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PEA REPORT

CWMRHYDDERCH COURT, EBBW VALE, NP23 7QX

TAI CALON COMMUNITY HOUSING LIMITED

Document Ref: WWE24187 REV A | 04/11/2024

Client:	Tai Calon Community Housing Limited
Site/Job:	Cwmrhydderch Court, Ebbw Vale, NP23 7QX
Report title:	PEA report
Report reference:	WWE24187 REV A

Grid Reference:	SO 18468 05513
Survey date:	11 th October 2024 (Preliminary Ecological Appraisal)
Surveyed by:	Jack McCormack
Architect/Agent:	Tai Calon
Confidentiality:	N/A

VERSIONING AND QUALITY ASSURANCE

Status	Date	Author	Reviewed by	Approved by
Final	04/11/2024	Jack McCormack Consultant Ecologist	Dr Amy Williams Schwartz MCIEEM Senior Ecologist	Dr Amy Williams Schwartz MCIEEM Senior Ecologist

DISCLAIMER

This document has been prepared by Wildwood Ecology Limited for Tai Calon Community Housing Limited solely as a PEA report. Wildwood Ecology Limited accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

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.

Purpose

Wildwood Ecology was commissioned by Tai Calon Community Housing Limited (the client) to undertake a Preliminary Ecological Appraisal (PEA) at Cwmrhydderch Court, Ebbw Vale, NP23 7QX.

The site is subject to a full planning application for the construction of 18 new build dwellings and associated car parking.

Work undertaken

A PEA was undertaken, consisting of a desk study and an extended Phase 1 Habitat Survey, carried out in October 2024, following the Chartered Institute of Ecology and Environmental Management (CIEEM) Preliminary Ecological Appraisal (2017) guidelines and using UK Habitat Classification Version 2.0 codes (UK Hab, 2023).

Key Constraints

Due to the proposed works, it is likely that in the absence of mitigation there may be adverse effects on the following designated sites, habitats and species:

- Fish;
- Foraging and commuting bat;
- Nesting birds;
- Otter;
- Reptiles;
- Trees; and
- Water vole.

Recommendations

Further surveys are required as follows to determine the presence or likely absence of protected, priority, and notable species:

- Reptile presence/likely absence survey; and
- BS5937 tree survey and Arboricultural Impact Assessment.

Mitigation measures during the construction phase of the proposed development are required as follows:

- A Construction Environmental Management Plan (CEMP);
- A Precautionary Working Methods Statement (PWMS) to avoid impacts to reptiles (if found to be present) and nesting birds; and
- Removal of invasive species (cotoneaster) prior to works onsite.
- Site clearance works will commence outside of the bird nesting season or, if
 work has to carried out 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 nesting bird check will be required and must be carried
 out by a suitably qualified ecologist. Active nests should be protected by a
 suitable buffer, as instructed by the ecologist, until the young have fledged, as
 confirmed by the ecologist.

Mitigation measures during the operational phase of the proposed development are required as follows:

¹ CIEEM (2019). Advice Note: On the Lifespan of Ecological Reports and Surveys. Chartered Institute for Ecology and Environmental Management, Winchester.

- Two bird boxes and two bat boxes should be fitted. Furthermore, a swift brick should be fitted within each new dwelling if suitable.
- A Sensitive Lighting Strategy should be implemented in order to avoid impacts to foraging and commuting bats as a result of the development.
- New grassland onsite should be planted with native species of local provenance.
 Furthermore, grassland should be managed appropriately for pollinators by undertaking one annual cut in early September.

Conclusions

The full ecological impacts of the proposed development cannot be fully assessed following the PEA survey alone as further survey work is required.

This report will remain valid for a maximum period of 18 months from the date of the last survey¹ - i.e. until 11/04/2026 In the case of certain exceptions, data may only be valid for 12 months, examples include:

- where a site may support existing or new features which could be used by mobile species, such as bats and birds, within a short timeframe;
- where bats and birds are present onsite or in the wider area, and can create new features of relevance to the assessment; and
- where country-specific or species-specific guidance dictates otherwise.

Further surveys may be required to update the site information if planning is not obtained, or works do not commence within this time period.

¹ CIEEM (2019). Advice Note: On the Lifespan of Ecological Reports and Surveys. Chartered Institute for Ecology and Environmental Management, Winchester.

1 INTRODUCTION

- 1.1 Wildwood Ecology was commissioned by Tai Calon Community Housing Limited (the client) to undertake a Preliminary Ecological Appraisal (PEA) at Cwmrhydderch Court, Ebbw Vale, NP23 7QX (the site), centred at grid reference: SO 18468 05513.
- 1.2 This report has been written in cognisance of the CIEEM Guidelines on: Ecological Report Writing, Preliminary Ecological Appraisal and Ecological Impact Assessment, with full survey methodology provided in the appendices.

Site description

1.3 The aerial image of the site (Figure 1) showed the site to consist of modified grassland, a car parking area and a building (which has now been demolished). A large block of woodland can be seen approximately 50m east of the site boundary, providing connectivity to the wider landscape. Nant Merddog also runs approximately 30m east of the site boundary.

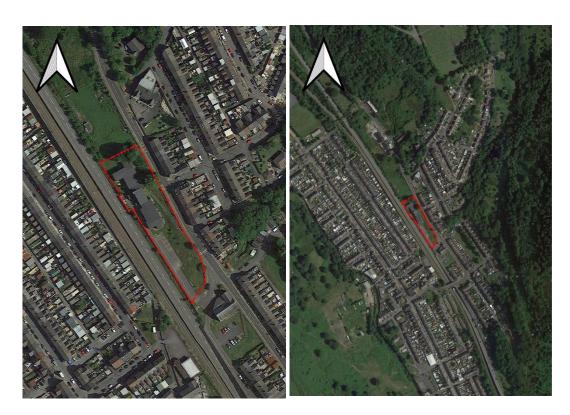


Figure 1 - Aerial image of the site. Red line shows the site boundary (building visible now demolished). Image used under licence (@2024 Google). Figure created: 16/10/2024.

Proposed development

1.4 The site is subject to a full planning application for the construction of 18 new build dwellings and associated car parking.

Data collected

1.5 The data informing this report was collected from a field survey and desk study. Desk study data was collected from the following sources on 19/09/2024:

- South East Wales Biodiversity Records Centre (SEWBReC); and
- Multi-Agency Geographic Information for the Countryside (MAGIC).
- 1.6 Full information on the data sets used and the search buffers can be found in the appendices.
- 1.7 This report should be read in conjunction with:
 - Cwmrhydderch Court 2021 EclA report REV C (document ref: WWE20171 BAS REV C)
 - Cwmrhydderch Court 2022 EcIA update letter

Purpose of this report

- 1.8 The purpose of this report is to provide sufficient information for the local planning authority to fully assess the ecological impacts of the proposed development, or to identify what further information is required, before a full assessment can be made in the form of an Ecological Impact Assessment (EcIA).
- 1.9 The key objectives of this PEA are to:
 - identify the likely ecological constraints associated with the proposed development;
 - identify mitigation measures likely to be required, following the 'Mitigation Hierarchy';
 - identify additional surveys that may be required to inform an EcIA; and
 - identify the opportunities for the proposed development to deliver ecological enhancement.
- 1.10 This PEA can be used as a scoping report, but unless it can be determined that the project would have no significant ecological effects, no mitigation is required and no further surveys are necessary, the PRA will need to be superseded by an EcIA report prior to submission.

Limitations and assumptions

1.11 No assumptions have been made within this assessment.

2 RESULTS

Links to the surrounding landscape

- 2.1 The site has good connectivity to the surrounding landscape via a large block of woodland approximately 50m east of the site boundary. Nant Merddog also runs approximately 30m east of the site boundary.
- 2.2 The wider landscape is comprised of residential buildings, grassland, and woodland.

Desk study

Designated sites

- 2.3 There were three statutory international designated sites requiring special consideration (Special Areas of Conservation (SACs)) within 10km. These were Aberbargoed Grasslands SAC (6km from site), Cwmclydach Woodland SAC (7km from site) and Usk Bat Sites SAC (7km from site).
- 2.4 There were two statutory national designated sites within 2km. These were Cwm Merddog Woodland (Site of Special Scientific Interest (SSSI), 626m from site and Silent Valley Local Nature Reserves (LNR), 514m from the site.
- 2.5 There were eight non-statutory sites (Sites of Interest to Nature Conservation (SINC)) within 1km of the site. These were New Cwm Terrace (106m), Ebbw River South Section (206m), Waunlwyd (247m), Mynydd Carn-y-Cefn and Cef-yr-Arail (393m), Garn-Cam-Isaf (673m), Mynydd Manmoel (717m), Cwm Slopes, festival park (789m), and Mynydd Manmoel, North of Manmoel (898m).

Light pollution Map layers Overlay (1) Zenith sky brightness info (2015) **VIIRS 2023** Color blind Coordinates 51.74237, -3.18226 60 20.64 mag./arc sec2 SQM Feature 🕕 0.600 mcd/m² Brightness None selected ▼ ***** Artif. bright. 428 µcd/m² 85 2.50 Ratio Basemap 1 Bortle class 4 RoadHybrid Elevation 222 meters Map legend > My locations > Privacy settings

2.6 The site is in rural/suburban area with medium levels of light pollution (VIIRS Data Base (2023)).

Habitat Regulations Assessment (HRA) Screening

2.7 The site was not situated within the zone of influence (ZoI) of any international designated sites. Therefore, due to the distance of the development from the international designated sites and lack of identified impact pathways, a Habitat Regulations Assessment is considered unlikely to be required.

Core sustenance zones/consultation areas

2.8 The site is within the core sustenance zone of a lesser horseshoe maternity roost of unknown size 2km from site.

Priority and protected species

- 2.9 Priority and protected species records were returned from South East Wales Biodiversity Records Centre (SEWBReC) for species located within 2km of the site. Key species records can be found below, with the full data set available on request.
 - A single lesser horseshoe maternity roost (of unknown size) was returned 2km from site.
 - Records of Himalayan balsam and montbretia were returned adjacent to site.
 - There were four records of Schedule 1 birds within 500m of the site, including two sightings of red kite, one of redwing and one of crossbill.

Field survey - PEA

2.10 A PEA survey was undertaken at the site on 11/10/2024, led by Jack McCormack (Consultant Ecologist). Survey details can be found in Table 1.

Table 1 - Field survey timings and conditions.

		Weather o	conditions	
Date	Temp [°C]	Cloud cover [Oktas]	Wind speed [Beaufort scale]	Rain
11/10/2024	12	2	1	Nil

- 2.11 Table 2 sets out descriptions of the habitats present within the site using UK Habitat Classification Version 2.0 codes, along with a list of species present.
- 2.12 The distribution and extent of habitat parcels at the site, along with the locations of any target notes, are included within a habitat plan in the appendices, alongside an accompanying full species list.

Table 2 - Habitats and linear features present within the site.

Habitat	Habitat description	Species present
		Herbaceous species:
g4 – Modified grassland		Bitter dock, bracken, burnet saxifrage, coltsfoot, common nettle, common selfheal, common vetch, cow parsnip, creeping thistle, hairy willowherb, lady's bedstraw, ragwort, ribwort plantain, rosebay willowherb, rough hawkbit, short pod mustard, speedwell, teasel, wild
Secondary codes:		carrot, wild strawberry, wood avens, yarrow.
10 - Scattered scrub		Grass species:
13 – Scattered dwarf shrubs		Bentgrass, cocksfoot, false brome,
32 – Scattered trees	Unmanaged modified grassland	false oat grass, Yorkshire fog.
128 – Tall or tussocky sward	comprised the predominant habitat across the site.	Rush species:
521 – Unmanaged		Hard rush
524 – Invasive Non-Native Species 612 - Fence		Scattered shrub species: Blackthorn, buddleia, cotoneaster, dogrose, gorse.
612 - Ferice		Scattered scrub species:
		Bramble
		Tree species:
		Ash, goat willow*, hazel*, oak*, silver birch*, small leaved lime, white beam
		*sapling

with Davidanad last to		Herbaceous species: Bramble, buddleia, burnet saxifrage, creeping thistle, dandelion, fleabane, hairy willowherb, red valerian, ribwort
u1b – Developed land; sealed surface	Tarmac area, previously comprising pavements, car park and road.	plantain, rough hawkbit, yarrow Grass species: Cocksfoot
U1f – Sparsely vegetated urban land Secondary code: 804 – Car park	Area of bare ground following the demolition of the onsite building.	Herbaceous species: bitter dock, buddleia, burnet saxifrage, cow parsnip, dandelion, great mullein, red valerian, ribwort plantain, rough hawkbit, Russian sage, short pod mustard, white clover, yarrow
		Grass species: Annual meadow grass

 $2.13\ \ Cotoneaster\ was\ identified\ in\ two\ areas\ of\ the\ site\ (see\ Target\ note\ 1,\ Appendix\ II).$

Priority habitats

2.14 No priority habitats were identified onsite.

Priority, protected, and notable species

2.15 The suitability of the site habitats for protected species, the connectivity of the site, and any evidence identified can be found in Table 3.

Table 3 - Protected species onsite.

Species or group	Habitat suitability	Site connectivity	Presence confirmed?
Amphibians, including great crested newt	Poor	Poor	N/A
Badger	Poor	None	N/A
Bats: foraging and commuting	Good	Excellent/direct	No evidence identified but the site is well connected to suitable habitat offsite

Birds	Good	Good	No evidence but the site contains highly suitable habitat and well connected to offsite habitat
Hedgehog	Good	Good	N/A
Invertebrates	Good	Good	No evidence but the site contains highly suitable habitat and well connected to offsite habitat
Otter	Poor	None	N/A
Reptiles	Good	Good	No evidence identified but the site is well connected to suitable habitat offsite
Water vole	Poor	None	N/A

Key findings

2.16 Rubble remained onsite following the demolition, providing suitable hibernacula and sheltering habitat for reptiles (Figure 8).

Invasive species

- 2.17 The following invasive species were identified at the site:
 - Cotoneaster (see Target Note 1, Appendix II).

3 IMPACTS

3.1 The following discussion and assessment is provided to ensure compliance with legislation and planning policy (see Appendices).

Impacts of the proposed development

- 3.2 The proposed development will result in the loss of approximately 0.1ha of modified grassland to allow for the creation of an 18 dwelling housing development.
- 3.3 Due the proposed works, it is likely that in the absence of mitigation there will be adverse effects on the following designated sites, habitats, and species:
 - 0.1ha of modified grassland;
 - Fish;
 - Foraging and commuting bat;
 - Nesting birds;
 - Otter;
 - Water vole; and
 - Reptiles.

Designated sites

3.4 Given the scale and type of the proposed development, the distance of the designated sites from the site, and the lack of likely impacts beyond the site boundary, no impacts on their designated features are anticipated as a result of the works.

Priority, protected, and notable habitats

3.5 Common and widespread habitats which are of limited ecological importance are not discussed further as they will be compensated by native and wildlife-friendly planting and general landscaping across the site.

Amphibians (including great crested newt)

- 3.6 Desk study data confirmed that great crested newts are not present in the surrounding landscape. Furthermore, there were no waterbodies within 1km of the site suitable for great crested newt.
- 3.7 Onsite habitat was suitable to support great crested newt in its terrestrial phase. However, connectivity between the onsite habitats and nearby ponds was poor.
- 3.8 No ponds, ditches or other suitable aquatic habitat are being impacted by the proposed development. There will be no impact on aquatic habitats suitable for great crested newt as a result of the proposed development.
- 3.9 In the absence of mitigation during works, there will not be an adverse impact on great crested newt or common amphibians due to impacts on existing onsite habitats.

Badger

- 3.10 No incidental badger evidence (latrines, tracks, hair, snuffle holes or setts) were observed during the habitat survey. Furthermore, the fence around the perimeter meant the site could not be accessed by badger.
- 3.11 The proposed development will not impact potential badger foraging habitat.

Bats: foraging and commuting

- 3.12 The suitability for habitats and linear features located onsite to be used as potential flight-paths and/or foraging habitat was moderate.
- 3.13 Therefore, these habitats/linear features must remain unfragmented in order to prevent potential impacts on bats, and in particular light-averse bat species. Fragmentation can occur by physical removal of the habitat/feature, but also through artificial light spilling onto them.
- 3.14 Current proposals indicate that there will be new external and internal lighting included in the proposed development and therefore an increase in light spill is anticipated.
- 3.15 Particular consideration must be given to preserving dark flight-lines and preventing light spill on trees and scattered scrub in the north-east corner of the site.

Birds

3.16 It is considered likely that nesting birds use the trees and scattered scrub present onsite.

Hazel dormouse

- 3.17 No incidental observations of old and/or active dormouse nests were made at the site during the PEA.
- 3.18 The onsite habitat suitable for dormouse (scattered scrub and trees) provided good vegetation structure and is likely to have provided a foraging resource if dormouse was present onsite.
- 3.19 However, onsite connectivity to the surrounding landscape was poor, with no records returned within the data search. Therefore, dormice are unlikely to be present on site to be impacted.
- 3.20 In the absence of mitigation during onsite works there will not be an adverse impact on hazel dormouse as a result of the proposed development.

 Otter
- 3.21 The closest waterbody to the site was Nant Merddog, located 30m east of the site. Given that there is a fence surrounding the site however, it is considered unlikely that otter would be able to access the site. Furthermore, there is more suitable terrestrial habitat adjacent to the water course, so it is considered unlikely that otter would attempt to enter the site.
- 3.22 Given that the site is within close proximity of Nant Meroddog, the development may lead to pollution (via dust or surface/soil runoff), either directly or through drainage channels. This may impact otter directly (by killing/injury or habitat damage) or indirectly (by impacting prey species).

3.23 Impacts on the local otter population (if present) are likely and there will be adverse impacts from pollution through dust or surface run off without a Construction Environmental Management Plan (CEMP) in place.

Reptiles

- 3.24 Suitable onsite habitat consisted of modified grassland, scrub and sparsely vegetated urban land. Onsite habitats were considered good for reptiles to use them for basking, commuting, and foraging.
- 3.25 Additionally, features suitable to provide shelter and hibernation opportunities for reptiles were present onsite in the form of rubble remaining from demolition.
- 3.26 The surrounding landscape and associated features were considered suitable reptile habitat, with the presence of long vegetation encroaching onto the site. It is likely that the site supports common reptile species (slow worm and common lizard) only.
- 3.27 In the absence of mitigation, there may be a negative impact on reptiles as a result of the proposed development due to killing/injury (if present), triggering legislation that protects reptiles.

Water vole

- 3.28 Water voles have relatively small territories and as the species is unlikely to disperse to the site via the surrounding habitats.
- 3.29 Given that the site is within close proximity of Nant Meroddog, the development may lead to pollution (via dust or surface/soil runoff), either directly or through drainage channels. This may impact water vole populations downstream.

Fish

3.30 As fish species are known to be present downstream of Nant Merddog, pollution to the watercourse may lead to adverse impacts on fish populations.

4 RECOMMENDATIONS

Designated sites

4.1 Given the scale and type of the proposed development, the distance of the designated sites from the site, and the lack of likely impacts beyond the site boundary, no impacts on their designated features are anticipated as a result of the works.

Priority, protected, and notable species

Badger

- 4.2 The site currently has a fence around the perimeter. Should this fence be removed before or during works, a Precautionary Working Method Statement (PWMS) must be implemented. A toolbox talk would be conducted to inform all workers about the presence of badgers. If a badger is encountered during works, operations will cease immediately, and the site ecologist will be consulted.
- 4.3 If the fence is removed, precautionary working methods should include measures to prevent impacts on badgers moving through the site. These measures should include capping pipes, covering up trenches overnight, or placing a plank within trenches to prevent animals from becoming trapped.

Bats: foraging and commuting

- 4.4 Onsite light levels and overall site radiance were moderate. It is therefore considered likely that the site will be used by foraging and commuting bats, including light-averse bat species. Consideration must be given to preserving dark flight lines and preventing light spill on trees and scattered scrub, especially in the north-east corner of the site.
- 4.5 New external and internal lighting proposed in the development is expected to increase light spill. The increased disturbance is likely to have an adverse effect on the favourable conservation status of the local bat populations.
- 4.6 A lighting plan should ensure that post-development focuses strongly on avoidance as a key tool to mitigate impacts from lighting these key areas.
- 4.7 Works should be done during daylight hours to avoid the impacts of artificial lighting on bats. Full lighting guidance can be found in Appendix VII.

Birds

4.8 Site clearance works will commence outside of the bird nesting season or, if work has to carried out 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 nesting bird check will be required and must be carried out by a suitably qualified ecologist. Active nests should be protected by a suitable buffer, as instructed by the ecologist, until the young have fledged, as confirmed by the ecologist.

Hedgehogs

4.9 Grassland habitat and small areas of scrub on site are suitable to support foraging and nesting hedgehogs, cautious working is advised to prevent killing or injury to this species.

4.10 To ensure that the habitat within the new development is not fragmented across the site gaps (13cm x13cm) should be left at the bases of all on-site fences/walls including site boundaries to allow passage of hedgehogs across the site.

Otter, water vole and fish

4.11 A Construction Environmental Management Plan (CEMP) should be implemented in order to avoid impacts to otter, water vole and fish downstream of Nant Merddog.

Reptiles

4.12 A reptile survey will be required in order to determine the presence or likely absence of reptile species on site.

Trees

4.13 A BS5837 Tree Survey and an Arboricultural Impact Assessment (AIA) will be required in order to determine potential impacts to trees onsite.

Invasive species

4.14 Cotoneaster should be removed from site prior to any other works onsite to prevent spread.

Biodiversity enhancement

- 4.15 Local authorities have a duty to seek to maintain **and enhance** biodiversity in the exercise of their functions.
- 4.16 Where possible, the existing onsite habitat of ecological importance will be retained to ensure that habitats and species that rely on them are not adversely affected by the development. Native species of local provenance (and grown in the UK) or ornamental plants with known wildlife value will be used for new onsite planting.
- 4.17 Further onsite habitat retention, creation or enhancement may be required as part of the required net benefit for biodiversity.
- 4.18 Two bird nesting boxes and two integrated bat roosting boxes should be incorporated within newly constructed buildings (i.e., built-in). A range of box types should be used to provide opportunities for a number of species. The following designs are recommended (or similar, if they are not available):
 - Bats (integrated bat boxes) Schwegler 1FR Bat Tube, Vivara Pro Build-in WoodStone Bat Box;
 - Birds (general purpose, small bird species) Woodstone Nest Box 32mm / 28mm;
 - Birds (swift if bricks are not suitable) Vivara Pro WoodStone Swift Nest Box,
 - Birds (sparrow terrace) Schwegler 1SP Sparrow Terrace, Wildcare House Sparrow Nest box).
- 4.19 If onsite buildings are suitable: a 1:1 nest brick to dwelling ratio is followed, based on guidance from the Swift Conservation Group. https://www.swift-conservation.org/universal_swift_nest_brick02.pdf. Integrated nest bricks should be installed in clusters of 2-3 at the north, east and west gable ends or close under

PEA report Cwmrhydderch Court, Ebbw Vale, NP23 7QX

the eaves away from windows and doors, at a height of 4m+, with clear flight access and no protruding ground floor roofs such as garages.

APPENDIX I: SURVEY METHODS

Extended UKHabs Survey

A field survey was undertaken on 11/10/2024.

All habitats present within the site with the suitability to support rare, protected, or otherwise notable species of flora or fauna (together with direct signs) were noted.

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 legislation (see Appendix VII);
- UK Post-2010 UK Biodiversity Framework priority species or Local Biodiversity Action Plan (LBAP) species;
- nationally rare or nationally scarce species; and
- Species of Conservation Concern (e.g. JNCC Red List, RSPB/BTO Red Lists).

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. However, many invasive species can be cryptic and therefore this survey does not provide a guarantee that an invasive species is not present and shouldn't be relied on to rule out absence of an invasive species.

An extended Phase 1 Habitat Plan was produced in QGIS, incorporating Target Notes used to highlight features of ecological interest (see Appendix II).

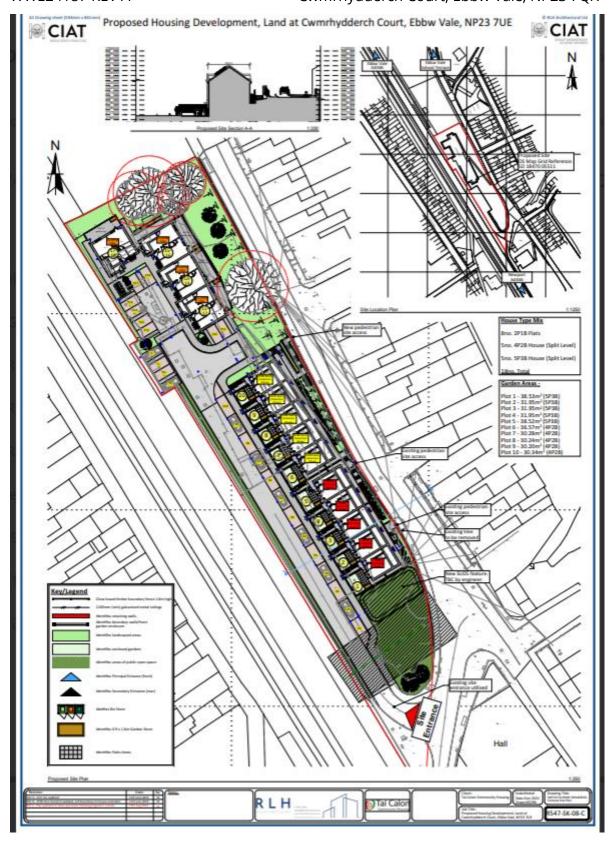
APPENDIX II: HABITAT PLAN





RLH

(a) Tai Calon



APPENDIX IV: SURVEY IMAGES



Figure 2 - Modified grassland along eastern site boundary.



Figure 3 - Developed sealed surface onsite (previously car park).



Figure 4 - Cotoneaster (Target Note 1)



Figure 5 - Sparsely vegetated urban land



Figure 2 - Tussocky grassland onsite.



Figure 3 – Rubble remaining from previous demolition onsite.



Figure 4 - Trees and scrub in north-east of site.

APPENDIX V: SPECIES LIST

The site name: Cwmrhydderch Court, Ebbw Vale, NP23 7QX

Grid reference: SO 18468 05513

Provided by: Wildwood Ecology

Verified by: Jack McCormack

Annual meadow grass Poa annua Ash Fraxinus excelsior Bentgrass Agrostis spp. Bitter dock Rumex obtusifolius Blackthorn Prunus spinosa Bracken Pteridium aquilinum Bramble Rubus fruticosus Buddleia Buddleja davidii Burnet saxifrage Pimpinella saxifraga Cocksfoot Dactylis glomerata Cottsfoot Tussilago farfara Common nettle Urtica dioica Common vetch Vicia sativa Cotoneaster Cotoneaster Spp. Creeping thistle Cirsium arvense Dandelion Taraxacum officinale Dogrose Rosa canina False brome Brachypodium sylvaticum False aat grass Arrhenatherum elatius Fleabane Pulicaria dysenterica Gorse Ulex europaeus Hard ulgaris Great mullein Verbascum thapsus Hard ulgaris Great mullein Grasa Galium verum Oak Quercus spp. Rosugh hawkbit Leontodon hispidium Rosugh hawkbit Leontodon hispidium Fosum tatificial in	verified by.	Jack McCormack
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Rough hawkbit Leontodon hispidus	Rosebay willowherb	
	Rough hawkbit	
Kussian sage Perovskia atripiicijolia	Russian sage	Perovskia atriplicifolia
Short pod mustard Hirschfeldia incana	Short pod mustard	Hirschfeldia incana

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Silver birch	Betula pendula	
Small leaved lime	Tilia cordata	
Speedwell	Veronica spp.	
Teasel	Dipsacus fullonum	
White beam	Sorbus aria	
White clover	Trifolium repens	
Wild carrot	Daucus carota	
Wild strawberry	Fragaria vesca	
Wood avens	Geum urbanum	
Yarrow	Achillea millefolium	
Yorkshire fog	Holcus lanatus	

APPENDIX VI: FULL METHODOLOGY

This report has been informed by the following, with detailed methodology provided in Appendix I:

- desk study and records search;
- Preliminary Ecological Appraisal; and
- Preliminary Roost Assessment survey.

This report has been written in cognisance of the CIEEM Guidelines on: Ecological Report Writing, Preliminary Ecological Appraisal, Preliminary Roost Appraisal and Ecological Impact Assessment.

A desk study was undertaken in relation to the site. The sources consulted and the type of information obtained are summarised below.

Source	Information and data sets	Search buffer from the site centre/boundary
South East Wales Biodiversity Records Centre (SEWBReC)	Protected and priority species.Non-statutory designations	• (2km) • (1km)
Multi-Agency Geographic Information for the Countryside (MAGIC)	 International statutory designations National statutory designations 	• (10km) • (2km)

The search buffers are sufficient to cover the Zone of Influence (ZoI) of the proposed development in relation to Protected and Priority species and designated sites.

The impact of the proposed development on the biological integrity of nearby designated protected sites has been fully considered.

Assessing ecological importance

The assessment of the importance of sites, habitats and species are made with reference to CIEEMs guidelines for EcIA, where possible. These guidelines provide consistency in the approach to evaluating the importance of the ecological features within a site and the effects or impacts a proposed development will have on them.

Firstly, the sites, habitats and species are assessed using a framework which assigns a level of geographical importance to ecological features. This framework incorporates a wide range of legislation and governmental guidance in assessing each feature's importance.

Next, the effects/likely effects of the proposed development are predicted, considering different stages and activities within the development process. These effects/likely effects are then assessed for their significance, based upon the importance of the site, habitat or species being assessed. The assessment of effects/likely effects significance is

considered before and after the proposed mitigation to give an overall indication of significance.

The importance of specific ecological receptors (sites, habitats or species) is assigned according to their level of importance using the following terms:

- International Importance;
- UK Importance;
- National Importance (i.e. England/Northern Ireland/Scotland/Wales);
- Regional Importance;
- County Importance;
- District Importance (or Unitary Authority, City, or Borough);
- Local or Parish Importance; and
- Of Importance within the site (the zone of influence or a larger defined area).

Contributor information

The PEA survey and report was undertaken and written by Jack McCormack, Consultant Ecologist. The report was reviewed and approved by Dr Amy Williams Schwartz MCIEEM.

Appendix VII: Lighting guidance

As foraging and commuting bats are confirmed to be present on or close to the site, Guidance Note 08/23 - 'Bats and artificial lighting at night' (The Bat Conservation Trust, BCT, and the Institution of Lighting Professionals, ILP) will be followed.

- All luminaires should lack UV elements when manufactured. Metal halide, compact fluorescent sources should not be used.
- LED luminaires should be used where possible due to their sharp cut-off, lower intensity, good colour rendition and dimming capability.
- A warm white light source (2700Kelvin or lower) should be adopted to reduce blue light component.
- Light sources should feature peak wavelengths higher than 550nm to avoid the component of light most disturbing to bats (Stone, 2012).
- Internal luminaires can be recessed (as opposed to using a pendant fitting See Figure 5) where installed in proximity to windows to reduce glare and light spill.
- Waymarking inground markers (low output with cowls or similar to minimise upward light spill) to delineate path edges (see Case Study 1).
- Column heights should be carefully considered to minimise light spill and glare visibility. This should be balanced with the potential for increased numbers of columns and upward light reflectance as with bollards.
- Only luminaires with a negligible or zero Upward Light Ratio, and with good optical control, should be considered See ILP GN01.
- Luminaires should always be mounted horizontally, with no light output above 90° and/or no upward tilt.
- Where appropriate, external security lighting should be set on motion sensors and set to as short a possible a timer as the risk assessment will allow. For most general residential purposes, a 1- or 2-minute timer is likely to be appropriate.
- Use of a Central Management System (CMS) with additional web-enabled devices to light on demand.
- Use of motion sensors for local authority street lighting may not be feasible unless the authority has the potential for smart metering through a CMS.
- The use of bollard or low-level downward-directional luminaires is strongly discouraged. This is due to a considerable range of issues, such as unacceptable glare, poor illumination efficiency, unacceptable upward light output, increased upward light scatter from surfaces and poor facial recognition which makes them unsuitable for most sites. Therefore, they should only be considered in specific cases where the lighting professional and project manager are able to resolve these issues.
- Only if all other options have been explored, accessories such as baffles, hoods or louvres can be used to reduce light spill and direct it only to where it is needed. However, due to the lensing and fine cut-off control of the beam inherent in

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modern LED luminaires, the effect of cowls and baffles is often far less than anticipated and so should not be relied upon solely.

APPENDIX VIII - BIBLIOGRAPHY

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APPENDIX IX: PLANNING POLICY AND LEGISLATION

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

Planning and biodiversity (Wales)

Technical Advice Notes (TANs).

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

Planning Policy Wales – Edition 12 (2024) and Technical Advice Note 5 (2009)
Planning Policy Wales (Edition 12, February 2024) 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

Section 6.2 of Planning Policy Wales (Edition 12) describes how elements of Green Infrastructure should be incorporated into new developments. Paragraph 6.2.12 states: "A green infrastructure statement should be submitted with all planning applications. This will be proportionate to the scale and nature of the development proposed and will describe how green infrastructure has been incorporated into the proposal. In the case of minor development this will be a short description and should not be an onerous requirement for applicants. The green infrastructure statement will be an effective way of demonstrating positive multi-functional outcomes which are appropriate to the site in question and must be used for demonstrating how the step-wise approach (Paragraph 6.4.15) has been applied."

Section 6.4 of Planning Policy Wales outlines how all developments should achieve net benefit for biodiversity by implementing the DECCA framework. Paragraph 6.4.5 states: "Planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions. This means development should not cause any significant loss of habitats or populations of species (not including non- native invasive species), locally or nationally and must work alongside nature and it must provide a net benefit for biodiversity and improve, or enable the improvement, of the resilience of ecosystems. A net benefit for biodiversity is the concept that development should leave biodiversity and the resilience of ecosystems in a significantly better state than before, through securing immediate and long-term-, measurable and demonstrable benefit, primarily on or immediately adjacent to the site. The step-wise approach outlined below is the means of demonstrating the steps which have been taken towards securing a net benefit for biodiversity. In doing so, planning authorities must also take account of and promote the resilience of ecosystems, particularly the following attributes, known as the DECCA Framework:

- diversity between and within ecosystems;
- the extent or scale of ecosystems;
- the condition of ecosystems including their structure and functioning;
- the connections between and within ecosystems; and
- adaptability of ecosystems including their ability to adapt to, resist and recover from a range of pressures likely to be placed on them through climate change for example."

Section 6.4.15 outlines how the stepwise approach should apply to all new developments. This has been summarised below:

Avoid

"The first priority for planning authorities is to avoid damage to biodiversity in its widest sense (i.e. the variety of species and habitats and their abundance) and ecosystem functioning."

Proposals in statutory designated sites are, as a matter of principle, unacceptable and therefore must be excluded from site searches undertaken by developers. This principle also extends to those sites containing protected species and habitats which are irreplaceable and must be safeguarded."

Minimise

"When all locational, siting and design options for avoiding damage to biodiversity have been exhausted, applicants, in discussion with planning authorities, must seek to minimise the initial impact on biodiversity and ecosystems."

Restore/mitigate

"Where, after measures to minimise impact, biodiversity and ecosystems could still be damaged, or lost through residual impacts, the proposed development should mitigate that damage."

"Effective mitigation or restoration measures should be incorporated into the design proposal following the consideration of steps one and two above. Mitigation or restoration measures must be designed to address the specific negative effects by repairing damaged habitats and disturbed species. They should seek to restore in excess of like for like, accounting for disturbance and time lags for the recovery of habitat and species, and in every case, mitigation or restoration measures should seek to build ecosystem resilience within the site and where possible the wider area."

Compensate onsite

"When all the steps above have been exhausted, and where modifications, alternative sites, conditions or obligations are not sufficient to secure biodiversity outcomes further on-site/immediately proximate, as a last resort off-site compensation for unavoidable damage must be provided."

"Off-site compensation should normally take the form of habitat restoration, or habitat creation, or the provision of long-term- management agreements to enhance existing habitats and deliver a net benefit for biodiversity."

"The Green Infrastructure Assessment should be used to identify suitable locations for securing off-site compensation."

"Where compensation for specific species is being sought, the focus should be on maintaining or enhancing the population of the species within its natural range."

"Any proposed compensation should be place based, take account of the Section 6 Duty (Biodiversity and Resilience of Ecosystems Duty), the DECCA framework and appropriate ecological advice from the local authority Ecologist, NRW or a suitably qualified ecologist."

Compensate offsite

"Each stage of the step-wise approach must be accompanied by a long-term management plan of agreed and appropriate avoidance, minimisation, mitigation/restoration and compensation measures alongside the agreed enhancement measures."

Refuse planning permission

"Finally, where the adverse effect on biodiversity and ecosystem resilience clearly outweighs other material considerations, the development should be refused."

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, 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.

Future Wales: The National Plan 2040

Policy 9 of Future Wales: The National Plan 2040 (Resilient Ecological Networks and Green Infrastructure) states: "In all cases, action towards securing the maintenance and enhancement of biodiversity (to provide a net benefit) the resilience of ecosystems and green infrastructure assets must be demonstrated as

part of development proposals through innovative, nature based approaches to site planning and the design of the built environment."

Policy 34 of Future Wales: The National Plan 2040 (Green Belts in the South East) states: "The Welsh Government requires the Strategic Development Plan to identify a green belt to the north of Cardiff, Newport and the eastern part of the region to manage urban form and growth. The Strategic Development Plan must consider the relationship of the green belts with the green belt in the West of England. Local Development Plans and development management decisions should not permit major development in the areas shown for consideration for green belts, except in very exceptional circumstances, until the need for green belts and their boundaries has been established by an adopted Strategic Development Plan."

Wellbeing of Future Generations (Wales) Act 2015

The Wellbeing of Future Generations (Wales) Act 2015 aims to create:

- A globally responsible Wales;
- A prosperous Wales;
- A resilient Wales:
- A healthier Wales;
- A more equal Wales;
- A Wales of cohesive communities; and
- A Wales of vibrant culture and thriving Welsh language.

As part of the National Well-being Indicator Framework, 46 wellbeing indicators have been identified including Healthy Ecosystems (43) and Biological Diversity (44). These indicators have been identified as central to all seven of the goals that the Wellbeing of Future Generations (2015) Wales Act has set out to achieve.

The Future Generations Commissioner for Wales acts as a guardian for the interests of future generations in Wales, supporting 48 public bodies in assuring sustainable development (defined as acting "in a manner which seeks to ensure that the needs of the present are met without compromising the ability of future generations to meet their own needs") in line with each of the seven wellbeing goals. The public bodies listed within the act include Natural Resources Wales, Local Authorities and National Park Authorities. Therefore, planning proposals submitted to the aforementioned parties should be in aligned with the goals listed within the Wellbeing of Future Generations (Wales) Act 2015, and should aim to have a positive impact on the indicators identified with the National Well-being Indicators Framework.

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 (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 reasonable 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

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.

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.

If proposed development work is likely to kill/injure great crested newt or destroy a known breeding site, then a licence will need to be obtained from Natural Resources Wales, which would be subject to appropriate measures to safeguard amphibians.

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-treat¹ a Badger, or attempt to do so;
 and
- to intentionally or recklessly interfere with a sett² (this includes disturbing badger 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 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; and
- damage or destroy a breeding site or resting place of a bat.

¹ 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

² 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.

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 Resources Wales, 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.

Hazel dormouse

The hazel 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 dormouse; and
- damage or destroy a breeding site or resting place of a dormouse.

In addition, 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.

Otter

Otter 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; and
- damage or destroy a breeding site or resting place of an otter.

In addition, 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:

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

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

Reptiles

Adder, slow worm, grass snake and common lizard 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 site works can commence.

Smooth snake and sand lizard 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; and
- 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.

Water vole

Water vole 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 water vole;
- deliberately disturb wild water voles; and
- damage or destroy a breeding site or resting place of an water vole.

In addition, water vole 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:

- disturb a water vole while it is occupying a structure or place which it uses for shelter or protection; or
- obstruct access to such a place.

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