JP ECOLOGICAL
SERVICES

PRELIMINARY ECOLOGICAL ASSESSMENT: Concession Stands at Pyle Garden Centre, Bridgend

Report prepared for: Rob James of Pyle Garden Centre

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Date surveyed: 10th Oct 2022

Date written:19th Oct 2022

First Revision: 23rd Jan 2023

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This report should be deemed valid for 2 years from the date of survey (assuming no dramatic changes/modifications to the floral assemblage are undertaken in this time)

Contents

Disclaimer:

The contents of this report were correct at the time of the last survey visit. The report is provided for the sole use of the named client and is confidential.

EXECUTIVE SUMMARY

A Preliminary Ecological Assessment has been undertaken of the Proposed Development Site located at Pyle Garden Centre, Bridgend, where it is proposed that the redevelopment of an area used as concession stands be undertaken.

The whole survey site was found to be approx. 0.16ha in size and dominated by artificial, sealed or compacted surfaces.

A desk study has found that no part of the PDS is included within any statutory or non-statutory designations but that there are a considerable number of designated areas within relatively close proximity. In addition to this, the site has not been previously assessed to hold any areas deemed as having potential to support priority habitats. The LERC returned 1750 records of priority species within 2km, and with a small number of records within the bounds of the site.

The site visit confirmed that within the area currently enclosed for the use by concessions stands, the dominance of artificial surfaces with small areas of sparse vegetation had low conservation value. Little additional survey effort is deemed necessary to clarify the use of the enclosed concessions area by any protected/priority species.

Considering the seasonality of the survey, a considerable amount of invertebrate macrofauna was noted within close proximity to the site. However, it is not deemed likely that the habitats within the enclosed concessions area represent a key resource to any protected/priority species. However, it is considered highly likely that habitats close to the PDS, provided by the woodland, Afon Fach and its banks, represent a considerable resource to a wide range of priority/protected species including; birds, amphibians, reptiles, hedgehog, plants, a wide range of invertebrates and potentially otter, water vole and bats.

A couple of small stands of Himalayan balsam, an Invasive Non-Native species as noted on Schedule 9 of the Wildlife and Countryside Act 1981, were noted within the PDS.

A summary of constraints to development, additional actions and the required mitigations, as currently understood have been included within sections 5, 6 and 7 of the report, respectively.

1. INTRODUCTION

1.1. Initial Instruction

1.1.1. JP Ecological Services was instructed to undertake a Preliminary Ecological Assessment (PEA) of the Proposed Development Site (PDS) at Pyle Garden Centre (SS 82859 81966). These works were agreed to include:

1.1.1.1. A desk study, including the commissioning of a Local Ecological Records Check over a radius of 2km.

1.1.1.2. A site inspection to complete a Phase 1 habitat survey to inform the planning process.

1.1.1.3. Suggestions for a number of potential ecological enhancements on a site-specific basis.

1.2. Site Profile

1.2.1. The PDS is approximately 0.16ha located at Pyle Garden Centre, Bridgend, (centred SS 82859 81966) and comprises a large area of currently developed/artificially sealed/compacted land, within an enclosure to the south of the garden centre (as shown in Figure 1). The site as a whole is located within an industrial estate, surrounded by industrial development to the north and east, a main road and residential developments in the west and a major trainline to the south.

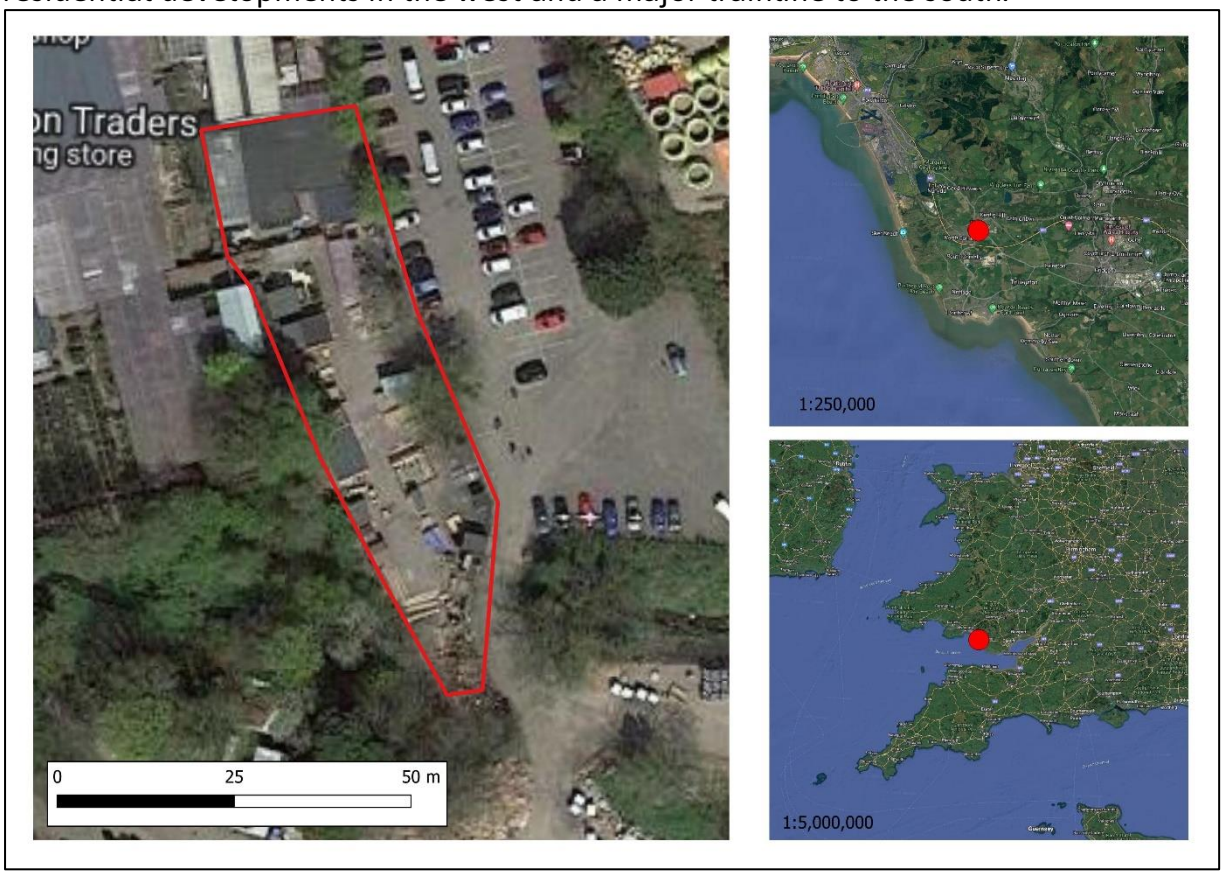

Figure 1: Location and extent of the PDS

1.2.2. The site is predominantly flat but slopes gently to the south. There are numerous structures and several semi-mature trees within the PDS.

1.3. Proposed Development

1.3.1.1. Construction of a new structure(s) to house the concessions associated with the garden centre, as indicated by the green shaded areas on Figure 2. It is currently understood that this will involve the demolition of the existing structures on site, clearance of the stock/display items from the 'compound' and an extension to the current footprint in the S.

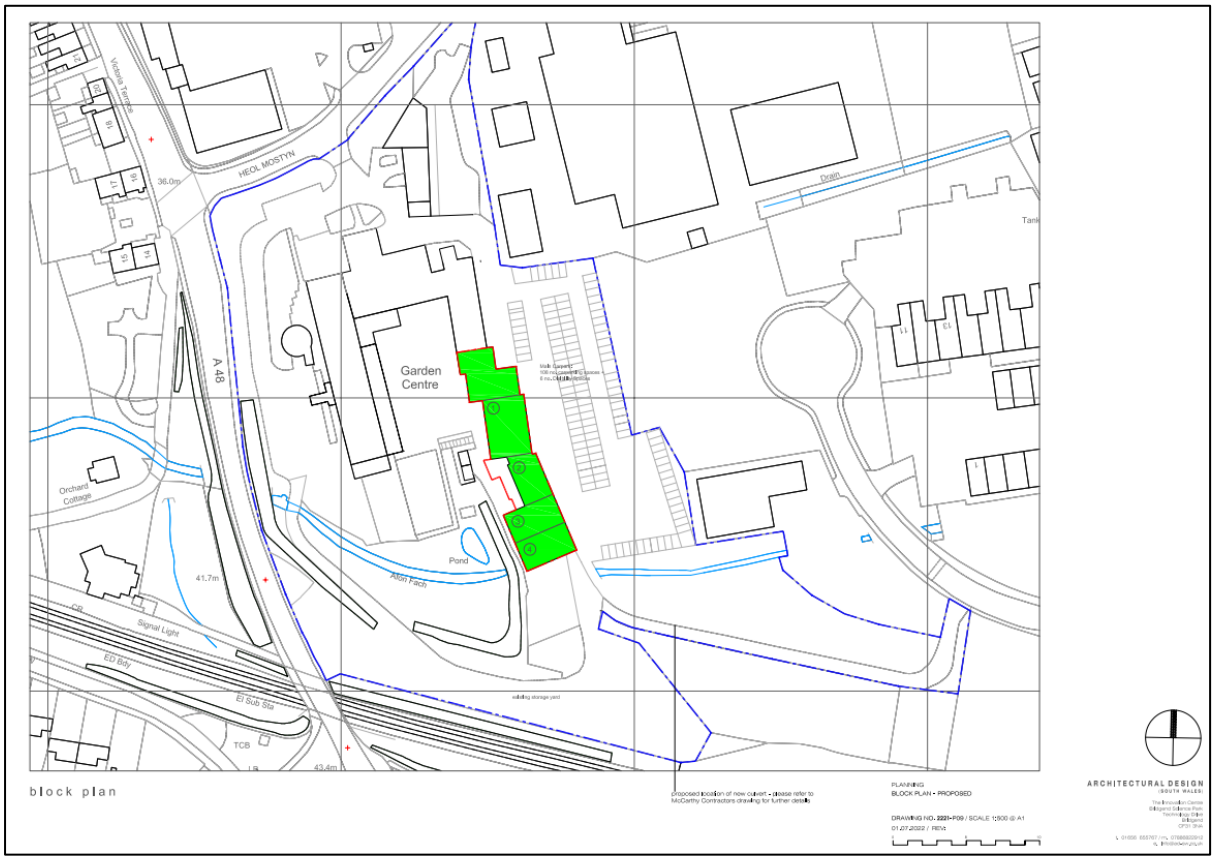

Figure 2: Plans of the proposed development provided by Simply Planning (23/01/23)

1.4. Predicted Zone of Influence

The direct impacts of the construction of the concession stands is unlikely to extend past the construction footprint (including access, staging and storage areas).

In addition to this, the developments will cause indirect impacts to the surrounding habitats and wider landscape, including, but not limited to an increase in air pollution from both increased heating requirements and numbers of visitors to the new facilities. Therefore, a thorough Ecological Impact Assessment (EcIA) must be undertaken to assess the zone and scale of the potential impacts of the proposed development on both the local and wider environments.

1.5. Surveyor Experience

1.5.1. Jen Pilkington (MSc, BSc, HND, ACIEEM) is the founder of JP Ecological Services and an experienced surveyor with over ten years of survey work, including the analysis of aerial imagery and GIS databases and extensive ecological management experience. She holds Natural Resources Wales licence for Great-crested newts and is

the named ecologist on a Natural England licence for a development project affecting badger setts; she is also an associate member of CIEEM. Jen has undertaken a large variety of ecological surveys with comprehensive reports including ecological impact assessments, recommendations and mitigations for protected species, biodiversity improvement recommendations, ecological management plans and general habitat/countryside management advice and has worked on many projects related to ecology and conservation.

2. DESK STUDY

2.0.1. A desk study has been undertaken utilising a specifically commissioned Local Ecological Records Check performed by SEWBREC (received 11/10/22), at up to 2km from the centre of the PDS, and a number of other online resources including but not limited to DEFRA MAGICmaps application, and GoogleEarthPro.

2.1. Pertinent Legislation and Policy

2.1.1. Prior to leaving the European Union, we were bound by the *EU Directive 92/43/EEC – Part II - The Habitats Directive 1992 (SEWSPG, 2008)* - European legislation that established a network of internationally important sites (Natura 2000 (N2K) sites) which were designated for their ecological status. These sites included; Special Protection Areas (SPAs) – designated on the basis of conservation of wild birds under the *Birds Directive 79/409/EEC (Eur-Lex, 2007*) and Special Area of Conservation (SACs) including candidate SACs (cSAC) - designated on the basis of conservation of habitats by the Habitats Directive (Eur-Lex, 1992). In addition to these, the Senedd Cymru expected local authorities to treat the following as European sites; Potential SPAs (pSPA), Ramsar sites – designated on the basis of conservation of wetlands by the *Convention on Wetlands of International Importance 1971* (UNSECO, 2020) and Offshore Marine Sites (OMS). Articles 6(3) and 6(4) required an Appropriate Assessment to be completed on any plans/projects, which are likely to have a significant effect on one or more N2K site, that are not necessary for the management of that site. They also state that the potential impacts should be analysed in combination with any other plans that may have a cumulative effect on the protected site. In the UK the *Conservation (Natural Habitats & c.) Regulations 1994 (Legislation.gov.uk, 2020)* implemented the Habitat Directive which lists a number of species which are designated as European Protected Species (EPS) and makes it an offence to deliberately kill, capture or disturb individuals or to damage or destroy the breeding or resting places used by them.

2.1.2. ***The Conservation of Habitats and Species Regulations 2017 (Regulation 9(1)),*** *(CIEEM 2021)* - Domestic law, was created to transpose the land and marine aspects of the Habitats Directive and aspects of the Wild Birds Directive (2009/147/EC known as the Nature Directive). These regulations were then amended in 2019 by the Conservation of Habitats and Species (Amendment) (EU Exit) regulations 2019 which were made to ensure the main points and processes of the regulations were operable from 1 January 2021.

2.1.2.1. The amendments were predominantly focused on transferring functions from the European Commission to appropriate English and Welsh authorities. However, the British sites, excluding RAMSAR sites that originally belonged to the

Natura 2000 network, have been redefined into a National Site Network, and new sites will be added to the network under the conditions specified by these regulations. In addition to this, new management objectives (now termed network objectives) will be established for the NSN set, managed and adapted by the UK governments and its devolved administrations. Other provisions have also been made to address; reporting on the implementation of regulations, Imperative Reasons of Overriding Public Interest (IROPI) test where a project affects a priority habitat or species; and for amending the schedules to the Regulations and annexes to the Nature Directives that apply to the UK now that the UK no long reports to the European commission.

2.1.3. ***Environment Act 2021*** **(**Legislation.gov.uk, 2021) -The UK Environment Act is a wide-ranging act which amends a range of existing environmental and ecological legislation and includes targets, plans and policies for, amongst other things, improving the natural environment, including environmental protection and enhancement (Part 1); and biodiversity and local nature recovery plans and the felling of trees (Part 6). It also introduces a body, the Office for Environmental Protection, to ensure compliance with environmental law.

2.1.4. ***Wildlife and Countryside Act 1981****(Legislation.gov.uk, 2019a)* -The Wildlife and Countryside Act 1981 makes it an offence to intentionally kill, injure or take any wild bird or animal listed on Schedules 1 and 5 respectively. It is also an offence to take, damage or destroy the nests of wild birds either whilst they are being built or used, the eggs of wild birds or places of shelter/protection for wild animals, including disturbance of animals using these places. Schedule 8 prohibits the intentional picking, uprooting or destruction of any species listed. Finally, Schedule 9 prohibits the release of animals or the dispersal of plants detailed on Schedule 9, as they pose a significant detrimental risk to native wildlife.

2.1.4.1. Since 1 January 2021, the Wildlife and Countryside Act 1981 is also amended so that species of wild birds found in or regularly visiting either the UK or the European territory of a Member State will continue to be protected.

2.1.5. ***Environment (Wales) Act 2016 Section 7*** *(Wales Biodiversity Partnership, 2019)* - This act replaced the duty previously described in section 42 of the NERC Act 2006 in Wales as of 2016. It documents the lists of species and habitats deemed of key significance to improve and sustain Welsh biodiversity, to ensures all reasonable steps are taken to maintain and enhance the species and habitats listed.

2.1.6. ***Countryside Rights of Way Act 2000 (CRoW 2000)*** *(Legislation.gov, 2020b)* - The Countryside and Rights of Way Act 200 implements the so-called "right to roam" on certain upland and uncultivated areas of England and Wales (e.g. mountain, moor, heath and down, in addition to registered common land). It reinforced the WCA 1981, in particular Part I, increasing the maximum penalty to imprisonment instead of a fine; increasing disturbance offences against certain birds and animals to cover reckless acts as well as intentional ones; and enabling the Secretary of State to designate "wildlife inspectors" who have a range of powers under the Act.

2.1.7. ***Convention of the Conservation of European Wildlife and Natural Habitats 1982 (Bern Convention)*** *(COE.INT, 2020)* - The Convention imposes legal obligations on contracting parties, throughout the continent of Europe and some African states, to ensure protection and conservation of both wild animal and plant species and their natural habitats (listed in Appendices I and II of the Convention), to increase co-operation between contracting parties, and to regulate the exploitation of migratory species listed in Appendix III of the Convention.

2.1.8. ***The Protection of Badgers Act 1992*** *(Legislation.gov.uk, 2019b)*
This Act makes it an offence to wilfully take, injure or kill a badger (*Meles meles*); cruelly mistreat a badger; interfere with badger setts, sell or possess a live badger; mark or ring a badger. A licence is required for work which may damage or disturb a sett.

2.1.9. ***Wild Mammals (Protection) Act 1996*** **-** This Act provides protection for all wild animals from intentional acts of cruelty.

2.1.10. ***Hedgerow Regulations 1997*** **-** These Regulations establish a set of criteria for assessing the importance of hedgerows. Where a hedgerow is deemed to be 'important', its removal is prohibited without consent from the local Planning Authority

2.2. Designated areas

2.2.1. *Statutory Designations:* There is one National Network Site – Cefn Cribwr Grasslands; four SSSI's – Kenfig, Cefn Cribwr, Stormy Down and Waun Cimla; and one Local Nature Reserve – Frog Pond Wood, with statutory designations within 2km of the centre of the PDS (DEFRA, 2021). See Figure 3.

Figure 3: Statutory designations within 2km of the centre of the PDS (DEFRA, 2022)

2.2.2. Due to the presence of an NNS site within 2km of the centre of the PDS, a Habitats Regulation Assessment (HRA) may be deemed necessary by the local authority. If a HRA is not deemed necessary, an Ecological Impacts Assessment (EcIA) should be considered to ensure that designated and vulnerable areas/habitats within close proximity of the PDS are not detrimentally impacted by the proposed development,

including both direct (e.g. habitat destruction, modification and fragmentation etc.) and indirect factors (e.g. increased air, noise and vibration pollution etc.).

2.2.3. *Non-statutory Designations*: As shown in Figure 4, 20 sites have been afforded local non-statutory protection (15 SINCS – NPT Watercourses, Stormy Down, North-Eastern Dunes, Frog Pond Woods, St. James' Church Wood, Eastern Frog Pond Wood, Waunbant Road (North), Waunbant Road (Triangle), Old Ballas Wood, Ty Tanglwst Wood, Afon Cynffig, Cornelly Quarry, North of Pyle, Bedford Park and Mynydd Bach; 3 RIGS – Pant Mawr Quarry, Stormy Down Quarry and Gaen Quarry; 1 Important Plant Area and 1 B-Line) within 2km of the boundary of the site. These sites, especially those within close proximity (500m) to the construction zone, should also be considered in the HRA/EcIA, as they fill an important gap not covered by other designations and they are vital in maintaining the full range of biodiversity across the county.

Figure 4: Location and extent of non-statutory designations within 2km of the PDS

2.2.4. Interrogation of the LERC (Fig 5) shows that there is a network of 28 Priority Areas (18 Ancient Semi-Natural Woodlands, 3 restored Ancient Woodlands, 4 NRW Priority Areas of Enclosed Farmland, 1 NRW Priority Area of Heathland and Grassland and 2 NRW Priority Areas of Coastal Sand Dune) within 2km of the PDS boundary.

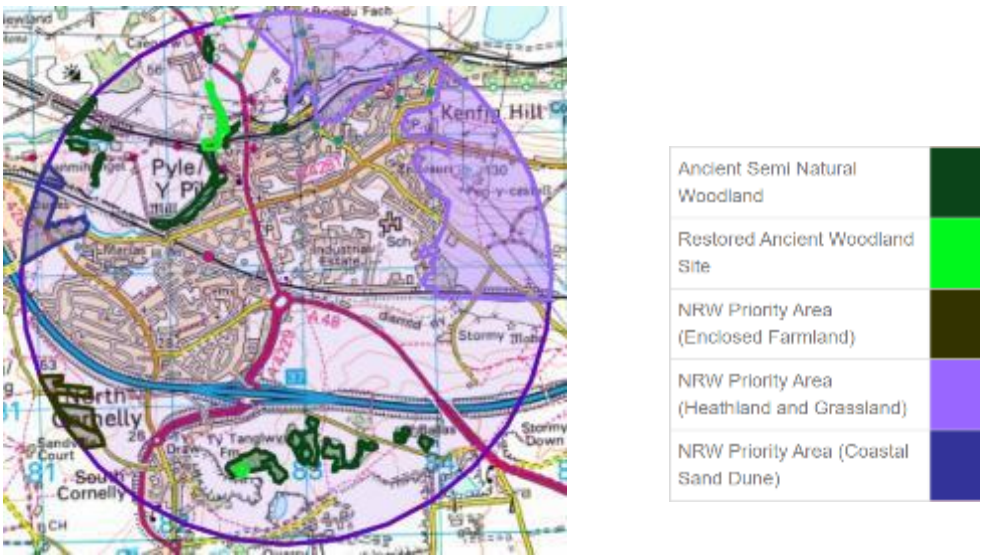

Figure 5: Location and extent of Priority Areas within 2km of the boundary of the PDS

2.3. Priority habitats

2.3.1. All habitats deemed to hold potential to host priority/protected habitats as assessed by NRW and reported within the LERC are shown in Figure 6.

Figure 6: Location and extent of areas deemed to have potential to host priority/protected habitats within the 2km search area (Aderyn 2022)

2.3.2. There are no habitats within the PDS that have been previously identified by the LERC as having potential to host a protected/priority habitat.

2.3.3. There is one area of semi-improved neutral grassland (yellow shading) within 500m of the PDS, that has previously been identified as having potential to host a protected/priority habitat. This area is located to the SW of the PDS, on the embankments of a slip-road off the A4229/A48 roundabout, which means that the habitat is likely to already be heavily influenced by pollution caused by road traffic. This area is deemed likely to be the only area indicated on Figure 6 that may potentially be impacted by the indirect impacts of the proposed development.

2.4. Protected and priority species

2.4.1. In total, over 1750 species records were returned by the LERC, 873 of them for priority species. It can be seen from Figure 7 that the results are reasonably distributed across the search area.

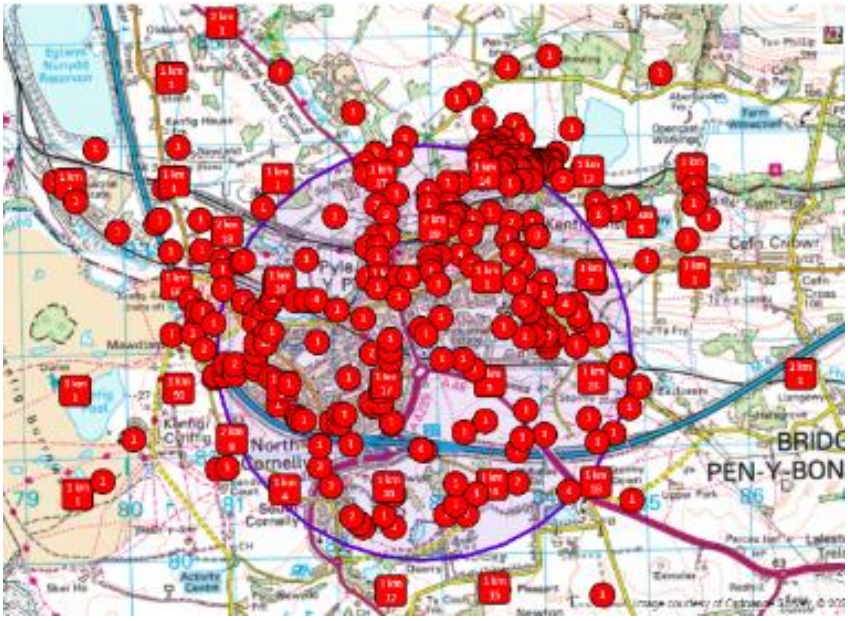

Figure 7: Distribution of historic species records recorded by the LERC

2.4.2. A brief summary of the results returned by the LERC can be found Table 1, a more detailed summary is available on request.

Table 1: LERC results within 2km of the centre of the PDS.

Superorder	Legislation	Number of species	Species
Amphibians	EPS & WCA5	1	Great crested newt
	WCA5	4	Common toad, Common frog, Smooth newt and Palmate newt
Crustaceans	-	-	-
Birds	BDir 1	2	Nightjar and Golden plover
	BDir1 & WCA1	17	Kingfisher, Bittern, Ruff, Marsh harrier, Hen harrier (S7), Montague's harrier, Dartford warbler, Whooper swan, Merlin, Peregrine, Leach's storm petrel, Mediterranean gull, Red backed shrike, Red kite, Osprey, Honey buzzard, Slavonian grebe.
	WCA1	21	Goshawk, Scaup, Goldeneye, Cetti's warbler, Little ringed plover, Long tailed duck, Quail, Hobby, Brambling, Crossbill, Whimbrel, Golden oriole, Black redstart, Firecrest, Greenshank, Redwing, Black-necked grebe, Green sandpiper, Redwing, Fieldfare and Barn owl
	S7	35	Lesser redpoll, Skylark, White fronted goose, Tree pipit, Common ringed plover, Black headed gull, Hawfinch, Cuckoo, Lesser spotted woodpecker, Corn bunting, Yellowhammer, Reed bunting, Kestrel, Pied flycatcher, Herring gull, Linnet, Grasshopper warbler, Yellow wagtail, Song thrush, Starling, Black grouse, Spotted flycatcher, Curlew, House sparrow, Grey partridge, Wood warbler. Willow tit, Marsh tit, Dunnock, Bullfinch, Turtle dove, Starling, Song thrush, Ring ouzel and Lapwing
Fish	S7	2	Eel and Atlantic salmon

Fungi	-	-	-
Invertebrates	WCA5 & S7	5	Marsh Fritillary, Pearl bordered fritillary, Small blue, Swallowtail, and Mole cricket
	S7	46	Small pearl-bordered fritillary, Small heath, Dingy skipper, Grayling, Wall, Grizzled skipper, Brown-banded carder bee, Moss carder bee, Red shanked carder bee, Shrill carder bee, Grey dagger, Knotgrass, Beaded chestnut, Green brindled crescent, Ear moth, Mouse moth, Flounced chestnut, Dusky brocade, Garden tiger, Centre barred sallow, Mottled rustic, Latticed heath, Sallow, Small square-spot, Small phoenix, Dusky thorn, Autumnal rustic, Dusky dart, Small emerald, Ghost moth, Rustic, Rosy rustic, Shoulder-striped wainscot, Rosy minor, Brindled beauty, Lackey, Dot moth, Dark brocade, Oblique carpet, Powdered quaker, Grass rivulet, Shaded broad bar, White ermine, Blood vein, Cinnabar and Dark barred twin spot carpet
Lichens	-	-	-
Mammals	EPS & WCA5	9	Hazel dormouse, Otter (S7), Myotis, Natterer's bat, Noctule (S7), Lesser horseshoe (S7), Soprano pipistrelle (S7), Brown long-eared bat and Common
	WCA5	1	pipistrelle (S7)
	PBA	1	Water vole
	S7	4	Badger
			Hedgehog, Brown hare, Harvest mouse and Polecat
Molluscs	S7	1	Mud pond snail
Mosses and liverworts	-	-	-
Plants	WCA 8	1	Bluebell
	S7	2	Yellow bird's nest and Tubular water dropwort
Reptiles	WCA5	4	Slow worm, Grass snake, Adder and Common lizard

3. PHASE 1 HABITAT SURVEY

3.1. Aim of survey

3.1.1. To provide a relatively rapid but appropriately thorough and robust assessment of the locations and extents of all of the habitats within the PDS.

3.2. Methodology

3.2.1. A thorough walk-over survey was completed across the site, during which all of the habitats present within the PDS were classified according to the definitions found in the 'Handbook for Phase 1 Habitat Survey - Field Manual', and the key defining floral species for each habitat were noted along with their relative abundances. Relative abundances are noted using the DACFOR scale (D Dominant; A Abundant; C Common; F Frequent; O Occasional; R Rare; L Local - used as a prefix to any of the above). All faunal sightings were noted for the site as a whole.

3.2.2. The site was visited on 10/10/2022 between 10:00 and 15:00. On arrival, it was a warm (approx. 18^{o}C), bright (approx. 3 octas), moderately still day with a light breeze and sunny spells through the later afternoon.

3.3. Limitations to survey

3.3.1. It was not possible to assess every aspect of every structure within the PDS due to fences and other structures blocking the view, and it is thus deemed highly possible that there are potential access features within these areas for both bats and 'roof dwelling birds' (e.g. sparrows and starlings). Additional surveys must be undertaken to assess the potential for use by these species prior to demolishment/modification of the roof and cladding materials.

3.4. Results

The Phase 1 Habitat Map, Species Records and Target Notes and Site Photos can be found in Appendix 2.

3.4.1. Scrub

3.4.1.1. There are a few small areas of bramble-dominated scrub that have established within the margins of the fenced enclosure in the west of the PDS. However, these areas are newly established and display sprawling growth forms that do not currently hold the structural diversity and density to provide any meaningful habitats within the PDS. If removed in the near future, their removal should be deemed negligible in terms of loss of biodiversity within the site. However, if they are left to mature prior to removal, it is advised that the clearance works be supervised by an appropriately experienced ecologist to ensure that there is no disturbance/injury caused to any protected/priority species that may have found their way into these areas (e.g. birds, amphibians, etc).

3.4.2. Scattered Trees

3.4.2.1. There are a number of highly modified willow trees within the PDS, with a highly managed growth form and little conservation value.

Plate 1: Highly modified willows in NE of PDS

3.4.2.2. Along the southern end of the boundary, between the enclosure and the carpark, there are a small number of semi-mature trees which are again managed, but to a much lesser degree, allowing these trees to display a some-what natural growth form. The lack of cover and connective habitats around the trees reduces the conservation potential these trees can offer, but they still represent a refuge habitat for a range of species and are thus deemed to have a moderate local conservation value. Appropriate mitigations must be made for the loss or modification of these trees.

Plate 2: Moderately modified semi-mature trees along boundary to enclosure and carpark

3.4.2.3. Most of the trees within the PDS were assessed to hold low potential to support a bat roost, but a couple had numerous Potential Roosting Features (including ivy growth, pruning scars, cracks, splits and dead wood). Without further survey effort, the trees have been deemed to hold a moderate roosting potential. Therefore, a Preliminary Roost Assessment should be carried out, prior to any modification of the trees, on any specimen that will be modified/felled to facilitate the development.

3.4.2.4. A tree survey should be undertaken on all the trees within the PDS that will be modified/removed or are within 5m of the construction zone to check for TPO's and to ensure that the sufficient mitigations/root protection zones can be made for the necessary works to facilitate the development. In addition to this, to remain in compliance with the Forestry Act 1967, all trees that are not directly within the footprint of a development consented by planning permissions, and are due to be modified/removed, must be specifically noted on the submitted plans. Even if planning permission is not required for the area of trees/woodland being cleared, a felling licence might be required from NRW unless exemptions apply.

3.4.3. Hardstanding with sparse vegetation

3.4.3.1. There are several areas of sparse vegetation growing on, or at the margins of areas of, the hardstanding. These areas are dominated by relatively low-growing, annual forbs, but grasses are also starting to gain traction in the areas, and these areas will soon succeed to grassland without management intervention. These areas of habitats have low conservation value as short ephemeral, or their predicted successive grassland type, due to their small size and lack of structural diversity. These limitations are likely to persist for a number of years, because of the limited abiotic resources available from growing over a sealed/compacted surface.

3.4.3.2. There is an area of sparse vegetation within the far southern end of the concession yard over an area of highly compacted soils. This area presents suboptimal foraging and refuge resources across the board, due to its lack of structural and species diversity. In addition to this, this area is deemed likely to be subjected to a moderate amount of disturbance from its use as storage for timber and other materials which are used by the venders in this part of the concessions yard.

Plate 3: Short ephemeral sward over compacted bare earth in the south of the concessions yard

3.4.4. Buildings

There are a considerable number of buildings within the fenced enclosure, currently being used for concessions stands. These buildings all appear to be predominantly weather tight and in a good state of repair, but a number of potential roost access points for both birds and bats were noted on the external aspects of several buildings. Therefore, prior to their modification, the buildings should be surveyed (including any interval voids) for the presence of protected/priority species or their roosts.

4. PROBABLE PRESENCE OF PROTECTED/PRIORITY SPECIES

4.0.1. Neither the site inspection nor the LERC can be expected to provide a definitive list of what is/isn't within an area, just an idea of what is actually seen during this preliminary survey and what is more likely to be present due to what has been found before. Therefore, use of these resources, in conjunction with analysis of the suitability of habitats for the protected species that are likely to be in an area, is key in determining the likelihood of the presence of protected/priority species

4.1. Amphibians

4.1.1. No individuals (dead or alive) from protected/priority species, or their field signs were noted within the PDS during the site inspection.

4.1.2. *Historic Records:* Common toad (6 record, nearest 266m), Palmate newt (3 records, nearest 1173m), Smooth newt (3 records, nearest 1837m), Common frog (5 records, nearest 705m) and Great crested newt (5 records, nearest 1837m).

4.1.3. *Breeding habitat:* There is no suitable amphibian breeding habitat within the PDS. However, there is an area of open water noted to the SW of the PDS which may hold potential to support breeding habitat and is within 250m of the boundary of the PDS.

4.1.4. *Terrestrial habitat*: There is a very limited amount of suitable, but highly suboptimal, terrestrial habitat within the PDS.

4.1.5. *Potential presence:* Whilst it is deemed likely that common frog and common toad are utilising the area around PDS, due to their abilities to tolerate less optimal habitats, wider dispersal ranges and close historic records; it is deemed less likely that newts, especially Great crested newts (GCN) are present within close proximity to the PDS. However, GCN are known to disperse up to 250m from their breeding sites during their terrestrial phase, so to ensure the absence of GCN from the scrub or accumulations of waste/materials the clearance of these areas should be supervised by an appropriately experienced ECoW.

4.1.6. *Further actions and mitigations*: A risk avoidance strategy to minimise the risk of harm to the other species of amphibians during all clearance of tall/woody vegetation is deemed sufficient to allow the commencement of works. This strategy must include, but is not limited to, the use of sympathetic vegetation clearance processes and take note of periods of peak vulnerability (Oct-Feb inclusive) and any periods of extended hot, dry weather. All works clearing tall, scrubby or woody vegetation should be supervised by a suitably experienced Ecologist/ECoW. If any Great crested newts are encountered within the PDS at any time, all works must cease immediately until an appropriately licensed ecologist has been consulted.

4.2. Birds

4.2.1. A Kingfisher was noted utilising the Afon Fach, within close proximity to the PDS, during the site inspection. No other individuals from priority/protected species, or their field signs, were noted as being present.

4.2.2. Historic records**:** A significant number (75) of protected/priority bird species was returned by the LERC within the 2km search radius. Many of these are deemed likely to be associated with Kenfig SAC. However, a number of species have been recorded at or within close proximity (approx. 500m) of the PDS including Dunnock, Pied flycatcher, Spotted flycatcher, Willow tit, Herring gull, House sparrow, Starling, Goshawk, Skylark, Black-headed gull, Merlin, Peregrine, Hobby, Kestrel, Red kite, Osprey, Black redstart, Barn owl and Lapwing.

4.2.3. *Suitable habitat***:** Whilst there is no suitable nesting habitat within the PDS for ground-nesting birds, there is a limited resource tree-nesting species. In addition to this, the foraging resource is limited to the unsealed, vegetated habitats in the SE of the PDS. These habitats provide a little forage resource to any species.

4.2.4. *Potential presence***:** The PDS is likely to support a sub-optimal resource to birds with negligible foraging opportunities and limited nesting habitat. However, there is a small potential for the PDS to support a small number of nests and thus no clearance of tall, woody or scrubby vegetations should be undertaken during bird nesting season.

4.2.5. *Further actions and mitigations***:** All wild birds, their nests, young and eggs are protected by the WCA 1981 whilst in, near or creating a nest, hence no areas of tall or woody vegetation should be cleared during bird nesting season. Mitigations for any potential loss of habitat caused must also be included within the plans for future development of the site.

4.3. Crustaceans

4.3.1. No individuals (dead or alive) from protected/priority species, or their field signs were noted within the PDS during the sight inspection.

4.3.2. Historic records**:** None

4.3.3. *Suitable habitat***:** No suitable habitat within the PDS

4.3.4. *Potential presence***:** Absent

4.3.5. *Further actions and mitigations***:** No further actions or mitigations required

4.4. Fish

4.4.1. No individuals (dead or alive) from protected/priority species, or their field signs were noted within the PDS during the site inspection.

4.4.2. Historic records**:** Eel (7 records, nearest 1043m) and Atlantic salmon (8 records, nearest 1043m); there are also informal records of Brown trout (*Salmo trutta*) within 2km of the PDS, associated with the Afon Cynffig.

4.4.3. *Suitable habitat***:** No suitable habitat within the PDS.

4.4.4. *Potential presence**:** Absent from the PDS*

4.4.5. *Further actions and mitigations**:*** Due to the proximity of the Afon Fach to the site, a thorough CEMP must be constructed and adhered to, to ensure no pollution enters the watercourse during clearance or construction of the development.

4.5. Fungi

4.5.1. No individuals from priority/protected species were noted as being present within the PDS during the site inspection.

4.5.2. Historic records**:** None

4.5.3. *Suitable habitat**:*** Limited suitable habitat

4.5.4. *Potential presence**:*** Highly unlikely

4.5.5. *Further actions and mitigations**:*** None – it is deemed that the proposed works will have no negative impact on any priority/protected species of fungi in the absence of additional mitigation.

4.6. Invertebrates & Molluscs

4.6.1. No protected/priority individuals or their field signs were noted as being present within the PDS during the site inspection. A considerable number of invertebrates were noted to the SE of the PDS, especially considering that the survey was conducted towards the end of the active season and that the climatic conditions on the days leading up to the survey were not optimal to detect the full range of invertebrate macrofauna that may be present within a habitat.

4.6.2. *Historic records: 51 protected/priory insects and 1 priority mollusc have been noted by the LERC. The species in these taxa protected by the WCA 1981 are Pearl bordered fritillary (1 record, 2040m), Small blue (2 records, nearest 2418m), Marsh fritillary (25 records nearest 780m), Swallowtail (1 record, 2418m) and Mole cricket (1 record, 1526m).*

4.6.3. *Suitable habitat**:*** There is very little suitable habitat within the areas of hardstanding within the PDS, despite the scattered ephemeral sward, to support breeding or foraging behaviours of invertebrates.

4.6.4. *Potential presence**:*** it is generally accepted that the likely presence of a lepidopteran species is significantly reduced if their larval food plant is absent. The larval foodplants for both Pearl bordered Fritillary (Common dog violet – *Viola riviniana*), Swallowtail (Milk parsley – *Thyselium palustre*), Marsh fritillary (Devils-bit scabious – *Succisa pratensis*, Field scabious – *Knautia arvensis* and Small scabious – *Scabiosa columbaria*) and small blue (Kidney vetch - *Anthyllis vulneraria)* were absent from the PDS. However, whilst they may not be present within the PDS, the number of records for Marsh fritillary returned by the LERC and their distribution indicate that there is a metapopulation of the species within relatively close proximity of the site.

This species is also recognised as an EPS and thus should be considered within the EcIA, as additional air pollution caused by vehicular emissions has been linked to the increase in pH causing their habitats to fail.

4.6.5. *Further actions and mitigations***:** It is deemed that the direct impact to the local invertebrate population in the absence of further mitigation is negligible.

4.7. Mammals

4.7.1. No individuals from protected/priority mammalian species, or their field signs, were noted as being present within the PDS during the site inspection.

4.7.2. *Otter* (10 records, 1465m): There is no suitable habitat within the PDS to support foraging, refuge or breeding behaviours. In addition to this, the site is fenced along its boundary reducing access potential into the PDS from the wider environment, significantly reducing the value of the site for commuting purposes. The closest record of otter was made downstream on the Afon Fach, and whilst otter hold large territories, there no suitable habitat within the PDS, so no additional surveys are required to confirm absence. However, precautions must be made to ensure any individuals, accessing the site during the clearance and construction phases, are not harmed/killed and that disturbance of their behaviours is kept to a minimum whilst they are on site. The measures include, but are not limited to, the covering/installation of an escape ramp to any deep/steep-sided excavations whilst not in use and prohibition of the use of artificial lighting and any works between dusk and dawn.

4.7.3. *Bats:* Natterer's bat (1 record, 2157m), Noctule (4 records, nearest 1076m) Common pipistrelle (22 records, nearest 997m), Soprano pipistrelle (3 records, nearest 1076m), Brown long-eared bat (1 record, 1626m) and Lesser horseshoe bat (3 records, nearest 1076m): Whilst significant effort was undertaken to survey all the structures and trees, to a give a basic assessment of the bat roosting potential within the PDS, it was not possible to access all the potential features closely enough to fully assess their potential. In addition to this, a number of trees were located within the PDS which held a moderate potential to host a roost. Without further survey effort, it is not possible to rule out the potential for bats to be utilising the PDS for a range of purposes, in combination with the surrounding land. Therefore, prior to modification of any of the structures and trees within the PDS a Preliminary Roost Assessment must be undertaken to ensure no roosts are disturbed/destroyed.

4.7.4. *Hazel Dormice* (4 records, nearest 1245m): There is no suitable habitat within the PDS, no clear connectivity to areas of suitable habitat nearby and the site is buffered by numerous significant barriers to dispersal (urban development and main roads) from the locations of historic records. Therefore, it can be confidently assumed that dormice are not present within the PDS, and it is assumed that in the absence of additional mitigation the local population of dormice will not be negatively impacted.

4.7.5. *Water vole* (2 records, nearest 1556m): There is no suitable habitat within the PDS, no clear connectivity to areas of suitable habitat nearby and the site is buffered by numerous significant barriers to dispersal (urban development and main roads) from the locations of historic records. Therefore, it can be confidently assumed that water vole are not present within the PDS, and it is assumed that in the absence of additional mitigation the local population of dormice will not be negatively impacted.

4.7.6. *Wild cat, red squirrel & pine martin* (no records): The PDS is well outside the understood current range of these species. Furthermore, there is no suitable habitat within the PDS, no sightings of individuals or their field signs and no historic records have been noted within 2km of the centre of the PDS. Therefore, they should be deemed absent from the PDS.

4.7.7. *Badger (34 records, nearest 768m):* The habitats within the PDS are deemed to be highly suboptimal for badger, due to the sealed nature of majority of the surfaces. No clear mammal tracks were noted within the PDS, and no field signs for badger were noted in the surrounding land. However, there are a considerable number of records for badger in the local area, and badger are well known to utilise railway lines as dispersal corridors and for the creation of setts. In addition to this, there is suitable habitat within 30m of the proposed development within the woodland to the south of the existing garden centre. Therefore, a sett survey must be carried out within 30m of the boundary of the PDS. In addition to this, due to the proximity of a main railway to the boundary of the PDS, there is a high potential that badger may commute through the area. Therefore, measures must be taken to ensure they do not become injured or entrapped within any workings involved in the completion of the proposed development. These measures include a prohibition of works or artificial light between dusk and dawn and the covering/installation of an escape ramp to any deep/steep sided-excavations.

4.7.8. *Hedgehog (29 records, nearest 545m):* There are suitable habitats within close the PDS to support hedgehog, but it is deemed highly unlikely that are regularly utilising the PDS for any behaviours including hibernation. However, there is a chance that hedgehog could access the PDS, so in addition to the excavations being covered or fitted with an escape ramp, all pipes of diameter 130mm or greater must be blocked whilst not in use. Sufficient, appropriate access must be provided within any linear boundaries installed within or surrounding the PDS. To further reduce the risk of harm to individuals utilising the habitats within the PDS for refuge/breeding purposes, hedgehog should be added as a target species to the risk avoidance strategy for the clearance of tall/woody/scrubby vegetation (peak vulnerability - Dependent young/natal nests – Jun-Sept, Hibernation - Nov-Mar).

4.7.9. Harvest mouse (2 records, nearest 1577m) There is no suitable habitat for harvest mice within the PDS and no clear connectivity to areas of suitable habitat nearby. In addition to this, the records of harvest mouse returned by the LERC were both made in 1975 and the record site is buffered by both a considerable geographic separation and a number of significant barriers to dispersal, including the M4 and a major railway. It is therefore confidently assessed that harvest mice are absent from the site and that there is no need for further mitigation for this species.

4.7.10. Brown Hare (3 records, nearest 264m): There is no suitable grazing or refuge habitat for brown hare within the PDS. Therefore, despite the proximity of the historic records to the PDS, it is deemed highly likely that brown hare are absent from the site. Thus, in the absence of additional mitigation it is deemed that there is negligible risk to the local population of brown hare from the proposed development.

4.7.11. *Stoat (1 record, 1515m), Weasel (7 records, nearest 1195m) and Polecat (9 records, nearest 423m):* There is suitable habitat for all three species within the scrub surrounding the Afon Fach and nearby in the woodland to the south of the existing garden centre. Therefore, whilst the PDS is deemed unlikely to support these species, they should be included as a target species in the risk avoidance strategy for the clearance of tall/woody vegetation within or in close proximity to the PDS, should such activity be necessary to facilitate future development.

4.8. Plants

4.8.1. No individuals from protected/priority species were noted as being present within the PDS during the site inspection.

4.8.2. *Historic records:* Bluebell (19 records, nearest 799m), Yellow birds' nest (1 record, 2439m) and Tubular water dropwort (1 record, 880m)

4.8.3. *Suitable habitat:* There is no suitable habitat for any priority/protected plants within PDS.

4.8.4. *Potential presence*: Highly unlikely

4.8.5. *Further actions and mitigations*: No additional surveys are required within the PDS to establish the presence/absence of protected/priority species of plants.

4.9. Reptiles

4.9.1. No individuals (dead or alive) or field signs from protected/priority reptile species were noted within the PDS during the site inspection.

4.9.2. *Historic records: Slow-worm (6 records, nearest 615m),* Grass snake (3 records, nearest 1942m), Adder (2 records, nearest 2093m) and Common lizard (3 records, 1526m).

4.9.3. *Suitable habitat:* There is currently no suitable refuge habitat within the PDS and limited foraging potential.

4.9.4. *Potential presence*: There is suitable habitat within close proximity of the PDS in scrub along the Afon Fach, which is considered most consistent with that associated with slow-worm and/or common lizard. However, there is no suitable refuge habitat and negligible foraging resource within the PDS. Therefore, it is deemed unlikely that the 4 common reptilian species are absent from the PDS. In addition to this, due to lack of highly specific habitat required by Smooth snake and Sand lizard, it is deemed highly unlikely that they are present within close to the PDS.

4.9.5. *Further actions and mitigations*: A risk avoidance protocol during clearance of tall/scrubby vegetation or accumulations of waste/materials is deemed sufficient to protect any members of the 4 most common reptiles from injury or death, as required by the WCA 1981.

4.10. INNS

4.10.1. A number of small stands of Himalayan balsam (*Impatiens glandulifera*), noted as an invasive non-native species on Schedule 9 of the WCA 1981, were confirmed to be present within the fenced enclosure at the southern end of the PDS (Target Note 1).

5. SUMMARY OF THE CONSTRAINTS TO DEVELOPMENT

5.1. Summary of the constraints to the development

5.1.1. There are very few potential ecological constraints to development of the proposed concession units; these are likely to be clarified by a small amount of additional survey effort and management intervention (see section 6) and likely to require minimal additional mitigations based on the information currently available.

6. ADDITIONAL ACTIONS

6.1.1. EcIA
6.1.2. CEMP
6.1.3. Potential Roost Assessment of existing structures and trees that will be modified/removed
6.1.4. Badger sett survey within 30m of the boundary of the PDS
6.1.5. Eradication of INNS and installation of robust biosecurity protocols.

7. REQUIRED MITIGATIONS

7.0.1. Best practice is to avoid all risk of direct, negative ecological impacts associated with the completion of the proposed development.

7.0.2. However, it is recognised that it is rarely possible to work within these strict prescriptions, and thus a set of measures (risk minimisation strategies) have also been stipulated. These measures will reduce the level of impact, caused by the completion of the proposed development, to the point that negligible direct ecological risk is posed.

7.0.3. Therefore, a set of key impacts, identified as likely to be encountered during the completion of the proposed development, have been identified below along with both risk avoidance and risk minimisation strategies..

7.0.4. These measures do not account for or negate the need for additional surveys previously identified within this report.

7.1. Impact: habitat loss/degradation/fragmentation

7.1.1. Risk avoidance strategy

7.1.1.1. No clearance of any existing, potential habitats to facilitate the proposed development.

7.1.2. Risk minimisation strategies

7.1.2.1. Minimise the amount of existing potential habitat that is impacted by the proposed development through planning (i.e. assess location, size, installation techniques etc.).

7.1.2.2. Prohibit development/disturbance in areas deemed to be of very high and high conservation value.

7.1.2.3. Protect nearby/neighbouring natural assets (i.e. trees) and habitats from damage through the establishment of root protection areas, physical boundaries/guards, HRA/EcIA, CEMP, using low-impact installation methodologies etc.

7.1.2.4. Appropriate connectivity between habitats, both within and surrounding the PDS, must be maintained within the final plans to ensure habitats are not fragmented.

7.1.3. Compensation strategy

7.1.3.1. For planned permanent loss of habitat, best practice is the creation or enhancement of a similarly sized area of the same broad habitat category, to a better condition, in an appropriate location, within close proximity of the site of loss. Whilst Natural England requires the use of their biodiversity metric to mitigate loses and provide biodiversity net gain within the site, in Wales the mitigations are currently agreed with the local authority unless an EPS licence is required.

7.1.3.2. Compensation for temporary loss of habitat through the installation of appropriate artificial refugia is frequently accepted to be sufficient. This should be considered appropriate in cases where a habitat is modified temporarily during development, but will be allowed to regenerate to the same extent and condition within an appropriate timescale. It would also be appropriate, in cases where habitat is destroyed but an appropriate area of similar broad habitat type will be created to the same or better condition, to provide stop gap habitat whilst the new habitat is maturing to a life-stage that will provide suitable resource.

7.1.4. Recommendations: In this case, it is not likely to be possible to follow the risk avoidance strategy, so the minimisation strategies must be followed and compensation measures must also be implemented to reduce the impact to negligible.

7.1.4.1. The planned permanent loss of habitat, as currently understood, is limited to four semi-mature trees, labelled T5-8 on the Tree survey. All but one of the specimens have been noted as Category U (Unsuitable for retention) in accordance with British Standard for Trees in Relation to Design, Demolition and Construction (BS 5837: 2012). The other tree was assessed as Category C (Low quality/value), and recommendations are made to replace the trees with species more suited to the car park.

7.1.4.2. This report agrees that replacement of all four trees with a species appropriate for a suitable nearby location (not yet identified) would be sufficient mitigation for the loss of these trees, provided that a minimum of 5 artificial nesting boxes be installed to offer interim bird-nesting habitat whilst the planted specimens mature.

7.1.4.3. Species-specific mitigations for bats cannot be made at this point without a full understanding of the use of the building and trees and thus must be fully detailed in the Preliminary Roost Assessment report when completed.

7.2. Impact: disturbance/destruction of breeding and/or important refuge habitats of protected/priority species

7.1.1. *Risk avoidance strategi*es

7.1.1.1. No clearance of trees, dense scrub or accumulations of materials/vegetation or waste should be undertaken during bird nesting season (Mar-Aug inclusive), or amphibian (Nov-Apr) or hedgehog (Oct-Apr) hibernation periods.

7.1.2. *Risk minimisation strategy:* If clearance cannot be completed outside of the previously mentioned periods, a Site-specific Risk Minimisation Strategy must be constructed for the relevant target species (as previously mentioned) to include the specific measures required to reduce risk of action to a tolerable level, including but not limited to the following:

7.1.2.1. Supervision of all clearance works by a suitably qualified/experienced ecologist is deemed advisable.

7.1.2.2. Thorough check of the habitat by a suitably experienced person, directly prior to the commencement of works, to check for protected/priority species and their field signs.

7.1.2.3. All clearance personnel should be made aware of potential presence of protected/priority species and their field signs.

7.1.2.4. If an individual of a protected/priority species or their field signs are discovered during clearance, works should immediately cease until a suitably qualified ecologist has had ample time to investigate the sighting and implement reasonable measures to allow continuation.

7.1.2.5. Employment of a 2-cut methodology where the scrub is cut no lower than 150mm and left for a suitable period for faunal species to clear the area before cutting to ground level.

7.1.2.6. All clearance should be performed uni-directionally towards an area of remaining suitable habitat that will be left intact to allow successful escape.

7.2. Impact: exclusion/disturbance from accessing key resources within the PDS or injury/entrapment/death of protected/priority species.

7.2.1. Risk avoidance strategies

7.2.1.1. No additional linear boundaries/features to be installed within or surrounding the PDS. In addition to this, no repairs should be made to existing boundaries which would remove existing access points.

7.2.1.2. No additional external lighting to be installed/used between dusk and dawn within or surrounding the PDS.

7.2.1.3. No excavation or ground works that would create any steep-sided holes greater that 130mm in diameter within or surrounding the PDS.

7.2.2. Risk minimisation strategies

7.2.2.1. If the repair of existing boundaries or the installation of additional linear boundaries is deemed necessary, a specific survey to assess current access points must be undertaken to ensure that access by native wildlife to/through the PDS is not negatively impacted by the proposed development. Installation of appropriate, species-specific access points at appropriate intervals within all new linear boundaries and the maintenance of existing access points within existing boundaries with the installation of species-specific access points may be an option. However, if access cannot be maintained, bespoke, site-specific and species-specific mitigations might be required.

7.2.2.2. If additional external lighting is deemed necessary, a specific lighting scheme must be designed to reduce the risk of disturbance to nocturnal species that may be utilising the undeveloped areas of the PDS. This should include, but not be limited to:

7.2.2.2.1. Use of LED luminaries in a warm white spectrum (ideally<2700K).
7.2.2.2.2. Where necessary external security lighting will be set on by motion-sensors and short (1 minute or less) timers.
7.2.2.2.3. Use of cowls/hoods to direct light specifically to the need and away from potential roost features.

7.2.3. If excavation/ground works are unavoidable, all steep-sided excavations deeper than 150mm, or pipes of diameter 130mm or greater, must be covered or have an escape ramp installed (e.g. chamfered edge or roughened plank) whilst not being worked.

7.3. Impact: changes to local hydrology

7.3.1. Appropriate arrangements must be made to discharge the water, shed from the rooves of the new structures, such that it will not negatively impact the water-levels/flowrates experienced by the local watercourses and/or bodies.

7.4. Impact: increased local air pollution

7.4.1. Additional emissions from both the increased demand for heating of the newly constructed spaces and increased vehicular access to the site on completion should be minimised through ensuring the development is well insulated and otherwise energy efficient and that good traffic management is installed at the site.

7.4.2. An investigation into how the addition of renewable power/heating sources (e.g. PV solar panels) and electric car charging points would affect the levels of emissions produced by the proposed development would also be beneficial.

It should be understood that the above are based on the information currently available and are likely to be increased/modified with the addition of new data captured by any additional recommended works and/or changes to the design of the proposed development.

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APPENDIX 1 – Summary of designated sites within 2km of the centre of the PDS

Table 2: Summary of designated sites within 2km of the centre of the PDS

Site name	Status	Distance (m)	Size (Ha)	Designation description
Cefn Cribwr grasslands	SAC	1200	57.92	*Annex I habitats that are a primary reason for selection of this site* - 6410 Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae) *Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site* – N/A *Annex II species that are a primary reason for selection of this site* – N/A *Annex II species present as a qualifying feature, but not a primary reason for site selection* - 1065 Marsh fritillary butterfly *Euphydryas (Eurodryas, Hypodryas) aurinia*
	SSSI	1200	7.8	Penycastell, Cefn Cribwr is of special interest for its marshy grassland and species-rich neutral grassland and for the association of these vegetation types with others including swamp, carr woodland and scrub Of note are several uncommon plant species. Green-winged orchid (*Orchis morio)* and Pepper saxifrage (*Silaum silaus*) occur in the neutral grassland, while Dyers greenweed (*Genista tinctoria)*, Petty whin (*Genista anglica*) and Narrow-leaved Marsh-dandelion (*Taraxacum palustre*) are present in the purple moor-grass pasture. Blunt-flowered rush *(Juncus subnodulosus)*, which is abundant in the base-rich rush-pasture is also notable, as is Early marsh-orchid *(Dactylorhiza incarnata ssp. Incarnate*), which is scattered through the base-enriched purple moor-grass and rush-pasture. The south western fields support a population of the nationally scarce Bog bush-cricket *(Metrioptera brachyptera*). The site provides suitable habitat for the Marsh fritillary *(Eurodryas aurinia)* and contributes to the area used by a metapopulation of this butterfly.
Kenfig	SSSI	1548	777.3	Kenfig is of special interest for its extensive sand dune habitats and standing waters, together with a mixture of associated coastal habitats including saltmarsh, intertidal areas, swamp, woodland and scrub. In addition, the site is of special interest for the assemblages of plants, fungi and invertebrates that are associated with the sand dunes and standing waters. The following individual species are also of special interest: Petalwort (*Petalophyllum ralfsii)*, the medicinal leech *Hirudo medicinalis*, the Fen orchid (*Liparis loeselii)*, the Shrill carder bee *(Bombus sylvarum)*, the Hairy dragonfly *(Brachytron pratense)* and a weevil *Pachytychius quinquepunctatus*.

Stormy Down	SSSI	1768	7.7	A locality in the Rhaetian Quarella Sandstone, a littoral deposit characteristic of the area between the Lias - L. Jurassic "Cowbridge Island" and the "mainland". Here these sandstones have produced the fish Hybodus, and "Schizodus" with a limited molluscan fauna, as well as the dinosaur Zanclodon cambrensis. Associated marls yield Rhaetavicula contorta. An important site in facies and palaeogeographic analysis of the 'Rhaetic' in South Wales.
	SINC			Main part is continuous bracken. Broad-leaved plantation, semi-improved neutral grassland
Waun Cimla	SSSI	1904	15.6	Waun Cimla is an extensive area of wet lowland heath and grassland, located to the east of Kenfig Hill and north of the village of Cefn Cribwr. It is situated on gently sloping ground at the foot of the Cefn Cribwr ridge and is influenced by a series of spring lines. The site overlies coal measures strata, and soils are of the Wilcocks Series. They are poorly drained greyish clay barns with a humose or peaty topsoil and a slowly permeable subsoil, in stony drift Of particular interest is the occurrence of Bristle bent (*Agrostis curtisii)*, a grass with a south western distribution in Britain which is here at the edge of its range.
Frog Pond Woods	LNR			
	SINC	955	-	Broad-Leaved Semi-Natural Woodland, Aquatic flora, Marsh/Marshy Grassland, standing water
NPT Water courses	SINC	834	-	*Unknown*
North Eastern Dunes	SINC	1484	-	Semi-Improved Neutral Grassland and Marsh/Marshy Grassland
St. James' Church Wood	SINC	739	-	Broad Leaved Semi-Natural Woodland and Improved Grassland
Eastern Frog Pond Wood	SINC	1133	-	Broad-Leaved Semi-Natural Woodland; Marsh/Marshy Grassland; Dense Continuous Scrub
Waunabnt Road (north)	SINC	1363	-	Unimproved Neutral Grassland, Scattered and Dense Continuous Scrub, Broad-Leaved Semi-Natural Woodland
Waunbant Road (triangle)	SINC	1443	-	Marsh/Marshy Grassland and Unimproved Neutral Grassland
Old Balla Wood	SINC	992	-	Broad-Leaved Semi-Natural Woodland and Improved grassland
Ty Tanglwst Wood	SINC	1312	-	Broad-Leaved Semi-Natural Woodland
Afon Cynffig	SINC	1083	-	River Corridor and Broad-Leaved Semi-Natural Woodland along the banks
Cornelly Quarry	SINC	1405	-	Limestone cliffs/tiers reclaimed by scattered and dense continuous scrub. Broad-Leaved Semi Natural Woodland

North of Pyle	SINC	1157	-	Dense Continuous Scrub to the east of the site; Marsh/Marshy Grassland
Bedford Park	SINC	1817	-	Marsh/marshy grassland, semi-improved neutral grassland, cultivates amenity grassland, dense continuous scrub, broad-leaved semi-natural woodland, scattered bracken
Mynydd Bach	SINC	1823	-	Broad-leaved semi-natural woodland, marsh/marshy grassland, dense continuous scrub, wet heath/acid grassland, semi-improved & unimproved acidic grassland, wet dwarf scrub heath, acid marshy grassland, bracken, scattered scrub
Pant mawr Quarry	RIGS			This site forms part of a network of key localities (RIGS & GCR) which collectively illustrate the evolution and facies development of the lower Carboniferous (Dinantian) carbonate ramp/platform in South Wales and includes sites of historical and educational interest. They form part of a sub-network of sites located to the south of the South Wales Coalfield, the so-called south crop
Stormy Down Quarry	RIGS			
Gaen Quarry	RIGS			

APPENDIX 2 - Phase 1 Habitat Map

Figure 8: Phase 1 Habitat map of the PDS

Table 3: Target notes

1	Stand of Himalayan Balsam
2	Short ephemeral over bare earth
3	Short ephemeral over hardstanding
4	Small area of bramble dominated scrub
5	Hard standing with a number of temporary structures (i.e. Sheds for sale and storage units) Northern end of Concessions yard
6	

Table 4: Floral Species List

Common Name	Scientific Name	Short ephemeral	Scrub
BARE SUBSTRATE		D	
Sycamore	*Acer pseudoplatanus*	R	
Rosebay willowherb	*Chamaenerion angustifolium*		R
Creeping thistle	*Cirsium arvense*	O/LA	R
Spear thistle	*Cirsium vulgare*	R	
Broad leaved willowherb	*Epilobium montanum*	R	
Willowherb	*Epilobium sp*	A	
Hemp agrimony	*Eupatorium cannabinum*	R	
Sun spurge	*Euphorbia helioscopia*	O	
Herb robert	*Geranium robertianum*	R	
Ivy	*Hedera helix*	F/LA	
Bristly oxtongue	*Helminthotheca echioides*	F	
Hoary mustard	*Hirschfeldia incana*	O	
Himalayan balsam	*Impatiens glandulifera*	F	
Nipplewort	*Lapsana communis*	R	
Bay laurel (boundary feature)	*Laurus nobilis*	F/LD	
Balm	*Melissa officinalis*	R	
Greater plantain	*Plantago major*	R	
Creeping cinquefoil	*Potentilla reptans*	R	
Oak	*Quercus robur*	R	
Creeping buttercup	*Ranunculus repens*	R	
Bramble	*Rubus fruticosus*	O	D
Curled dock	*Rumex crispus*	R	
Broad leaf dock	Rumex obtusifolius		O
Common ragwort	*Senecio jacobaea*	R	
Groundsel	*Senecio vulgaris*	R	
Black nightshade	*Solanum nigrum*	R	
Perennial sowthistle	*Sonchus arvensis*	O	
Prickly sowthistle	*Sonchus asper*	O	
Smooth sowthistle	*Sonchus oleraceus*	O	
Dandelion	*Taraxacum officinale*	O	
Lesser trefoil	*Trifolium dubium*	O	
Red clover	*Trifolium pratense*	R	
Coltsfoot	*Tussilago farfara*	R	
Common nettle	*Urtica dioicia*	R	O
Tufted vetch	*Vicia cracca*	O/LF	

Table 5: Faunal species list

Common Name	Scientific Name	No	Notes
Speckled wood	*Pararge aegeria*	1	Sunning on pile of timber

Photographs of target notes

Plate 4: Target note 1 - Stand of Himalayan Balsam

Plate 5: Target note 2 - Short ephemeral over bare earth

Plate 6: Target note 3 – Short ephemeral developing around temporary structures

Plate 7: Target Note 4 - Small area of bramble dominated scrub

Plate 8: Target note 5– Southern end of the Concessions yard

Plate 9: Target note 6 – Northern end of the Concessions yard