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# PRELIMINARY ECOLOGICAL APPRAISAL

## At

## Gwyndy Quarry
Llandrygan
Llanerchymedd
Anglesey
LL71 7AW

## NGR: SH 39800 79528

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| Prepared for: | Hogan Holdings Ltd C/O Christine House, House Associates |
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| Date: | 5th April 2024 |
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CIEEM REGISTERED PRACTICE 2023-2024

# CONTENTS

# EXECUTIVE SUMMARY

United Environmental Services Ltd (UES) was commissioned by Hogan Holdings Ltd $^{C}/_{O}$ Christine House, House Associates, to carry out a baseline ecological survey at Gwyndy Quarry, Anglesey. A desk study and preliminary ecological appraisal (PEA) survey were undertaken on 4th January 2024, including searches using the Multi Agency Geographic Information Centre (MAGIC) and Cofnod (the North Wales Environmental Information Service).

The PEA provides an assessment of potential ecological impacts associated with the development. The development proposals include the vertical extension of the existing quarry.

The survey boundary has an area of approximately 20ha and is mainly comprised of a working quarry with associated access roads, spoil mounds and buildings associated with the ongoing operation of quarry machinery. There are three ponds and two ditches within the base of the quarry, with a further three ponds in the ownership boundary. The areas surrounding the quarry contain a range of additional habitats including dense scrub, semi-improved grassland, scattered trees and a mixed, semi-natural woodland.

The results of the survey combined with the results of the desk study have highlighted the requirement for further work in relation to the following habitats and species:

- **Amphibians** – a great crested newt (GCN) *Triturus cristatus* impact assessment and environmental DNA (eDNA) analysis should be undertaken to assess all ponds / waterbodies onsite and within close proximity to the site to determine whether they are suitable to support breeding GCNs. eDNA analysis should also be undertaken between mid-April to June inclusive. If the ponds / waterbodies are found to be suitable, further surveys may be required from March to July.

- **Bats** – No significant vegetation removal is due to be undertaken by the current development proposals, however if the proposals change to include tree removal or arboricultural works, bats may be affected by the development. If trees are due to be removed, a ground level tree assessment (GLTA) should be undertaken of all trees that have the potential to be adversely impacted by the development (felling, arboricultural works or significant level of disturbance), to assess their potential to support roosting bats. This ground level assessment can be undertaken any time of year. If any trees due to be adversely impacted are found to have the potential to support roosting bats, further aerial tree inspections should be conducted (any time of year). If any potential roosting features are found to still be suitable following the inspections, further bat presence / absence surveys or further aerial inspections may be required during the bat survey season (May to September inclusive).

- **Breeding birds –** No significant vegetation removal is due to be undertaken by the current development proposals, however if the proposals change to include vegetation clearance, it should take place outside of the breeding bird season and should not be undertaken from March to August inclusive. If not possible and works need to take place during this period, a targeted nest survey is to be undertaken immediately prior to the works by a suitably qualified ecologist or an ecological clerk of works appointed to oversee the works.

- **Ponds / waterbodies –** to be retained where possible. If not possible, to be replaced as part of a detailed landscaping scheme. It is recommended that an enhancement plan is produced to maintain and manage the onsite ponds.

- **Reptiles –** reasonable avoidance measures (RAMs) to be implemented during the construction phase of the development.

- **Trees –** to be retained where possible, or replaced as part of a detailed landscaping scheme. Generic issues relating to root protection areas.

- **Watercourse** – specific procedures and control measures to be implemented to ensure that there is no risk of input into the watercourse, including the retention of a buffer zone. The measures should be set out by the contractors prior to commencement and agreed with the LPA and other statutory consultees.

- **Woodland -** to be retained where possible, or replaced two-fold in terms of area in an appropriate location. A detailed woodland management plan should be prepared for the proposed and retained areas of woodland.

Mitigation measures, as detailed in section 4, should be adhered to, which may in some cases negate the need for further survey work.

The development also presents an opportunity to improve the habitats on site for wildlife, such as bats and birds. The inclusion of nest boxes and bat boxes will provide suitable nesting and roosting features in the long term.

This report should be read with appendices 1 to 7, which include results of the desk study, GIS phase 1 habitat mapping, photographs of site and relevant statutory guidance.

# 1 INTRODUCTION

## 1.1 Author, surveyors, qualifications and scope of study area

This report is written by Ysobella Cox BSc MBiol, UES Graduate Ecologist. Ysobella holds a level 3 Botanical Society for Britain and Ireland (BSBI) field identification skills certificate (FISC), which certifies her as competent to undertake phase 1 habitat surveys. Other surveyors include:

- Mark Halliwell MBiol, UES Senior Ecologist. Mark holds a level 4 BSBI FISC, which certifies him as competent to undertake phase 1 habitat surveys and national vegetation classification (NVC) surveys.

- James Stubbs BSc MRes, UES Graduate Ecologist

The report provides an assessment of the potential ecological impacts associated with the proposed development at Gwyndy Quarry, Anglesey.

The zone of influence considered within the scope of the survey includes all land within the red line boundary. Where relevant, other ecological resources, receptors and important habitats which are spatially separate from the site are considered.

## 1.2 Survey objectives

UES was commissioned in September 2023 to conduct a PEA of the proposed development site. This was completed in order to:

- Establish baseline conditions and determine the importance of ecological features present or potentially present within the survey area

- Identify key ecological constraints to the project

- Make recommendations for design options to avoid significant effects on important ecological resources at an early stage of development planning

- Identify potential requirement for further surveys for nationally or internationally protected species which may be present on site

- Identify potential requirement for mitigation or compensation, including measures that may be required based on further surveys

## 1.3 Proposed development

The proposed development includes the vertical extension of the existing quarry where the base of the quarry will be excavated further and dropped to a lower level. For this application, only the existing quarry and gravel will be affected.

## 1.4 Structure of the report

This report is a baseline appraisal that forms the basis for further ecological surveys and Environmental Impact Assessments (EIA) if required. In the majority of cases the preliminary ecological assessment will not provide all the ecological data required by the Local Planning Authority to determine an application, especially in the event that protected habitat or species issues are present or likely.

This report should be read with appendices 1 to 7, which include results of the desk study, GIS phase 1 habitat mapping, photographs of site and relevant statutory guidance.

# 2 METHODOLOGY

This PEA comprises a desk study and a field survey. The desk study is conducted in order to collate ecological information on species and / or habitats of interest that may be present. The field survey is conducted in order to assess the habitats and their importance, both on site and in the context of their wider surroundings.

## 2.1 Desk study

The following resources were used to inform the desk study:

- National – Using the UK government's MAGIC website, statutorily protected sites were scoped to a distance of 10km from the application site.

- Local – A search for protected species or otherwise notable species and local designated sites was undertaken within a 2km radius of the proposed development site by Cofnod – North Wales Environmental Information Service.

## 2.2 Field survey

An ecological walkover survey was carried out on 4th January 2024 by Mark Halliwell, Ysobella Cox and James Stubbs. The purpose of the survey was to identify, record and map dominant habitats types within the development area and highlight any further species surveys that may be required based on the quality of those habitats. When conducting the surveys particular focus was concentrated on the following species and habitat features:

- Amphibians
- Reptiles
- Badger
- Bats
- Hazel dormouse
- Birds
- Trees
- Hedgerows
- Plant communities
- Invasive species
- Otter
- Water vole
- White-clawed crayfish

The habitats were assessed by using the phase 1 habitat survey technique, which is a system for environmental audit widely used within the environmental consultancy field. The survey was undertaken in accordance with the methodology in the 'Handbook for phase 1 habitat survey - A technique for environmental audit' (JNCC, 2010) as recommended by Natural Resources Wales, and in the "Guidelines for Preliminary Ecological Appraisal" (CIEEM, 2017).

The survey area encompasses all of the land within the development footprint and the land to a distance of 30m outside it where accessible. In line with recognised guidelines, ponds were also scoped to a distance of 500m (250m radius from the survey area).

The phase 1 habitat survey methodology was extended to record any signs of habitats suitable to support protected / invasive species and any incidental observations of other noteworthy species.

## 2.3 Survey limitations

The survey was conducted in January when not all plants are readily identifiable. However sufficient vegetative identification was possible, allowing a robust assessment of habitats to be undertaken.

Some areas of the proposed development site could not be accessed during the walkover survey due to the health and safety concerns associated with a working quarry. Sections of the quarry which could not be accessed include the current working area, the shelves and edges of the quarry.

# 3 RESULTS

## 3.1 Desk study

A desk study was conducted for the proposed development site and surrounding area. Statutorily protected sites were scoped to a distance of 10km. Further results of the desk study can be found at Appendix 1 – Desk study.

### 3.1.1 Protected sites

There are two statutorily protected sites within 2km of the proposed development site:

- Tyddyn Gyrfer SSSI[1]

*Tyddyn Gyrfer is located approximately 1.49km to the northwest of the proposed development site. Tyddyn Gyrfer is of special interest for its Precambrian geology and lies within the largest outcrop of gneisses in southern Britain. The site is located approximately 10 km north-west of Llangefni and consists of low-lying, rocky outcrops of metamorphic rock which were subjected to high temperatures and high pressure (high-grade).*

- Cors Bodwrog SSSI

*Cors Bodrog is located approximately 1.6km to the southeast of the proposed development site. It has been selected for its biological interest as an example of mesotrophic mire. This site lies in an alluvium filled basin overlying mica schists, metamorphic rocks of the mora complex.*

*Purple moor-grass Molinia caerulea mire is the principal vegetation type within Cors Bodwrog: typical associates of which include cross-leaved heath Erica tetralix, bog asphodel Nartheciun ossifragurm, tormentil Potentilla erecta and bog-myrtle Myrica gale. In places, particularly the edge of the site this community grades into fen meadow dominated by Yorkshire-fog Holcus lanatus, creeping bent Agrostis stolonifera and rush species Juncus spp. Black bog-rush Schoenus nigricans, occurs as scattered clumps within the Molinia mire and as a local dominant within the less acidic communities present. Blunt-flowered rush Juncus subnodulosus and great fen-sedge Cladium mariscus, further indicators of local base enrichment, have been recorded. The old peat cuttings ditchlines and wet hollows support the main stands of mesotrophic vegetation variously dominated by bottle sedge Carex rostrata, slender sedge Carex lasiocarpa, common cottongrass Eriophortm angustifolium, marsh cinquefoil Potentilla palustris, bogbean Menyanthes trifoliata, greater tussock-sedge Carex paniculata and the nationally scarce lesser tussock-sedge Carex diandra. The moss cover is variable within this community and includes Calliergon giganteum and the bog mosses Sphagnum subniters and Sphagnum contortum. A number of uncommon plants are recorded including greater spearwort Ranunculus lingua and lesser bulrush Typha angustifolia.*

*Common reed Phragmites australis and reed canary-grass Phalaris arundinacea are scattered through the site and form single species stands. Areas of willow Salix spp, alder Alnus glutinosa and gorse Ulex europaeus scrub are also widespread. Eight species of Odonata have been recorded including the nationally scarce variable damselfly Coenagrion pulchellum and the scarce blue-tailed damselfly Ischnura*

[1] SSSI – Site of Special Scientific Interest

*pumilio. The breeding bird community which is of local importance includes teal, reed warbler, grasshopper warbler and curlew.*

There are also two non-statutorily protected sites within 2km of the proposed development site:

- Cors Llynfaes, Wildlife Site

*Cors llynfaes is located approximately 864m to the southeast of the site. It is an area of herb-rich marshy grassland in a shallow basin between rock outcrops. The wettest parts are dominated by cotton-grass Eriophorum angustifolium, water horsetail Equisetum fluviatile, bog bean and marsh cinquefoil Comarum palustre. Several species of sedges are abundant, including the locally occuring tufted sedge Carex ericetorum, and herbs such as bugle Ajuga reptans, marsh marigold Caltha palustris, marsh pennywort Hydrocotyle vulgaris, and ragged robin Lychnis flos-cuculi, are also frequent. Bog myrtle Myrica gale, is abundant at the centre of the site. Frogs are very abundant at this site as are butterflies.*

- Cors Tre'r Ddol, Wildlife Site

*Cors Tre'r Ddol is located approximately 1.53km to the northwest of the site. It is an area of marshy grassland, reed bed and willow Salix sp. scrub at the confluence of two streams. Most of the grassland is dominated by tufted hair-grass Deschampsia cespitosa, with abundant meadowsweet Filipendula ulmaria. Soft rush Juncus effusus, and Yorkshire fog Holcus lanatus, become dominant towards the southern end which is also more herb-rich with frequent yellow flag Iris pseudacorus, bogbean Menyanthes trifoliata, wild angelica Angelica sylvestris, sneezewort Achillea ptarmica, yellow rattle Rhinanthus minor, and northern marsh orchid Dactylorhiza purpurella. There is a large bed of water cress Nasturtium officinale, at the northern end of the site. Several large specimens of the uncommon greater tussock-sedge Carex paniculate, are present amongst the willow scrub. The site is used by snipe Gallinago gallinago, sedge warbler Acrocephalus schoenobaenus, and reed bunting Emberiza schoeniclus.*

There are thirty-three statutorily protected sites (designated for ecological reasons) within 2 – 10km of site:

- Anglesey Terns / Morwenoliaid Ynys Mon, SPA[2]
- Beddmanarch – Cymyran, SSSI
- Caeau Talwrn, SSSI
- Cors Bodeilio, NNR[3]
- Cors Bodeilio, SSSI
- Cors Erddreiniog, NNR
- Cors Erddreiniog, SSSI
- Cors Goch, NNR
- Cors y Farl, SSSI
- Corsydd Mon / Anglesey Fens, SAC[4]
- Corsydd Mon a Llyn / Anglesey and Llyn Fens, Ramsar
- Craig Wen / Cors Castell, SSSI
- Fferam Uchaf, SSSI
- Gwenfro and Rhos y Gad, SSSI
- Llyn Alaw, SSSI
- Llyn Dinam, SAC
- Llyn Hafodol and Cors Clegyrog, SSSI
- Llyn Llywenan, SSSI
- Llyn Maelog, SSSI
- Llyn Padrig, SSSI

[2] SPA – Special Protection Area
[3] NNR – National Nature Reserve
[4] SAC – Special Area of Conservation

- Llyn Traffwll, SSSI
- Llynnau y Fali – Valley Lakes, SSSI
- Maen Gwyn, SSSI
- Malltraeth Marsh / Cors Ddyga, SSSI
- Nantanog, SSSI
- Penrhos Lligwy, SSSI
- Rhosneigr, SSSI
- Salbri, SSSI
- Tyddyn y Waen, SSSI
- Tywyn Aberffraw, SSSI
- Y Twyni o Abermenai i Aberffraw / Abermenai to Aberffraw Dunes, SAC
- Y Werthyr, SSSI
- Ynys Feurig, SSSI

### 3.1.2 Protected species

The following records of protected or otherwise notable species were highlighted by the environmental records search:

- Amphibians: four records of great crested newt *Triturus cristatus* were returned from within 2km of the proposed development site, the closest of which is located over 1km to the southeast of the site in 2008. Records of common frog *Rana temporaria*, common toad *Bufo bufo*, and palmate newt *Lissotriton helveticus*, were also returned from within 2km of the proposed development site.

- Badgers: no records of badger *Meles meles* were returned from within 2km of the proposed development site.

- Bats: records of unknown bat species, brown long-eared bat *Plecotus auritus*, natterer's bat *Myotis nattereri*, noctule *Nyctalus noctula*, a *Myotis sp.* bat, a *Pipistrellus sp.* bat, common pipistrelle *Pipistrellus pipistrellus*, and soprano pipistrelle *Pipistrellus pygmaeus*, were returned from within 2km of the proposed development site. The closest record is an unknown bat species which was recorded onsite in 2005.

- Birds: various species, including several NERC section 41, Wildlife and Countryside Act 1981 Schedule 1, Birds of Conservation Concern "amber and red" list species.

- Hazel dormouse: no records of hazel dormouse *Muscardinus avellanarius* were returned from within 2km of the proposed development site.

- Hedgehog: several records of hedgehog *Erinaceus europaeus* were returned from within 2km of the proposed development site, the closest of which was recorded onsite in 2015.

- Otter: a single record of otter *Lutra lutra* was returned from within 2km of the proposed development site and is located approximately 675m from the site in 2017.

- Reptiles: no records of reptiles were returned from within 2km of the proposed development site.

- Water vole: two records of water vole *Arvicola amphibius* were returned from within 2km of the proposed development site, which are located approximately 1.32km to the west of the site in 1991 and 1.81km southeast of the site in 2000.

- White clawed-crayfish: no records of white-clawed crayfish *Austropotamobius pallipes* were returned from within 2km of the proposed development site.

## 3.2 Baseline conditions – Habitats

The results of the PEA are also shown on the accompanying map at Appendix 2 – Phase 1 habitat plan. Habitats are colour-coded in accordance with the phase 1 standard.

The survey boundary and ownership boundary are also indicated on the phase 1 habitat plan. The survey boundary includes the development area, comprising the existing quarry, and the immediate surrounding habitats.

A full botanical species list for each habitat is provided at Appendix 5.

The local area predominantly consists of hedgerow and tree-lined arable fields with pockets of woodland. A stream flows along the eastern boundary of the site. The following principle habitat types were characterised on site:

- A1.3.1 Mixed, semi-natural woodland
- A2.1 Dense scrub
- A2.2 Scattered scrub
- A3.1 Scattered broadleaved trees
- A3.2 Scattered coniferous trees
- B2.2 Neutral, semi-improved grassland
- C3.1 Tall ruderal
- G1 Standing water
- I2.1 Quarry
- I2.2 Spoil
- J1.3 Ephemeral / short perennial
- J2.4 Fence
- J3.6 Buildings
- J5 Hardstanding

### 3.2.1 A1.3.1 Mixed, semi-natural woodland

There is a mixed, semi-natural woodland located between an access road and the edge of a spoil mound within the western section of the site (see Appendix 4 – Photographs, Photograph 2).

The canopy is comprised of ash *Fraxinus excelsior*, sycamore *Acer pseudoplatanus*, elm *Ulmus procera*, and 12hapsus cypress *Cupressus x leylandii*. The understory is comprised of immature and self-seeded trees of the same species with the addition of hawthorn *Crataegus monogyna*, and elder *Sambucus nigra*.

The ground flora is mainly comprised of ivy *Hedera helix*, however, other species present include wood avens *Geum urbanum*, common dog violet *Viola riviniana*, common ragwort *Senecio jacobaea*, spear thistle *Cirsium vulgare*, bramble *Rubus fruticosus agg.,* dog rose *Rosa canina*, wood sage *Teucrium scorodonia*, herb Robert *Geranium robertianum,* and navelwort *Umbilicus rupestris.* Several fern species were also identified within the woodland include: scaley male fern *Dryopteris affinis*, hard shield fern *Polystichum aculeatum*, common polypoady *Polypodium vulgare*, and hart's tongue fern *Asplenium scolopendrium*.

Rabbit holes were identified within the woodland (see Appendix 2 – Phase 1 Habitat Plan; Target Note 3).

### 3.2.2 A2.1 Dense scrub

The site contains several areas of dense scrub which vary slightly in composition. The northern section of the site contains an area of scrub which surrounds semi-improved grassland, and is mainly comprised of bramble, European gorse *Ulex europaeus*, and willow *Salix sp.* (Photograph 3).

There is an area of dense scrub along the western boundary of the site which contains a wider variety of species including hawthorn, willow, bramble, crack willow *Salix x fragilis*, European gorse, bracken *Pteridium aquilinum,* ivy, hart's tongue fern, wood sage and common polypody.

The southern section of the site also contains scrub which appears to have been an area of grassland that has succeeded into dense bramble scrub. The ground flora within the scrub includes foxglove *Digitalis purpurea*, white stonecrop *Sedum album*, common sorrel *Rumex acetosa*, common ragwort, and willowherb *Epilobium sp.* This area of scrub contains two log and brash piles (Target note 1, Photograph 4) and several rabbit holes (Target note 3, Photograph 5).

### 3.2.3 A2.2 Scattered scrub

Scattered scrub is present along the margins of the site and the edges of the access roads, spoils mounds, buildings, ponds and ditches. Species present include European gorse, crack willow, sycamore, butterfly bush *Buddleja davidii.*, pine *Pinus sp.,* rose *Rosa sp.,* and hawthorn.

### 3.2.4 A3.1 Scattered broadleaved trees

There is a single scattered broadleaved tree within the proposed development site, which is an ash tree located adjacent to a building in the western section of the site (Photograph 6).

### 3.2.5 A3.2 Scattered coniferous trees

There is a line of scattered coniferous trees on a bank along the western aspect of the hangar building (Photograph 7). The line of trees is comprised of a variety of pine species including stone pine *Pinus pinea*.

### 3.2.6 B2.2 Neutral, semi-improved grassland

The northern and southern sections of the site contain small areas of neutral, semi-improved grassland which are adjacent to dense scrub and access roads (Photograph 8). In addition, there is a small area along the western boundary of the site.

The grasslands contain a small amount of scattered scrub which has begun to encroach from the surrounding habitats. Grass species present within the semi-improved grassland include cock's foot *Dactylis glomerata*, Yorkshire fog *Holcus lanatus,* and red fescue *Festuca rubra*.

Other species within the grassland include common knapweed *Centaurea nigra*, bulbous buttercup *Ranunculus bulbosus*, lesser celandine *Ficaria verna,* red clover *Trifolium pratense*, yarrow *Achillea millefolium*, creeping buttercup *Ranunculus repens*, wood sage, meadowsweet *Filipendula ulmaria,* common sorrel *Rumex acetosa,* oxeye daisy *Leucanthemum vulgare,* lesser trefoil *Trifolium dubium*, violet *Viola sp.,* foxglove, red campion *Silene dioica*, creeping cinquefoil *Potentilla reptans,* common vetch *Vicia sativa*, curled dock *Rumex crispus*, ground ivy *Glechoma hederacea,* wild strawberry *Fragaria vesca,* common mouse-ear *Cerastium fontanum,* cut-leaved cranesbill *Geranium dissectum,* parsley piert *Aphanes arvensis,* scaley male fern, common polypoady, common ragwort, soft rush *Juncus effusus*, ribwort plantain *Plantago lanceolata,* herb Robert, spear thistle, bristly oxtongue *Helminthotheca echioides,* greater plantain *Plantago major*, stinging nettle *Urtica dioica,* ivy and bramble.

### 3.2.7 C3.1 Tall ruderal

The southern aspect of Pond 6 is surrounded by tall ruderal vegetation which is mainly comprised of broadleaved dock *Rumex obtusifolius*, common ragwort, willowherb, bramble, creeping buttercup, foxglove, bittercress *Cardamine sp.,* common hogweed *Heracleum sphondylium*, and great mullein *Verbascum 14hapsus* (Photograph 9).

### 3.2.8 G1 Standing water

There are two ditches and six ponds within the ownership boundary, and an additional pond directly adjacent to the northwestern boundary of the site. Anecdotal evidence from the site management team indicates that several of the onsite ponds are connected by system of artificial drainage pipes.

**Pond 1** is located within the northeastern section of the site and measures 134m$^2$. There is an inflow of water into the pond as it is connected to other ponds by drainage pipes. The pond contains marginal vegetation including soft rush and greater reed mace *Typha latifolia,* and is surrounded by grassland and dense scrub (Photograph 10).

**Pond 2** is located within the northeastern section of the quarry and measures 418m$^2$. It is a holding pool that lacks vegetation, and the boundaries of the pond are marked by spoil mounds, rubble and the quarry. The pond is cold, deep and heavily shaded by the quarry face. It is suspected that Ponds 2 and 3 are connected depending on water level (Photograph 11).

**Pond 3** is located within the northeastern section of the quarry and measures 578m$^2$. It is a holding pool that lacks vegetation, and the boundaries of the pond are marked by spoil mounds, rubble and the quarry. The pond is cold, deep and heavily shaded by the quarry face. It is suspected that Ponds 2 and 3 are connected depending on water level (Photograph 11).

**Pond 4** is located within the base of the quarry and measures 3883m$^2$. The depth of the pond fluctuates throughout and will likely vary with rainfall; however, at the time of the survey the depth at the edges was approximately 50cm (Photograph 12). The pond contains leaf litter and a small number of wooden pallets are present along the eastern edge (Target note 4). There is a small amount of aquatic and marginal vegetation within the pond including greater

reed mace, water crowfoot *Ranunculus sp.*, water bent *Polypogon viridis*, and sharp-flowered rush *Juncus acutiflorus*. The aquatic vegetation may provide some egg-laying opportunities for amphibians; however, the pond is shaded by the quarry, rubble piles and spoil mounds.

**Pond 5** is an outflow pond located directly adjacent to the northwestern boundary of the site, which measures 57m$^2$. The pond is extremely silty and contains marginal vegetation including willowherb, soft rush, and *Typha sp.* (Photograph 13). The pond is shaded by willow and European gorse scrub.

**Pond 6** is located within the southwestern section of the site and measures 100m$^2$. The pond is silty due to inflow of water from the surrounding hardstanding habitat, and contains marginal vegetation including goat willow *Salix caprea*, soft rush, willowherb and greater reed mace (Photograph 14).

**Pond 7** is located within the southern section of the site and measures 524m$^2$. The water is clear and the pond contains marginal vegetation including soft rush, reed canary grass *Phalaris arundinacea*, gypsywort *Lycopus europaeus*, water starwort *Callitriche sp.,* and floating sweetgrass *Glyceria fluitans* (Photograph 15). Amphibian egg laying opportunities are provided by aquatic vegetation. Grassland species around the margins of the pond indicate that the water level varies depending on rainfall.

**Ditch 1** is located within the base of the quarry, along the eastern edge (Photograph 16). It measures approximately 6m wide and has an unknown depth, but it shallows at the southern end which was approximately 15cm deep at the time of the survey. The ditch contains standing water and is not flowing. However, it is suspected that the water level will fluctuate depending on rainfall. The water is turbid (due to silt presence) at the centre of the ditch and there is a small amount of aquatic and marginal vegetation including yellow flag iris *Iris pseudacorus*, sharp-flowered rush, water crowfoot, willowherb, tufted hair grass *Deschampsia cespitosa*, and water starwort. The ditch is cold and heavily shaded by the quarry face.

**Ditch 2** is located within the centre of quarry, along the western aspect of the access road (Photograph 17). It measures approximately 2m wide and the depth was approximately 50cm at the time of the survey, however, it is suspected that the water level will fluctuate depending on rainfall. The ditch contains standing water and is not flowing. The boundaries of the ditch are marked by a spoil mound and an access road. There is a small amount of scattered scrub around the margins, but the majority of the ditch lacks aquatic / marginal vegetation except for water crowfoot at the southern end and algae. Two palmate newts were identified within the ditch during the walkover survey (Target note 2, Photograph 18).

### 3.2.9 I2.1 Quarry

The majority of the site is comprised of a working quarry for extracting granite (Photograph 1). The base of the quarry contains numerous spoil mounds, rubble piles and machinery, and there are 3 ponds and 2 ditches within the base of the quarry. There is minimal vegetation within the quarry itself except for a small amount of ephemeral / short perennial vegetation and scattered scrub along the margins or adjacent to the ponds and ditches.

The quarry is surrounded by several shelves which could not be accessed during the walkover survey due to health and safety concerns but appear to have a cover of grassland or dense scrub vegetation.

The southern-most point within the development site which can be used by the quarry is located at SH 39447 79321.

### 3.2.10 I2.2 Spoil

There are numerous spoil mounds within the development site as it is a working quarry (Photograph 19). The mounds are located within the base of the quarry and along the access road which leads into the quarry. They are unvegetated except for a very small amount of scattered scrub around the edges of the mounds located along the access road.

### 3.2.11 J1.3 Ephemeral / short perennial

Ephemeral / short perennial species have begun to encroach the areas of hardstanding, spoil mounds, edges of the buildings and margins of the site.

Species present include willowherb, annual meadow grass *Poa annua*, herb Robert, common ragwort, cleavers, red fescue, ribwort plantain, bittercress, toad rush *Juncus bufonius*, scarlet pimpernel *Lysimachia arvensis*, common knapweed, cock's foot grass, bramble, creeping buttercup, common bent *Agrostis capillaris*, a *Vulpia sp.,* bracken, wood sage, maidenhair spleenwort *Asplenium trichomanes*, hart's tongue fern, common polypoady, yarrow, common vetch, bristly oxtongue, black spleenwort *Asplenium adiantum-nigrum*, soft rush, common cat's-ear *Hypochaeris radicata*, smooth sowthistle *Sonchus oleraceus*, meadow buttercup *Ranunculus acris*, scentless mayweed *Tripleurospermum inodorum*, water bent, Canadian fleabane *Erigeron canadensis*, bird's-foot trefoil *Lotus corniculatus*, creeping thistle *Cirsium arvense*, great mullein and dandelion *Taraxacum officinale agg.*

### 3.2.12 J2.4 Fence

The boundaries of the site and Ponds 1 and 5 are demarcated by metal mesh fencing with wooden posts.

### 3.2.13 J3.6 Building

There are numerous buildings onsite including temporary buildings, a hangar building used for storing spoil and those associated with the operation of quarry machinery (Photograph 20).

### 3.2.14 J5 Hardstanding

The majority of the western section of the site is comprised of hardstanding car parking and access roads which lead directly into the quarry and operational areas. There is also an access road which extends around the entirety of the proposed development site and ownership boundary.

## 3.3 Baseline conditions – Protected species or resources

As part of the PEA, specific observations of wildlife were also recorded. Wildlife observations focused on protected species, invasive species or species of conservation concern. Habitats with potential to support protected species were noted with a view to follow up surveys if required.

### 3.3.1 Amphibians

Great crested newts have been recorded on four occasions in the local area.

There are two ditches and six ponds within the development site, with an additional pond directly adjacent to the western boundary of the site. Within 500m of the site there are an additional ten ponds. Two palmate newts were identified onsite within Ditch 2 (Target note 2, Photograph 18). Some of the onsite ponds contain aquatic vegetation which may provide egg-laying opportunities for newts.

The vegetated terrestrial habitats within the development footprint are broadly suitable for GCNs. The grassland, woodland, tall ruderal and dense scrub may provide sheltered commuting and foraging opportunities. In addition, there are two log and brash piles within the dense scrub which may provide further sheltering opportunities (Target note 1, Photograph 4).

### 3.3.2 Reptiles

No records of reptiles were returned from within 2km of the development site.

The woodland, scrub and tall ruderal edge habitats are broadly suitable for slow-worm *Anguis fragilis* and common lizard *Zootoca vivipara*. The grassland margins, where the sward has grown slightly longer, could also be used by commuting and foraging common reptile species. However, the proposed development only includes the vertical extension of the quarry. Therefore, the only habitats that will be affected by this application are the existing quarry and gravel, which are of limited value to reptiles.

### 3.3.3 Badger

No records of badger were returned from within 2km of the proposed development site.

The woodland, dense scrub and grassland habitats may provide commuting and foraging opportunities for badger. However, no evidence of badger activity, including setts, hairs, latrines or prints, were identified onsite during the walkover survey. Therefore, it is considered unlikely that badger will be present onsite.

### 3.3.4 Bats

There are several buildings onsite that were not assessed during the walkover survey but may provide roosting opportunities for bats. However, these buildings will not be affected as the proposed development includes the vertical extension of the quarry only.

Several mature trees are present within the woodland and there are scattered trees within the western section of the site. A ground level tree assessment was not undertaken during the walkover survey, but the trees may also contain features suitable for roosting bats.

The areas of woodland, dense scrub, tall ruderal and grassland may provide commuting and foraging opportunities for bats.

### 3.3.5 Hazel dormouse

The habitats on site are relatively unsuitable for dormice *Muscardinus avellanarius*. The woodland does not have a dense understorey and lacks key species such as hazel and honeysuckle *Lonicera periclymenum*. Therefore, hazel dormice are not considered to be present onsite.

### 3.3.6 Birds

Although a targeted bird survey was not conducted during the site visit, the following bird species were recorded whilst on site: Fieldfare *Turdus pilaris,* robin *Erithacus rubecula*, house sparrow *Passer domesticus*, blue tit *Cyanistes caeruleus*, bullfinch *Pyrrhula pyrrhula*, blackbird *Turdus merula*, dunnock *Prunella modularis*, great tit *Parus major*, carrion crow *Corvus corone*, jackdaw *Corvus monedula*, herring gull *Larus argentatus*, kestrel *Falco tinnunculus*, pied wagtail *Motacilla alba*, buzzard *Buteo buteo*, wood pigeon *Columba palumbus*, chaffinch *Fringilla coelebs*, magpie *Pica pica*, mistle thrush *Turdus viscivorus,* raven *Corvus corax,* goldcrest *Regulus regulus*, mallard *Anas platyrhynchos*, song thrush *Turdus philomelos*, and wren *Troglodytes troglodytes.*

Of these species mentioned above, the following birds are listed under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), Section 41 of the Natural Environment and Rural Communities (NERC) Act, and Birds of Conservation Concern “amber and red” list:

- Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) – Fieldfare
- Section 41 NERC Act – House sparrow, bullfinch, dunnock, herring gull and song thrush
- Birds of Conservation Concern “amber” list – Bullfinch, dunnock, kestrel, wood pigeon, mallard, song thrush and wren.
- Birds of Conservation Concern “red” list – Fieldfare, house sparrow, herring gull, and mistle thrush

Areas of woodland, trees, dense scrub, scattered scrub and tall ruderal all provide suitable nesting opportunities for breeding birds in the summer.

### 3.3.7 Trees

Trees on site may be protected by a Tree Preservation Order (TPO), for which a check has not been undertaken.

### 3.3.8 Hedgerows

There are no hedgerows within the proposed development boundary.

### 3.3.9 Plant communities

No plant communities or individual species were recorded on site which are afforded statutory protection in their own right.

### 3.3.10 Invasive species

No invasive species were identified onsite during the walkover survey.

### 3.3.11 Otter, water vole and white-clawed crayfish

There are two ditches within the base of the quarry that are not directly connected to watercourses within the surrounding area. The ditches contain minimal aquatic vegetation, and the banks are not vegetated. In addition, the ditches are shaded and cold due to their location within the quarry.

There are no flowing watercourses within the proposed development site but there is a stream that flows along the eastern boundary of the site which may provide commuting and foraging opportunities. However, the stream will not be directly affected by the proposed development. It is considered unlikely that otter, water vole and white-clawed crayfish will be present onsite.

### 3.3.12 Hedgehog

Records of hedgehog were returned from within 2km of the proposed development site. The areas of grassland, dense scrub and woodland may provide commuting and foraging opportunities for hedgehog, whilst the log and brash piles may provide sheltering opportunities (Target note 1, Photograph 4). However, the proposed development only includes the vertical extension of the quarry and therefore, the only habitats that will be affected by this application are the existing quarry and gravel. As such, it is considered unlikely that hedgehogs will be adversely affected by the development proposals.

# 4 EVALUATION AND RECOMMENDATIONS

This section provides a brief assessment of the likely impacts associated with the proposed development on the receptors identified during the walkover survey and desk study. It also includes any mitigation and compensation measures which may be required for the proposed development to proceed.

## 4.1 Habitats

### 4.1.1 Designated sites

The sites identified during the desk study were cross-referenced with the survey area relevant to this report. The closest statutorily protected site is Tyddyn Gyrfer SSSI which is located approximately 1.49km to the northwest of the proposed development site. Given the distances from site and the scale of development, it is considered unlikely that the proposed development will have any direct or indirect impact on this designated site.

The closest non-statutorily designated site is Cors llynfaes Wildlife Site which is located approximately 864m to the southeast. As the proposed development includes the vertical extension of the existing quarry only, it is suspected that there will be no material change in the conditions onsite and therefore, no changes to or additional impacts on this non-statutorily designated site.

### 4.1.2 Trees

There are a number of trees on the site, which vary in condition and maturity.

Construction impacts

Site clearance and setting out may involve the direct loss of trees on site as an ecological resource, or may result in damage to any trees which are to be retained. Construction activities too close to the RPAs of retained trees could cause permanent damage.

*Mitigation*

Trees, in particular those forming a linear feature across the site, should be retained where possible. RPAs should be established and implemented around the trees which are to be retained. These areas should be adequately protected by appropriately designed protective barriers and ground protection throughout the entire development process.

*Compensation*

If any trees are to be removed, they should be replaced accordingly as part of a detailed landscaping scheme, with only native species to be planted.

Operational impacts

No operational impacts are envisaged.

### 4.1.3 Woodland

There is a mixed, semi-natural woodland within the western section of the site.

Construction impacts

The woodland could be permanently damaged, altered and / or disturbed by the construction activities.

*Mitigation*

The woodland should be adequately protected during the construction activities on site. It should be fenced off to protect the root systems of the trees within, and no contractors should access the woodland unless authorised to do so or for reasons related to working within the woodland (e.g. protecting it from construction activities). No materials should be stored in the woodland and no temporary or permanent external lighting should be directed onto the woodland.

*Compensation*

If the woodland on site is to be removed, it should be replaced two-fold in terms of area in an appropriate location. A detailed woodland management plan should be prepared for the newly created woodland and agreed with the local planning authority.

Operational impacts

No operational impacts are envisaged.

### 4.1.4 Watercourse

A stream flows along the eastern boundary of the site.

Construction impacts

Construction works adjacent to the stream could result in disturbance and / or pollution to the watercourse.

*Mitigation*

Specific procedures and control measures will need to be implemented to ensure that there is no risk of input into the watercourse. These measures should be set out by the contractors prior to the commencement of works and will need to be agreed with the Local Planning Authority (LPA) and other statutory consultees. These measures should conform to best practice guidance and include the cleaning of all machinery and equipment before use on site to prevent contamination of the watercourse with foreign abiotic and biotic materials.

A buffer zone should also be retained along the length of the watercourse to protect it from disturbance. The buffer zone should be adequately fenced off and no vegetation clearance or other construction activities should take place within it.

Operational impacts

No operational impacts are envisaged.

### 4.1.5 Ponds and waterbodies

There are two ditches and six ponds onsite, with an additional pond immediately adjacent to the site.

Construction impacts

Site clearance and construction works in general may result in disturbance and / or pollution to the ponds on or adjacent to site.

*Mitigation*

Specific procedures or control measures will need to be implemented to ensure that the ponds are not affected by the proposed development.

If ponds are to be removed, they should be replaced as part of the proposed landscaping plan.

Operational impacts

Without regular clearance, the ponds may silt up and succeed such that they will not provide suitable breeding habitat for amphibians. Conversely, inappropriate management or timing of maintenance works may result in significant impacts to amphibians in the future.

*Mitigation*

It is recommended that an enhancement plan is produced to maintain and manage the onsite ponds.

## 4.2 Species

### 4.2.1 Amphibians

The ponds and ditches onsite may provide suitable habitat for GCN. In addition, the terrestrial habitats within the development boundary are broadly suitable as the grassland, woodland and dense scrub may provide sheltered commuting and foraging opportunities. Log and brash piles are also present within the dense scrub.

Construction impacts

Potential impacts include direct harm, injury and / or death to individuals.

*Mitigation*

A GCN impact assessment and environmental DNA (eDNA) analysis should be undertaken of all accessible ponds, both onsite and within close proximity to the proposed development site, to assess their suitability to support GCNs. This impact assessment should occur between mid-April to June inclusive.

Operational impacts

To be determined following the further surveys.

### 4.2.2 Reptiles

The woodland edge, grassland margins, dense scrub and tall ruderal vegetation may provide foraging, sheltering and commuting opportunities for common reptile species. However, the proposed development only includes the vertical extension of the quarry, and therefore, the only habitats that will be affected by this application are the existing quarry and gravel, which are of limited value to reptiles.

Construction impacts

Reptile presence within the proposed development boundary is considered unlikely, however if reptiles are present during the construction activities, they could be directly harmed.

*Mitigation*

The following reasonable avoidance measures should be implemented on site during the construction phase of the development to reduce any residual risk to negligible levels:

- Any areas of grassland within the proposed working area are to be mown to have a sward length below 10cm, and the grassland is to be mown to this height at least 24 hours prior to the start of development works. This is to give any reptiles present time to move off site of their own accord. The mown / cleared area will then be maintained with a short sward until the works on site have been completed.

- No excavations are to be left open overnight. If this is not feasible a plank should be left within the excavation at a 45-degree angle to allow trapped wildlife to escape. Any open excavations should be checked for trapped wildlife in the morning prior to start of works on site.

- Where possible, materials will be stored on pallets off the ground in order to reduce the risk of reptiles sheltering underneath them.

- UES will remain on-call throughout the development and if any reptiles are encountered, work on site is to stop immediately and ecological advice is to be sought. **UES can be contacted directly on 01565 757788.**

Operational impacts

No operational impacts are envisaged.

### 4.2.3 Bats

There are a number of trees on and offsite which contain features that are suitable for roosting bats however these are not due to be directly affected by the development proposals. The buildings on site were not fully assessed with regards to potential for roosting bats, however these are not due to be affected by the development proposals.

Construction impacts

No significant vegetation removal is due to be undertaken by the current development proposals, however if the proposals change to include tree removal, bats may potentially be harmed if roosting within trees. Inappropriate landscaping could also result in the severing of commuting corridors used by bats as well as the loss of foraging habitats.

*Mitigation*

If any of the trees on site or adjacent to the site will be affected by the proposed development, then a ground level tree assessment will be required to determine the suitability of the trees to support roosting bats. This ground level assessment can be undertaken any time of year. If any trees due to be adversely impacted are found to have the potential to support roosting bats, further aerial tree inspections should be conducted. If any potential roosting features are found to still be suitable following the inspections, further bat presence / absence surveys or further aerial inspections may be required during the bat survey season (May to September inclusive).

*Enhancements*

The provision of bat boxes as part of the development proposals would increase the roosting opportunities for bats on site but would also increase the ecological value of the site. At the time of writing this report no detailed plans are available, but bat boxes that could be used on site include:

- Schwegler 1FF box (affixed to trees or buildings)
- Schwegler 2F box (affixed to trees or buildings)
- Schwegler 1FW hibernation box (affixed to trees)
- Schwegler 2FR bat tube (installed in connected pairs or threes into the external walls
- of buildings)

Bat boxes affixed to trees should be fitted at a height of between 5 and 6m metres on a southerly aspect.

The bat boxes affixed to, or installed into the external walls of buildings should be installed just below the eaves / roof height. No detailed lighting proposals are as yet available to UES, however care must be taken when installing any new lighting to ensure that light spillage onto the bat boxes is minimised. This may require the use of cowling or relocation of the bat box or lighting.

It should be noted that once bat inhabits a bat box, they may only be disturbed by a licensed bat worker.

Operational impacts

To be assessed following the further surveys.

### 4.2.4 Birds

There are a number of habitats, such as woodland, dense scrub, scattered scrub, mature trees and tall ruderal vegetation which could support breeding birds.

Construction impacts

No significant vegetation removal is due to be undertaken by the current development proposals, however if the proposals change to include tree felling, arboricultural works and / or vegetation removal, it could result in the direct loss of nests, any individuals within the nests and of available nesting territories if conducted during the breeding season.

*Mitigation*

Any site clearance, tree felling, arboricultural works and / or vegetation removal (including enabling works) are to take place outside of the breeding bird season and should not be undertaken from March to August inclusive. If this is not possible and works need to take place between this period, a targeted breeding bird nest scoping survey should be conducted by a suitably qualified ecologist immediately prior to the works, or an ecological clerk of works appointed to oversee the works.

*Compensation and enhancement*

If extensive areas of vegetation are to be removed, consideration should be given to providing replacement habitat for foraging and nesting birds by incorporating tree, shrub or scrub planting as part of the landscaping proposals.

Landscaping can also be used to promote biodiversity through the appropriate design of habitats and creating habitat mosaics, which promote natural linkages and hence the dispersal of target species. Principles and landscaping ideas beneficial to wildlife and relevant to this site include:

- Planting and management of hedgerows
- Planting of berry and nut bearing shrub species to encourage winter birds
- Planting and management of shrubs which develop a mosaic of structures to support breeding birds
- Use of nectar bearing flowers to encourage invertebrates (such as bees, flies, beetles and butterflies)

Species are to be native, of local provenance or to have a proven benefit to biodiversity. Further information can be found at Appendix 6 – Landscape design for birds.

Compensation for the loss of nesting habitat and the enhancing of the nesting habitat on site can also be provided through the provision of bird nest boxes. At the time of writing this report no detailed plans are available, but bird boxes that could be used on site include:

- Schwegler 1B nest box (affixed to trees)
- Schwegler 1SP sparrow terrace (affixed to building below the eaves)
- Schwegler 2H robin nest box (affixed to trees)
- Schwegler 3S starling nest box (affixed to trees or buildings)
- Schwegler 1MR Avianex box (affixed to trees or buildings)

The bird boxes should be sited at a minimum height of three metres. Unless there are trees which shade the box during the day, the boxes should be oriented between north and east, thus avoiding strong sunlight and the wettest winds.

Operational impacts

Inappropriate management of the habitats on site could degrade them and render them unsuitable for wildlife.

*Mitigation*

It is important to implement good horticultural practice in any landscaping scheme, including the use of peat-free composts, mulches and soil conditioners. The use of pesticides (herbicides, insecticides, fungicides and slug pellets) should be discouraged to prevent fatal effects on the food chain. Any pesticides used should be non-residual.

Excessive removal or pruning of trees and hedgerows should be avoided to maximise the growth and plant matter available to wildlife. Pruning should be left until late winter to leave seeds and berries for wintering wildlife and to ensure no impact on breeding and nesting birds.

# 5 CONCLUSION

The survey boundary has an area of approximately 20ha and is mainly comprised of a working quarry with associated access roads, spoil mounds and buildings associated with the operation of quarry machinery. The are three ponds and two ditches within the base of the quarry, with a further three ponds in the ownership boundary. The areas surrounding the quarry contain a range of additional habitats including dense scrub, semi-improved grassland, scattered trees and a mixed semi-natural woodland.

The preliminary ecological appraisal has highlighted potential issues with the following ecological receptors on or adjacent to site: amphibians, bats, breeding birds, reptiles, woodland, trees, watercourse and ponds / waterbodies. Provided these issues are addressed in accordance with the recommendations detailed in this report, the development may proceed without adversely impacting the aforementioned ecological receptors.

The development also presents an opportunity to enhance the habitats available to wildlife on site. The provisioning of bat and bird nest boxes on site will provide improved roosting and nesting opportunities into the long-term future of the site.

# 6 REFERENCES

CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal* (Second Edition).

DEFRA (2019). *MAGIC* [online]. Available at: http://magic.defra.gov.uk/.

JNCC (2010). *Handbook for Phase 1 habitat survey: A technique for environmental audit*.

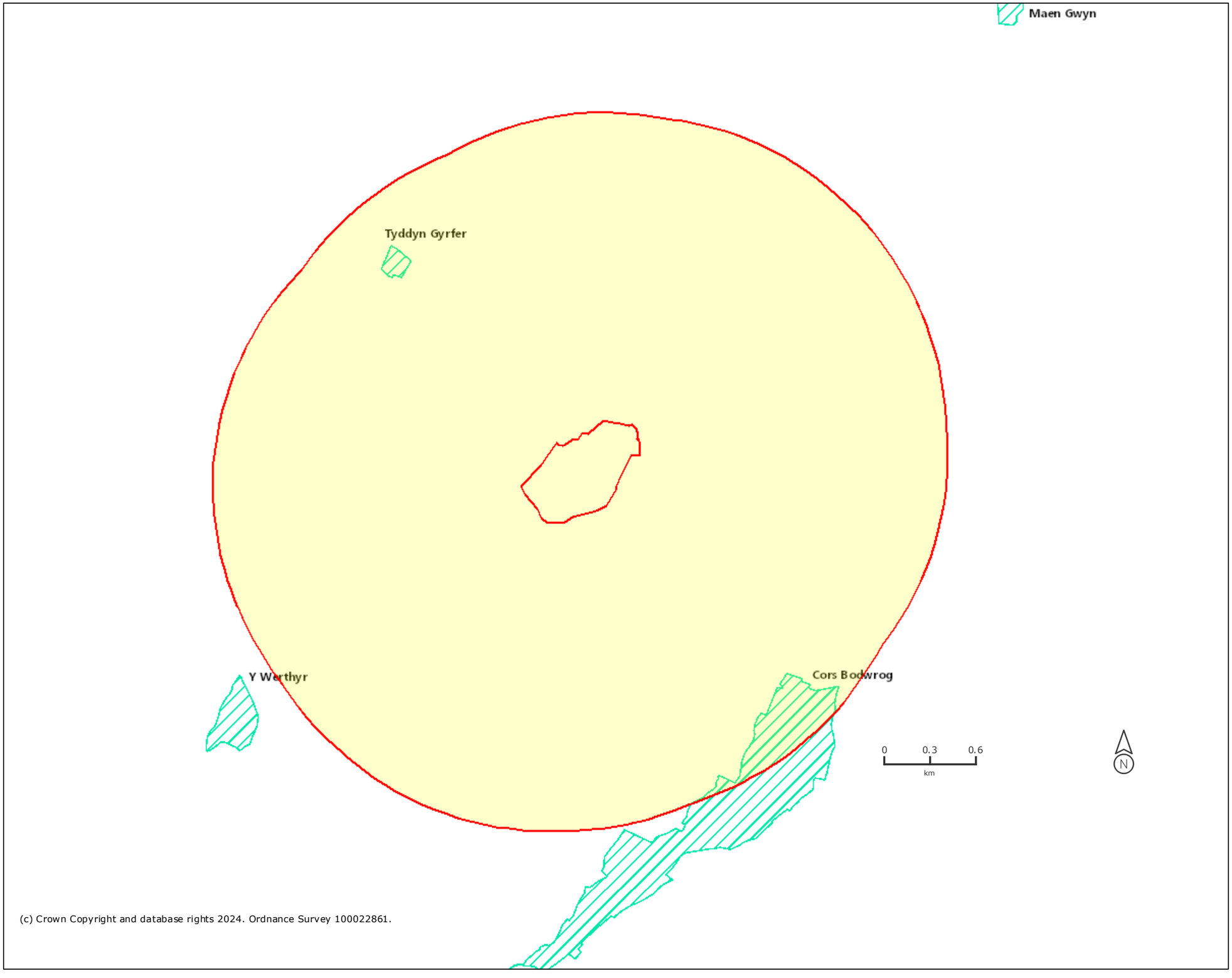
Welsh Government (2024). *Planning Policy Wales (PPW).* 12th Edition.

# APPENDICES

## Appendix 1 – Desk study

MAGiC

# Statutorily Designated Sites (2km Buffer)






## Legend

- National Nature Reserves (Wales)
- Ramsar Sites (Wales)
- SSSI Impact Risk Zones - to assess planning applications for likely impacts on SSSIs/SACs/SPAs & Ramsar sites (England)
- Sites of Special Scientific Interest (Wales)
- Special Areas of Conservation (Wales)
- Special Protection Areas (Wales)

Projection = OSGB36
xmin = 235100
ymin = 376900
xmax = 244900
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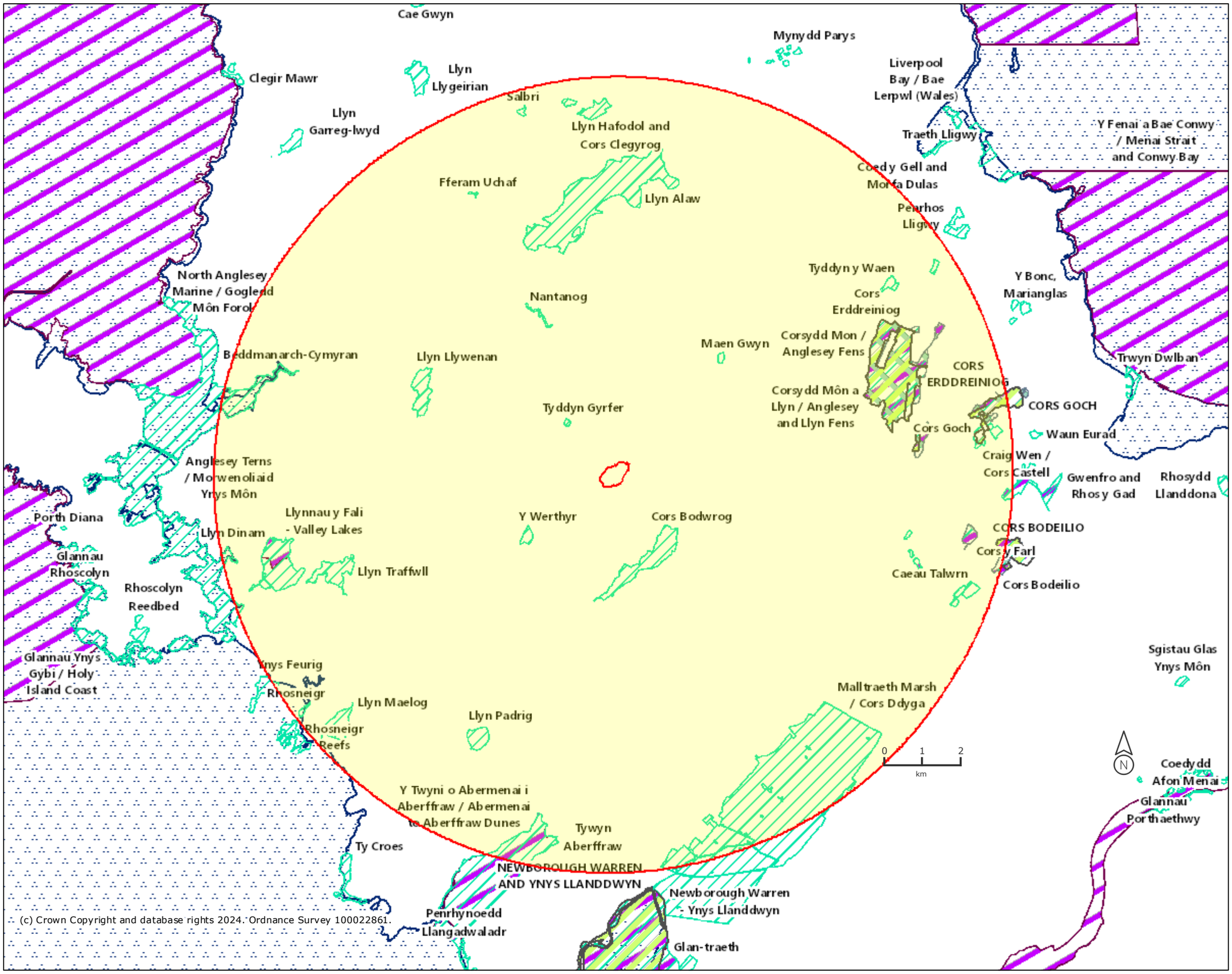
km

Map produced by MAGIC on 29 January, 2024.

MAGiC

# Statutorily Designated Sites (10km Buffer)

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## Legend

- National Nature Reserves (Wales)
- Ramsar Sites (Wales)
- Sites of Special Scientific Interest (Wales)
- Special Areas of Conservation (Wales)
- Special Protection Areas (Wales)

Projection = OSGB36
xmin = 220100
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ymax = 389000

0 2 4 km

Map produced by MAGIC on 29 January, 2024.

## Appendix 2 – Phase 1 habitat plan

Target note 1 – Log and brash pile

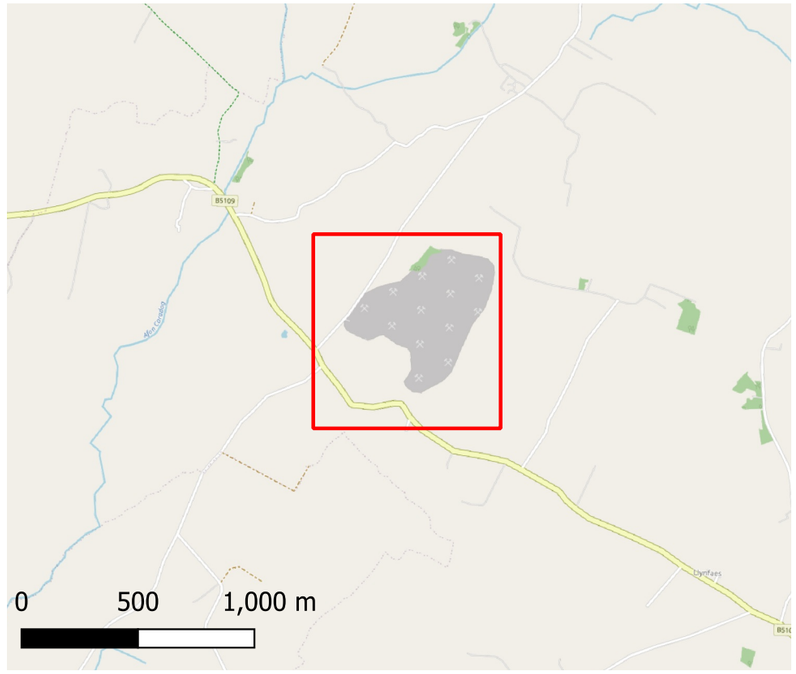
Target note 2 – Two palmate newts

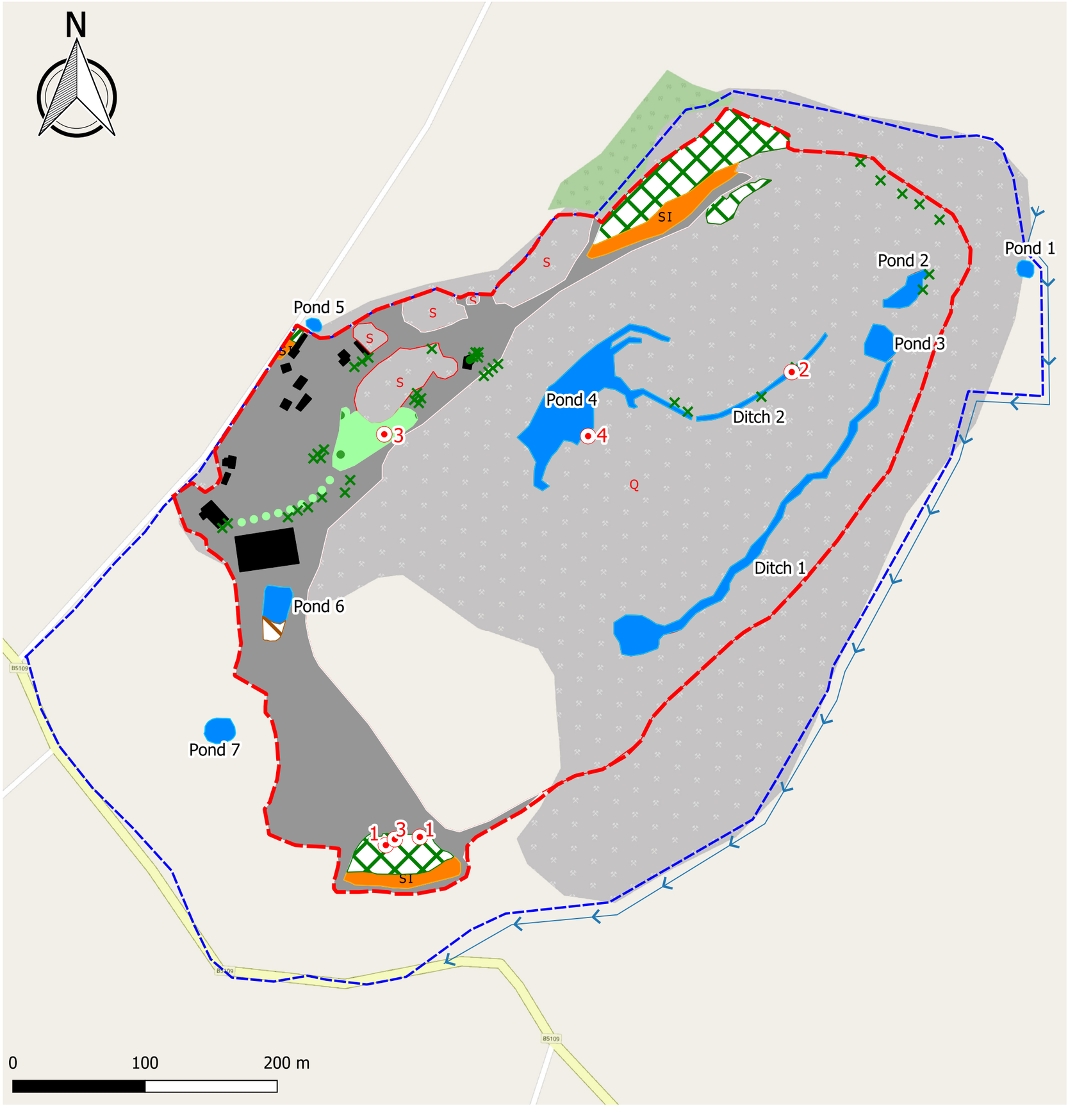
Target note 3 – Rabbit burrows

Target note 4 – Wooden pallets along the edge of a pond

# Preliminary Ecological Appraisal

**Site: Gwyndy Quarry, Anglesey**
**NGR: SJ 39800 79498**
**Author: Ysobella Cox**
**Date: 12.03.2024**

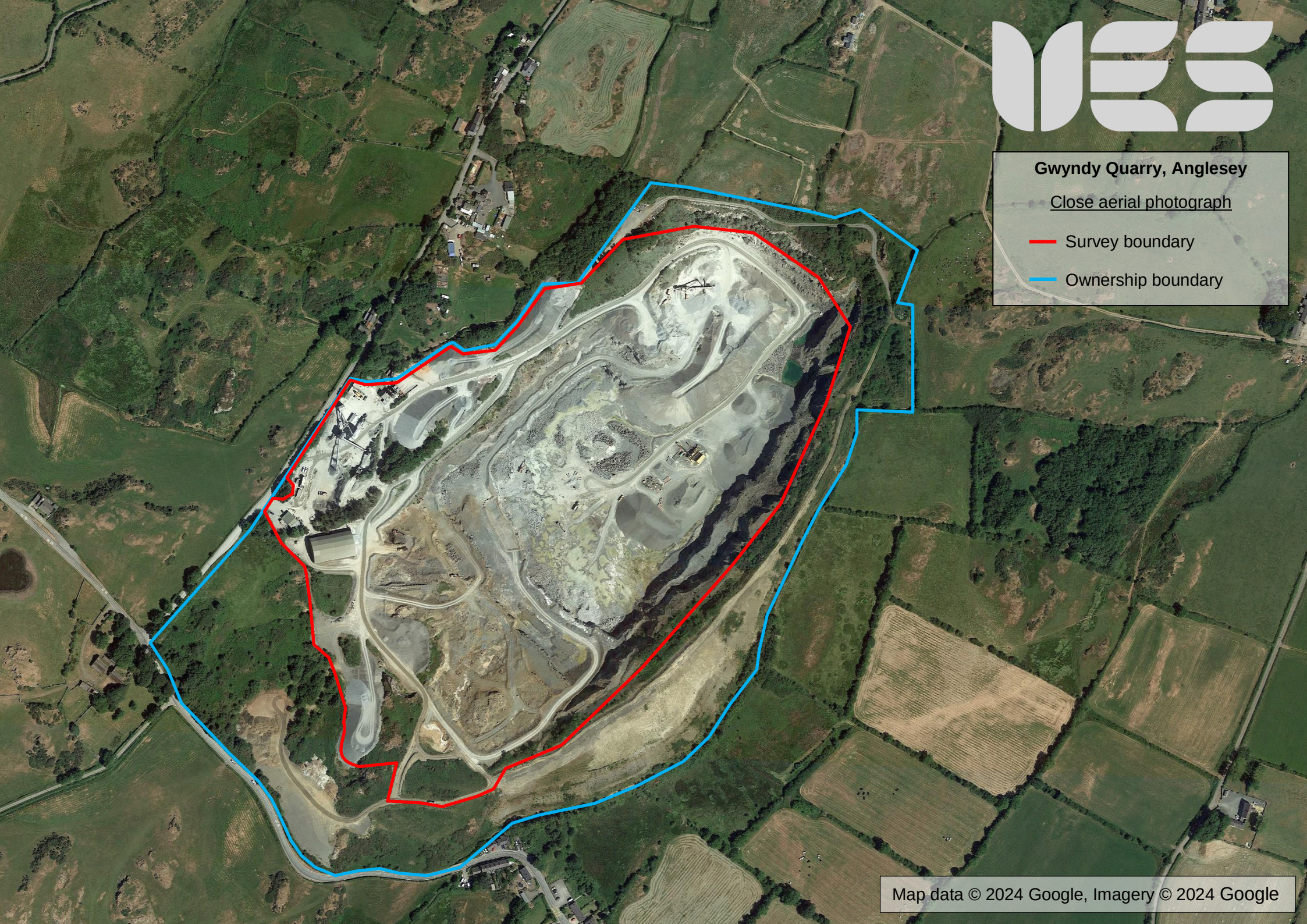



## Key

- A1.3.1 - Mixed woodland - semi-natural
- A2.1 - Dense scrub
- A2.2 - Scrub - scattered
- A3.1 - Broadleaved scattered trees
- A3.2 - Coniferous scattered trees
- B2.2 - Semi-improved neutral grassland
- C3.1 - Tall ruderal
- G1 - Standing water
- I2.1 - Quarry
- I2.2 - Spoil
- J3.6 - Buildings
- J5 - Hardstanding
- Target Notes
- Survey boundary
- Ownership Boundary

# Appendix 3 – Aerial photographs


Gwyndy Quarry, Anglesey
Close aerial photograph
Survey boundary
Ownership boundary
Map data © 2024 Google, Imagery © 2024 Google


Gwyndy Quarry, Anglesey
Wide aerial photograph
Site location
Map data © 2024 Google, Imagery © 2024 Google

# Appendix 4 – Photographs

Photograph 1 – The working quarry, looking north across the site.

Photograph 2 – The mixed, semi-natural woodland located within the western section of the site.

Photograph 3 – Dense scrub within the northern section of the site.

Photograph 4 – A log and brash pile within the dense scrub in the southern section of the site.

Photograph 5 – A rabbit hole identified in the dense scrub in the southern section of the site.

Photograph 6 – A building located within the western section of the site, and a scattered ash tree.

Photograph 7 – A line of coniferous trees along the western aspect of the hangar building.

Photograph 8 – Semi-improved, neutral grassland within the northern section of the site.

Photograph 9 – Tall ruderal vegetation surrounding Pond 6.

Photograph 10 – Pond 1 within the northeastern section of the site.

Photograph 11 – Ponds 2 and 3 within the base of the quarry.

Photograph 12 – Pond 4 located within the base of the quarry.

Photograph 13 – Pond 5 located directly adjacent to the northwestern boundary.

Photograph 14 – Pond 6 located within the southwestern section of the site.

Photograph 15 – Pond 7 located within the southern section of the site.

Photograph 16 – Ditch 1 located within the base of the quarry, along the eastern edge.

Photograph 17 – Ditch 2 located within the centre of the quarry.

Photograph 18 – Two palmate newts identified within Ditch 2.

Photograph 19 – A spoil mound within the proposed development site.

Photograph 20 – Buildings associated with the operation of quarry machinery.

# Appendix 5 – Botanical species list

| *Scientific name* | Common name |
|---|---|
| *Acer pseudoplatanus* | Sycamore |
| *Achillea millefolium* | Yarrow |
| *Agrostis capillaris* | Common Bent |
| *Aphanes arvensis* | Parsley Piert |
| *Asplenium adiantum-nigrum* | Black Spleenwort |
| *Asplenium scolopendrium* | Hart's Tongue Fern |
| *Asplenium trichomanes* | Maidenhair Spleenwort |
| *Buddleja sp.* | Butterfly Bush |
| *Callitriche sp* | Water Starwort |
| *Cardamine sp.* | Bittercress |
| *Centaurea nigra* | Common Knapweed |
| *Cerastium fontanum* | Common Mouse-ear |
| *Cirsium arvense* | Creeping Thistle |
| *Cirsium vulgare* | Spear Thistle |
| *Conyza canadensis* | Canadian Fleabane |
| *Crataegus monogyna* | Hawthorn |
| *Cupressus x leylandii* | Leyland Cypress |
| *Dactylis glomerata* | Cock's Foot |
| *Deschampsia cespitosa* | Tufted Hair Grass |
| *Digitalis purpurea* | Foxglove |
| *Dryopteris affinis* | Scaly Male Fern |
| *Epilobium sp* | Willowherb |
| *Fagaria vesca* | Wild Strawberry |
| *Festuca rubra* | Red Fescue |
| *Ficaria verna* | Lesser Celandine |
| *Filipendula ulmaria* | Meadowsweet |
| *Fraxinus excelsior* | Ash |
| *Galium aparine* | Cleavers |
| *Geranium dissectum* | Cut-leaved Cranesbill |
| *Geranium robertianum* | Herb Robert |
| *Geum urbanum* | Wood Avens |
| *Glechoma hederacea* | Ground Ivy |
| *Glyceria fluitans* | Floating Sweet-grass |
| *Hedera helix* | Ivy |
| *Helminthotheca echioides* | Bristley Oxtongue |
| *Holcus lanatus* | Yorkshire Fog |
| *Hypochaeris radicata* | Common Cat's-ear |
| *Iris pseudacorus* | Yellow Flag Iris |
| *Jacobaea vulgaris* | Common Ragwort |
| Juncus acutiflorus | Sharp-flowered Rush |
| *Juncus bufonius* | Toad Rush |
| *Juncus effusus* | Soft Rush |
| *Leucanthemum vulgare* | Oxeye Daisy |
| *Lotus corniculatus* | Birdsfoot Trefoil |
| *Lycopus europaeus* | Gypsywort |
| *Lysimachia arvensis* | Scarlet Pimpernel |
| *Phalaris arundinacea* | Reed Canary Grass |
| *Pinus pinea* | Stone Pine |
| *Pinus sp.* | Pine |
| *Plantago lanceolata* | Ribwort Plantain |
| *Plantago major* | Greater Plantain |
| *Poa annua* | Annual Meadow-grass |
| *Polypodium vulgare* | Common Polypoady |
| *Polystichum aculeatum* | Hard Shield-fern |
| *Potentilla reptans* | Creeping Cinquefoil |
| *Pteridium aquilinum* | Bracken |
| *Ranunculus acris* | Meadow Buttercup |
| *Ranunculus bulbosus* | Bulbous Buttercup |
| *Ranunculus repens* | Creeping Buttercup |
| *Ranunculus sp.* | Water Crowfoot |
| *Rosa canina* | Dog Rose |
| *Rosa sp.* | Rose |
| *Rubus fruticosus agg.* | Bramble |
| *Rumex acetosa* | Common Sorrell |

| *Scientific name* | Common name |
|---|---|
| *Rumex acetosa* | Common Sorrell |
| *Rumex crispus* | Curled Dock |
| *Rumex obtusifolius* | Broadleaved Dock |
| *Salix caprea* | Goat Willow |
| *Salix fragilis* | Crack Willow |
| *Salix sp.* | Willow |
| *Sambucus nigra* | Elder |
| *Sedum album* | White Stonecrop |
| *Silene dioica* | Red Campion |
| *Sonchus oleraceus* | Smooth Sowthistle |
| *Taraxacum officinale agg.* | Dandelion |
| *Teucrium scorodonia* | Wood Sage |
| *Trifolium dubium* | Lesser Trefoil |
| *Trifolium pratense* | Red Clover |
| *Tripleurospermum inodorum* | Scentless Mayweed |
| *Typha latifolia* | Greater Reed Mace |
| *Ulex europaeus* | European Gorse |
| *Ulmus procera* | Elm |
| *Umbilicus rupestris* | Navelwort |
| *Urtica dioica* | Stinging Nettle |
| *Verbascum thapsus* | Great Mullein |
| *Vicia sativa* | Common Vetch |
| *Viola riviniana* | Common Dog-violet |
| *Viola spp* | Violet |

# Appendix 6 – Landscape design for birds

| SPECIES | F | SIZE | | | | LOCATION | | | SOIL MOISTURE | BENEFITS TO WILDLIFE |
|---|---|---|---|---|---|---|---|---|---|---|
| | | T | S | M | L | H | W | Su/Sh | | |
| **TREES** | | | | | | | | | | |
| Alder* | D | | | | Y | | | Su | M | Seed food for birds |
| Beech* | D | | | Y | Y | Y | | Su | D | Seed food for birds |
| Birch* | D | | Y | Y | Y | | | Su | D | Seed food for birds |
| Bird cherry * | D | | | Y | Y | | | Su | D | Food for birds, flowers attract insects |
| Crab apple* | D | | Y | Y | Y | | | Su | D | Food for birds, flowers attract insects |
| English oak* | D | | | | Y | | | Su | D | Food for birds, insects and mammals, nesting sites |
| European larch* | D | | | | Y | | | Su | M | Seed food for birds |
| Holly* | E | | Y | Y | Y | Y | | Su | D | Fruits eaten by birds, food plant of holly blue butterfly |
| Juniper* | E | | | | | | | Su | D | Shelter and nest sites, fruits eaten by thrushes |
| Lime* | D | | | | Y | Y | | Su | D | Seed food for birds |
| Rowan* | D | | | Y | Y | | | Su | D | Fruits eaten by birds |
| Scot's pine* | E | | | | Y | | | Su | D | Seed food for birds |
| Swedish whitebeam | D | | Y | Y | Y | | | Su | D | Food for birds, flowers attract insects |
| Wild cherry* | D | | | Y | Y | | | Su | D | Food for birds, flowers attract insects |
| Yew* | E | | Y | Y | Y | Y | | Su | D | Food for birds, nesting sites |
| **SHRUBS** | | | | | | | | | | |
| Barberry | B | Y | Y | Y | Y | Y | | Su | D | Good shelter and nest cover for birds, berries may provide food |
| Blackthorn* | D | | | Y | Y | Y | | Su | M | Attracts insects, food for birds, nesting sites |
| Buckthorn* | D | | | Y | Y | Y | | Su/Sh | D | Food plant of brimstone butterfly, fruits eaten by birds |
| Butterfly bush | E | Y | Y | Y | Y | Y | | Su | D | Attracts insects |
| Californian lilac | E | | | Y | Y | Y | Y | Su | D | Flowers attractive to various insects |
| Cotoneaster | B | Y | Y | Y | Y | Y | Y | Su | D | Flowers attractive to insects, fruits eaten by birds |
| Dogwood* | D | | | Y | Y | Y | | Su | D | Food for birds, winter stem colour |
| Elder* | D | | Y | Y | Y | Y | | Su | D | Food for birds |
| Escallonia | E | | | Y | Y | Y | | Su | M | Flowers attractive to various insects, tolerant of salt - good in coastal areas |
| Field maple* | D | | Y | Y | Y | Y | | Su | D | Good source of insect food for birds |
| Firethorn | E | Y | Y | Y | Y | Y | Y | Su | D | Berries popular with many bird species |
| Flowering current | D | | Y | Y | Y | | | Su | D | Early flowers attractive to insects |
| Forsythia | D | | Y | Y | Y | Y | Y | Su | D | Early flowers attractive to insects |
| Garria | E | Y | Y | Y | Y | | Y | Su | D | Winter catkins, early cover for nesting birds |
| Goat willow* | D | Y | Y | Y | Y | | | Su | D | Catkins attractive to bees, good source of insect food for birds |
| Gorse* | E | | | Y | Y | Y | | Su | D | Early flowers attractive to insects, good protection for birds |
| Rhytismatales | E | | | Y | Y | Y | | Su | D | Good cover, tolerant of salt - good in coastal areas |
| Guelder-rose* | D | | | Y | Y | Y | | Su | D | Food for birds & insects |
| Hawthorn* | D | | Y | Y | Y | Y | | Su | D | Flowers attractive to insects, fruits eaten by birds, good shelter and nesting site |
| Hazel* | D | Y | | Y | Y | Y | | Su | D | Food for birds, insects and mammals, nesting sites |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Laurel-leaved vibumum | E | | Y | Y | Y | | | Su | D | Early flowers good for insects, good cover for birds |
| Lavender | E | Y | Y | Y | Y | Y | | Su | D | Flowers attract many insects, seeds popular with finches |
| Lilac | D | | Y | Y | Y | | | Su | D | Flowers attractive to insects |
| Oregon grape | E | | Y | Y | Y | | | Su/Sh | M | Early flowers good for insects |
| Pheasant berry | E | | | Y | Y | | | Su | D | Berries popular with many bird species |
| Privet* | E | | Y | Y | Y | Y | | Su | D | Flowers attract butterflies, produces berries |
| Rose | D | Y | Y | Y | Y | Y | Y | Su | D | Fruits of some varieties attractive to birds |
| Rosemary | E | Y | Y | Y | Y | Y | | Su | D | Flower attract many insects |
| Shad bush | D | | Y | Y | | | | Su | M | Flowers attract insects, early forming berries good for thrushes |
| Snowberry | D | | | Y | Y | Y | | Su/Sh | D | Flowers attractive to bees, fruits attractive to birds, dense stems provide cover |
| Spindle* | D | | Y | Y | Y | | | Su | D | Berries eaten by birds, but poisonous to mammals |
| Tamarix | D | | | Y | Y | Y | | Su | D | Flowers attractive to various insects, tolerant of salt - good in coastal areas |
| **CLIMBERS & RAMBLERS** | | | | | | | | | | |
| Bramble* | D | | Y | Y | Y | Y | Y | Su/Sh | D | Food for birds, insects and mammals, nesting sites |
| Clematis | D | Y | Y | Y | Y | | | Su | D | Nesting sites |
| Honeysuckle* | D | Y | Y | Y | Y | Y | Y | Su/Sh | D | Attractive to insects, good nesting site, food for birds |
| Ivy* | E | Y | Y | Y | Y | Y | Y | Su/Sh | D | Attractive to insects, good nesting site, food for birds |
| Rose | D | Y | Y | Y | Y | Y | Y | Su | D | Fruits of some varieties attractive to birds |
| Winter jasmin | E | Y | Y | Y | Y | Y | Y | Su | D | Early flowers attractive to insects |
| Wisteria | D | Y | Y | Y | Y | | Y | Su | D | Attractive to insects, good nesting site |

| **KEY** | | | |
|---|---|---|---|
| ***** | Native (NB: some varieties are cultivars or non-native) | **Location** | H = may be used as a hedge plant |
| **F** | D = Deciduous | | W = may be used as a wall shrub |
| Foliage type | E = Evergreen | | Su = Sunny borders |
| | B = Both | | Sh = Shade tolerant |
| **Size** | T = Terraces & balconies | | Su/Sh = Grows in partial shade |
| Suitable for garden sizes | S = Small garden (</= 6m x 4m) | **Soil mositure** | D = Well drained |
| | M = Medium gardens (</= 12m x 6m) | | M = Moist |
| | L = Large gardens (> 12m x 6m) | | W = Wet soil |

# Appendix 7 – Planning and statutory context

## STATUTORY AND PLANNING CONTEXT

### Ecological assessments

Ecological assessments play an important part within the planning context; they include an initial assessment which highlights any specific interests of a site. From the initial site assessment, the surveyor assesses the suitability of habitats within the site to support protected species and makes recommendations for further survey works if required. The following paragraphs provide a brief interpretation of the legislative protection that is relevant to the findings of this report.

### Habitats

Section 7 of the Environment Act (Wales) places a duty on Welsh Ministers to publish, review and revise lists of types of habitats and species in Wales which they consider are of key significance to sustain and improve biodiversity. The Welsh Ministers must also take all reasonable steps to maintain and enhance the habitats published in these lists, and encourage others to take such steps.

### Amphibians

<u>Great crested newts</u>

Great crested newts (GCN) *Triturus cristatus* and their habitat (aquatic and terrestrial) are afforded full protection by the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017. If both national and international legislation are taken together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture GCN
- Deliberately, intentionally or recklessly disturb GCN in such a way to be likely to significantly affect:
    - their ability to survive, breed, reproduce, rear or nurture their young
    - their ability to hibernate or migrate
    - their local distribution or abundance
- Deliberately, intentionally or recklessly take or destroy the eggs of GCN
- Damage or destroy breeding sites or resting places of GCN
- Intentionally or recklessly disturb sheltering GCN, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead GCN, any part of GCN or anything derived from GCN

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

GCN are also protected by the Protection of Animals Act 1911, which prohibits cruelty and mistreatment. Releasing a GCN in such a way as to cause undue suffering may be an offence under the Abandonment of Animals Act 1960.

In addition to the above, there are various statutory provisions relating to the transport of animals, designed to ensure their welfare. GCN are also listed under Section 7 of the Environment (Wales) Act 2016.

It is important to identify the presence of GCN individuals and also to identify suitable habitat on sites so that legal obligations regarding this species can be observed. If a survey identifies the presence of GCN on the site, an assessment of the population size class is required. This can then inform a mitigation scheme, which would need to be developed in liaison with the local Natural Resources Wales (NRW) team, and which minimises direct threats to newts and compensates for any loss of habitat. A licence issued by NRW is required for the legal implementation of a mitigation scheme.

An NRW mitigation licence application requires a Mitigation Method Statement and a Reasoned Statement of Application. The Mitigation Method Statement contains details of the proposed mitigation works. The Reasoned Statement needs to provide a rational and reasoned justification as to why the proposed development meets the requirements of the Conservation (National Habitats & c.) regulations 1994, namely Regulations 44(2)(e), (f) or (g), and 44(3)(a).

Other amphibians

More common British amphibians, such as common frog *Rana temporaria*, common toad *Bufo bufo*, smooth newt *Triturus vulgaris* and palmate newt *Triturus helveticus* are protected only by Section 9(5) of the Wildlife and Countryside Act 1981 (as amended). This section prohibits sale, barter, exchange, transporting for sale and advertising to sell or to buy.

The above named species are also listed as UK Species of Conservation Concern. Due to general declines in most British amphibian species in recent years, many local authorities require amphibian surveys as a planning condition, or as part of environmental information submitted as part of a planning application, even where the presence of GCN is ruled out.

Natterjack toad *Bufo calamita* and pool frog *Pelophylax lessonae* are also offered the same level of protection as GCN, through the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017.

Natterjack and common toad are also listed under Section 7 of the Environment (Wales) Act 2016.

Water bodies that support all five (more common) species of British amphibians in high numbers, may be afforded protection in local plans, as Sites of Importance for Nature Conservation (SINC), or a similar equivalent, for sites of local importance. A site may require statutory protection as a Site of Special Scientific Interest (SSSI).

**Reptiles**

Common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, grass snake *Natrix natrix* and adder *Vipera berus* are protected under the Wildlife and Countryside Act 1981 (as amended). They are listed as a Schedule 5 species therefore part of Section 9(1) and section 9(5) apply. The Countryside and Rights of Way Act 2000 also strengthens their protection. It is offence to:

- Intentionally or recklessly kill or injure any of the species listed above
- Sell, offer, advertise or transport for sale a live or dead animal of the species listed above

If a proposed development is likely to have an impact on these reptiles the local statutory nature conservation organisation must be consulted.

Sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca* receive full protection under the Wildlife and Countryside Act 1981 (as amended) and Conservation of Habitats and Species Regulations 2017. Read together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture any sand lizards or smooth snakes
- Deliberately, intentionally or recklessly disturb sand lizards or smooth snakes in such a way to be likely to significantly affect:
    - their ability to survive, breed, reproduce, rear or nurture their young
    - their ability to hibernate or migrate
    - their local distribution or abundance
- Deliberately, intentionally or recklessly take or destroy the eggs of such an animal
- Damage or destroy breeding sites or resting places of such animals
- Intentionally or recklessly disturb sheltering sand lizards or smooth snakes, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead sand lizards or smooth snakes, any part of such an animal or anything derived from such an animal

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

All reptile species (except for smooth snake) are also listed under Section 7 of the Environment (Wales) Act 2016.

**Badger**

European badgers *Meles meles* and their habitat are protected under The Protection of Badgers Act 1992 and are also included on Schedule 6 of the Wildlife and Countryside Act 1981, and Appendix III of the Bern Convention. The legislation affords badgers protection against deliberate harm or injury making it an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat a badger (or attempt to do so)
- To interfere with a sett by damaging or destroying it
- To obstruct access to, or entrance of, a badger sett
- To disturb a badger whilst it is occupying a sett

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

Works that disturb badgers whilst they are occupying a sett are illegal without a licence. Disturbance can occur even without direct interference or damage to the sett in question. In general, the following activities are likely to require a licence:

- Use of heavy machinery or significant earth moving within 30m of a sett
- Use of lighter machinery (usually any wheeled vehicles) within 20m of a sett
- Any digging, chain saw use or scrub clearance within 10m of a sett

**Hazel dormouse**

Hazel dormice *Muscardinus avellanarius* are offered full protection through the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017. If both national and international legislation are taken together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture dormice
- Deliberately, intentionally or recklessly disturb dormice in such a way to be likely to significantly affect:
    - their ability to survive, breed, reproduce, rear or nurture their young
    - their ability to hibernate or migrate
    - their local distribution or abundance
- Damage or destroy breeding sites or resting places of dormice
- Intentionally or recklessly disturb sheltering dormice, or obstruct access to their resting place
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead dormouse, any part of a dormouse or anything derived from a dormouse

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

Dormice are also listed under Section 7 of the Environment (Wales) Act 2016.

**Bats**

In the United Kingdom, all species of bat and their roosts are afforded full protection under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (known as the "Habitats Regulations"). The Wildlife and Countryside Act is the domestic implementation of the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention) and was amended by the Countryside and Rights of Way Act 2000. This makes it an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture a bat
- Deliberately, intentionally or recklessly disturb a bat while it is occupying a structure or place that it uses for shelter or protection
- Deliberately, intentionally or recklessly damage, destroy or obstruct access to any place that a bat uses for shelter or protection (even if the bat is not present at the time)
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead bat, any part of a bat or anything derived from a bat

Under UK law, a bat roost is *any structure or place which any wild [bat] … uses for shelter or protection*. As bats often reuse the same roosts, legal opinion is that a roost is protected whether or not the bats are present at the time of the activity taking place.

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

If an activity is likely to result in any of the above offences, a licence can be applied for to derogate from the protection afforded. These licences must provide appropriate mitigation and are issued by NRW.

The Environment (Wales) Act 2016 also lists the following bat species as species of principle importance under Section 7:

- Barbastelle *Barbastella barbastellus*

- Bechstein's bat *Myotis bechsteinii*
- Noctule *Nyctalus noctula*
- Common pipistrelle *Pipistrellus pipistrellus*
- Soprano pipistrelle *Pipistrellus pygmaeus*
- Brown long-eared bat *Plecotus auritus*
- Greater horseshoe *Rhinolophus ferrumequinum*
- Lesser horseshoe *Rhinolophus hipposideros*

**Birds**

All wild birds, their nests and young are protected throughout England and Wales by the Wildlife & Countryside Act 1981 (as amended). It is illegal to kill, injure or take any wild bird, or damage or destroy the nest or eggs of breeding birds. The legislation applies to all bird species, common and rare.

In addition to the protection afforded to all wild birds, more vulnerable species listed on Schedule 1 of the Act receive enhanced protection when breeding. Schedule 1 species, including their dependent young, are protected from intentional or reckless disturbance whilst at or near the nest, in addition to the protection afforded the more common species.

The Environment (Wales) Act 2016 offers further protection to the nests of some species that regularly re-use their nests, even when the nests are not in use.

The leading governmental and non-governmental conservation organisations in the UK have reviewed the population status' of 244 UK bird species. "Birds of Conservation Concern 4: the Red List for Birds" is the most recent publication summarising their findings. Three lists, Red, Amber and Green, have been produced based on the most up-to-date evidence available and criteria include conservation status at global and European levels and, within the UK: historical decline, trends in population and range, rarity, localised distribution and international importance. These lists are a valuable resource when considering conservation priorities.

**Trees**

Trees may be protected on an individual or group level through a Tree Preservation Order (TPO). In order to carry out works to trees with a TPO, prior written consent must be obtained from the Local Planning Authority. Trees may also be protected through a condition of planning consent or designated conservation areas.

**Hedgerows**

The Hedgerow Regulations are made under Section 97 of the Environment Act 1995 and came into operation on 1st of June 1997. They aim to protect important hedgerows in the countryside by controlling their removal through a system of notification to the Local Planning Authority.

A hedgerow can only be considered for classification as "important" if it, or the hedgerow of which the section belongs to is over 20m in length (or which meets a hedgerow at either end) and has existed for 30 years or more.

**Plants**

Schedule 8 of the Wildlife & Countryside Act 1981 (as amended) lists a number of plant species which are protected under Section 13 of the same legislation. As such, it is an offence to:

- Intentionally or recklessly pick, uproot or destroy a plant, or any seeds or spores attached to it, which is listed on Schedule 8
- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead wild plant on Schedule 8, any part of the plant or anything derived from the plant

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

The Conservation of Habitats and Species Regulations 2017 extends European legislative protection to a further subset of plants. It is therefore an offence to pick, collect, cut, uproot, destroy or trade any plant listed in Schedule 4 of these Regulations, unless the appropriate licence is first obtained.

A large number of species of vascular plants, lichens, algae, fungi, mosses, stoneworts and liverworts are also protected through planning policy as species of principal importance, as required under Section 7 of the Environment Act (Wales) 2016.

**Invasive Plant Species**

A number of non-native, invasive plant species, such as Japanese knotweed and giant hogweed, are listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). Section 14 of the Act makes it an offence to plant or to otherwise cause to grow in the wild any of these listed species. These provisions are necessary to prevent the establishment of non-native species which may be detrimental to our native wildlife.

Japanese knotweed has an extensive root system and new plants can regenerate rapidly from the smallest fragments of rhizomes. Material containing this species is classed as “controlled waste” under the Environmental Protection Act (Duty of Care) Regulations 1991. The disposal of such waste requires all involved parties to follow a strict code of practice and maintain adequate records regarding their conduct.

**Otter**

European otter *Lutra lutra* are offered full protection through the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017. If both national and international legislation are taken together, it is an offence to:

- Deliberately, intentionally or recklessly kill, injure or capture otters
- Deliberately, intentionally or recklessly disturb otters in such a way to be likely to significantly affect:
    - their ability to survive, breed, reproduce, rear or nurture their young
    - their ability to migrate
    - their local distribution or abundance
- Damage or destroy breeding sites or resting places of otters
- Intentionally or recklessly disturb sheltering otters, or obstruct access to their resting place

- Keep, transport, sell or exchange, or offer for sale or exchange any live or dead otter, any part of an otter or anything derived from otter

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

Otters are also listed under Section 7 of the Environment (Wales) Act 2016.

**Water vole**

Water voles *Arvicola amphibius* are protected by the provisions of Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:

- Intentionally kill, injure or take water vole
- Possess or control live or dead water vole or any part of a water vole
- Intentionally or recklessly damage destroy or obstruct access to any structure or place which a water vole uses for shelter or protection, or disturb water vole using such a place
- Sell, offer, advertise or transport live or dead water voles for sale

Licences are available from NRW to allow activities that would otherwise be an offence, including:

- Scientific or educational purposes
- For the purposes of ringing or marking
- Conserving wild animals or introducing them into particular areas
- Preserving public health or public safety
- Preventing the spread of disease
- Preventing serious damage to any form of property or to fisheries

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.

Water voles are also listed under Section 7 of the Environment (Wales) Act 2016.

**White-clawed crayfish**

White-clawed crayfish *Austropotomobius pallipes* are protected under the Wildlife and Countryside Act 1981 (as amended). They are listed as a Schedule 5 species therefore part of Section 9(1) and section 9(5) apply. The Countryside and Rights of Way Act 2000 also strengthens their protection. It is offence to:

- Intentionally or recklessly kill or injure white-clawed crayfish
- Sell, offer, advertise or transport for sale a live or dead white-clawed crayfish

If a proposed development is likely to have an impact on white-clawed crayfish then the local statutory nature conservation organisation must be consulted.

Penalties for offences include unlimited fines (formerly up to £5000), plus up to six months imprisonment, for each offence committed.
Their inclusion on the EC Habitats Directive allows areas to be designated as Special Areas of Conservation (SAC) for the presence of white-clawed crayfish. Such a designation brings

legal protection under the Conservation of Habitats Regulations 2017, this includes how the site is managed and what development can occur on and in proximity to these sites.

White-clawed crayfish are also listed under Section 7 of the Environment (Wales) Act 2016.

## Planning Policy

National planning guidance is issued in the form of Planning Policy Wales (PPW - 2016). The most relevant sections are included in Chapter 5: Conserving and Improving Natural Heritage and the Coast. This chapter details the policies on issues such as the protection of trees, woodlands, species, and designated sites. The document is free and available to view online.