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ECOLOGICAL IMPACT ASSESSMENT REPORT

CANOLFAN BUILDING AND SPLASH PAD AREA, CYFARTHFA PARK

MERTHYR TYDFIL COUNTY BOROUGH COUNCIL

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A	Draft	23/10/2020	Julie Player MCIEEM Senior Ecologist	Alex Wilson MCIEEM Principal Ecologist	Alex Wilson MCIEEM Principal Ecologist
B	FINAL	26/11/2020			Alex Wilson MCIEEM Principal Ecologist

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The evidence which we have prepared and provided is true and has been prepared and provided in accordance with the guidance of The Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

SUMMARY

Purpose	- Wildwood Ecology was commissioned by Merthyr Tydfil County Borough Council (the client) to undertake a Preliminary Ecological Appraisal (PEA) of Canolfan Building and Splash Pad Area, Cyfarthfa Park. A subsequent check for bats within the pod building was carried out. - The site is the subject of a planning application for patio and terrace extension to the Canolfan Building, a new changing room pod, bin store and an extension to the splash pad plant room. A new footpath will be created with a footbridge installed over a stream, and repairs to the existing paths and hardstanding areas will be made as appropriate.
Work undertaken	- A PEA and PRA was undertaken consisting of a desk study and field survey undertaken in October following the Chartered Institute of Ecology and Environmental Management (CIEEM) Preliminary Ecological Appraisal (2013) guidelines and standard Phase 1 Habitat Survey protocol (JNCC, 2010). - A subsequent endoscopic survey of the pod was carried out.
Key issues	- The development may result in impacts on wildlife and habitats affecting the following protected species: - Bats - Nesting birds - Hedgehogs
Recommendations	- A precautionary approach to be taken with respect to the pod, for bats, with works carried out following an inspection by a bat ecologist, and compensation feature installed nearby to replicate any suitable roost features. - Avoidance strategy employed to ensure that the route taken through the woodland does not impact upon (i.e. root zone protection and no felling) of trees with bat roost suitability. - Any works through vegetation will be undertaken outside the bird breeding season. - Enhancement measures will be installed onsite (a dipper/wagtail box and bat box within woodland adjacent to the stream) with management of the amenity grassland and woodland edge to include a wildflower meadow area.
Conclusions	- Providing that the recommendations outlined within this report are successfully implemented, it should be possible for the proposed development to proceed and for there to be no long-term impacts upon the key protected species present at the site. - This ecological report will remain valid for a period of 18 months from the date of the last survey – i.e. until April 2022.

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1 INTRODUCTION

- 1.1 Wildwood Ecology was commissioned by Merthyr Tydfil County Borough Council (the client) to undertake a Preliminary Ecological Appraisal (PEA) of Canolfan Building and Splash Pad Area, Cyfarthfa Park (the site) centred at grid reference SO 04259 07345.

Site description

- 1.2 The aerial images of the site (Figures 1 and 2) show the site to consist of a play area with outdoor play equipment, buildings and plantings within a wooded setting. There are paths and roads throughout the local area, along with carparks, formal gardens and amenity areas. Open fields with vegetated boundaries are found to the east, with parkland to the south. Cyfarthfa Castle is located 120m to the west of the site, and the lake to the south-west (approximately 520m).
- 1.3 The site is found within Merthyr Tydfil, towards the northern end of the town.



Figure 1 – Aerial image of the site (red line shows the site boundary). Image used under licence (©2020 Google). Imagery date 25/06/2018



Figure 2 – More distant aerial image of the site (red line shows the site boundary). Image used under licence (©2020 Google). Imagery date 25/06/2018

Proposed development

- 1.4 The site is the subject of a planning application for a new patio and terrace extension to the Canolfan Building, a new changing room pod, bin store and an extension to the splash pad plant room. A new footpath will be created with a footbridge installed over a stream, and repairs to the existing paths and hardstanding areas will be made as appropriate.

Purpose of this report

- 1.5 The purpose of this report is to provide sufficient information for the local planning authority to fully assess the potential ecological impacts of the proposed development, or to identify what further information is required before a full assessment can be made.
- 1.6 The result of the surveys have been used to inform whether further surveys are required, or to establish the need for, and extent of, any mitigation or compensation measures required as part of the proposed development.

2 METHODOLOGY

Desk study

- 2.1 A biodiversity desk study was undertaken in relation to the site in October 2020. The sources consulted and the type of information obtained are summarised in Table 1.

Table 1 – Sources of biodiversity and ecological records.

Source	Information requested (search buffer from site centre/boundary)
Aderyn (via LPA ecologist)	- Protected and priority species (2km) - Sites of local importance/designation (1km)
Multi-Agency Geographic Information for the Countryside (MAGIC) ¹	- International statutory designations (5km) - National statutory designations (2km)

- 2.2 The search buffers are considered to be sufficient to cover the potential zone of influence (ZoI²) of the proposed development.
- 2.3 The impact of the proposed development on the biological integrity of any nearby designated protected sites has been fully considered.
- 2.4 No previous ecological survey information was available for the site itself, though records are noted from the data returned.

Field survey

- 2.5 A field survey was undertaken on the 7th and 9th October 2020.
- 2.6 All habitats present within the site with the potential to support rare, protected, or otherwise notable species of flora or fauna (together with any direct signs) were noted.
- 2.7 In the context of this report, rare, protected, or otherwise notable species of flora or fauna were those considered to meet any of the following criteria:
- Species protected by UK or European legislation (see Appendix V);
 - UK Post 2010 UK Biodiversity Framework priority species or Local Biodiversity Action Plan (LBAP) species;
 - Species and habitats as listed within the Environment (Wales) Act (2016) lists;
 - Nationally rare or nationally scarce species;
 - Species of Conservation Concern (e.g. JNCC Red List, RSPB/BTO Red or Amber Lists).
- 2.8 A PEA habitat map was drawn up incorporating target notes used to highlight features of particular ecological interest (see Appendix I).
- 2.9 The Wildlife and Countryside Act (1981) as amended, makes it an offence to release or allow to escape into the wild any animal, plant or micro-organism not ordinarily resident in the UK (as listed in Schedule 9 of the Act). Plant species listed in Schedule 9 were searched for during the survey. Examples include species such as Japanese knotweed (*Fallopia japonica*) and Himalayan balsam (*Impatiens glandulifera*).

¹ <http://magic.defra.gov.uk/MagicMap.aspx>

² ZoI definition – ‘the areas/resources that may be affected by the biophysical changes caused by activities associated with a project’ (CIEEM, 2016).

Surveyor information

2.10 The PEA was undertaken by Alex Wilson. See Table 2 for further information.

Table 2 – Surveyor information.

Surveyor	Licences	Ecological experience
Alex Wilson Ph.D., B.Sc. (Hons) MCIEEM Principal Ecologist	Bat Dormouse Barn owl	Holds a Ph.D (Visual constraints in bird behaviour). Experienced in undertaking ornithological surveys, and bat surveys. Is a licensed bat and dormouse ecologist in England and Wales. Supervisor and advisor to undergraduate and postgraduate ecological research projects.

Limitations and assumptions

- 2.11 The desk study and field survey will not produce a comprehensive list of plants and animals as this will be limited by factors that influence their presence (e.g. activity and dormancy periods). An assessment can however be made of the habitats within the survey area, their nature conservation value and potential to support protected or priority species.
- 2.12 The exterior of buildings was examined and assessed only due to Covid restrictions.
- 2.13 No other limitations were encountered, or assumptions made during either the desk study or the field survey and it is considered that with the access gained and recording undertaken an accurate assessment of the site's ecological value has been made.

3 RESULTS

Desk study

Designated sites

- 3.1 There were a number of international statutory designations within 5km of the site, national statutory designations within 2km, and locally designated sites within 1km (see Table 3).
- 3.2 There were no statutory sites designated wholly or in part due to their bat populations.

Table 3 – Summary of designated sites in range of the site.

Site name	Designation	Description / key reason for designation	Distance & direction
X4 RAWs	RAWs	Restored Ancient Woodland Sites	Closest - onsite – adjacent to E of visitor centre
Cyfarthfa Park	SINC	Part of an area of mainly ornamental parkland within Merthyr Tydfil. The SINC includes semi-natural woodland and several enclosures of neutral grassland in the eastern half of the park. Also includes small areas of plantation woodland and scrub and several woodland ponds.	78m (E)
X2 ASNW	ASNW	Ancient Semi-Natural Woodland	Closest - 320m (NNE)
Cwm Taf Fechan	SINC	The SINC contains Cwm Taf Fechan SSSI. The limestone geology gives rise to limestone woodlands, species-rich calcareous grasslands, species-rich neutral grasslands and calcareous scrub. Many species of interest have been recorded from the woodlands which are the designated feature of the SSSI. The neutral and calcareous grasslands of the valley slopes and bottom are typically species-rich. Otter ranges along the Afon Taf Fechan, which also supports a range of native fish species including salmon. Nationally rare and scarce invertebrate and bryophyte species have been recorded from the SSSI.	405m (W)
Afon Taf	SINC	The major river in the County Borough. Includes areas of bankside habitats, particularly towards the south where the river corridor is less industrialised than further north. Associated habitats are chiefly semi-natural woodland, including areas of ancient semi-natural woodland and linear wet woodlands. There are also numerous neutral grasslands, scrub patches and bracken stands, as well as small areas of	482m (S)

		marshy grassland and tall herb vegetation. Notable features of the river course include cobble banks which support localised plants. Otter occurs throughout the length of the river which is known to be of value to a wide variety of birds, fish, bats and reptiles.	
Cwm Taf Fields & Cefn Coed Tip	SINC	Linear series of fields between the Afon Taf Fawr and the A470, also containing areas of semi-natural woodland and a re-vegetated limestone slag tip from the former Cyfarthfa Ironworks as well as smaller areas of semi-improved acid grassland, scrub, bracken slopes and dry heathland. The fields are a mosaic of damp and dry neutral grasslands with species-rich areas. The woodlands are variable in character, including areas of wet willow woodland, acid oak woodland and some base-rich ash woodland near the calcareous tip. The thin soils on the tip plateau support a unique type of calcareous grassland.	486m (WSW)
Cwm Taf Fawr	SINC	Section of major river tributary of the Afon Taf. The river extends into Brecon Beacons National Park to the north. Includes adjacent woodlands, which are relatively undisturbed in the upper reaches and more urban in character further downstream. The upper reaches in particular are of high ecological value, comprising limestone gorge woodland with a rich ground flora. Numerous rare plant species occur here. Further south the riverside woodland is more acid in character, but nevertheless supports a relatively diverse ground. The site also includes some adjacent areas of species-rich calcareous, neutral and acid grasslands. The calcareous grasslands in particular support numerous species which are scarce in the County Borough. Otter ranges along the Afon Taf Fechan, which also supports a range of native fish species including salmon.	559m (WSW)
Cwm Taf Fechan Woodlands	SSSI/LNR	A Wildlife Trust of South and West Wales site. Comprised of semi-natural broadleaved woodland, with assemblages of bryophytes. Acid grassland and heath also present.	580m (NW)
Y Graig	SINC	Area of fridd habitats dominated by bracken with patches of unimproved acid grassland and dry heathland, particularly around gritstone outcrops. An area of species-rich damp neutral and marshy grassland to the	701m (NNW)

		west and some wet willow woodland exists to the south. Other habitats include scrub and boulder scree. Associated with the habitats of Cwm Taf Fechan SSSI/SINC to the north, but separated from these by the A465 Heads of the Valleys Road. Regionally rare plant species frequent the woodlands. The damp neutral and marshy grasslands support the regionally scarce plants	
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Priority and protected species

3.3 Table 4 summarises the priority and protected species records found within the local area within the last 10 years.

Table 4 – Priority and protected species records found in the vicinity of the site within the last 10 years.

Protected & priority		# of records (# species)			Further information (from site)
Groups	Species	Onsite	<500m	>500m	
Bats	Common pipistrelle	-	1	95	Closest record for possible roost at 306m away. NB Cyfarthfa Castle is a roost also (within 100m) though records not within LRC data
	Soprano pipistrelle	-	1	41	Closest record for maternity roost at 380m away.
	Unidentified pipistrelle	-	-	73	Closest record for field record at a site 600m away, possible roosts at 600m also.
	Brown long-eared bat	-	-	14	Closest record for field record at a site 600m away. NB Cyfarthfa Castle is a roost also (within 100m) though records not within LRC data
	Unidentified long-eared bat	-	-	5	Closest record for droppings at a site 1.2km away
	Noctule	-	-	4	Closest record for field record at a site 930m away
	Serotine	-	-	1	Closest record for field record at a site 1.1km away
	Lesser horseshoe bat	-	-	7	Closest confirmed roost at 1km away
	Daubenton's bat	-	-	17	Closest record for field record at a site 600m away
	Natterer's bat	-	-	15	Closest record for field record at a site 600m away
	Unidentified <i>Myotis</i>	-	-	35	Closest record for roost at a site 600m away
	Unidentified bat	-	1	19	Closest record for field record at a site 300m away (within Cyfarthfa Park)
Mammals (excluding bats)	European otter	-	-		Spraint at 1km away
	European badger	-	-	3	Sett at ~1km away
	West European hedgehog	-	1	18	Live sighting is closest record at 380m away.
	Weasel	-	-	1	Record at 740m away

Protected & priority		# of records (# species)			Further information (from site)
Groups	Species	Onsite	<500m	>500m	
Amphibians	Great crested newt	-	-	1	Adult female at 1.9km away
	Palmate newt	-	-	2	Adult found at 2km away
	Common toad	-	1	16	Closest record for 229m away for emerging toadlets
	Common frog	-	2	17	Closest record for 182m away for spawn within Cyfarthfa Park Ponds.
Reptile	Common lizard	-	-	20	Closest record at 1.3km away
	Slow worm	-	-	24	Closest record at 600m away
Birds	Schedule 1	3	-	69(8)	Closest species for goshawk (overhead), peregrine and kingfisher within Cyfarthfa Park. Other species include red kite, redwing, hobby, common crossbill, fieldfare and brambling.
	Non-schedule 1	-	11 (5)	279 (21)	Closest records for song through (175m away), dunnock, house sparrow, black-headed gull, herring gull and lesser redpoll.
Invertebrates	Totals:	-	2 (2)	113 (25)	Cinnabar; shimmering ruby-tail – closest records at 476m and 485m away. Other records are over 800m away. Closest marsh fritillary record at 1.9km away.
Plants	Bluebell	2	3	17	Closest record in woodland onsite to east of visitor centre.
	Eyebright (<i>Euphrasia officinalis subsp. pratensis</i>)	-	-	1	Within 2.1km of the site
	Lesser butterfly-orchid	-	-	1	Within 550m of the site
Fish	Brown/Sea Trout	-	-	2	Closest record for 1.6km away
Lichen	Witches' Whiskers Lichen	-	-	1	Closest record for 1.3km away
Fungi and slime moulds	Nail fungus	-	-	1	Closest record at 2km away on alder

Field survey

Timing and conditions

3.4 Prevailing weather conditions during the field survey are summarised within Table 5.

Table 5 – Summary of weather conditions during the PEA/PRA and endoscope check.

Date	Weather conditions			
	Temp [°C]	Cloud cover [Oktas]	Wind speed [Beaufort scale]	Rain
07/10/2020	12	7	2	Nil
09/10/2020	13	3	1	Nil

- 3.5 The distribution and extent of habitats observed within the site is illustrated in the PEA plan (see Appendix I). An accompanying species list (including scientific names) can be found in Appendix IV.
- 3.6 The habitats present onsite are described in detail in Table 6 using the standard Phase 1 survey habitat classification hierarchical alphanumeric reference codes (JNCC, 2010).
- 3.7 Please also refer to Table 6 for a list and description of the onsite target notes. The positions for these target notes are highlighted in the PEA plan in Appendix I.
- 3.8 The site was classified according to the following habitat types: hardstanding, soft landscaping, bare ground, scrub, tall ruderal, amenity grassland, a stream, buildings and mixed woodland (semi- natural).

Table 6 – Habitats and linear features present onsite.

Habitat type / Linear feature	Species present	Other observations
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<i>A1.3.1 Semi-natural, mixed woodland</i> Part formally managed with the remaining is RAWs (restored ancient woodland site), to the east of the visitor centre. Scattered trees also present within the park area.	Holly, sycamore, sessile oak, hawthorn, bramble, hazel, ivy, beech, pine sp, pedunculate oak, willow sp, rowan, pendulous sedge, hogweed, birch sp, rose sp, dogwood	• TN1 – trees identified with bat roost suitability • TN2 – managed area with scrubber section (more open)
<i>A2.1 Scrub (dense/continuous)</i> Forming an understorey and edge to the woodland areas. Particularly dense where management of the trees has opened the canopy.	Bramble, willow sp, hogweed, holly, rhododendron	
<i>C3.1 Tall ruderal</i> Small areas of this habitat are present along the bank leading down to the visitor centre, and adjacent to the car park.	Broad-leaved dock, common nettle, hogweed, soft rush, barren strawberry, broad-leaved willowherb, cock's foot	
<i>J1.2 Amenity grassland</i> Shortly mown grass with this habitat extending under scattered trees.	Creeping buttercup, daisy, dandelion, perennial rye grass, false oat grass, greater plantain, annual meadow grass, chickweed, clover sp, ribwort plantain, lady's mantle, self-heal, ragwort, lesser trefoil	
<i>J3.6 Buildings</i> Two buildings are found onsite – a pod and the visitor centre. These two structures are discussed below with respect to bat roost suitability.	Sedum roof on visitor centre	• TN1 – structures with bat roost suitability
<i>G2 Running water</i> Within a partially stone lined ditch, running along the edge of the eastern woodland.		
<i>J4 Bare ground</i> Areas of bare earth are present where informal pathways have been made around picnic tables, and showing desire lines.		
<i>J5 Other habitat</i> Areas of hardstanding are present with these comprising the play surface, formal paths and accesses.	Holly, pheasantberry, pendulous sedge, ash, lavender, butterfly bush, sycamore, aquilegia, possible crocosmia sp.	

Onsite fauna

- 3.9 The presence of the following species were observed or detected around the site during the survey: great tit, song thrush, blue tit, woodpigeon, robin, carrion crow, grey squirrel and blackbird.

Invasive species

- 3.10 Crocosmia is likely to be present onsite within ornamental areas, however it is not known if the species is Crocosmia x crocosmiiflora as listed on Schedule 9.
- 3.11 Some common rhododendron was also observed within the ornamental planting areas and surrounds to the north of the site.
- 3.12 Grey squirrel were also observed foraging around the play area.
- 3.13 Other non-natives were present, though no other possible species as classes as invasive.

Preliminary Roost Assessment

- 3.14 The pod is a single storey structure with a flat roof, and with timber open panelling on the ceiling overhangs and walls.
- 3.15 Most of the gaps in the slats were found to be meshed securely, though several at the wall/ceiling interface had incomplete mesh, leaving small gaps.
- 3.16 The visitor centre is over two levels, with a single storey area projecting to the north. The roofs are flat and have a sedum covering. There are deep overhangs forming covered walkways around the edge of the structure, along with additional structural shading.
- 3.17 The walls are a combination of timber and metal with glazed panels to the southern aspect.
- 3.18 The panelling along the upper roof edge was in part decayed with gaps present along the length of the edge.
- 3.19 Two trees were noted as having high suitability for roosting bats – a sycamore with a feature at approximately 1.8m height with a decay pocket present. A second tree, a large oak had a tear out feature at height, with some areas of decay. Other trees within the woodland are likely to have features present also (of a lower suitability), though are unlikely to be impacted by the proposals.
- 3.20 No evidence of any bat roosts were noted during the PRA survey, though suitability for use was assessed.

Endoscopy assessment of the pod

- 3.21 Given the time of year precluding a bat survey, given the low suitability and likely use of the pod building as an occasional or transitory roost for individuals or small numbers of crevice dwelling bats, it was agreed that all gaps could be endoscoped as part of a precautionary strategy.
- 3.22 All gaps were endoscoped using a Rigid See Snake endoscope. No bats or signs of bats were noted onsite. The gaps present appeared to open up into a small open void with some cobwebbing apparent.

4 INTERPRETATION AND ASSESSMENT

- 4.1 The proposed development will require displacement of onsite habitats and disturbance to their associated features. This section concerns an assessment of ecological impacts resulting from the proposed development.
- 4.2 The following interpretation and assessment is provided to ensure full compliance with both UK and European legislation and both local and national planning policy (see Appendix V).

Designated sites

- 4.3 There were both statutory and non-statutory designated sites identified within the vicinity of the site (see Table 4).
- 4.4 The woodland to the east of the visitor centre is proposed to have a new path leading through it. This woodland is RAWs, though if the proposed route may lead through the path of least resistance, with adequate roost protection in place, then no impacts on the status of the woodland are anticipated.
- 4.5 Given the scale of the proposed development, and the lack of likely impacts beyond the site boundary, the other nearby designated sites are sufficiently well separated so that no impacts on their designated features are anticipated as a result of the works.

Priority and protected habitats

- 4.6 The following priority habitats (as listed in Section 7 of the Environment (Wales) Act 2016) were present onsite: lowland mixed deciduous woodland.
- 4.7 This habitat onsite is a mix of managed and natural growth, with parts of the woodland present onsite for many years (woodland is present in 1945 aerials, with the RAWs designation suggesting continued woodland presence for 400+ years).
- 4.8 The woodland already has informal and formal paths through it, and if it is possible to avoid any tree removal and implement root protection zones, to install the new woodland path, then there are unlikely to be any long-term impacts on the status of the habitat.

Priority and protected species

- 4.9 The following priority species (as listed in Section 7 of the Environment (Wales) Act 2016, or having other priority and protected status) were present or likely to be present onsite: bats, nesting birds, badger, amphibians and bluebell.

Bats

- 4.10 The local records search returned a number of records for bat species in the vicinity of the site, with records of roosting bats (brown long-eared) within the castle, and pipistrelle roosts and activity nearby also.
- 4.11 The structures on site offered some suitability for roosting bats – the pod offers low suitability for crevice dwelling species within the timber and mesh gaps. There is no suitability for void dwelling species or horseshoe bats given the lack of any free flight access into enclosed space. The small void that is present is not sufficient to allow flight, but is more spacious than would be described by “crevice”.
- 4.12 The visitor centre was noted to have gaps present along its northern more elevated edge also, with the location and height affording it a higher suitability for roosts. This structure is categorised as having moderate suitability.

- 4.13 The pod will be impacted by the proposals, with the amendments to the structure enclosing the space under the current overhangs.
- 4.14 The lack of any bats or evidence of them within the structure during the endoscopic survey suggests that the structure is not used either often enough to allow any build up of evidence (or at all). The structure does not offer any suitability for hibernating animals or maternity use.
- 4.15 No works are planned to the roof structures of the visitor centre or any additional lighting installed, and so any roosts that may be present will be retained unaffected.
- 4.16 The sycamore, if it can be avoided being removed or having its roots impacted, will be unaffected by the proposals. The oak and others to the south of the sycamore will be retained also and will not be impacted by any additional lighting or works affecting them.
- 4.17 There will be continued canopy and foraging suitability, with no additional lighting installed within the woodland and so no impacts on bat flight lines or foraging areas are anticipated, with respect to the known roosts and any others.
- 4.18 There is unlikely to be a negative impact on bat species as a result of the proposed development.

Common dormouse

- 4.19 There are no records of dormouse returned with limited data on this species within the county of Merthyr. This may be due to under-recording rather than absence of the species.
- 4.20 No evidence of dormouse was noted onsite (hazel nuts noted on the ground were gnawed by squirrel). There is habitat onsite suitable to support dormice, though the proposals impact on these is negligible.
- 4.21 If the path of least resistance is followed through the woodland area, then there will be only a very small amount of vegetation removal needed, with this area previously cut back.
- 4.22 If dormice are present, they will be able to continue to use the woodland and scrub around the site, unimpacted.
- 4.23 There is unlikely to be a negative impact on common dormouse as a result of the proposed development.

European otter

- 4.24 Otter records are noted nearby, though none associated with the site itself. The small stream onsite is not optimal for otter use and the site is not adjacent to such optimal foraging or undisturbed laying up areas.
- 4.25 It is unlikely that otter will use the site as there are higher quality areas of woodland and cover adjacent to watercourses near to the Afon Taf.
- 4.26 There is unlikely to be a negative impact on European otter as a result of the proposed development.

Great crested newt and amphibians

- 4.27 The local records search returned a number of records for amphibians including several for great crested newt.
- 4.28 The stream does not offer suitability for breeding amphibians and there are no ponds onsite suitable for breeding amphibians. The woodland does offer some suitability for terrestrial

phase animals, though the proposed woodland route of the path is quite bare with limited litter cover.

- 4.29 It is unlikely that the proposals will have a negative impact on amphibian species.

Reptiles

- 4.30 The local records search returned a number of records for common lizard and slow worm nearby to the site.
- 4.31 There are superficially suitable areas suitable for use by reptiles – the tall ruderal areas, however these are surrounded by unsuitable habitats (in terms of structure or management with the grassland regularly cut short) and so it is unlikely that reptiles are present onsite.
- 4.32 There will not be a negative impact on reptile species as a result of the proposed development.

Nesting birds

- 4.33 The local records search returned a number of records for nesting bird species in the vicinity of the site, including some Schedule 1 designated species. In addition, several bird species were encountered onsite during the PEA.
- 4.34 The woodland and scrub offer suitable nesting opportunities for a variety of bird species – though no suitability for Schedule 1 species such as barn owl, red kite or goshawk, given the features available and disturbance levels.
- 4.35 The buildings may also offer nesting suitability for cup dwelling species (though no evidence for this was found) and no old nesting material was observed associated with the buildings onsite.
- 4.36 Any vegetation removal or work within woodland during the nesting season will likely impact upon breeding birds.
- 4.37 There may be a negative impact on nesting bird species as a result of the proposed development, if works are carried out in the breeding season within suitable habitats.

European badger

- 4.38 The local records search returned a number of records for European badger in the vicinity of the site.
- 4.39 No evidence of badger use was noted onsite, with no tracks, setts, latrines or other sign noted. It is likely that badger cross the site from time to time, to forage within the grounds of the park.
- 4.40 Any construction work involving open trenching or deep excavations may therefore pose a welfare risk to badgers.
- 4.41 Similarly, badgers are curious animals and may investigate chemicals, fuel or materials, and so may be impacted if these are tampered with.
- 4.42 There may be a negative impact on European badger as a result of the proposed development, due to construction related impacts.

West European hedgehog

- 4.43 The local records search returned a number of records for west European hedgehog. The woodland, soft landscaping and scrub offer good foraging and cover for this species, particularly where denser.
- 4.44 These areas are outside the scope of proposed works, and so it is unlikely that there will be impacts on hedgehog, with continued availability to disperse, forage and nest onsite.

Invertebrates

- 4.45 The local records search returned a number of records for invertebrate species in the vicinity of the site.
- 4.46 No priority or protected species were noted, though ragwort was noted (a food plant of cinnabar). No other foodplants suitable for use by species such as tormentil mining bee, marsh fritillary or pearl-bordered fritillary were noted onsite.
- 4.47 The current habitats onsite will be maintained in the majority with only minor losses of vegetation. This will therefore mean that there will be negligible impacts on invertebrate species.
- 4.48 There will not be a negative impact on invertebrate species as a result of the proposed development.

Invasive species

- 4.49 Several species of non-natives were noted onsite, with common rhododendron observed onsite, along with possible Montbretia (this was not in flower with limited leaves present).
- 4.50 The proposal areas are outside the areas where the non-native species may be spread and so they are of low risk to the project.

Other species

- 4.51 The habitats present, management of the site and levels of disturbance mean that the site is unsuitable for priority species of grassland fungi and fish.
- 4.52 The proposals are unlikely to impact on any other species or group of species not outlined in this section.

5 CONCLUSIONS AND RECOMMENDATIONS

- 5.1 Wildwood Ecology was commissioned to undertake a Preliminary Ecological Appraisal (PEA) of Canolfan Building and Splash Pad Area, Cyfarthfa Park.
- 5.2 The site is the subject of a planning application for a new patio and terrace extension to the Canolfan Building, a new changing room pod, bin store and an extension to the splash pad plant room. A new footpath will be created with a footbridge installed over a stream, and repairs to the existing paths and hardstanding areas will be made as appropriate.

Designated sites

- 5.3 Avoidance measures are required with respect to the RAWs site (woodland to the east of the visitor centre) – with no felling of trees and root protection zones in place.
- 5.4 Other designated sites in the vicinity of the site (see Table 4) are sufficiently well separated so that no impacts on their designated features are anticipated as a result of the proposed development.

Protected species

- 5.5 Recommendations regarding protected species are shown in Table 7.

Table 7 – Recommendations.

Species	Recommendations
Bats	Precautionary approach required – the pod will be checked again by a licenced bat ecologist prior to any works occurring, with a bat box (e.g. Greenwood's Ecohabitats Single Crevice box) installed on a nearby suitable tree prior to works occurring. The sycamore will be checked prior to any works within the woodland. No lighting above existing levels will be installed. If works are proposed to be carried out to the visitor centre building, two bat surveys will be required to be carried out (between May and August). In the event that any bat is found onsite during works, the animal will be made safe and the project ecologist contacted for advice, with this acted upon.
Common dormouse	No further surveys required.
European otter	No further surveys required. Precautionary measures as for badger (below)
Great crested newt	No further surveys required.
Reptiles	No further surveys required.
Nesting birds	If habitats suitable for nesting birds are to be removed, then any vegetation clearance will take place outside of the bird nesting season. In the event that clearance work has to be undertaken during the nesting season (generally from 1st March until 31st August, although birds are known to nest outside of these dates in suitable conditions), a breeding bird survey will be required and must be carried out by a suitably qualified person. Any active nests identified should be protected until the young have fledged. Where a Schedule 1 species (as defined in the Wildlife and Countryside Act - http://www.jncc.gov.uk/page-3614 is involved, compensation for impacts, e.g., loss of nesting sites, should be devised and implemented.
European badger	No further surveys required.

	All excavations, if unable to be covered will be provided with a means of escape such as a plank set to a shallow angle. All fuel, chemicals and materials to be safely stored away from animal access.
West European hedgehog	No further surveys required. Cautious working is advised to prevent killing or injury to this species during any clearance works.
Invertebrates	No further surveys required.

Biodiversity enhancement

- 5.6 Local Authorities have a duty (known as the 'Biodiversity and resilience of ecosystems duty') under the [Environment \(Wales\) Act 2016](#) to seek to maintain and *enhance* biodiversity in the exercise of their functions.
- 5.7 Where possible the existing onsite habitat will be retained to ensure that species are not adversely affected by the development. Native species of local provenance will be used for any new planting on the site to support The Action Plan for Pollinators in Wales, 2013 (<http://gov.wales/docs/desh/publications/130723pollinator-action-plan-en.pdf>).
- 5.8 An area of amenity grassland will be allowed to grow tussocky with reduced cutting (and autumnal cuts only down to 150mm minimum). This may be overseeding or plug planted with species such as dog violet (along the woodland edge), field scabious, devil's bit scabious, common bird's foot trefoil and great burnet.
- 5.9 Bird nesting boxes and bat roosting boxes will be incorporated within the woodland to the north-east of the new footbridge, on appropriate trees as directed by the onsite ecologist:
- 5.9.1 Greenwood's Ecohabitats single crevice box with curved back
- 5.9.2 <https://www.nhbs.com/vivara-pro-woodstone-grey-wagtail-and-dipper-nest-box>

Overall conclusion

- 5.10 Providing that the recommendations outlined within this report are successfully implemented, it should be possible for the proposed development to proceed and for there to be no long-term impacts upon the key protected species present at the site.

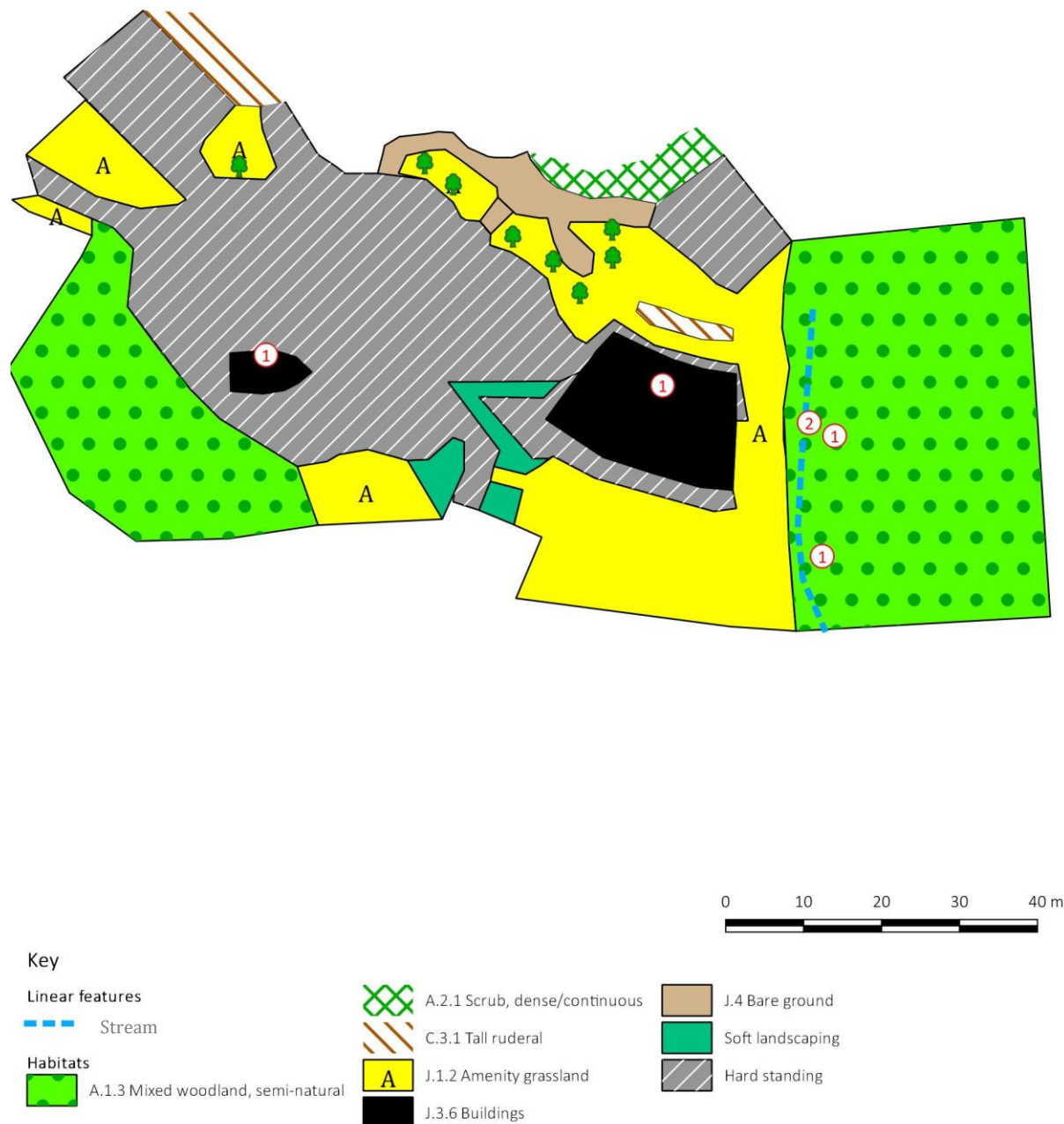
This ecological report will remain valid for a period of 18 months from the date of the last survey - i.e. until April 2022. Further surveys may be required to update the site information if planning is not obtained or works do not commence within this time period.

6 REFERENCES

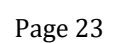
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APPENDIX I: PEA PLAN

ID	Description
1	Potential bat roost features
2	Break in woodland edge



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APPENDIX IV: SURVEY IMAGES



Figure 3 – View of the play area within the main hardstanding area onsite, to north-west



Figure 4 – View of southern aspect of visitor centre, view to north-east (RAWS woodland behind building)



Figure 5 – View of tall ruderal habitat adjacent to car park



Figure 6 – View of barer (already managed area) leading into woodland across stream



Figure 7 – View of open area/desire line path through woodland with feature on sycamore circled.



Figure 8 – View of play area from elevated position adjacent to rope climbing pyramid



Figure 9 – View of southern aspect of pod



Figure 10 – view of northern aspect of pod



Figure 11 -Northern aspect of visitor centre, view to east



Figure 12 – Vent on pod does not open into a PRF

APPENDIX V: SPECIES LIST

To be submitted to the appropriate Local Records Centre

Site Name: Canolfan Building and Splash Pad Area, Cyfarthfa Park
Grid ref: SO 04259 07345
Provided by: Wildwood Ecology Ltd
Verified by: Alex Wilson

Common name	Scientific Name (if known)	Number	Comment
Annual meadow grass	<i>Poa annua</i>		
Aquilegia sp	<i>Aquilegia sp</i>		
Ash	<i>Fraxinus excelsior</i>		
Barren strawberry	<i>Potentilla sterilis</i>		
Beech	<i>Fagus sylvatica</i>		
Birch sp	<i>Betula sp</i>		
Bramble	<i>Rubus fruticosus agg.</i>		
Broad-leaved dock	<i>Rumex obtusifolius</i>		
Broad-leaved willowherb	<i>Epilobium montanum</i>		
Butterfly bush	<i>Buddleja davidii</i>		
Chickweed	<i>Stellaria media</i>		
Clover sp	<i>Trifolium sp</i>		
Cock's foot	<i>Dactylis glomerata</i>		
Common nettle	<i>Urtica dioica</i>		
Creeping buttercup	<i>Ranunculus repens</i>		
Daisy	<i>Bellis perennis</i>		
Dandelion	<i>Taraxacum officinale agg.</i>		
Dogwood	<i>Cornus sanguinea</i>		
False oat grass	<i>Arrhenatherum elatius</i>		
Greater plantain	<i>Plantago major</i>		
Hawthorn	<i>Crataegus monogyna</i>		
Hazel	<i>Corylus avellana</i>		
Hogweed	<i>Heracleum sphondylium</i>		
Holly	<i>Ilex aquifolium</i>		
Ivy	<i>Hedera helix</i>		
Lady's mantle	<i>Alchemilla</i>		
Lavender	<i>Lavandula angustifolia</i>		
Lesser trefoil	<i>Trifolium dubium</i>		
Pedunculate oak	<i>Quercus robur</i>		
Pendulous sedge	<i>Carex pendula</i>		
Perennial rye grass	<i>Lolium perenne</i>		
Pheasantberry	<i>Leycesteria formosa</i>		
Pine sp	<i>Pinus sp</i>		
Possible crocosmia sp.	Possible <i>Crocosmia sp</i>		
Ragwort	<i>Senecio jacobaea</i>		
Rhododendron	<i>Rhododendron ponticum</i>		
Ribwort plantain	<i>Plantago lanceolata</i>		
Rose sp	<i>Rosa sp</i>		
Rowan	<i>Sorbus aucuparia</i>		
Sedum sp	<i>Sedum sp</i>		
Self-heal	<i>Prunella vulgaris</i>		
Sessile oak	<i>Quercus petraea</i>		
Soft rush	<i>Juncus effusus</i>		
Sycamore	<i>Acer pseudoplatanus</i>		
Willow sp	<i>Salix sp</i>		
Great tit	<i>Parus major</i>		

Blue tit	<i>Cyanistes caeruleus</i>		
Woodpigeon	<i>Columba palumbus</i>		
Robin	<i>Erithacus rubecula</i>		
Carrion crow	<i>Corvus corone</i>		
Grey squirrel	<i>Sciurus carolinensis</i>		
Blackbird	<i>Turdus merula</i>		

APPENDIX VI: PLANNING POLICY AND LEGISLATION

The following local and national planning policy and both primary and European legislation relating to nature conservation and biodiversity status are considered of relevance to the current proposal.

Planning and biodiversity

Local Authorities have a requirement to consider biodiversity and geological conservation issues when determining planning applications under the following planning policies.

Planning Policy Wales (2018) and Technical Advice Note 5 (2009)

Planning Policy Wales (Edition 10, December 2018) sets out the land use planning policies of the Welsh Government, integrating with the Environment (Wales) Act (2016). The advice contained within Planning Policy Wales (PPW) is supplemented for some subjects by Technical Advice Notes (TANs).

TAN 5 (Welsh Government, 2009) specifically provides advice about how the land use planning system should contribute to protecting and enhancing biodiversity and geological conservation. The TAN provides advice for local planning authorities on the key principles of positive planning for nature conservation; nature conservation and Local Development Plans; nature conservation in development management procedures; development affecting protected internationally and nationally designated sites and habitats; and development affecting protected and priority habitats and species.

Under Section 2.4 within the TAN 5, 'when deciding planning applications that may affect nature conservation local planning authorities should':

- Pay particular attention to the principles of sustainable development, including respect for environmental limits, applying the precautionary principle, using scientific knowledge to aid decision making and taking account of the full range of costs and benefits in a long term perspective;
- Contribute to the protection and improvement of the environment, so as to improve the quality of life and protect local and global ecosystems, seeking to avoid irreversible harmful effects on the natural environment;
- Promote the conservation and enhancement of statutorily designated areas and undeveloped coast;
- Ensure that appropriate weight is attached to designated sites of international, national and local importance;
- Protect wildlife and natural features in the wider environment, with appropriate weight attached to priority habitats and species in Biodiversity Action Plans;
- Ensure that all material considerations are taken into account and decisions are informed by adequate information about the potential effects of development on nature conservation;
- Ensure that the range and population of protected species is sustained;
- Adopt a step-wise approach to avoid harm to nature conservation, minimise unavoidable harm by mitigation measures, offset residual harm by compensation measures and look for new opportunities to enhance nature conservation; where there may be significant harmful effects local planning authorities will need to be satisfied that any reasonable alternative sites that would result in less or no harm have been fully considered;

Legislation and biodiversity

Certain species of animals and plants found in the wild in the UK are legally protected from being harmed or disturbed. These species are listed in the Wildlife and Countryside Act 1981 (as amended) or are named as European Protected Species (EPS) in the Conservation of Habitats and Species Regulations 2017 (as amended). These two main pieces of legislation have been consulted when writing this report and are therefore described in detail within this section.

Other relevant legislation and policy documents that have been consulted include – The Environment (Wales) Act 2016; The Countryside and Rights of Way Act 2000; The Hedgerow Regulations 1997; Biodiversity Action Plans, both UK-wide (UKBAP) and Local plans (LBAPs), and The National Planning Policy Framework (NPPF).

There is also legislation that legally protects certain animals - for example, the Protection of Badgers Act (1992) protects badgers and their setts, and the Deer Act (1991) places restrictions on actions that can be taken against deer species.

Environment (Wales) Act 2016

Section 6 of the Act places a duty on public authorities to 'seek to maintain and enhance biodiversity' so far as it is consistent with the proper exercise of those functions. In so doing, public authorities must also seek to 'promote the resilience of ecosystems'. The duty replaces the section 40 duty in the Natural Environment and Rural Communities Act 2006 (NERC Act 2006), in relation to Wales, and applies to those authorities that fell within the previous duty.

Public authorities will be required to report on the actions they are taking to improve biodiversity and promote ecosystem resilience.

Section 7 replaces the duty in section 42 of the NERC Act 2006. The Welsh Ministers will publish, review and revise lists of living organisms and types of habitat in Wales, which they consider are of key significance to sustain and improve biodiversity in relation to Wales.

The Welsh Ministers must also take all reasonable steps to maintain and enhance the living organisms and types of habitat included in any list published under this section, and encourage others to take such steps.

Wildlife & Countryside Act 1981 (as amended)

The Wildlife & Countryside Act 1981 (as amended) [WCA] is the primary legislation for England and Wales for the protection of flora, fauna and the countryside. Part I within the Act deals with the protection of wildlife.

Most European Protected Species offences are now covered under the Conservation of Habitats and Species Regulations (as amended) (see below), but some 'intentional' acts are still covered under the WCA, such as obstructing access to a bat roost.

The WCA prohibits the release to the wild of non-native animal species listed on Schedule 9 (e.g. Signal Crayfish and American Mink). It also prohibits planting in the wild of plants listed in Schedule 9 (e.g. Japanese Knotweed and *Rhododendron ponticum*) or otherwise deliberately causing them to grow in the wild. This is to prevent the release of invasive non-native species that could threaten our native wildlife.

The provisions relating to animals in the Act only apply to 'wild animals'; these are defined as those that are living wild or were living wild before being captured or killed. It does not apply to captive bred animals being held in captivity.

There are 'defences' provided by the WCA. These are cases where acts that would otherwise be prohibited by the legislation are permitted, such as the incidental result of a lawful operation which could not be reasonably avoided, or actions within the living areas of a dwelling house.

Licensing: certain prohibited actions under the Wildlife and Countryside Act may be undertaken under licence by the proper authority. For example, scientific study that requires capturing or disturbing protected animals can be allowed by obtaining a licence – e.g. bat surveys.

Conservation of Habitats and Species Regulations 2017 (as amended)

The Conservation of Habitats and Species Regulations 2017 (as amended) (which are the principal means by which the EC Habitats Directive is transposed in England and Wales) update the legislation and consolidate all the many amendments which have been made to the Regulations since they were first made in 1994.

These regulations provide for the:

- protection of European Protected Species [EPS] (animals and plants listed in Annex IV Habitats Directive which are resident in the wild in Great Britain) including bats, dormice, great crested newts, and otters;
- designation and protection of domestic and European Sites - e.g. Site of Special Scientific Interest [SSSI] and Special Area of Conservation [SAC]; and
- adaptation of planning controls for the protection of such sites and species.

Public bodies (including the Local Planning Authority) have a duty to have regard to the requirements of the Habitats Directive in exercising their function – i.e. when determining a planning application.

There is no defence that an act was the incidental and unavoidable result of a lawful activity.

Licensing: it is possible for actions which would otherwise be an offence under the Regulations to be undertaken under licence issued by the proper authority. For example, where a European Protected Species has been identified and the development risks deliberately affecting an EPS, then a 'development licence' may be required.

Species protection

The following protected species information is relevant to this report. Legislation is only discussed in relation to planning and development; other offences may exist.

Amphibians

The common frog, common toad, common newt, and palmate newt receive limited protection under the Wildlife and Countryside Act 1981 (as amended), making it illegal to sell or trade them.

The Great Crested Newt and Natterjack Toad are fully protected under the Conservation of Habitats and Species Regulations 2017 (as amended) as European Protected Species. It is illegal to:

- Deliberately capture, injure, kill, or disturb either species,
- Intentionally or recklessly obstruct access to any structure/place used for shelter or protection, or
- Damage or destroy a breeding site or resting place.

Badger

Badgers are protected in the UK under the Protection of Badgers Act 1992. Under the act it is an offence to:

- Wilfully kill, injure, take, possess or cruelly ill-treat³ a Badger, or attempt to do so;
- To intentionally or recklessly interfere with a sett⁴ (this includes disturbing Badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it).

The legislation aims to protect the species from persecution, rather than being a response to an unfavourable conservation status, as the species is in fact common over most of Britain; it is not intended to prevent properly authorised development.

Bats

All British bats are classed as European Protected Species and therefore receive protection under the Conservation of Habitats and Species Regulations 2017 (as amended), making it an offence *inter alia* to:

- Deliberately kill, injure or capture a bat;
- Deliberately disturb bats;
- Damage or destroy a breeding site or resting place of a bat.

In addition, all British bats are also listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which contains further provisions making it an offence to intentionally or recklessly:

- Obstruct access to any structure or place which any bat uses for shelter or protection; or
- Disturb any bat while occupying a structure or place which it uses for that purpose.

If proposed development work is likely to destroy or disturb bats or their roosts, then a licence will need to be obtained from Natural England, which would be subject to appropriate measures to safeguard bats.

Birds

In the UK, the provisions of the Birds Directive are implemented through the Wildlife & Countryside Act 1981 (as amended), the Conservation of Habitats and Species Regulations 2017 (as amended). All wild birds, their nests and eggs are protected it an offence to:

- kill, injure, or take any wild bird;
- take, damage or destroy the nest of any such bird whilst it is in use or being built; or
- take or destroying an egg of any such wild bird.

The law covers all species of wild birds including common, pest or opportunistic species.

Special protection against disturbance during the breeding season is also afforded to those species listed on Schedule 1 of the Act.

³ The intentional elimination of sufficient foraging area to support a known social group of Badgers may, in certain circumstances, be construed as an offence by constituting “cruel ill treatment” of a Badger

⁴ A sett is defined as “any structure or place which displays signs indicating current use by a Badger”. Advice issued by Natural England (June 2009) is that a sett is protected as long as such signs remain present, which in practice could potentially be for some time after the last actual occupation by Badger.

Dormice

The common dormouse is classed as a European Protected Species and therefore receive protection under the Conservation of Habitats and Species Regulations 2017 (as amended), making it an offence inter alia to:

- Deliberately capture, injure, or kill a dormouse;
- Deliberately disturb dormice;
- Damage or destroy a breeding site or resting place of a dormouse.

In addition, the dormouse is listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which contains further provisions making it an offence to intentionally or recklessly:

- Obstruct access to any structure or place which a dormouse uses for shelter or protection; or
- Disturb a dormouse while occupying a structure or place which it uses for that shelter or protection.

Otters

The European Otter, *Lutra lutra* is a European Protected Species and therefore receive protection under the Conservation of Habitats and Species Regulations 2017 (as amended), making it an offence inter alia to:

- deliberately capture, injure or kill any wild otter;
- deliberately disturb wild otters;
- damage or destroy a breeding site or resting place of an otter.

In addition, the otter is listed under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which contains further provisions making it an offence to intentionally or recklessly:

- disturbs an otter while it is occupying a structure or place which it uses for shelter or protection; or
- obstructs access to such a place.

If proposed development work is likely to destroy or disturb otters or their resting places, then a licence will need to be obtained from Natural Resource Wales, which would be subject to appropriate measures to safeguard otters.

Reptiles

Adders, slow worms, grass snakes and common lizards are protected against killing and injuring under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). This legislation makes it illegal to intentionally kill or injure a common reptile. As a result, reptiles must be removed from areas of development and relocated onto suitable release sites before any site works can commence.

Smooth snakes and sand lizards are European Protected Species under schedule 5 of the Wildlife and Countryside Act 1981 (as amended) and Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended). This makes it illegal to carry out the following activities:

- Deliberately or recklessly disturb, capture or kill these animals;
- Deliberately or recklessly take or destroy eggs of these animals;
- Damage or destroy a breeding site or resting place of such a wild animal; or

Keep, transport, sell or exchange, or offer for sale or exchange, any live or dead animal, or any part of, or anything derived from such a wild animal.