

Valley View Retreat, Llanidloes Preliminary Ecological Appraisal

Prepared for Hughes Architects

March 2022

Revision 00



TURNSTONE ECOLOGY LIMITED

Project Number	TT3401	
Title	Valley View Retreat, Llanidloes	
Document Number	R01-Preliminary Ecological Appraisal-	Rev00
Client	Hughes Architects	
Issue Date	30 th March 2022	
Prepared by:	Clare Knight Senior Ecologist	26/03/2022
Checked and Approved for Issue by:	Mark Gash Director	29/03/2022

This report has been prepared by Turnstone Ecology Limited, with all reasonable skill, care and diligence within the terms of the Contract with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.



SURVEY AND REPORT VALIDITY

It is important that planning decisions are based on up-to-date ecological reports and survey data. However, it is difficult to set a specific timeframe over which reports or survey data should be considered valid, as this will vary in different circumstances. In some cases there will be specific guidance on this (such as for the age of data which may be used to support an EPS licence application) but in circumstances where such advice does not already exist, the Chartered Institute of Ecology and Environmental Management (CIEEM) has provided the general advice set out below.

Age of Data / Survey / Report	Validity
Less than 12 months	Likely to be valid in most cases.
12-18 months	Likely to be valid in most cases with the following exceptions: Where a site may offer existing or new features which could be utilised by a mobile species within a short timeframe; Where a mobile species is present on site or in the wider area, and can create new features of relevance to the assessment; Where country-specific or species-specific guidance dictates otherwise.
18 months to 3 years	A professional ecologist will need to undertake a site visit and then review the validity of the report.Some or all of the other ecological surveys updated.
Protected Species Licensing	Licence applications usually only possible using data less than 2 years old

The likelihood of surveys needing to be updated increases with time and is greater for mobile species or in circumstances where the habitat or its management has changed significantly since the surveys were undertaken. Factors to be considered include (but are not limited to):

Whether the site supports, or may support, a mobile species which could have moved on to site, or changed its distribution within a site;

Whether there have been significant changes to the habitats present (and/or the ecological conditions/functions/ecosystem functioning upon which they are dependent) since the surveys were undertaken, including through changes to site management;

Whether the local distribution of a species in the wider area around a site has changed (or knowledge of it increased), increasing the likelihood of its presence.



Table of Contents

<u>1</u>	Intro	oduct	<u>ion</u>		
<u>1</u>	<u>.1</u>	<u>Purp</u>	pose of Report		
1	.2	Ecol	logical Context		
<u>2</u>	Met	hods			
2	<u>.1</u>	Desl	k-based Study		
2	<u>2</u>	<u>Phas</u>	se 1 Habitat Survey		
2	. <u>.3</u>	Prot	ected Fauna Survey and Assessment		
	<u>2.3.</u>	<u>1</u>	Badger		
	<u>2.3.</u>	<u>2</u>	<u>Bats</u>		
	<u>2.3.</u>	<u>3</u>	Dormouse		
	<u>2.3.</u>	<u>4</u>	Nesting birds		
<u>2.3.5</u>		<u>5</u>	Great Crested Newt		
	<u>2.3.6</u> <u>Repti</u>		<u>Reptiles</u>		
2	<u>4</u>	Con	straints		
2	<u>5</u>	<u>Crite</u>	eria for Assessment		
<u>3</u>	Res	<u>ults</u>			
3	.1	Desl	<u>k Study</u>		
	<u>3.1.</u>	<u>1</u>	Designated Sites		
3	<u>.2</u>	Ecol	logical Surveys		
3	3.3 Phase 1 Habitat Survey		se 1 Habitat Survey		
	<u>3.3.</u>	<u>1</u>	Semi-improved grassland		
	<u>3.3.</u>	<u>2</u>	Hedgerows and trees		
	<u>3.3.</u>	<u>3</u>	Hardstanding		
	<u>3.3.</u>	<u>4</u>	<u>Scree</u>		
3	<u>.4</u>	Prot	ected Fauna		
	<u>3.4.</u>	<u>1</u>	<u>Badger</u>		
	<u>3.4.</u>	<u>2</u>	<u>Bats</u>		
	<u>3.4.</u>	<u>3</u>	Dormouse		
	<u>3.4.</u>	<u>4</u>	<u>Birds</u>		
	<u>3.4.</u>	<u>5</u>	Great Crested Newt		
	<u>3.4.</u>	<u>6</u>	<u>Reptiles</u>		
<u>4</u>	Eva	luatic	<u>on</u> 20		



<u>4.1</u>	Summary of Proposals					
<u>4.2</u>	Hab	<u>itats</u>	1			
<u>4.2.</u>	<u>.1</u>	<u>General</u>	1			
<u>4.2.</u>	<u>.2</u>	Mitigation	1			
<u>4.3</u>	Prot	ected Fauna	3			
<u>4.3.</u>	<u>.1</u>	Badger	3			
<u>4.3.</u>	<u>.2</u>	<u>Bats</u>	3			
<u>4.3.</u>	<u>.3</u>	Dormouse	4			
<u>4.3.</u>	<u>.4</u>	Nesting Birds	4			
<u>4.3.</u>	<u>.5</u>	<u>Great Crested Newt</u>	5			
<u>4.3.</u>	<u>.6</u>	<u>Reptiles</u>	5			
<u>5 Leg</u>	gal Pro	<u>ptection</u>	6			
<u>5.1</u>	Bad	<u>ger</u>	6			
<u>5.2</u>	Bats		6			
<u>5.3</u>	Dor	<u>mouse</u>	7			
<u>5.4</u>	Nesting Birds					
<u>5.5</u>	Grea	at Crested Newt	8			
<u>5.6</u>	Con	nmon Reptile Species	8			



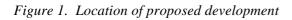
1 INTRODUCTION

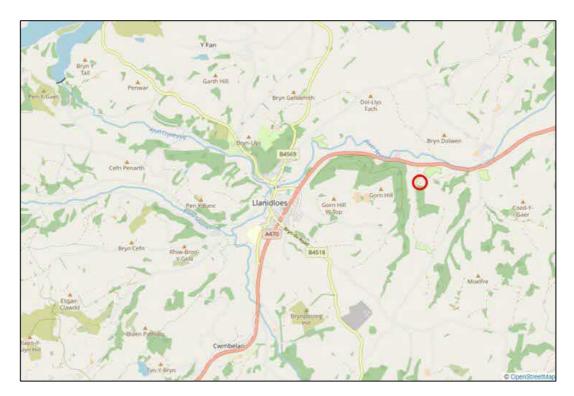
1.1 Purpose of Report

This report has been completed in connection with the extension of an existing holiday park on land at Valley View Retreat, Llanidloes, Powys (OS Grid Location SN 983 848). The location of the proposed development site is shown in *Figure 1* and the proposed development plans are fully detailed in *Section 4*.

The site survey was carried out on 3rd March 2022 by Turnstone Ecology Ltd and consisted of a Phase 1 Habitat Survey and a Protected Fauna Survey and Habitat Suitability Assessment.

This report details survey and assessment methodology along with the results of a desk-based study and on-site surveys. It also provides an assessment of potential impacts and appropriate mitigation to offset any impacts associated with the proposal and to satisfy national and local planning policies.





1.2 Ecological Context

The proposed development site is located in an elevated position approximately 2.4 km east of Llanidloes, Powys and comprises an area of grassland and hardstanding immediately south of an existing holiday park (*Figures 2* and 3). The proposals involve the extension of the holiday park to include an additional four holiday cabins, associated parking and landscaping. Access will utilise an existing



hardcore track that serves the holiday cabins and runs around the boundaries of the development footprint.

The development site boundaries are formed by post and wire fencelines, hedgerow and scattered trees along the northern and western boundaries with holiday cabins and residential dwellings beyond. There are no formal boundaries along the southern and eastern boundaries. A hardstanding yard used for storage of agricultural and building materials is located to the south of site.

Coed Clydfannau, a conifer woodland borders the hardstanding yard to the south of site and Berth-Iwyd Coppice, an extensive area of conifer woodland is located approximately 250m west of site. Nant Y Bradnant, a tributary of the River Severn, is located approximately 80m west of site and flows in to the River Severn approximately 450m north of site.

The wider landscape is dominated by woodlands, grass fields bordered by hedgerows and trees, scattered dwellings and watercourses.



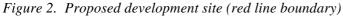




Figure 3. Aerial image of site (red line = development area) www.bing.com/maps accessed 8th March 2022





2 METHODS

2.1 Desk-based Study

A data request through the local environmental records centre was not undertaken as the site is small, the habitats that will be impacted are limited and it is very unlikely that the records obtained would impact the site assessment and mitigation proposed.

Information relating to designated sites and historic records of protected species within 2 km of the proposed development site were obtained from Magic (<u>www.magic.gov.uk</u>) and other freely available information on the internet, such as planning portals.

Any species-specific historic records are detailed within the relevant species accounts in the *Results* section.

2.2 Phase 1 Habitat Survey

The survey methods were based on the Phase 1 Habitat Survey approach (Joint Nature Conservation Committee 2010), which is a standardised method to survey main habitat types. Plant nomenclature in this report follows Rose (*Revised Edition 2006*) for native, naturalised, and garden varieties of vascular plant. Introduced species and garden varieties are not always identified.

2.3 Protected Fauna Survey and Assessment

The habitats on site were assessed for suitability for protected fauna that occur in the region and obvious signs and incidental sightings of protected species were noted where present. Taking into consideration the geographical region and habitat types on and adjacent to site, the protected species and species groups that could be encountered are listed below.

Badger Bats Dormouse Nesting birds Great Crested Newt Reptiles

Details of initial survey methods for each relevant species are given below.

2.3.1 Badger

Where access allowed, a comprehensive assessment was carried out to identify areas that are used by Badgers (*Meles meles*) for foraging and sett digging. Signs of Badgers including setts, foraging signs, paths and latrines were recorded where present.

2.3.2 Bats

Any trees on or adjacent to the site were visually surveyed to assess them for their potential to support roosting bats, although a thorough inspection of all potential roosting features would not be undertaken as part of the Phase 1 survey.

Habitats were assessed for their suitability for use by foraging or commuting bats. Areas of particular interest vary between species, but generally include sheltered areas and those habitats with good numbers of insects, such as woodland, scrub, hedges, watercourses, ponds, lakes and more species-rich or rough grassland.

2.3.3 Dormouse

Habitats were assessed for their general suitability for use by Dormouse (*Muscardinus avellanarius*), which generally use areas of dense woody vegetation cover. Dormice are most likely to be found where there is a wide diversity of woody species contributing to three-dimensional habitat complexity, a number of food sources, plants suitable for nest-building material and good connectivity to other areas of suitable habitat. A search for hazelnuts opened by Dormouse was also completed on and adjacent to site.

2.3.4 Nesting birds

Habitat that might be used by nesting birds was identified and actively nesting birds or evidence of nesting birds noted where present. Special consideration was given to the potential presence of Barn Owl (*Tyto alba*), which is a Schedule 1 protected bird species.

2.3.5 Great Crested Newt

The suitability of any aquatic and terrestrial habitat on the site, and in the immediate vicinity, was assessed for suitability for use by Great Crested Newts (*Triturus cristatus*). Great Crested Newts are known to travel up to 500 m between breeding ponds and suitable terrestrial habitat, so a desk-based search was undertaken for any ponds up to 500 m from the site using OS maps and aerial imagery. The terrestrial habitat between the site and these ponds, and therefore connectivity to the site, was also considered.

2.3.6 Reptiles

The site was assessed for suitability for use by widespread species of reptiles, with particular attention paid to those features that could be used as basking areas (*e.g.* south-facing slopes), hibernation sites (*e.g.* banks, walls, piles of hardcore) and opportunities for foraging (*e.g.* rough grassland and scrub). The site was assessed for its suitability for the commoner reptile species which have broadly similar habitat requirements but more specific requirements include those shown below (Beebee & Griffiths 2000).

Common Lizards (*Zootoca vivipara*) use a variety of habitats from woodland glades to walls and pastures, although one habitat they use is brownfield sites



Slow-worms (*Anguis fragilis*) use similar habitats to Common Lizards, and are often found in rank grassland, gardens and derelict land

Grass Snakes (*Natrix natrix*) have broadly similar requirements to Common Lizards but with a greater reliance on ponds and wetlands, where they prey on amphibians

Adder (*Vipera berus*) use a range of fairly open habitats with some cover, but are most often found in dry heath.

2.4 Constraints

March is not an ideal time to undertake Phase 1 surveys as certain plants may not be present or identifiable and certain animal signs may be harder to detect. However, for a site of this size, location and habitat composition it is not considered that this would have had a significant effect on the survey results or assessment of the site.

2.5 Criteria for Assessment

The scientific value of habitats for nature conservation is assessed according to widely accepted criteria of which the most important are naturalness, extent, rarity, and diversity.

The assessment of impacts is based on the principles within Chartered Institute of Ecology and Environmental Management (CIEEM) Environmental Impact Assessment (EIA) Guidance (2019) which assesses the impacts of the proposal on ecological receptors taking in to consideration extent, duration, reversibility, timing, frequency and certainty.

Mitigation and enhancement is designed to reduce the level of impact upon receptors and provide ecological enhancement in order to meet current legislation and planning policy. The information below has therefore been considered during assessment.

The scientific value of habitats for nature conservation is assessed according to widely accepted criteria of which the most important are naturalness, extent, rarity, and diversity.

The assessment of impacts is based on the principles within Chartered Institute of Ecology and Environmental Management (CIEEM) Environmental Impact Assessment (EIA) Guidance (2019) which assesses the impacts of the proposal on ecological receptors taking in to consideration extent, duration, reversibility, timing, frequency and certainty.

Mitigation and enhancement is designed to reduce the level of impact upon receptors and provide ecological enhancement in order to meet current legislation and planning policy. The information below has therefore been considered during assessment.

Criteria that have been developed to assist in the identification of statutory Sites of Special Scientific Interest (SSSIs) (JNCC 2013)

Habitats and species of Principal Importance included under Section 41 (England) and Section 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006



The legal status of habitats and species according to The Conservation of Habitats and Species Regulations 2017 (as amended)

CIEEM Guidelines (2019) for assessing the value of ecological receptors within a defined geographical context using the following categories: international (*i.e.* Europe); UK and national (England); regional; county; Unitary Authority; local or parish; and zone of influence. Receptors are identified as 'important' at these levels, or as 'not important'

Species protected by European directives

Species protected by the Wildlife and Countryside Act 1981 (as amended)

Other species listed as scarce or notable in literature issued by conservation organisations or learned societies *e.g.* vascular plant species listed in Stewart *et al.* (1994) and Red and Amber List Birds of Conservation Concern (Eaton et al. 2015)

Local Wildlife Site selection criteria

National Policy Planning Framework (NPPF), 2019

BS42020:2013 - Biodiversity Code of practice for planning and development

Protected species handbooks and best practice guidelines

The Powys Local Biodiversity Action Plan (BAP), which identifies and prioritises local habitats and species of conservation importance. These habitats and species are stated as

Habitats: Upland oak woodland, Lowland woodpasture and parkland, Wet woodlands, Coniferous woodland, Scrub and ffridd, Linear habitats (hedges and verges), Rivers and stream, Mesotrophic waters, Lowland raised bog, Rhos pastures, Lowland meadows, Lowland dry acid grassland, Upland calcareous grassland, Upland and lowland heath, Traditional orchards and Farmland and Gardens.

Species: Alien Plant species, Allis Shad (*Alosa alosa*), Twaite Shad (*Alosa fallax*), Brown Hare (*Lepus europaeus*), Brown Trout (*Salmo trutta*), Climbing Corydalis Weevil (*Procas granulicollis*), Curlew (*Numenius arquata*), European Otter (*Lutra lutra*), Fairy Shrimp (*Chirocephalus diaphanous*), Floating Water Plantain (*Luronium natans*), Globeflower (*Trollius europaeus*), Great Crested Newt, Hazel Dormouse, High Brown Fritillary (*Fabriciana adippe*), Nightjar (*Caprimulgus europaeus*), Pearl-bordered Fritillary (*Boloria euphrosyne*), Pillwort (*Pilularia globulifera*), Pipistrelle Bat (*Pipistrellus pipistrellus & P. pygmaeus*), Red Kite (*Milvus milvus*), Red Northern Wood Ant (*Formica lugubris*), Red Squirrel (*Sciurus vulgaris*), River Jelly Lichen (*Collema dichotomum*), River Lamprey (*Lampetra fluviatilis*), Slender Green Feather Moss (*Hamatocaulis vernicosus*), Tree Sparrow (*Passer montanus*), Water Vole, Waxcap Grasslands, White-clawed Crayfish (*Austropotamobius pallipes*) and Wood Bitter Vetch (*Vicia orobus*).



3 RESULTS

3.1 Desk Study

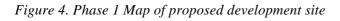
3.1.1 Designated Sites

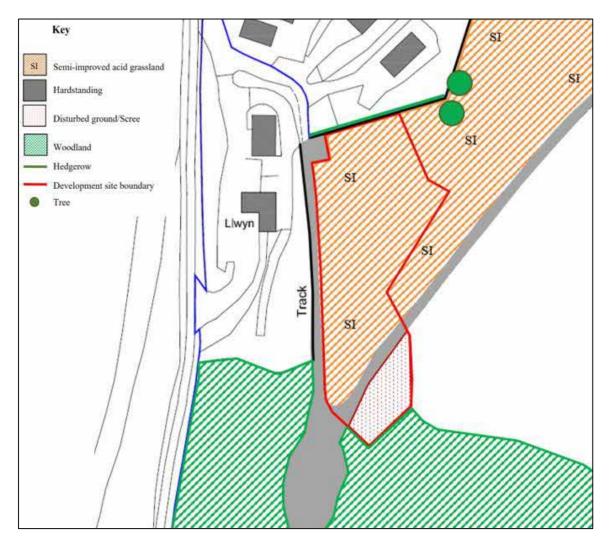
There are no statutory designated sites within 2 km of the proposed development site.

3.2 Ecological Surveys

Phase 1 habitat types recorded within and immediately adjacent to the proposed development sites are listed below and shown in *Figure 4*.

Semi-improved acid grassland Hedgerow and trees Hardstanding Disturbed ground/Scree







The site or immediately adjacent areas contain habitat suitable for the protected species listed below.

Badger Bats Dormouse Nesting birds Great Crested Newt Reptiles

3.3 Phase 1 Habitat Survey

3.3.1 Semi-improved acid grassland

The proposed development site is dominated by semi-improved acid grassland (*Figure 4 and Plate 1*). At the time of survey the grassland was unmanaged and had a moderate length sward with tussocky areas throughout the grassland. Species are dominated by common grass species including Common Bent (*Agrostis capillaris*), Sheep's Fescue (*Festuca ovina*), Couch Grass (*Elymus repens*) and Cock's-foot (*Holcus lanatus*). Forb species recorded within the grassland include Yarrow (*Achillea millefolium*), Creeping Buttercup (*Ranunculus repens*), Common Dandelion (*Taraxacum officinale agg.*), Hairy Bittercress (*Cardamine hirsuta*), Lesser Celandine (*Ficaria verna*), Rosebay Willowherb (*Chamerion angustifolium*), Broadleaved Dock (*Rumex obtusifolius*), Foxglove (*Digitalis purpurea*), Barren Strawberry (*Potentilla sterilis*), Creeping Thistle (*Cirsium arvense*) and Common Nettle (*Urtica dioica*). Scattered Bramble (*Rubus fruticosus agg.*) and Gorse (*Ulex europaeus*) are located along the eastern edge of the grassland.



Plate 1. Semi-improved acid grassland (looking south-west)



3.3.2 Hedgerows and trees

A recently planted Laurel, Buddleia, Rose (*Rosa sp.*) and Field Maple (*Acer campestre*) hedgerow and post and wire fenceline forms the northern boundary of site (*Plate 2*).

The western and south-eastern edges of the grassland have been recently planted up with ornamental species including Laurel (*Laurus sp.*), Buddleia (*Buddleja davidii*), Japanese Spiraea (*Spiraea japonica*), Viburnum (*Viburnum sp.*) and Apple saplings (*Malus sp.*) (*Plate 3*).

Two mature English Oak (*Quercus robur*) trees are located to the north-east of the development boundary (*Plate 4*) and woodland is located to the south of site (*Plate 5*).



Plate 2. Recently planted hedgerow along northern edge of site

Plate 3. Recently planted Laurel along the eastern edge of grassland





Plate 4. Oak trees to north-east of development footprint



Plate 5. Woodland to south of development boundary



3.3.3 Hardstanding

A hardstanding track extends along the edges of site and borders the grassland to the south, east and west (*Figure 4 and Plates 6 and 7*). A hardstanding yard area is present to the south of site but outside the development area and is used for storage of various agricultural and building materials (*Plate 8*).



Plate 6. Existing hardstanding track along western edge of site



Plate 7. Hardstanding track at southern edge of site



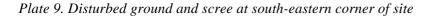


Plate 8. Hardstanding yard to south of development footprint



3.3.4 Disturbed Ground/Scree

An area of disturbed ground and scree is located at the south-easter corner of site and borders the hardstanding track (*Figure 4 & Plate 9*). The majority of this area is bare with some patchy areas of grass, Bramble, Gorse and Foxglove.





3.4 Protected Fauna

3.4.1 Badger

No Badger setts or evidence of foraging or commuting Badger were recorded within, or adjacent to the boundaries of the proposed development site.



The grassland within the proposed development site is suitable for setts to be located and this area also provides suitable foraging habitat.

3.4.2 Bats

There are no suitable bat roosting features within the proposed development site, including no features (frost cracks, knot holes etc) on the site boundary trees.

Boundary trees and woodland to the south of site do provide suitable habitat for foraging and commuting bats but the hardstanding, grassland and scree within the development footprint are unlikely to be of importance for foraging bats.

3.4.3 Dormouse

There are no apparent records of Dormouse within 2 km of the proposed development site.

The grassland, hardstanding and disturbed ground/scree within the proposed development footprint are unsuitable for Dormouse. The conifer woodland to the south of site is of limited suitability for Dormouse with sparse ground cover and suitable foodplants limited to small areas of Bramble. The woodland is also unconnected to any extensive optimal habitat.

3.4.4 Birds

No evidence of nesting birds was recorded within the development footprint. Suitable breeding bird habitat within, and adjacent to the application site includes the boundary trees and woodland to the south.

Due to the small size of the affected grassland, close proximity to trees and buildings it is very unlikely that ground nesting birds will occur within the areas of semi-improved grassland.

There is no suitable habitat on, or adjacent to site for nesting Barn Owl however the grassland within, and adjacent to the development footprint provides suitable habitat for hunting Barn Owl.

3.4.5 Great Crested Newt

There are no apparent records of Great Crested Newt within 2 km of the proposed development site and no ponds within 250m.

The areas of hardstanding, disturbed ground/scree and recently planted hedgerow along the northern site boundary are unsuitable for Great Crested Newt due to the lack of cover but could be crossed during dispersal. The tussocky semi-improved acid grassland is suitable for foraging and dispersing and hibernating.

3.4.6 Reptiles

There are no apparent records of common reptile species within 2 km of the proposed development site.

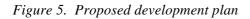
The hardstanding, disturbed ground/scree and recently planted hedgerow along the northern boundary are unsuitable for foraging or hibernating reptiles due to a lack of dense cover, although they could be crossed during dispersal. Suitable habitat is limited to the tussocky semi-improved acid grassland, which provides suitable cover and opportunities for basking, foraging, dispersing and/or hibernating reptiles.



4 EVALUATION

4.1 Summary of Proposals

The proposals involve the construction of four holiday cabins and associated access within an area of grassland, hardstanding, disturbed ground and scree to the south-east of an existing holiday park (*Figures 5 to 9*).







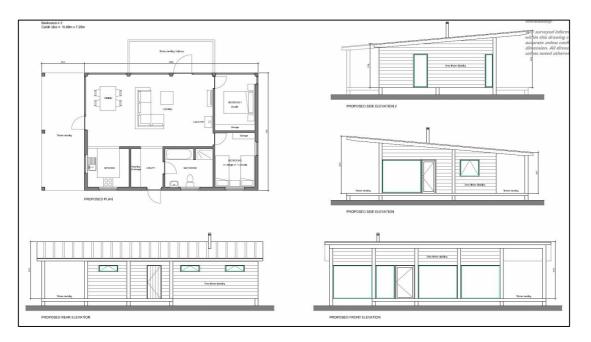


Figure 6. Proposed elevations and floorplan of cabins

The Powys BAP lists 17 Habitat Action Plans of which $543m^2$ of lowland acid grassland will be directly impacted by the proposals. The Powys BAP also lists 28 Species Action Plans including Great Crested Newt and Pipistrelle Bat. These species could be directly or indirectly affected by the proposed development and appropriate project design and mitigation will need to be adhered to ensure there will be no negative impacts on them as a result of the proposals. Ecological enhancements are also recommended to ensure the proposals result in a positive ecological gain which is in accordance with the National Planning Policy Framework.

4.2 Habitats

4.2.1 General

In order to protect habitats and maintain and increase biodiversity of the site the following mitigation measures and safe working methods will need to be incorporated into the proposals.

4.2.2 Mitigation

Semi-improved acid grassland

In order to enhance the retained areas of semi-improved acid grassland, the site boundaries and grassland to the north-east should be stock fenced (*Figure 8*) and be subject to low-intensity sheep grazing annually between August and October and February to March to allow the existing plants within the grassland to flower and set seed. To maintain floral diversity grazing (or cutting) of the grassland between April and July should be avoided.



The recently created ornamental planting around the western and south-eastern edges of the grassland should be removed and native species limited to Gorse and Broom (*Cytisus scoparius*) can be planted around the edges of site. No additional tree planting or ornamental planting should be completed within the retained areas of grassland around the site boundaries to ensure the integrity of the semi-improved acid grassland is maintained.

Figure 8. Location of stock fencing and grassland to be subject to low intensity sheep grazing (outlined in red)



Hedgerows and trees

A short section of hedgerow to screen of an existing oil tank will be planted at the north-western corner of site. The hedgerow will comprise a mix of native broadleaved tree species including Hawthorn (*Crataegus monogyna*), Blackthorn (*Prunus spinosa*), Crab Apple (*Malus sylvestris*), Hazel (*Corylus avellana*), Dog Rose (*Rosa canina* agg.), Rowan (*Sorbus aucuparia*), Holly (*Ilex aquifolium*), Dogwood (*Cornus sanguinea*), Honeysuckle (*Lonicera periclymenum*) and Field Maple (*Acer campestre*) to create a species-rich hedgerow.

The new hedgerow should be double planted with six plants per metre; mulchings or weed suppressing mats should be used to aid good establishment of woody species. Plants should be 80 - 100 cm bare root whips (1 + 1), planted between November and March and staked and protected with a biodegradable treeguard to prevent pest damage.



The new hedgerow planting will be monitored for a minimum 5 years to check establishment and if dieback or failure to establish occurs then re-planting will be required. Re-planting will replace the original species and be of a similar size. Once established (probably when first laid) the tree guards should be removed, if they have not fully degraded.

The proposed areas of groundworks will need to be confined to areas that will not impact on the root systems of the existing and retained hedgerow and boundary trees. An appropriate buffer (as detailed in BS5837:2012) will need to be established.

4.3 Protected Fauna

4.3.1 Badger

No setts were recorded on, or adjacent to site and no evidence of foraging or commuting Badger was recorded although the grassland is suitable habitat for sett creation, foraging and commuting.

Although significant negative impacts on Badgers are not predicted it is recommended mitigation measures are put in place to ensure Badgers do not become trapped within any excavation works associated with construction works. Excavations should either not be left uncovered overnight or ways of escape for Badgers provided (*e.g.* wooden planks or graded earth banks).

4.3.2 Bats

There is no suitable roosting habitat within the proposed development site however the mature Oaks to the north-east of the development footprint and the woodland to the south provide suitable habitat for commuting and foraging bats.

The semi-improved acid grassland is unlikely to be of importance for foraging bats and the removal of $543m^2$ is therefore unlikely to have significant negative effects on foraging and commuting bats.

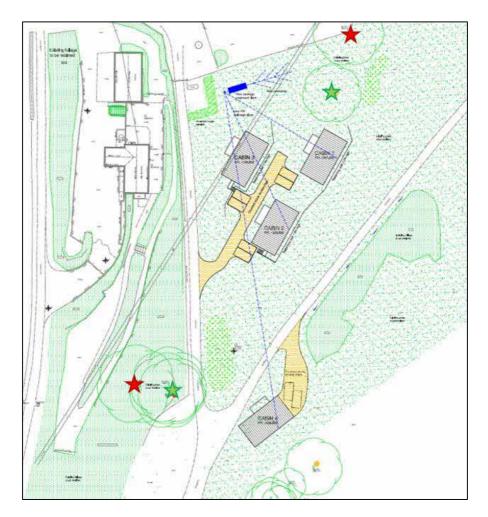
Long term bat roosting provision should be incorporated around site and should include two Schwegler 2F, or equivalent erected along the woodland edge to the south of site and a Schwegler 1FF, or equivalent, erected on one of the retained Oak trees to the north-east of site (*Figure 7*).

A lighting plan showing the location and specification for any proposed lights on the site will be produced. The lighting plan will reflect the Bat Conservation Trust Bats and Lighting in the UK guidance (2018) and will include directing lighting away from the new and retained hedgerows, trees and new roosting features and the use of downlighting to ensure that suitable roosting features and foraging and commuting habitats remain unlit.





Figure 7. Location of Schwegler 2F bat boxes, or equivalent, and hole-fronted nest boxes (green stars) and Schwegler 1FF and open-fronted nest boxes (red stars) on retained trees



4.3.3 Dormouse

Due to the lack of Dormouse records within 2 km of the proposed development site, suitability of habitats affected by the proposals and limited connectivity to more extensive suitable Dormouse habitat, it is considered very unlikely that Dormouse will occur on site and no specific mitigation for this species is considered necessary.

4.3.4 Nesting Birds

The boundary trees are suitable for nesting birds however none of these will be affected by the proposals. The grassland, hardstanding and disturbed ground/scree within the development footprint are unsuitable for nesting birds due to the lack of cover and proximity to trees and buildings. Given the habitat types present on site it is considered extremely unlikely that any *Schedule 1* breeding birds would be present within the proposed development footprint although the grassland within and surrounding site is suitable for foraging Barn Owl.



In order to enhance the site for nesting birds, one hole-fronted and one open-fronted nest boxes will be erected along the woodland edge to the south of site and one hole-fronted and one open-fronted nest boxes will be erected on the mature Oak trees to the north-east of site (*Figure 7*). It is recommended a Barn Owl box is erected on site, either on a suitable mature tree within the same land ownership as the development site or a pole-mounted box installed along a field boundary.

4.3.5 Great Crested Newt

There are no apparent records of Great Crested Newt within 2 km of the proposed development site and no ponds within 250m.

The hardstanding, disturbed ground/scree and recently planted hedgerow along the northern boundary are unsuitable for hibernating and foraging Great Crested Newt however they could be crossed during dispersal. The tussocky semi-improved acid grassland does provide some opportunities for foraging, dispersing and hibernating Great Crested Newt.

Taking into consideration the distance between site and the nearest record of Great Crested Newt, the suitability and extent of habitats affected by the proposals and the distance between the construction areas and nearest potential breeding pond (>500m), it is considered very unlikely that Great Crested Newts are present on or around the proposed development site and no negative impacts on this species are predicted.

4.3.6 Reptiles

The hardstanding and disturbed ground/scree which will be affected by the proposals are of poor suitability for foraging or hibernating reptiles due to a lack of dense cover, although they could be crossed during dispersal. The tussocky semi-improved acid grassland provides suitable cover for foraging, hibernating and/or dispersing reptiles.

As some suitable habitat for reptiles is present within the proposed works areas it is recommended safe working methods are put in place to ensure no reptiles are harmed. These measures should include habitat modification (e.g. cutting and maintaining vegetation to just above ground level prior to works) to discourage reptiles from occurring during the reptile active season (April to October). During construction, any storage of piles of materials and excavated earth on the site should be kept to a minimum and away from the boundaries to deter reptiles from using them for temporary cover.

The proposed grassland management will ultimately improve the suitability of the site and adjacent habitats for reptiles.



5 LEGAL PROTECTION

This section briefly describes the legal protection afforded to the protected species referred to in this report. It is for information only and is not intended to be comprehensive or to replace specialised legal advice. It is not intended to replace the text of the legislation, but summarises the salient points.

5.1 Badger

Badger is protected in Britain under the *Protection of Badgers Act 1992* and *Schedule 6* of the *Wildlife* and *Countryside Act 1981* (as amended). The legislation affords protection to Badgers and Badger setts, and makes it a criminal offence to:

wilfully kill, injure, take, possess or cruelly ill-treat a Badger, or to attempt to do so;

interfere with a sett by damaging or destroying it;

to obstruct access to, or any entrance of, a Badger sett; or

to disturb a Badger when it is occupying a sett.

5.2 Bats

All species of British bat are protected by *The Wildlife and Countryside Act 1981* (as amended) extended by the *Countryside and Rights of Way Act 2000*. This legislation makes it an offence to:

intentionally kill, injure or take a bat;

possess or control a bat;

intentionally or recklessly damage, destroy or obstruct access to a bat roost; and

intentionally or recklessly disturb a bat whilst is occupies a bat roost.

Bats are also listed on *Schedule 2* of the *Conservation of Habitats and Species Regulations 2017 (as amended).* This legislation makes it an offence to:

deliberately capture, injure or kill a bat;

deliberately disturb bats in such a way as to be likely to (a) impair their ability to: (i) to survive, to breed or reproduce, or to rear or nurture their young, or (ii) in the case of animals of a hibernating or migratory species, to hibernate or migrate; or b), to affect significantly the local distribution or abundance of the species to which they belong; and

damage or destroy a breeding site or resting place of a bat; and

possess, control, transport, sell, exchange a bat, or offer a bat for sale or exchange.

All bat roosting sites receive legal protection even when bats are not present.

Where it is necessary to carry out an action that could result in an offence under the regulations protecting bats and their roots it is possible to apply for Mitigation Licence from Natural England (NE) or Natural Resources Wales (NRW). Three tests must be satisfied before this licence (to permit otherwise prohibited acts) can be issued:



Regulation 55(1)(a) states that licences may be granted to "preserve public health or public safety or 55(6)(a) other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment."

Regulation 55(2) and 55(7)(a) states that a licence may not be granted unless "there is no satisfactory alternative".

Regulation 55(7)(b) states that a licence, in respect of imperative reasons of overring public interest (IROPI), cannot be issued unless the action proposed "will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range".

5.3 Dormouse

The Dormouse is on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), and receives full protection under Section 9. This species is also listed on Schedule 2 of the Conservation of Habitats and Species Regulations 2010 (SI 2010/490) which gives them full protection under Regulation 41. Protection was extended by the Countryside and Rights of Way Act 2000 (the CRoW Act).

Under the above legislation it is an offence to:

kill, injure or take an individual of such a species;

possess any part of such species either alive or dead;

intentionally or recklessly damage, destroy or obstruct access to any place or structure used by such species for shelter, rest, protection or breeding;

intentionally or recklessly disturb such a species whilst using any place of shelter or protection; or

sell or attempt to sell any such species.

Dormouse is included as a Priority Species in the UK Biodiversity Action Plan (UKBAP) and also as a species of principal importance for the conservation of biological diversity in England under Section 74 of the CRoW Act.

5.4 Nesting Birds

All species of bird are protected under *Section 1* of the *Wildlife and Countryside Act 1981* (as amended). The protection was extended by the CRoW Act.

The legislation makes it an offence to intentionally:

kill, injure or take any wild bird;

take, damage or destroy the nest of any wild bird while that nest is in use or being built; or take or destroy an egg of any wild bird.

Certain species of bird are listed on *Schedule 1* of the *Wildlife and Countryside Act 1981* (as amended) and receive protection under *Sections 1(4)* and I(5) of the Act. The protection was extended by the



CRoW Act. The legislation confers special penalties where the above mentioned offences are committed for any such bird and also make it an offence to intentionally or recklessly:

disturb any such bird, whilst building its nest or it is in or near a nest containing dependant young; or

disturb the dependant young of such a bird.

5.5 Great Crested Newt

Great Crested Newt is listed on *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), and receive full protection under *Section 9*. These species are also listed on *Schedule 2* of the *Conservation of Habitats and Species Regulations 2017 (as amended)*. Protection was extended by the *Countryside and Rights of Way Act 2000* (the CRoW Act).

Under the above legislation it is an offence to:

kill, injure or take an individual of such a species;

possess any part of such species either alive or dead;

intentionally or recklessly damage, destroy or obstruct access to any place or structure used by such species for shelter, rest, protection or breeding;

intentionally or recklessly disturb such a species whilst using any place of shelter or protection; or

sell or attempt to sell any such species.

The Great Crested Newt is included as a Priority Species in the UK Biodiversity Action Plan (UKBAP) and also as a species of principal importance for the conservation of biological diversity in England under *Section* 74 of the CRoW Act.

5.6 Common Reptile Species

Common Lizard, Grass Snake, Slow-worm and Adder are listed under *Schedule 5* of the *Wildlife and Countryside Act 1981* (as amended), in respect of *Section 9(5)* and part of *Section 9(1)*. This protection was extended by the CRoW Act.

Under the above legislation it is an offence to:

intentionally or deliberately kill or injure any individual of such a species; or sell or attempt to sell any part of the species alive or dead.