due to the predominance of hardstanding, bare ground, short sward grassland and frequent disturbance. These habitats provide limited shelter, foraging opportunity or hibernation potential.

A line of trees and associated understorey vegetation along the western boundary offers some structural cover; however, this habitat is separated from the pond to the south by Manmoel Road. While it is acknowledged that amphibians can occasionally cross roads, Manmoel Road represents a barrier to regular dispersal and functional connectivity. Importantly, this boundary habitat will be retained in situ and will not be affected by the proposed works.

An area of mixed scrub with scattered young trees located along the north-eastern boundary of the Site is structurally capable of supporting amphibians during their terrestrial phase, including great crested newt (*Triturus cristatus*). However, this habitat is limited in extent (approximately 65 m² of scrub proposed for clearance), is directly adjacent to Parkway (a busy road), and is isolated within a predominantly urban and industrial landscape. The scrub edge is east-facing, which limits optimal solar gain compared to south-facing or sheltered aspects typically favoured by endothermic species for thermoregulation. As a result, the habitat is unlikely to provide particularly favourable basking or thermal conditions for great crested newt or other amphibians.

To the north, the scrub extends for approximately 130 m before transitioning to short sward grassland and subsequently to roads and industrial estate infrastructure. The land between the mixed scrub proposed for clearance and the pond to the south comprises fragmented habitats including mixed scrub, an access road, derelict or vacant land and urban infrastructure. This fragmented and disturbed landscape context significantly reduces the likelihood of regular movement between the pond and the Site.

Although it is not unfeasible that an individual great crested newt could occasionally traverse the wider landscape, the combination of habitat fragmentation, barriers to dispersal, limited habitat extent, sub-optimal orientation and ongoing disturbance means that the Site is unlikely to support a resident population or play a meaningful role in the species' life cycle.

The Site is therefore assessed as being of low ecological value for great crested newt and other amphibians.

Impact Assessment of Proposed Development

The retained line of trees and associated boundary vegetation along the western Site boundary will remain unaffected by the proposals.

The proposed development will result in the loss of a small area of mixed scrub to the north-east of the Site, totalling approximately 65 m². Given the limited extent, isolated nature and sub-optimal thermal characteristics of this habitat, the proposed clearance is not anticipated to result in significant adverse impacts on great crested newt or other amphibians. No mitigation or licensing is considered necessary.

Importantly, the development proposals include the creation of native woodland planting along the western and southern boundaries, together with a hedgerow and areas of wildflower meadow and wetland-associated planting. These measures will increase structural diversity, improve terrestrial habitat quality and enhance foraging and shelter opportunities for amphibians in the longer term. The proposed green infrastructure will strengthen habitat connectivity within the Site and provide improved terrestrial habitat relative to the current baseline condition.

As a proportionate precautionary measure, vegetation clearance will be undertaken sensitively and, where appropriate, under ecological supervision to safeguard any amphibians that may be present.

5.5 Dormouse

Desk Study Results

One record of hazel dormouse was returned from the SEWBREC data search. This record relates to a partial nest found in a nest tube in August 2022 and is located 860m south of the Site. The record is unassessed and unverified. The record is associated with young woodland planting and is not functionally connected to the Site.

Field Survey Results and Evaluation

No evidence of dormouse was recorded during the field survey.

The majority of the Site comprises hardstanding, short sward grassland, bare ground and disturbed land, which is highly unsuitable for dormouse and does not provide foraging, nesting or dispersal opportunities.

A small area of mixed scrub is present along the north-eastern boundary of the Site. This habitat is structurally suitable for dormouse, providing dense shrub cover and a developing woody component; however, it is limited in extent and relatively species-poor, with bramble comprising up to approximately 80% of the cover. While bramble provides a useful food resource and cover for dormice, the absence of a diverse native shrub assemblage limits the habitat's overall suitability.

The mixed scrub is further constrained by its isolation from the wider landscape, being surrounded by industrial development, roads and disturbed land. The absence of functional connectivity to other suitable habitats significantly reduces its potential to support dormouse beyond possible transient or opportunistic use by individual animals.

A line of mature trees with associated understorey is present along the western boundary of the Site. This habitat is considered suitable for dormouse and lies adjacent to a larger, albeit fragmented, area of woodland to the west. Although this woodland is separated from the Site by Manmoel Road, it is not inconceivable that dormice could cross this feature on occasion and utilise the boundary vegetation for foraging or dispersal. This habitat lies outside the red line boundary and will be fully retained in situ. Root protection areas will be respected during construction, and no works are proposed that would result in direct or indirect impacts to this habitat.

The Site is therefore assessed as being of negligible to low value for dormouse, due to the small size and limited species diversity of the on-site scrub habitat, the predominance of unsuitable habitat across the Site, the fragmented nature of surrounding habitats, and the lack of a continuous network of hedgerows or woodland linking the Site to known or potential dormouse populations.

Impact Assessment of Proposed Development

The proposed development will result in the loss of a small area of mixed scrub along the north-eastern boundary of the Site. Although this habitat is structurally suitable for dormouse, its small size, limited species diversity and fragmented position within a highly urbanised landscape mean it is unlikely to support dormouse or contribute meaningfully to population-level function.

The line of mature trees and associated understorey along the western boundary, which represents the most suitable dormouse habitat in the vicinity, will be retained in situ and protected during construction. No works are proposed that would affect this habitat, and root protection areas will be respected.

Habitat creation proposals associated with the development, including new native hedgerow, woodland and scrub planting, will enhance habitat structure and connectivity across the Site. These measures will improve the availability of foraging and dispersal habitat for dormouse in the longer term and strengthen links between retained boundary features and the wider landscape.

Given the predominance of unsuitable habitat across the Site, the absence of functional habitat connectivity at present, the lack of desk study records within or immediately adjacent to the Site, and the retention and enhancement of suitable habitat, the proposed development is not expected to result in adverse impacts on dormouse. No further survey or mitigation is required.

As a precaution, vegetation clearance will be undertaken under ecological supervision to ensure compliance with wildlife legislation.

5.6 Badger

Desk Study Results

No records of badger were returned for the site or surrounding area within 1 km of the site boundary from the data search.

Field Survey Results and Evaluation

The habitats within the Site, including modified grassland, mixed scrub and boundary vegetation, provide limited opportunities for badger to forage and commute across the landscape. No evidence of badger activity, including setts, latrines, paths or foraging signs, was recorded during the field survey. The Site does not provide suitable habitat to support a resident badger social group.

However, given the presence of boundary vegetation and retained off-site features, it is considered possible that badgers may occasionally pass through or forage within the Site on an infrequent basis.

The Site is therefore assessed as being of low value for badger.

Impact Assessment of Proposed Development on Badgers

No badger setts were recorded on Site, and the proposed development is not anticipated to result in direct impacts to badgers. Occasional foraging or commuting activity may be temporarily displaced during construction; however, given the limited extent of suitable habitat affected, the small scale of the proposals and the retention of boundary features, any such impacts are considered negligible.

As a precaution, it is recommended that the Site is re-checked for any evidence of badger activity, including sett creation, prior to the commencement of works by an ecologist. Should any evidence of badger be identified at that stage, appropriate mitigation measures would be agreed with the local planning authority.

5.7 Reptiles

Desk Study Results

No records of reptiles were returned for the site or surrounding area within 1 km of the site boundary from the data search.

Field Survey Results and Evaluation

The majority of the Site comprises hardstanding, bare ground and short sward grassland, which provide negligible suitability for reptiles due to the absence of suitable refuge, foraging habitat and basking structure. These areas are subject to regular disturbance and lack the structural complexity typically associated with reptile populations.

A small area of mixed scrub with scattered young trees and an interface with modified grassland is present along the north-eastern boundary. This habitat offers limited structural diversity and some potential refuge and basking opportunities; however, it is fragmented, relatively small in extent and isolated within a predominantly urban and industrial setting. The habitat is east-facing and therefore does not provide optimal solar exposure compared to south-facing or sheltered banks typically favoured by reptiles. It is also subject to edge disturbance from adjacent infrastructure and activity.

The Site lacks key features commonly associated with established reptile populations, such as extensive tussocky grassland, south-facing embankments, undisturbed grassland-scrub mosaics, hibernacula, or well-connected refuge

networks linking to larger areas of semi-natural habitat. On this basis, the Site is assessed as being of low ecological value for reptiles, with a low likelihood of supporting more than occasional transient individuals.

Impact Assessment of Proposed Development on Reptiles

The proposed development will result in the loss of a small area of mixed scrub and adjacent disturbed grassland along the north-eastern boundary to facilitate access. Given the limited extent, isolated nature and sub-optimal structural and thermal characteristics of this habitat, together with the absence of desk study records within 1 km of the Site, the likelihood of reptiles being present at more than incidental levels is considered low.

The proposed works are therefore not expected to result in significant adverse impacts on reptile populations at the local scale.

Importantly, the development proposals include the creation of native woodland planting along the western and southern boundaries, together with areas of species-rich wildflower meadow and enhanced grassland planting. These measures will increase structural diversity, improve habitat quality and provide greater sheltering, foraging and edge habitat opportunities for common reptile species in the longer term. The proposed green infrastructure will result in an overall enhancement of terrestrial habitat structure across the Site relative to the current baseline.

As a proportionate precautionary measure, vegetation clearance will be undertaken sensitively, ideally during suitable weather conditions when reptiles are active, and under ecological supervision where appropriate. This approach will allow any reptiles present to move away naturally and will minimise the risk of injury or mortality in accordance with the Wildlife and Countryside Act 1981 (as amended).

5.8 Invertebrates

Desk Study Results

No records of notable or protected invertebrate species were returned for the site or surrounding area within 1 km of the site boundary from the desk study search.

Field Survey Results and Evaluation

The habitats present within the Site and its immediate surroundings can support a typical assemblage of common and widespread invertebrate species. In particular, the line of mature trees along the western boundary, located outside the red line boundary and retained in situ, provides comparatively good habitat for invertebrates through the presence of mature trees, varied understorey vegetation, shaded and sheltered conditions, and potential deadwood resources.

The area of mixed scrub along the north-eastern boundary of the Site also provides suitable habitat for common invertebrates, offering shelter, foraging opportunities and structural diversity within an otherwise disturbed environment. Other habitats within the Site, including modified grassland, bare ground and hardstanding, are of limited value to invertebrates.

Overall, the Site is assessed as being of site value for invertebrates, with higher localised value associated with retained boundary vegetation and off-site tree lines.

Impact Assessment of Proposed Development on Invertebrates

The proposed development will result in the loss of a small area of mixed scrub and scattered trees to the north-east of the Site, which currently provides habitat for common and widespread invertebrate species associated with scrub and ruderal vegetation. Given the limited spatial extent of habitat affected, its fragmented nature, and the availability of similar habitats within the wider landscape, this loss is considered minor in scale.

The retained western boundary tree line, located outside the red line boundary, will remain unaffected by the proposals and will continue to provide comparatively higher-quality habitat for invertebrates. The structural diversity, mature trees, understorey vegetation and potential deadwood resources associated with this feature represent the most ecologically valuable habitat for invertebrates within the immediate vicinity and will be protected during construction.

The proposed landscaping scheme, including native broadleaved woodland planting along the western and southern boundaries, new hedgerow creation, additional native tree planting and areas of wildflower meadow, will significantly increase floral diversity, structural complexity and nectar and pollen resources across the Site. Over time, these measures will enhance habitat quality and provide improved foraging, shelter and breeding opportunities for a range of invertebrate assemblages relative to the current baseline condition.

Overall, the proposed development is not expected to result in significant adverse effects on invertebrate populations at the local scale and will deliver a net enhancement in habitat suitability for common invertebrate species.

5.9 Hedgehog

Desk Study Results

One record of hedgehog *Erinaceus europaeus* was returned from the desk study data search. This record relates to a single individual recorded in March 2017 at approximately 190 m to the north-east of the Site boundary.

Field Survey Results and Evaluation of Ecological Value of Site

The Site includes limited habitat that could provide shelter or foraging opportunities, primarily within boundary vegetation and small areas of mixed scrub. The majority of the Site comprises hardstanding, bare ground and disturbed grassland, which are of low suitability for hedgehog.

Overall, the Site provides limited opportunities for hedgehog and is assessed as being of site value, with ecological function restricted to occasional foraging or dispersal.

Impact Assessment of Proposed Development on Hedgehog

Given the limited extent of suitable habitat, and the disturbed nature of the Site, the proposed development is unlikely to result in significant adverse impacts on hedgehog.

Vegetation clearance will be undertaken under ecological supervision as a precaution. Should a hedgehog be encountered during works, it will be carefully relocated to adjacent retained habitat.

6 Required Actions and Conclusions

This Preliminary Ecological Appraisal (PEA) has identified that the Site is of overall low ecological value, comprising predominantly disturbed and modified habitats within an established industrial landscape. No statutory designated sites are present within the Site, and no Important Ecological Features of more than local value have been identified that would be subject to likely significant effects because of the proposed development.

The assessment has confirmed that the majority of habitats within the Site will be retained, with only small-scale clearance of mixed scrub/ scattered trees and modified grassland required to facilitate revised access arrangements to the north-east. These habitats are somewhat fragmented with the wider landscape and their removal is not anticipated to result in significant adverse effects on protected or notable species.

On this basis, no further protected species surveys, mitigation or licensing are required, and a full Ecological Impact Assessment (EcIA) is not considered necessary.

The following actions and recommendations are provided to inform the Local Planning Authority and are expected to be secured, where appropriate, through planning conditions or informative notes. They are proportionate to the findings of this PEA and reflect relevant Welsh legislation and policy, including the Environment (Wales) Act 2016, Planning Policy Wales (Edition 12, 2024), the Wildlife and Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2017 (as amended), and the Caerphilly County Borough Local Development Plan.

6.3 Precautionary Measures

6.3.1 CEMP and Ecological Safeguards

A Construction Environmental Management Plan (CEMP) will be prepared and implemented as part of the development. The CEMP will set out proportionate measures to avoid and minimise potential ecological impacts during construction and will include, but not be limited to:

- timing and sequencing of works;
- protection of retained habitats and boundary vegetation;
- pollution prevention and surface water management; and
- procedures to be followed should protected or notable species be encountered unexpectedly.

Vegetation clearance associated with the proposed works has the potential to affect nesting birds and other common wildlife, including amphibians, mammals, reptiles and hedgehog. As a precaution, any vegetation clearance will be undertaken outside the bird breeding season (March–August inclusive) under ecological supervision. Where this is not practicable, clearance will be preceded by a nesting bird check undertaken by a suitably qualified ecologist.

Where clearance is required within areas of scrub, works will be undertaken sensitively and, where appropriate, under ecological supervision to allow animals to move away naturally or be relocated to suitable retained habitat.

In the unlikely event that a European Protected Species is encountered during works, all works in the affected area will cease immediately, and advice will be sought from Natural Resources Wales prior to works recommencing.

These measures are precautionary and proportionate to the low likelihood of protected species being present.

6.3.2 Tree Protection

All retained trees and boundary vegetation, including the line of mature trees along the western boundary and retained trees along the eastern boundary, will be protected throughout construction.

Tree protection measures will be implemented in accordance with the approved Tree Survey and Arboricultural Impact Assessment, and Root Protection Areas (RPAs) will be respected during all construction activities. No works are proposed that would result in direct or indirect impacts to retained off-site habitats or protected tree features.

6.3.3 Biodiversity Enhancement Strategy

Habitat creation and enhancement measures will be delivered as an integral component of the development proposals. These include the establishment of native broadleaved woodland planting, wildflower meadow, wetland wildflower meadow, native hedgerow planting and additional tree planting. The detailed soft landscape proposals are presented on Plan 3.

Detailed planting specifications, schedules and long-term management prescriptions are set out within Plan 3 and the Landscape Specification and Management Plan – Proposed Training Centre, Parkway, Blackwood (TDA, 2026). The proposals have been developed collaboratively at the design stage in consultation with the client and Ark Ecology to ensure ecological functionality, deliverability and alignment with Biodiversity Net Gain objectives.

In addition to habitat creation, built-in ecological enhancements will be incorporated. Two Schwegler bat boxes and two Schwegler bird boxes will be installed within the retained mature tree line along the western boundary, as illustrated on Plan 4. The bat boxes will be mounted on a mature tree at a height of approximately 3–5 m above ground level, positioned to provide clear flight access and oriented away from prevailing winds and direct artificial lighting. Bird boxes will be installed at a comparable height on suitable trees, orientated to avoid prevailing winds and excessive solar exposure. Installation will be undertaken in accordance with manufacturer guidance to ensure durability and maximise ecological benefit.

Collectively, these measures will increase structural diversity, strengthen habitat connectivity and enhance the overall biodiversity value of the Site and its immediate surroundings, contributing positively to local ecological networks.

6.3.4 Responsible Persons, Management Mechanism and Funding

The developer will be responsible for implementing the recommendations set out within this report and for appointing suitably qualified contractors to undertake the works in accordance with the approved plans and strategies.

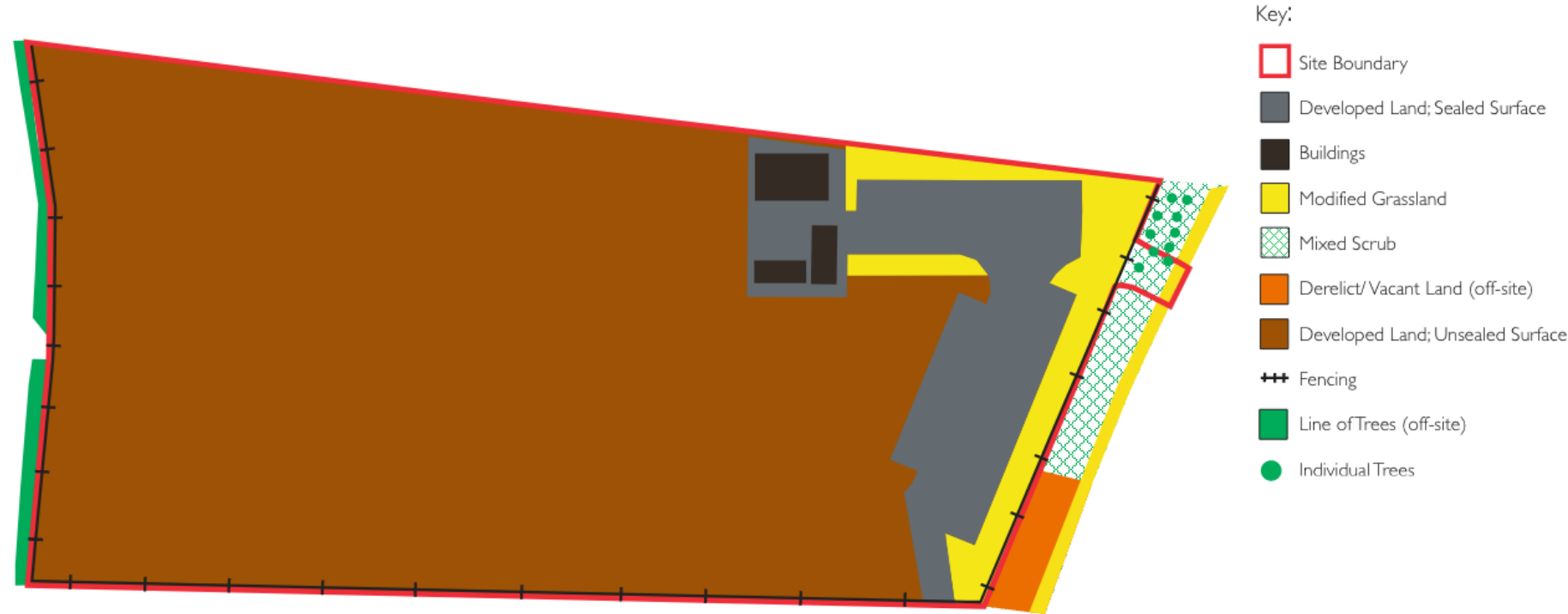
6.4 Longevity of Report

If development works do not commence within two years of the date of this report, an updated ecological walkover survey is likely to be required, in line with CIEEM (2024) and BS 42020:2013, to confirm whether baseline conditions remain materially unchanged and that the conclusions and recommendations set out herein remain valid.

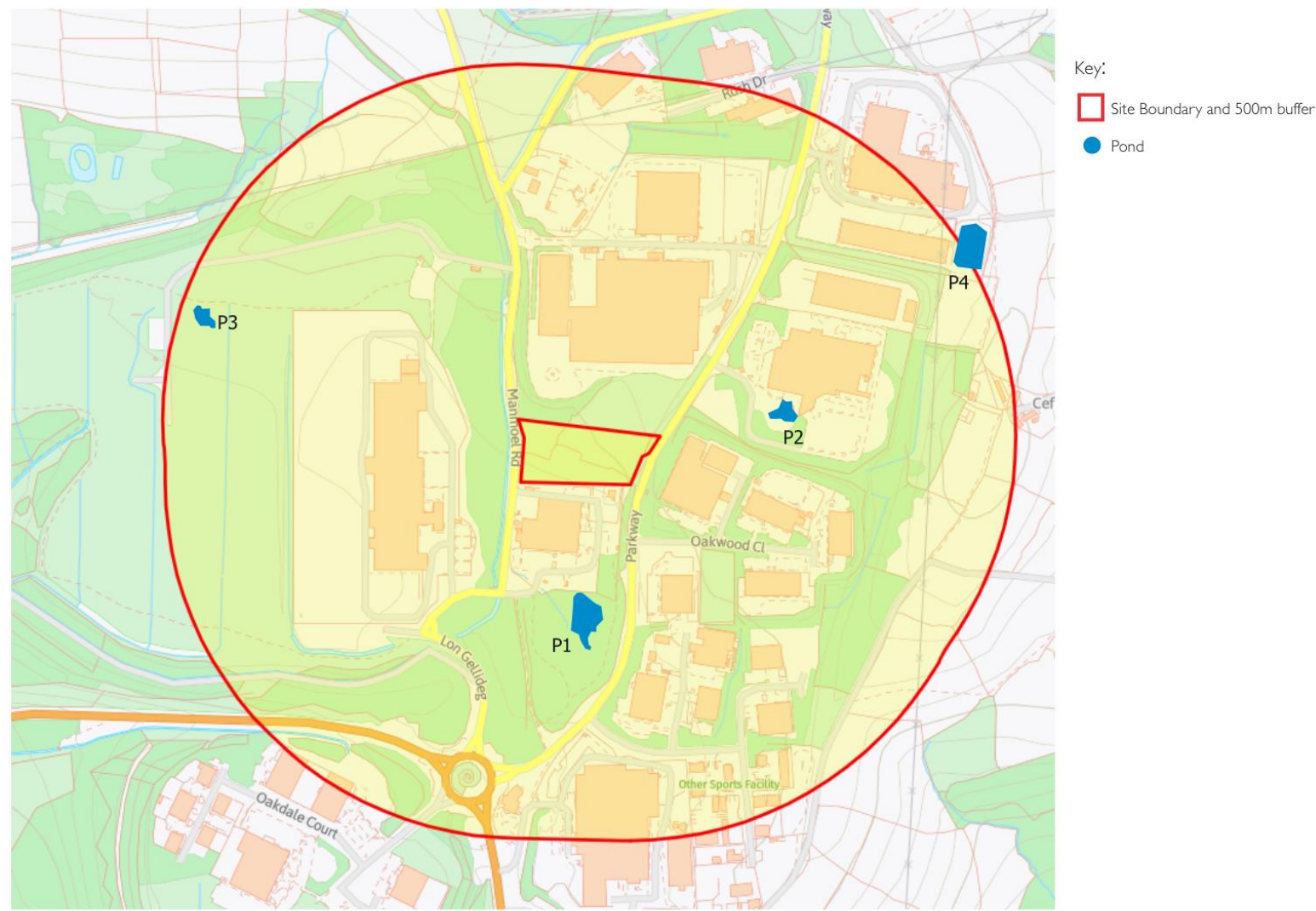
Where there is a delay, the need for update work should be reviewed proportionately, having regard to: changes in site condition or land management (including recolonisation by scrub/ruderal vegetation), the timing of commencement relative to sensitive periods (in particular the nesting bird season), and any changes in relevant legislation, policy or published guidance.

If a material change is identified, or if works are scheduled to commence during periods of higher ecological risk, further targeted surveys may be required prior to works (for example, an updated nesting bird check and/or updated assessment of habitat suitability for other protected species).

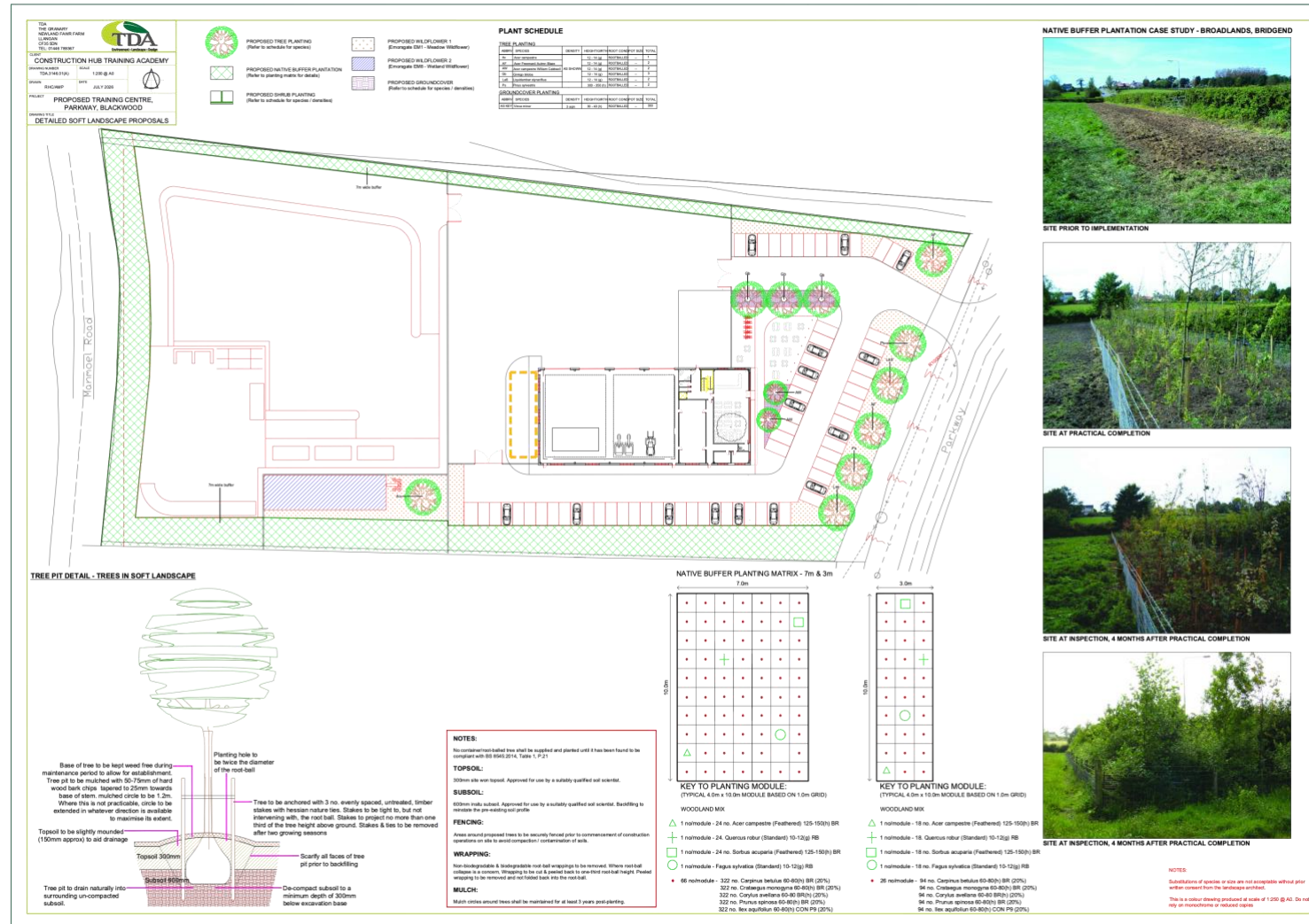
Plan 1 – Habitats and Vegetation



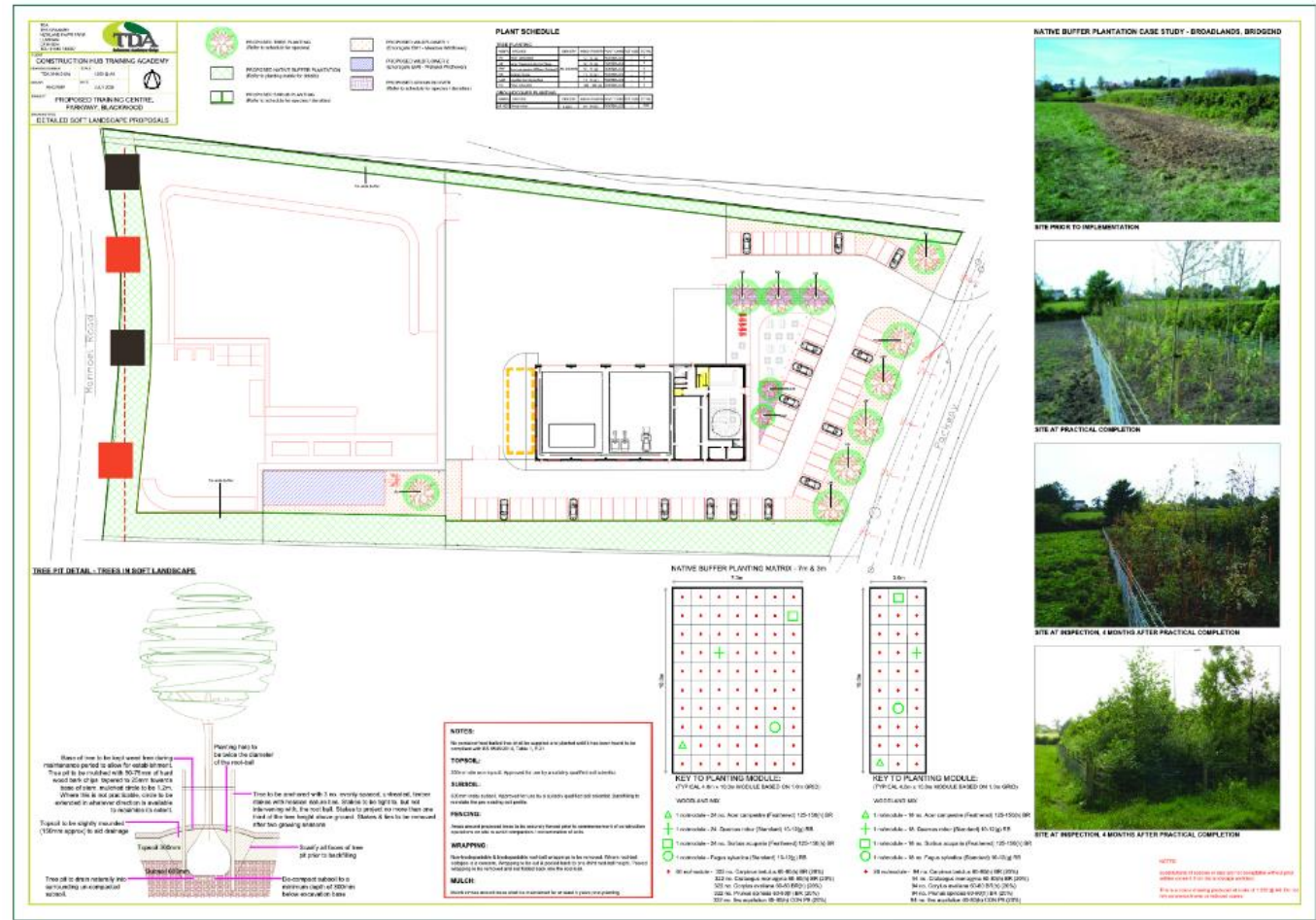
Plan 2 – 500m Pond Search



35



Plan 4 - Biodiversity Enhancement Plan



Appendix 1 - Summary of Legislation and Policy

Relating to Statutory and Non-Statutory Designated Sites and Planning Policy Relevant to Site

SACs

SACs¹⁰ are strictly protected sites designated under the:

Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters),

- the Conservation (Natural Habitats &c.) Regulations 1994 (as amended) in Scotland,
- the Conservation (Natural Habitats, &c.) Regulations (Northern Ireland) 1995 (as amended in Northern Ireland, and
- the Conservation of Offshore Marine Habitats and Species Regulations 2017 in the UK offshore area.

These regulations require establishment of a network of important high-quality conservation sites that will make a significant contribution to conserving the habitats and species identified in Annexes I and II, respectively, of European Council Directive 92/43/EEC¹¹ on the conservation of natura habitats of wild fauna and flora, known as the Habitats Directive.

SSSIs

SSSIs are important as they support habitats and/or species of national importance. SSSIs are legally protected under the Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000 and the Natural Environment and Rural Communities Act 2006, and are of national (second tier) biodiversity significance and form the essential building blocks of the United Kingdom's protected areas for nature conservation. Many are also designated as Natura sites i.e. internationally (first tier) designated sites. It is an offence for any person to intentionally or recklessly damage the protected natural features of a SSSI.

In Wales, SSSIs are afforded protection through statutory controls on operations likely to damage the special interest features of the site. It is an offence to intentionally or recklessly damage or destroy the features of a SSSI without consent from Natural Resources Wales.

¹⁰ <https://sac.jncc.gov.uk/>

¹¹ https://environment.ec.europa.eu/topics/nature-and-biodiversity/habitats-directive_en

Sites of Importance for Nature Conservation (SINCs)

Sites of Importance for Nature Conservation are non-statutory designations identified by local authorities in Wales to recognise areas of substantive nature conservation value at the county or local level. While SINCs do not receive statutory protection, they are afforded material weight in the planning process through local development plan policies.

In Caerphilly County Borough, SINCs are designated to protect locally important habitats and species and to contribute to the wider ecological network. Development proposals affecting SINCs are expected to demonstrate avoidance of impacts where possible, or appropriate mitigation and enhancement where impacts cannot be avoided.

Environment (Wales) Act 2016

The Environment (Wales) Act 2016 places a duty on public authorities to seek to maintain and enhance biodiversity and to promote the resilience of ecosystems in the exercise of their functions. Section 6 of the Act requires decision-makers to have regard to the purpose of conserving biodiversity and to take action to promote ecosystem resilience.

Section 7 of the Act lists Habitats of Principal Importance and Species of Principal Importance in Wales. These lists replace the former Section 41 lists used in England and provide the primary biodiversity reference framework for ecological assessment in Wales.

Wildlife and Countryside Act 1981 (as amended)

The Wildlife and Countryside Act 1981 provides protection for a wide range of wild plants and animals in Wales. It includes provisions relating to the protection of nesting birds, certain plant species, and animals listed on Schedules 1, 5 and 8.

Offences include the intentional killing, injury or disturbance of protected species and the damage or destruction of protected nests, resting places or habitats, subject to specific licensing provisions.

Planning Policy and Guidance

Planning Policy Wales (Edition 12, updated 2024) sets out the Welsh Government's land use planning policies. Chapter 6 of PPW relates to distinctive and natural places and emphasises the protection and enhancement of biodiversity, ecological networks and ecosystem resilience.

PPW requires planning authorities to ensure that development does not cause unacceptable harm to biodiversity interests, particularly designated sites and Section 7 habitats and species, and to seek opportunities to enhance biodiversity and ecosystem resilience, noting that mandatory Biodiversity Net Gain does not apply in Wales.

Technical Advice Note (TAN) 5 – Nature Conservation and Planning

TAN 5 provides detailed guidance on how nature conservation should be considered in the planning system in Wales. It sets out principles for assessing ecological impacts, protecting designated sites and species, and applying the mitigation hierarchy of avoidance, mitigation and compensation.

TAN 5 emphasises the importance of early ecological assessment, proportionate survey effort, and the protection of ecological networks and connectivity.

Caerphilly County Borough Local Development Plan

The Caerphilly County Borough Local Development Plan includes policies aimed at protecting and enhancing biodiversity, green infrastructure and the wider ecological network. These policies seek to safeguard designated sites, including SINC, and to ensure that development proposals avoid harm to biodiversity interests or provide appropriate mitigation and enhancement where impacts are unavoidable.

Development proposals are expected to demonstrate compliance with relevant biodiversity policies through proportionate ecological assessment and the incorporation of suitable avoidance, mitigation and enhancement measures.

Appendix 2 – Protected Species Legislation Relevant to Site

Birds

All wild British birds (while nesting, building nests and sitting on eggs), their nests and eggs (with certain limited exceptions) are protected by law under Section 1 of the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way Act 2000. Included in this protection are all nests (at whatever stage of construction or use) and all dependent young until the nest is abandoned and the young have fledged and become independent. Particularly rare species such as barn owl (*Tyto alba*) are listed on Schedule 1 which gives them additional protection from disturbance whilst nest building, whilst near a nest with eggs or young, or from disturbing the dependent young. Section 10.8 of the Conservation of Habitats and Species Regulations 2017 state that Local authorities must use all reasonable endeavours to avoid any deterioration of habitats of wild birds.

Bats

All UK bat species are European Protected Species (EPS) and are protected in Wales under the Conservation of Habitats and Species Regulations 2017 (as amended) (and associated amendments). It is an offence to deliberately capture, injure or kill a bat, or to deliberately disturb bats, and to damage or destroy a breeding site or resting place (roost), whether or not bats are present at the time. Bats are also protected under the Wildlife and Countryside Act 1981 (as amended) (Schedule 5).

In Wales, bats are also listed as Species of Principal Importance under Section 7 of the Environment (Wales) Act 2016. Where works could affect bats or their roosts, mitigation may require licensing by Natural Resources Wales (NRW), and surveys should follow relevant professional guidance (e.g. BCT good practice guidance).

Great Crested Newt

Great crested newt *Triturus cristatus* is an EPS in Wales and is protected under the Conservation of Habitats and Species Regulations 2017 (as amended). It is an offence to deliberately capture, injure or kill a great crested newt, to deliberately disturb the species in a way that is likely to affect its ability to survive, breed or rear young, or to damage or destroy breeding sites or resting places. The species is also protected under the Wildlife and Countryside Act 1981 (as amended) (Schedule 5). Great crested newt is listed as a Species of Principal Importance under Section 7 of the Environment (Wales) Act 2016. Where development could result in offences, mitigation and/or a licence from NRW may be required, supported by proportionate survey and impact assessment.

Dormice

Hazel dormouse *Muscardinus avellanarius* is an EPS in Wales and is protected under the Conservation of Habitats and Species Regulations 2017 (as amended). It is an offence to deliberately capture, injure or kill dormice, to deliberately

disturb them, or to damage or destroy breeding sites or resting places. Dormice are also protected under the Wildlife and Countryside Act 1981 (as amended) (Schedule 5). Hazel dormouse is listed as a Species of Principal Importance under Section 7 of the Environment (Wales) Act 2016. Where works could affect dormice or their habitat, mitigation and licensing by NRW may be required, supported by appropriate surveys undertaken in accordance with relevant guidance applicable to Wales and best practice.

Badgers

Badgers and their setts are protected under the Protection of Badgers Act 1992, which applies in Wales. It is an offence to kill, injure or take a badger, or to interfere with a sett (including damaging, destroying, obstructing access, or disturbing a badger while it is occupying a sett) except under licence. In Wales, licensing is managed by Natural Resources Wales where licensable sett works are required. Works should be planned to avoid impacts to setts and to apply appropriate precautionary measures where badgers may be present.

Reptiles

In Wales, native reptiles are protected under the Wildlife and Countryside Act 1981 (as amended). This legislation makes it an offence to intentionally kill or injure certain species listed on Schedule 5 (including common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, grass snake *Natrix helvetica* and adder *Vipera berus*). Unlike EPS, reptiles are not generally protected in respect of their shelters/resting places; however, the risk of committing offences through killing or injury during vegetation clearance or groundworks must be managed through appropriate working methods. Several reptile species are also Species of Principal Importance under Section 7 of the Environment (Wales) Act 2016, and should be considered in ecological assessment and design, with reasonable measures taken to avoid harm and to retain/enhance suitable habitat where practicable.

Hedgehogs

Hedgehog *Erinaceus europaeus* is listed as a Species of Principal Importance under Section 7 of the Environment (Wales) Act 2016. Hedgehogs are not an EPS and do not receive full protection from disturbance; however, they are afforded limited protection under the Wildlife and Countryside Act 1981 (as amended) (Schedule 6), which prohibits certain methods of killing or taking (e.g. specific traps/snares). In practice, hedgehogs are commonly addressed through proportionate precautionary measures during site clearance and construction (e.g. sensitive vegetation clearance, checks of brash/piles, provision of escape routes from excavations), alongside opportunities for enhancement such as habitat connectivity and refugia provision.

Appendix 3 – Definitions of Site Value

International Value

Internationally designated or proposed sites such as Ramsar Sites, Special Protection Areas, Biosphere Reserves and Special Areas of Conservation, or non-designated sites meeting criteria for international designation. Sites supporting populations of internationally important species or habitats.

National Value

Nationally designated sites such as Sites of Special Scientific Interest (SSSIs), or non-designated sites meeting SSSI selection criteria (NCC 1989), National Nature Reserves (NNRs) or Nature Conservancy Review (NCR) Grade I sites, viable areas of key habitats within the UK Biodiversity Action Plan. Sites supporting viable breeding populations of Red Data Book (RDB) species (excluding scarce species), or supplying critical elements of their habitat requirements.

Regional Value

Sites containing viable areas of threatened habitats listed in a regional Biodiversity Action Plan, comfortably exceeding SINC/SNCI criteria, but not meeting SSSI selection criteria. Sites supporting regionally significant areas of Section 7 habitats or large and viable populations Nationally Scarce species, or those included in the Regional Biodiversity Action Plan on account of their rarity, or supplying critical elements of their habitat requirements.

County Value/District Value

Site identified as local sites i.e. SINC/SNCI/CWS at the district level; but falling short of SSSI designation criteria, whether designated as a local site or not. Ancient woodlands and sites supporting regionally significant areas of UK BAP habitat. Large scale examples of Section 7 habitats or areas supporting small populations of protected, Section 7 or threatened species (other than badger).

High Local

Habitats which just fail to meet District/County value criteria, but which appreciably enrich the ecological resource of the locality. Sites supporting species which are notable or uncommon in the county; or species which are uncommon, local or habitat-restricted nationally, and which might not otherwise be present in the area. Moderate scale examples of Section 7 habitats or areas supporting small populations of protected, Section 7 or threatened species.

Local Value

Old hedges, woodlands, ponds, significant areas of species-rich grassland, small scale examples of Section 7 or areas supporting small populations of protected, Section 7 or threatened species. Undesignated sites or features which appreciably enrich the habitat resource in the context of their immediate surroundings, parish or neighbourhood (e.g. a species-rich hedgerow). Rare or uncommon species may occur but are not restricted to the site or critically dependent upon it for their survival in the area.

Low Value (within the immediate zone of influence)

Low-grade and widespread habitats. Woodland plantations, structured planting, small areas of species-rich grassland and other species-rich habitats not included in the Section 7 list.

Negligible

No apparent nature conservation value.
