

**19A SPRINGFIELD RISE, TREHARRIS, MERTHYR
TYDFIL**

**PRELIMINARY ECOLOGICAL APPRAISAL,
ENHANCEMENT AND RECOMMENDATIONS 2022**



QUALITY ASSURANCE

Author	Reviewer	Revision	Date Issued
Rebecca Sheahan-East	Abbey Sanders	V1.0	05/04/2022
		V1.1	28/04/2022

Revision	Notes
V1.1	Data search reference number, additional information for mitigation and mitigation plans Figures 4 and 5.

CONTENTS

INTRODUCTION	1
SPECIES ECOLOGY AND LEGISLATION	2
METHODOLOGY.....	5
Data search	5
Site survey.....	5
Constraints	5
BASELINE CONDITIONS.....	6
Designated Sites.....	6
Species Records.....	6
Habitats.....	9
Potential for Priority and Protected Species.....	10
ECOLOGICAL CONSTRAINTS, FURTHER SURVEYS OPPORTUNITIES AND RECOMMENDATIONS FOR MITIGATION	11
CONCLUSIONS.....	13
FIGURES	14
REFERENCES.....	18
APPENDIX A SITE PHOTOS	19
APPENDIX B TARGET NOTES	25

SUMMARY

The owner of the land at 19a Springfield Rise has planning permission to build a two-storey detached house on the plot, but the planning permission will lapse in April 2022. The applicant wishes to renew the planning permission, but a preliminary ecological appraisal must be submitted in order for this to be completed.

A preliminary ecological appraisal was commissioned in support of the application renewal and undertaken by Rebecca Sheahan-East of East Ecology in March 2022.

The appraisal found that the habitats present within the plot were dense continuous scrub and a small area of grassland on disturbed ground. Effects on these habitats would not need to be mitigated, but enhancements are recommended.

A few common bird species were observed on the day of the survey. Some areas of habitat were thought to be suitable for some bat and hedgehog foraging and commuting and common reptile species, most of which are known to occur in the area.

Enhancement for species include bat and bird boxes which will be added to building.

No further species-specific surveys are thought to be necessary.

INTRODUCTION

The plot at **19a Springfield Rise, Treharris, Merthyr Tyfil, CF46 5RD** lies at an approximate National Grid Reference: **ST 0968 9738**. The site is an undeveloped plot on sloping ground between Springfield Rise and Twynygarreg. The relative position of the site can be seen in figures 1 and 2 to the end of the report.

The small plot is comprised of willow and bramble scrub with an area of improved grassland at the end of Springfield Rise which is a partly developed cul-de-sac. Springfield Rise is one of the most northerly extents of the built-up area of Treharris with semi-natural habitats to all directions around it. These are mainly bracken and upland grasslands with scrub. The main built-up area and centre of Treharris lies to the south, with a wooded valley to the north, small grasslands and mixed or coniferous woodland beyond this to the west and park Taff Bargoed and the Taff valley to the east with Trelewis beyond this.

The owner of the site wishes to develop the plot by building a two-storey house with parking, accessed from Springfield Rise. Planning permission was granted by Merthyr Tydfil County Borough Council in 2017 but is about to lapse. The owner and applicant wishes to extend the existing planning permission but an ecological appraisal was requested before the permission could be renewed. A preliminary ecological appraisal was commissioned and conducted in March 2022. The layout of the proposed new house is shown in figure 2 to the end of the report.

This report aims to assess the habitats within the plot for biodiversity value and potential for protected and priority species to be present, providing any proposals for mitigation or enhancement where necessary.

The author of this report, Rebecca of East Ecology has over fifteen years post graduate experience in ecological consultancy and nature conservation and holds Natural Resources Wales survey licences for protected species including bats. Rebecca is also a full member of the Chartered Institute of Ecology and Environmental Management and a Chartered Environmentalist.

SPECIES ECOLOGY AND LEGISLATION

Reptiles

There are four common species of reptile present in Wales common lizard (*Zootoca vivipara*), slow worm (*Anguis fragilis*), adder (*Vipera berus*) and grass snake (*Natrix natrix*) one further species has a very restricted range in north Wales. Slow worms by far are the more common species occupying a variety of habitats such as tall grasslands and scrub, railway embankments and derelict sites. Adders require a good supply of small mammal prey as do grass snake, but will also take amphibians and small birds. Grass snake are often associated with still water habitats and adders with heath and upland areas. All reptiles require habitat in which to bask and warm their bodies, nearby cover and foraging opportunities and shelter for winter where they go into a type of hibernation called brumation. Hibernaculum can consist of gaps between tree roots, rubble, stone walls and log piles.

Nesting birds

Different bird species make use of a variety of habitats. Woodland, trees and scrub provide habitat for a great many species, but others require grassland, cliffs, buildings or bare ground for ground nesting. Food preference dictates the habitat in which they are found including mudflats, grassland, agricultural land, rivers, moorland and woodland although some are more generalist.

Bats

Bats are nocturnal insectivorous mammals which have been a conservation priority for many years mainly due to habitat loss. Bats occupy a variety of structures including houses, barns, churches and halls as well as other structures, rock faces and tree hollows and move throughout the seasons. The species of bat and life stage dictates the habitat preference, which may be large fly-in spaces or small crevices as well as their foraging style and prey preference. Some species have more specific prey while other such as the pipistrelle species are more generalist. Bats require shelter with nearby unlit vegetation with an abundance of small flying invertebrates on which to feed but can fly several kilometres per night to find good foraging.

Conservation of Species and Habitats Regulations (Amendment) 2017

All bats and otter found in the UK are Higher Level Protected Species (HLPS) being protected under the Conservation of Habitats and Species Regulations 2017, known as the 'Habitats Regulations'.

Under the Habitats Regulations, it is an offence to:

- Deliberately capture, injure or kill any wild animal of an HLPS,
- Deliberately disturb wild animals of any such species,

- Damage or destroy a breeding site or resting place of such an animal.

Disturbance is defined as that which is likely:

1. To impair the animal's ability:

- to survive, to breed or reproduce, or to rear or nurture their young, or
- in the case of animals of a hibernating or migratory species (e.g. bats), to hibernate or migrate; or

2. To affect significantly the local distribution or abundance of the species to which they belong.

Other offences also exist relating to possession, transport and sale.

Wildlife and Countryside Act 1981

Section 9 of the Wildlife and Countryside Act 1981 (as amended) offers varying degrees of protection to species including otter, bats, dormice, amphibians and reptiles. Animals listed on Schedule 5 of the Act are protected against one or more of the following:

- intentional killing, injuring or taking (not applicable to bats);
- intentional or reckless damage or destruction, or obstruction of access to any structure or place which any wild animal included in Schedule 5 uses for shelter or protection;
- disturbance of any such animal while it is occupying a structure or place which it uses for that purpose;
- sell, offer or exposes for sale, or has in his possession or transports for the purpose of sale, any live or dead wild animal included in schedule 5, or any part of, or anything derived from such an animal.

Wild birds are protected under the Wildlife and Countryside Act (1981) (as amended). It is an offence to intentionally kill, injure or take wild birds, intentionally take, damage or destroy a wild bird's nest while it's being used or built, intentionally take or destroy a wild bird's egg, possess, control or transport live or dead wild birds, or parts of them, or their eggs, sell wild birds or put them on display for sale, use prohibited methods to kill or take wild birds.

Common frog, common toad and two species of newt are protected from sale only under the Wildlife and Countryside Act 1981 (as amended)

Environment Act (Wales) 2016

Section 7 of the Environment (Wales) Act has replaced the Section 42 of the NERC Act 2006 in Wales. Section 7 lists the living organisms and types of habitat in Wales which are considered to be of key significance to sustain and improve biodiversity in relation to Wales.

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

Planning Policy Wales 2016

Section 5.2.8 of Planning Policy Wales states that: 'The planning system has an important part to play in meeting biodiversity objectives by promoting approaches to development which create new opportunities to enhance biodiversity, prevent biodiversity losses, or compensate for losses where damage is unavoidable.'

Merthyr Tydfil County Borough Council – Higher Level Statement

'Throughout our operations we will (where possible) seek to maintain and enhance the diversity of our natural environment to make it resilient and able to support the social, economic, health and well-being of local communities, both for enjoyment and for its own inherent value'.

METHODOLOGY

Data search

A search was made for available information relating to designated sites within a 1km area for their biodiversity interest, including Internationally and Nationally important sites; Special Protected Areas (SAC) and Sites of Special Scientific Interest (SSSI). The South East Wales Biodiversity Records Centre supplied a data search for protected and priority species within a 1km radius ref: 0212-955. Freely available information was obtained from internet source Multi Agency Geographical Information for the Countryside (MAGIC). The data search was conducted to the latest ecological survey guidelines of the Chartered Institute for Ecology and Environmental Management (CIEEM).

Site survey

The site survey broadly followed a recognised survey method sometimes known as extended Phase 1.

The Phase 1 habitat survey technique is a standardised habitat mapping system used by consultants, wildlife organisations and agencies throughout the UK. Habitat information is conveyed by means of colour coded maps and symbols with descriptive text and target notes regarding features of wildlife interest (NCC 1990).

Limitations of the method, common to all surveys, are that it provides a 'snapshot' of plant species present and animals tracks and signs at the time of survey. Other plants may be more apparent at different times of year, but most plants are thought to be visible during the summer months. Phase 1 habitat surveys are ordinarily carried out between April and September although most habitats may be identified outside of this time.

An ecological surveyor experienced in Phase 1 habitat survey carried out a site visit on 24th March 2022 using the extended Phase 1 habitat survey technique. The weather on the day of the survey was dry and sunny. The most dominant plant species were identified to assist in placing the habitat into the correct classification.

Any species not immediately identified were examined with the use of a hand lens and several wildflower keys.

Tracks and signs of fauna were also searched for, including examining opened hazel nuts, droppings, footprints and burrows.

Constraints

No significant constraints to the survey were encountered.

BASELINE CONDITIONS

Designated Sites

No statutory site protected for its nature conservation value were found within the search area.

Seven non-statutory Sites of Importance for Nature Conservation (SINC) or Local Nature Sites were found within approximately a 1 km search area, listed below. None of which fell on the proposed development site. The southern boundary of Coed Cefn-Fforest & Cwm Cothi SINC fell close to the development site but has an existing dwelling in-between.

- Afon Bargoed Taf (440m)
- Coed Cefn-fforest & Cwm Cothi (37m)
- Treharris Park & Cardiff Road Woodlands (307m)
- Lower Taf & Edwardsville Woods (568m)
- Lower Cwm Bargod (694m)
- Nant Caeach (695m)
- Berthlwyd (608m)

In addition to the non-statutory sites thirty ancient semi-natural woodland fragments were identified to the south of the site along the major river valleys, to the west and to the north and northwest. With these sites and often associated with them were 2 restored ancient woodlands, 3 plantations on ancient woodland and 6 ancient woodland sites of an unknown category. None were at or adjacent to the proposed development site.

The site itself has been mapped as dense continuous bracken with neighbouring fields of semi-improved acidic grassland.

Species Records

A diversity of fauna was found to have been recorded within the search area, 415 priority and protected species particularly bird species, but also a varying number of common amphibians, reptiles, invertebrates, fish and mammals. Table 1 shows a summary of all the priority and protected species records retrieved for the search area. The nearest records were associated with the neighbouring Treharris grassland site (birds and invertebrates) bats in flight and hedgehogs were also recorded close to the site.

Scientific name	Common name	Proximity	Number of records	Conservation status
<i>Hyacinthoides non-scripta</i>	Bluebell	211m	11	WCA8, LBAP (ANG, CLY, CON, FLI, SNP, TRA, TRF)
<i>Usnea florida</i>	Witches' whiskers lichen	898m	2	S7, RDB1 (Wales) - LC, RDB1 (UK) - NT
<i>Acronicta rumicis</i>	Knotgrass	898m	1	S7, LBAP (GWY, VOG)

<i>Boloria selene</i>	Small pearl-bordered fritillary	1168m	6	S7, RDB1 (UK) - NT, LBAP (BGW, BRG, CON, DEN, FLI, GWY, MTR, NEW, POW, RCT, SNP, SWN, TRF, VOG), LI(SEWBRReC), LI(VC43)
<i>Chiasmia clathrata</i>	Latticed heath	1124m	1	S7, LBAP (GWY, VOG)
<i>Coenonympha pamphilus</i>	Small heath	817m	4	S7, RDB1 (UK) - NT, LBAP (GWY, VOG)
<i>Ecliptopera silaceata</i>	Small phoenix	733m	2	S7, LBAP (GWY, VOG)
<i>Erynnis tages</i>	Dingy skipper	211m	7	S7, RDB1 (UK) - VU, LBAP (BGW, BRG, CON, FLI, GWY, SWN, VOG), LI(SEWBRReC)
<i>Euphydryas aurinia</i>	Marsh fritillary	1776m	1	HDir, WCA5, S7, Bern, RDB1 (UK) - VU, LBAP VOG), LI(SEWBRReC)
<i>Hipparchia semele</i>	Grayling	553m	3	S7, RDB1 (UK) - VU, LBAP (BRG, CDF, GWY, RCT, VOG), LI(SEWBRReC), LI(VC43)
<i>Lasiommata megera</i>	Wall	1124m	2	S7, RDB1 (UK) - NT, LBAP (GWY, VOG)
<i>Scotopteryx chenopodiata</i>	Shaded broad-bar	453m	1	S7, LBAP (GWY, VOG)
<i>Spilosoma lubricipeda</i>	White ermine	898m	1	S7, LBAP (GWY, VOG)
<i>Spilosoma lutea</i>	Buff ermine	1372m	1	S7, LBAP (GWY, VOG)
<i>Tyria jacobaeae</i>	Cinnabar	66m	5	S7, LBAP (GWY, VOG)
<i>Bufo bufo</i>	Common toad	758m	4	WCA5, S7, Bern, LBAP VOG)
<i>Lissotriton helveticus</i>	Palmate newt	1372m	1	WCA5, Bern, LBAP (ANG, CLY, CON, DEN, FLI, POW, TRA), LI(BIS)
<i>Rana temporaria</i>	Common frog	648m	4	HDir, WCA5, Bern, LBAP (ANG, CLY, CON, FLI, POW, TRA)
<i>Anguis fragilis</i>	Slow-worm	605m	5	WCA5, S7, Bern, LBAP (ANG, CLY, CON, DEN, FLI, GWY, POW, SNP, TRA, VOG)
<i>Vipera berus</i>	Adder	1589m	2	WCA5, S7, Bern, LBAP (ANG, CLY, CON, DEN, FLI, GWY, POW, SNP, TRA, TRF, VOG)
<i>Zootoca vivipara</i>	Common lizard	682m	5	WCA5, S7, Bern, LBAP (ANG, CLY, CON, DEN, FLI, GWY, POW, SNP, TRA, TRF, VOG)
<i>Salmo salar</i>	Atlantic salmon	730m	2	HDir, S7, Bern, RDB2 (UK), LBAP (CLY, CON, DEN, FLI, GWY, POW, TRA, VOG)
<i>Salmo trutta</i>	Brown/sea trout	528m	11	S7, LBAP (BGW, CLY, CON, GWY, MTR, RCT, TRA, TRF, VOG), LI(BIS)
<i>Acanthis cabaret</i>	Lesser redpoll	817m	6	S7, LBAP (CON), LBAP (DEN, POW, VOG), WBAm(RSPB), UKBR(RSPB)
<i>Accipiter gentilis</i>	Goshawk	1124m	3	WCA1.1, WCA9, CITES, LBAP
<i>Alauda arvensis</i>	Skylark	1124m	5	BDir22, S7, WBAm(RSPB), UKBR(RSPB)
<i>Alcedo atthis</i>	Kingfisher	211m	7	BDir1, WCA1.1, Bern, LBAP (CLY, CON, DEN, FLI, GWY, POW, TRA), WBAm(RSPB), UKBAm(RSPB)
<i>Anthus trivialis</i>	Tree pipit	211m	5	S7, Bern, LBAP (CON, DEN, FLI, GWY, POW, VOG), WBAm(RSPB), UKBR(RSPB)
<i>Chroicocephalus ridibundus</i>	Black headed gull	817m	3	BDir22, S7, WBR(RSPB), LBAP (GWY, VOG), UKBAm(RSPB)
<i>Circus aeruginosus</i>	Western marsh harrier	1620m	1	BDir1, WCA1.1, CITES, LBAP (CON), WBAm(RSPB), UKBR(RSPB), UKBAm(RSPB)
<i>Coccothraustes coccothraustes</i>	Hawfinch	211m	2	S7, Bern, LBAP (CON, DEN, FLI, GWY, POW, VOG), WBAm(RSPB), UKBR(RSPB)
<i>Cuculus canorus</i>	Cuckoo	898m	4	S7, WBR(RSPB), LBAP (CON, DEN, FLI, GWY, VOG), UKBR(RSPB)
<i>Dendrocopos minor</i>	Lesser Spotted Woodpecker	671m	3	S7, Bern, WBR(RSPB), LI(VC43), UKBR(RSPB) 10+
<i>Emberiza schoeniclus</i>	Common reed bunting	898m	3	S7, Bern, LBAP (BBNP, CER, CLY, CON, DEN, FLI, GWY, PEM, POW, VOG), WBAm(RSPB), UKBAm(RSPB)

<i>Falco columbarius</i>	Merlin	1372m	2	BDir1, WCA1.1, Bern, CITES, WBR(RSPB), LBAP (CON, DEN, FLI, GWY, POW), LI(VC43), UKBR(RSPB)
<i>Falco peregrinus</i>	Peregrine	575m	10	BDir1, WCA1.1, Bern, CITES LI(VC43)
<i>Falco subbuteo</i>	Hobby	817m	2	WCA1.1, Bern, CITES LI(VC43) 10+
<i>Falco tinnunculus</i>	Kestrel	817m	5	S7, Bern, CITES, WBR(RSPB) LI(VC43), UKBAm(RSPB)
<i>Ficedula hypoleuca</i>	European pied flycatcher	1124m	3	S7, WBR(RSPB), LBAP (CON, GWY, POW, SNP, VOG), UKBR(RSPB)
<i>Fringilla montifringilla</i>	Brambling	211m	4	WCA1.1, WBAm(RSPB)
<i>Larus argentatus</i>	Herring gull	211m	10	BDir22, S7, WBR(RSPB), LBAP (CON, GWY, POW, VOG), UKBR(RSPB)
<i>Linaria cannabina</i>	Linnet	898m	3	S7, Bern, WBR(RSPB), LBAP (ANG, BBNP, CER, CLY, DEN, FLI, PEM, VOG), LBAP (CON, GWY), UKBR(RSPB)
<i>Locustella naevia</i>	Grasshopper warbler	1372m	1	S7, WBR(RSPB), LBAP (BBNP, CON, DEN, FLI, GWY, POW, VOG), UKBR(RSPB)
<i>Loxia curvirostra</i>	Red crossbill	211m	8	WCA1.1, Bern, LBAP (CON, POW), LI(VC43)
<i>Milvus milvus</i>	Red Kite	560m	14	BDir1, WCA1.1, WCA9, CITES WBAm(RSPB)
<i>Muscicapa striata</i>	Spotted flycatcher	665m	7	S7, Bern, WBR(RSPB), LBAP (BBNP, CER, CLY, CON, DEN, FLI, GWY, PEM, POW, VOG), UKBR(RSPB)
<i>Numenius arquata</i>	Curlew	1124m	3	BDir22, S7, WBR(RSPB), LBAP (ANG, BBNP, CLY, CON, CRM, DEN, FLI, GWY, PEM, POW, SNP, VOG), LI(VC43), UKBR(RSPB)
<i>Pandion haliaetus</i>	Osprey	211m	2	BDir1, WCA1.1, CITES, LBAP (GWY), WBAm(RSPB), UKBAm(RSPB)
<i>Passer domesticus</i>	House Sparrow	66m	16	S7, WBAm(RSPB), UKBR(RSPB)
<i>Phylloscopus sibilatrix</i>	Wood warbler	211m	8	S7, WBR(RSPB), LBAP (CON, GWY, SNP, VOG), UKBR(RSPB)
<i>Poecile palustris</i>	Marsh tit	1185m	1	S7, Bern, WBR(RSPB), LBAP (BBNP, CON, DEN, FLI, GWY, POW, VOG), UKBR(RSPB)
<i>Prunella modularis</i>	Dunnock	211m	20	S7, Bern, UKBAm(RSPB)
<i>Pyrrhula pyrrhula</i>	Bullfinch	211m	18	S7, WBR(RSPB) UKBAm(RSPB)
<i>Sturnus vulgaris</i>	Starling	211m	11	BDir22, S7, Bern, WBR(RSPB), UKBR(RSPB)
<i>Turdus iliacus</i>	Redwing	211m	8	BDir22, WCA1.1, WBAm(RSPB), UKBR(RSPB)
<i>Turdus philomelos</i>	Song thrush	66m	16	BDir22, S7, Bern, WBAm(RSPB), UKBR(RSPB)
<i>Turdus pilaris</i>	Fieldfare	1124m	4	BDir22, WCA1.1, WBAm(RSPB), UKBR(RSPB)
<i>Tyto alba</i>	Barn Owl	702m	20	WCA1.1, WCA9, Bern, CITES LI(VC43)
<i>Vanellus vanellus</i>	Lapwing	1365m	2	BDir22, S7, WBR(RSPB), LBAP (ANG, BBNP, CLY, CON, CRM, DEN, FLI, GWY, MON, PEM, POW, SNP, TRF, VOG), LI(VC43), UKBR(RSPB)
<i>Chiroptera</i>	Bats	211m	13	EPS, WCA5,
<i>Erinaceus europaeus</i>	European hedgehog	163m	12	S7, Bern
<i>Lutra lutra</i>	Otter	445m	24	EPS, HDir, WCA5, S7, Bern, CITES, RDB2 (UK),
<i>Meles meles</i>	Badger	817m	3	BA, Bern, LBAP (CLY, CON, DEN, FLI, PEM, POW, TRF, WRE)
<i>Mustela erminea</i>	Stoat	1372m	1	NRW, Bern, LBAP (ANG, BGW, BRG, CON, FLI, NEW, POW)
<i>Myotis daubentonii</i>	Daubentons' bat	487m	1	EPS, HDir, WCA5, Bern, RDB2 (UK), LBAP (ANG, CLY, CON, DEN, FLI, GWY, POW, SNP, TRA, TRF)
<i>Myotis</i>	Unidentified bat	487m	2	EPS, HDir, WCA5, Bern, LBAP (ANG, DEN, FLI, SNP, TRA, TRF)

<i>Nyctalus noctula</i>	Noctule	487m	4	EPS, HDir, WCA5, S7, Bern, RDB2 (UK), LBAP (ANG, CLY, CON, DEN, FLI, GWY, POW, SNP, TRA, TRF, VOG)
<i>Pipistrellus</i>	Pipistrelle bat species	143m	4	EPS, WCA5, LBAP (ANG, DEN, FLI, SNP, TRA, TRF),
<i>Pipistrellus pipistrellus</i>	Common pipistrelle	238m	12	EPS, HDir, WCA5, S7, Bern, RDB2 (UK), LBAP (ANG, BBNP, CER, CLY, CON, CRM, DEN, FLI, GWY, PEM, POW, SNP, TRA, TRF, VOG)
<i>Pipistrellus pygmaeus</i>	Soprano pipistrelle	487m	13	EPS, HDir, WCA5, S7, Bern, RDB2 (UK), LBAP (ANG, BBNP, CLY, DEN, FLI, GWY, PEM, POW, SNP, TRA, TRF, VOG)
<i>Plecotus auritus</i>	Brown long-eared bat	487m	6	EPS, HDir, WCA5, S7, Bern, RDB2 (UK), LBAP (ANG, CLY, CON, DEN, FLI, GWY, POW, SNP, TRA, TRF, VOG)

Table 1. Summary of data search results from SEWBRc. BA = Protection of Badgers Act, UKBAP = UK Biodiversity Action Plan Priority Species, UKBAP (R) = UK Biodiversity Action Plan Priority Species (Research only species), BDir1 = EC Birds Directive Annex 1 Species, BDir21 = EC Birds Directive Annex 2.1 Species, BDir22 = EC Birds Directive Annex 2.2 Species, Bern = The Bern Convention on the Conservation of European Wildlife and Natural Habitats Bonn = The Bonn Convention on the Conservation of Migratory Species of Wild Animals Species, CITES = Convention on International Trade in Endangered Species, EPS = European Protected Species, HDir = EU Habitats Directive Species, NRW = Natural Resources Wales Priority Species, RD1 (Wales) = Welsh Red Data Book listing based on IUCN guidelines, RD1 (UK) = UK Red Data Book listing based on IUCN guidelines, RD2 (UK) = UK Red Data Book listing not based on IUCN guidelines (Nationally Rare and Scarce), WBR (RSPB) = RSPB Welsh Red listed birds (not based on IUCN criteria), WBAm (RSPB) = RSPB Welsh Amber listed birds (not based on IUCN criteria), UKBR (RSPB) = RSPB UK Red listed birds (not based on IUCN criteria), UKBAm (RSPB) = RSPB UK Amber listed birds (not based on IUCN criteria), S7 = Environment Act (Wales) Section 7 Species, WCA1.1 = Wildlife and Countryside Act Schedule 1 Part 1 Species, WCA5 = Wildlife and Countryside Act Schedule 5 Species, WCA8 = Wildlife and Countryside Act Schedule 8 Species, WCA9 = Wildlife and Countryside Act Schedule 9 Species, INNS = Invasive Non-Native Species, WSG.P = Guidelines for the Selection of Wildlife Sites in South Wales – Primary Species, WSG.C = Guidelines for the Selection of Wildlife Sites in South Wales – Contributory species, WVP = IUCN Threat Listing of Welsh Vascular Plants, LBAP (xxx) = Local Biodiversity Action Plan Species (see key below), LI (SEWBRc) = Locally Important Species (as identified by local specialists) in SEWBRc area LI (BIS) = Locally Important Species (as identified by local specialists) in BIS Area, LI (BRYO-MON) = Locally or nationally scarce or rare bryophyte in Monmouthshire, LI (VC##) = Locally Important Species (as identified by local specialists) in Vice County ##, LI (VC##, LS) = Locally Scarce in Vice County ##, LI (VC##, LR) = Locally Rare in Vice County ##, LI (VC##, EX) = Extinct in Vice County ##, LI (VC##, UR) = Under Recorded in Vice County

Habitats

The study area consisted of an undeveloped plot at the end of an existing housing development between the end of Springfield Rise and Twynygarreg. Habitats present were willow and bramble scrub covering the side of the plot and a small area of grassland. The site sloped downhill from Springfield Rise down to Twynygarreg although the bottom of the plot was raised by a retaining wall. The site had been subject to some disturbance in the past where earth had been mounded into the centre and flattened. Habitats are mapped in Figure 3 and habitats are thought to be of site level value only.

Dense continuous scrub

The most dominant species present was immature goat willow (*Salix caprea*), bramble (*Rubus fruticosus*) and silver birch (*Betula pendula*) in this part of the site along the north-eastern side of the plot.

Improved Grassland

A small area of grassland was found to the centre and rear of the plot. This was made up of sheep's fescue (*Festuca ovina*), Yorkshire fog (*Holcus lanatus*) both occurring commonly, but also contained frequent field wood rush (*Luzula campestris*) Ribwort plantain (*Plantago lanceolata*) and creeping buttercup (*Ranunculus repens*) yarrow (*Achillea millefolium*), Cut leaved cranesbill (*Geranium dissectum*) and Oxeye daisy (*Leucanthemum vulgare*) occurred

rarely with a single example of and the spring fruiting fungi bleach cap (*Discoitis venosa*). The grassland was categorised as such due to its size and obvious signs of disturbance, but retained characteristic of an acidic grassland as sheep's fescue was the dominant grass species.

Boundaries

The boundaries of the plot were defined by a wood panel fence to the side of the neighbouring property and a brick and block wall to the read of the plot at Twynygarreg. The northeast side was marked with a wire fence.

Potential for Priority and Protected Species

Bird species

Robins (*Erithacus rubelcula*) and dunnock (*Prunella modularis*) were noted on the small site during the site visit. The site holds only a very small potential for small birds due to the immaturity of the shrubs present and may not be suitable for nesting.

Reptiles

Although the site was small the mixed stone, concrete and soil with discarded materials such as wood and plastics have created some potential shelter for reptiles. The site is very small but is well connected to the wider landscape to the northeast. Its is possible that reptiles could be present and use the site some of the time through their life-cycle. A cursory check for reptiles was made, but none were found on the day.

Bats

The area of the proposed development within the plot did not contain any trees with features suitable for bat roosting and no specific survey is thought necessary.

Bats are likely to utilise the site for partly for commuting and foraging, albeit very briefly. The shrubs at the boundary form a near-continuous flight path for bats around the neighbouring field and to the Nant Cothi woodland to the northeast.

Hedgehog

There was little to offer hedgehogs at the site for shelter, except perhaps some leaf litter at the margins, but they are known to be in the area and may move through the site.

ECOLOGICAL CONSTRAINTS, FURTHER SURVEYS OPPORTUNITIES AND RECOMMENDATIONS FOR MITIGATION

Designated Sites

No statutorily designated sites fell into the search area but seven local nature sites did. All of these sites as well as the identified priority habitats will remain unaffected by the proposals, due to their distance from them. Semi-improved acidic grassland has been identified in the neighbouring field and 'may' be identified as a priority habitat depending on NRW criteria, but the development is very unlikely to affect this area.

Habitats

The habitat affected by the current proposals to build a single detached house are scrub and improved grassland. The impact to these low conservation significance habitats will be negligible to low. No further surveys are thought to be necessary with respect to the habitats present.

The grassland found within the plot is likely to be a remnant of semi-improved acidic grassland habitat and will be removed as turf and relocated to the area around the parking spaces in the design. This type of grassland would require minimal intervention during the summer months, but managed by mowing between September and April.

The shrubs at the boundary with the adjacent field will remain in place to help support the bank of built-up material for the house platform, provide connectivity in the landscape and shelter for birds and potentially reptiles and hedgehogs. These shrubs will require maintenance by coppicing after 10 years or so of growth.

Species

A range of protected and priority species records were found within the search area including mammals, (mainly bats), reptiles and amphibians, birds, fish, invertebrates and plants. The nearest records were of bat species in flight and some garden birds.

Birds

A small number of common birds were observed during the site survey and may possibly nest there although no signs were observed during the site visit. The main constraint to the presence of birds would be the timing of the vegetation clearance, birds are assumed to nest between March and August when they are protected by law and clearance should be avoided then. Should any shrubs require clearance during this time they should be checked for nests immediately beforehand by an ecologist. Should an active nest be discovered, it must remain undisturbed along with a 10m buffer of vegetation until chicks have fledged, which may take several weeks depending on species.

As an enhancement a selection of bird boxes should be installed on the new house. A minimum of two durable boxes is recommended to be placed out of the reach of predators and facing into a quiet area preferably to the southeast or southwest. Models such as the Eco sparrow

tower, woodstone Burgos swift box, Vivara Pro starling nest box and the Vivara Pro Barcelona woodstone open box.

Reptiles and amphibians

As a precautionary measure to discourage amphibians and reptiles from the area of work a two-phased cut will be needed. First to 15cm height followed by a cut to ground level or 5cm depending on the vegetation type. The cut will be conducted from the southern corner of the plot towards the north and adjoining unaffected habitat. There will be at least a gap of one week between these cuts which will be conducted during the reptile active season between April and October without the presence of an ecologist unless reptiles are found, at which point an ecologist will be required to supervise the remainder of the clearance work.

Prior to work beginning the log piles and discarded materials would need to be removed by hand in order to uncover and remove any reptile or amphibian species found here. Individual animals will be removed to nearby safe habitat while work commences. This is likely to be within the adjacent field or the far end of Springfield Rise which has yet to be developed.

Due to limited space available at the plot, no further enhancements are recommended on the site itself.

Bats

No impacts are anticipated on bats other than the possible introduction of artificial light to the site which is currently dark with exception of lighting from neighbouring properties. Maintaining a dark corridor for bats at the edge of the site from the southeast to the northeast will be important and any lighting here should be avoided. Exterior lighting on the new house will be of a bollard or downlit type with a maximum of 2000 lumens. Any PIR sensor lighting will be set to a maximum of 1 minute.

In terms of enhancing the opportunities for bats at the site addition of at least one build-in bat box to the new house would be required such as the Vivara Pro Woodstone Build-in models. It would be placed on the northeast facing wall/gable end near to the apex away from windows, lighting and possible predator perches. No exterior lighting will be installed which would spill onto the bat box entrance of the adjacent vegetation and flight path.

Hedgehog

Although no signs of hedgehog were found at the site it is possible that they move through the site. Through the building process it will be important to check piles of undisturbed material to begin with and gently move any animals out of the way and re-cover if found. Also it will be important to check machinery and materials in the mornings before use for resting hedgehogs. Excavations left open overnight will have a simple wooden ramp left in them at a 45-degree angle to allow curious animals to escape.

Opportunity for enhancement for hedgehogs would consist of leaving piles of leaves and brash where there is space along the boundary. Boundary fences will have a 10 x 10cm hole at the base to allow hedgehogs passage from the neighbouring field into the garden area of 19a Springfield Rise.

CONCLUSIONS

The data search found that the proposals were far enough away from all protected sites and priority habitat areas to not have any adverse effects. However the site is adjacent to a semi-natural acidic grassland and this should be taken into consideration in terms of enhancements for wildlife.

The shrub and grassland habitats recorded at the site were thought to be of negligible significance, but an enhancement to the area would be the striping of grassland from the site and relocation to the area surrounding the parking bays to recreate the acidic grassland on the estate.

No further surveys are thought to be needed for species occurring at the site although it can be assumed that small numbers of common birds, and possibly reptiles are likely to be and possibly present. Mitigation measures will be employed to protect these groups during site clearance, but avoiding breeding or hibernation times, checking for nests by an ecologist and conducting a phased cut to discourage animals. Enhancements for birds will entail placing at least two bird boxes on the new house.

Hedgehogs and bats are thought to potentially pass through the site and enhancements for them are recommended in terms of maintaining flight paths and passage through fences and avoiding exterior lighting where none already exists. At least one build-in bat box is proposed for the building.

A biodiversity enhancement plan may be required in addition to this report showing locations of proposed enhancements or mitigation.

FIGURES

Figure 1. Location of 19a Springfield Rise. Contains Ordnance Survey data © Crown copyright and database right 2013

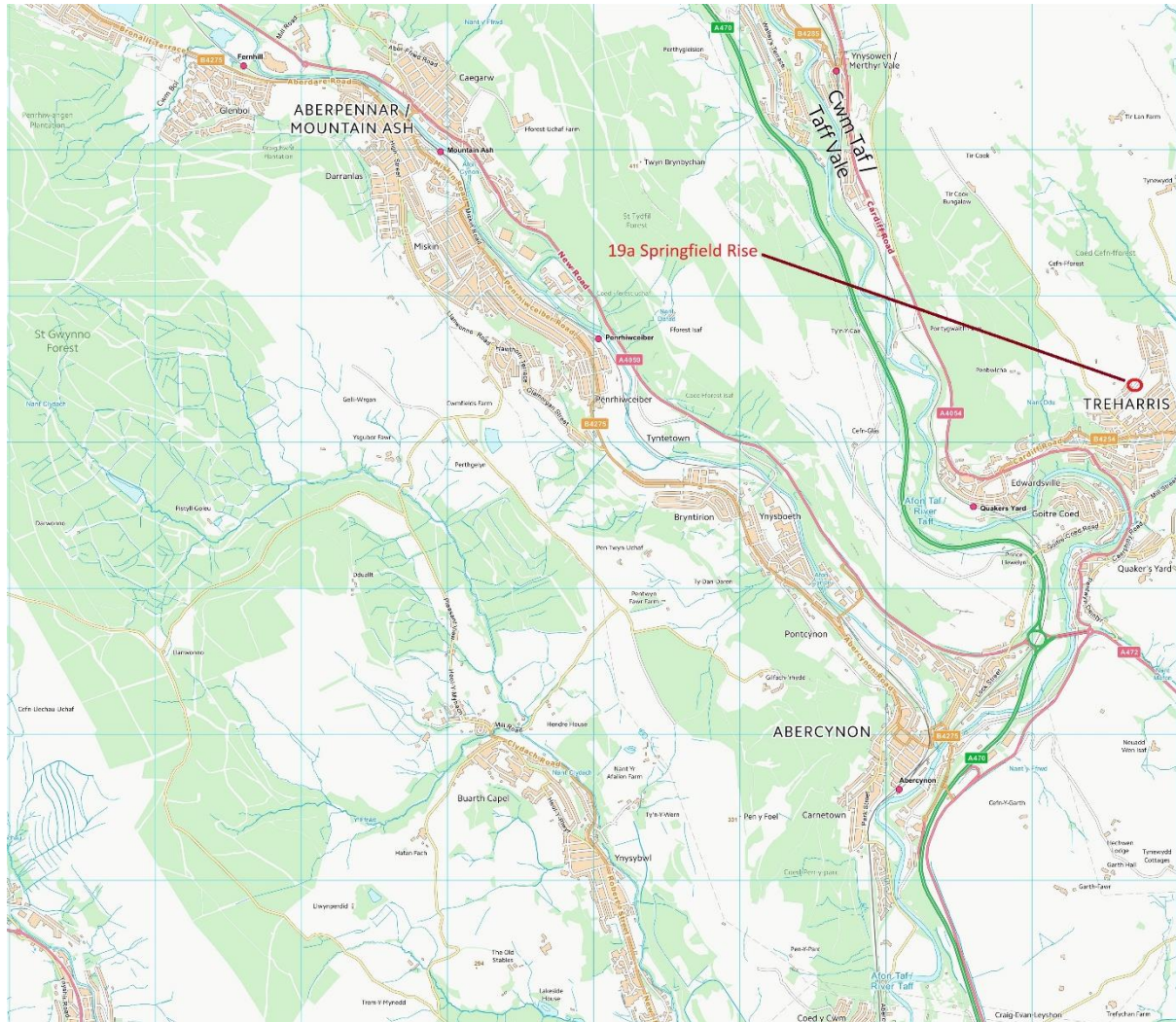




Figure 3 Phase 1 Habitats at 19a Springfield Rise

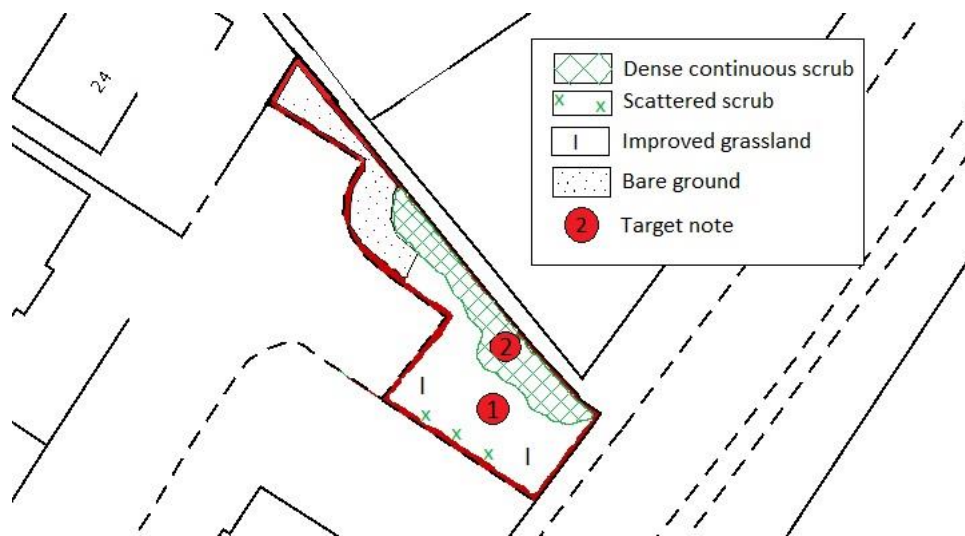


Figure 4 Proposed bat and bird box locations



Figure 5 Transplanted grassland and brash for hedgehogs



REFERENCES

Bat Conservation Trust (2015) *Encouraging Bats. Bat Conservation Trust*

Department of the Environment, Food and Rural Affairs (2014) *MAGIC interactive maps*
<http://magic.defra.gov.uk/website/magic/>

Nature Conservancy Council (1990) *Handbook for Phase 1 habitat survey, a technique for environmental audit.*

Natural Resources Wales *Sites of Special Scientific Interest citations (various)*

South East Wales Biodiversity Records Centre (2020) *Data search for Protected, Priority and other species of conservation concern at 19a Springfield Rise, Treharris*

APPENDIX A SITE PHOTOS



Photo 1 The central area of the plot



Photo 2 Corner of the plot showing the retaining wall on Twynygarreg



Photo 3 Side of the plot nearest the neighbouring property



Photo 4. Side of the plot adjacent to the grassland



Photo 5. – Bramble and discarded materials at the side of the plot looking northeast



Photo 6. Bleach cup fungus fruiting body found at the centre of the plot

APPENDIX B TARGET NOTES

TN 1 Improved grassland.

Scientific name	Common name	Abundance
<i>Achillea millefolium</i>	Yarrow	R
<i>Agrostis capilaris</i>	Common bent	O
<i>Cardamine flexuosa</i>	Wavy bittercress	O
<i>Cerastium fontanum</i>	Common mouse ear	O
<i>Chamaenerion angustifolium</i>	Rosebay willowherb	R
<i>Cirsium palustre</i>	Marsh thistle	O
<i>Dactylis glomerata</i>	Cocksfoot	C
<i>Dicoitis venosa</i>	Bleach cup	R
<i>Epilobium montanum</i>	Broad leaved willowherb	O
<i>Festuca ovina</i>	Sheep's fescue	C
<i>Festuca rubra</i>	Red fescue	O
<i>Geranium robertianum</i>	Herb robert	R
<i>Gernium dissectum</i>	Cut-leaved cranesbill	R
<i>Holcus lanatus</i>	Yorkshire fog	C
<i>Hypochaeris radicata</i>	Common cat's ear	O
<i>Juncus effusus</i>	Soft rush	R
<i>Leucanthemum vulgare</i>	Oxeye daisy	R
<i>Luzula campestre</i>	Field wood rush	F
<i>Plantago lanceolata</i>	Ribwort plantain	F
<i>Ranunculus repens</i>	Creeping buttercup	F
<i>Senecio jacobea</i>	Ragwort	R
<i>Senecio vulgaris</i>	Groundsel	R
<i>Taraxacum officinale agg</i>	Dandelion	F
<i>Trifolium repens</i>	White clover	O
<i>Vicia sativa</i>	Common vetch	O

TN 2 Dense continuous scrub

Scientific name	Common name	Abundance
<i>Betula pendula</i>	Silver birch	O
<i>Buddleja davidii</i>	Buddleia	R
<i>Rubus fruticosus</i>	Bramble	F
<i>Salix caprea</i>	Goat willow	F

Faunal species recorded at the site

Robin, dunnoek.