



Preliminary Ecological Appraisal

Brackendale

January 2020





Document Information			
Project	Brackendale Garage Development		
Location	Brackendale, Heolgerrig, Merthyr Tydfil, CF48 1TD		
Title	Brackendale Garage Development – Preliminary Ecological Appraisal		
Document Ref	Ev200309	Issue / Revision	1
File reference	Ev200309.02		
Start Date	17/01/2020		
	Name	Signature	Date
Survey Carried Out by	Bradley Stokes		17/01/2020
Document prepared by	Erin MacDonald/ Bradley Stokes	 	27/03/2020
Checked by	Bradley Stokes		31/03/2020

Document Control		
Rev.	Date	Description
1		Issued
2	05/06/2020	Addressing Comments



Contents

1	Introduction	5
1.1	Survey Area Description	5
1.2	Works Required	6
2	Methodology	7
2.1	Desk Study	7
2.2	Walkover Survey	7
2.3	Limitations	7
3	Results	8
3.1	Data – SEWBREC	8
3.1.1	Designated sites	8
3.1.2	European Protected Species and Priority Species	9
3.2	Site Walkover Observations	10
3.2.1	General Habitat	10
3.3	Results Summary	12
3.3.1	Habitat	12
3.3.2	Bird Species	12
3.3.3	Bat Species	12
3.3.4	Common Mammal Species	12
3.3.5	Common Reptile Species	12
3.3.6	Amphibian Species	12
3.3.7	Invertebrates	12
3.3.8	Invasive Species	12
4	Recommendations	13
4.1	Bat Species	13
4.2	Bird Species	13
4.3	Common Reptiles & Amphibians	13
4.4	Invertebrates	14
4.5	Designated Sites	14
4.6	Invasive Species	14
4.7	Other Protected Species	14
5	References	15
6	Appendix 1	16



Date:	27/03/20	Surveyor/Ecologist:	Bradley Stokes
Project:	Brackendale Garage Development	Project No:	Ev200309
Location of Site:	Central Grid Ref: SO 02626 05877		
Description of proposed work:	Installation of a new garage adjacent to existing house.		
Non-Technical Summary			
<u>Habitat</u> Overall habitat quality is poor with limited connectivity to neighbouring designated sites. Low risk for any protected/priority species. <u>Bird species</u> No bird species recorded on site, but there is potential for species to move in during works. It is recommended that works take place outside of breeding season to reduce this risk. However if this is not possible, any vegetation removal should only be performed following a pre-works ecological check. <u>Bat species</u> No suitable habitat was found for any bat species and no species recorded on site. As enhancements to the area a 2F bat box should be installed on a suitable tree on the boundary of site. Location will be advised by a suitably trained ecologist. <u>Common mammal species</u> No evidence or records for any U.K. protected mammals. <u>Common reptile species</u> No reptiles were discovered on site and there were no records of any species nearby. The habitat has low potential for reptile species so any works requiring ground disturbance is recommended to take place outside of winter hibernation season. As a precaution to the low possibility of encountering reptiles during works, the principle contractor will contact an ecologist prior to any ground works and any initial disturbance works will be supervised. As potential enhancements for the area reptile hibernacula will be constructed on site under the supervision of a suitably trained ecologist. <u>Amphibians</u> No evidence and no records of amphibians found on site. As with reptiles there is a low potential for amphibians to utilise the site habitat, so any ground disturbance is recommended to take place outside of winter hibernation. N.B. Great Crested Newt are known to be found within 500m of the site but are unlikely to be present on site due to several barriers (roads, houses etc), even so workers should remain especially vigilant for this particular species. If any are located works should stop immediately and an ecologist should be contacted. As a precaution to the low possibility of encountering amphibians during works, the principle contractor will contact an ecologist prior to any ground works and any initial disturbance works will be supervised. <u>Invertebrates (Marsh Fritillary)</u> No evidence of Marsh Fritillary were discovered on site during the survey. The site is not suitable habitat for the species so it is unlikely that they will be impacted by the works. <u>Invasive species</u> No invasive non-native species were discovered on site, however Japanese knotweed has been identified on a neighbouring property so care should be taken to avoid this. N.B. This survey was conducted in the winter months and it is possible that some invasive plant species could have been missed due to the natural dieback of some plants e.g. Japanese knotweed.			



1 Introduction

During January 2020, EcoVigour Ltd was commissioned to undertake a Preliminary Ecological Appraisal (PEA) for a small site in Brackendale, Heolgerrig, Merthyr Tydfil. The work planned to take place, is the construction of a new garage adjacent to an existing house. The PEA is required to inform the principle contractor of any ecological constraints present at the site before and during the planned works are carried out.

The main objectives of the PEA were:

- To undertake an ecological inspection of the site to produce a habitat plan with target note descriptions, based on standard preliminary ecological appraisal methods.
- To assess the site's potential to support protected species and make recommendations for further survey, where required to clarify potential ecological constraints.
- To identify features of significant value for nature conservation.
- To make recommendations for any valuable habitats to be considered during the project development, through retention or enhancement, or if this is not possible, by habitat mitigation or compensation.
- To identify the presence of any invasive non-native species on site.

Ecologists involved-

Bradley Stokes BSc MSc- Experienced Environmental Specialist with a strong focus on Ecology and ecological management. Several years of experience of working/ leading ecological projects within a multitude of sectors, undertaking surveys, report writing, contributing to EPS License applications, HRA's, ecological supervision and watching briefs.

Erin Macdonald MSc- Experienced Graduate Ecologist with experience of working within the infrastructure and rail sectors, undertaking surveys, report writing, contributing to EPS License applications and the production of HRA's, ecological supervision and watching brief.

1.1 Survey Area Description

The survey area is located in Heolgerrig, Merthyr Tydfil at grid reference SO 02626 05877 (fig. 1). The site area is a plot of residential land consisting of mostly bare ground with patches of tall ruderal vegetation. The field is currently heavily grazed by several horses. Along the western edge of the site is a small strip of semi-natural broadleaved woodland.

The site is bordered to the west by a road, to the south by residential property, to the north by semi-natural broadleaved woodland and to the east by an open field.



Figure 1 – Approximate site area in Heolgerrig, Merthyr Tydfil.

1.2 Works Required

The Principle contractor will be constructing a new garage adjacent to the existing house structure. This will require:

- Vegetation clearance within the site area
- General groundworks
- Erection of the garage structure.
- The siting of two converted railway units for domestic use.



2 Methodology

2.1 Desk Study

A data search was requested from the South East Wales Biodiversity Records Centre (SEWBREC) to assist with the overall ecological assessment of the site. This provides the following information within a 1km radius of the site:

- Any statutory and non-statutory designated sites
- Protected species and priority species records from the last 10 years

2.2 Walkover Survey

The PEA was undertaken on the 17th of January 2020 by a suitably experienced ecologist Bradley Stokes BSc MSc (Seven years' experience of performing a variety of ecological surveys on both small and large scale projects). The weather during the survey was over cast with mild temperatures. An experienced ecologist conducted the survey following the Phase 1 habitat survey techniques laid out by the Joint Nature Conservation Committee (JNCC 2010). The survey consisted of the following:

- An overall assessment of vegetation and habitat within the site area with a particular focus on invasive non-native species and protected plants.
- The identification of or evidence of any protected species within the site boundaries.
- The identification of any suitable habitat or features for any European protected species

All findings were recorded via field notes, drawings and photographs.

2.3 Limitations

There were no access limitations during the survey allowing the whole site to be inspected, but the following limitations should be noted with regards to the time of year the survey was carried out:

- The survey was done during the winter so it is possible that some plant species were not identified due to the natural dying back of some species which includes some invasive non-native species e.g. *Fallopia japonica* and *Impatiens glandulifera*.
- Several animal species have reduced activity during the winter months so their presence within the site boundary may have been missed e.g. reptiles.



3 Results

3.1 Data – SEWBREC

3.1.1 Designated sites

The following statutory designated sites are located within 1km of the site:

- **Cwm-Glo a Glyndyrus** – Is a **Site of Special Scientific Interest (SSSI)** and a **Natural Resources Wales Priority Area**. The 203.1ha site lies within 250m of the work site and comprises of marshy grassland, species-rich neutral grassland and lowland acid grassland as well as woodland and heath. It is particularly known for its grassland fungi. Cwm-Glo a Glyndyrus has also been adopted as a **Site of Importance for Nature Conservation (SINC)**.

The following non-statutory designated sites are located within 1km of the site:

- **Winchfawr West** – is a **Site of Importance for Nature Conservation (SINC)** and lies directly adjacent to the proposed work site separated only by Heolgerrig road. The site comprises of a complex mosaic of moorland and ffridd habitats including wet and dry heathlands, marshy grasslands, unimproved acid grasslands, acid flushes and grass-heaths. Numerous ponds are also located within the site.
- **Winchfawr East and Clwydyfagwyr** – is also a **SINC site** and lies just over 500m away from the proposed work site. The site comprises of heathland, acid grassland, marshy grassland and acid flushes with areas of neutral grassland. There is also a series of small ponds located here.





Figure 2 – Designated sites within 1km of the work site.

3.1.2 European Protected Species and Priority Species

There are a number of species protected under the following legislation within the U.K.:

- The Conservation of Habitats and Species Regulations 2010 – Schedule 2, European Protected Species
- Wildlife and Countryside Act 1981 – Schedules 1, 2, 4 and 5

Table 1: Summaries the relevant protected species found within 1km of the site in the last 10 years.

Species	Number of records	Distance from site
Bats	5 records of common pipistrelle within 1km of the site. Most recent record dated in July 2016	The closest pipistrelle was recorded 157m from the site.
Birds	1 record of Common Crossbill in 2012	884m
	6 records of Hen harrier in 2014	185m
	1 record of a Redwing in 2016	851m from site
	1 record of a Woodcock in 2012	864m from site
Common Amphibians	6 records of common frog in 2014	185m from site
Great Crested Newt	1 record in 2011 N.B. There were 11 record between 2000 and 2010	311m from site
Common reptiles	No records within 1km	n/a
Otter	No records within 1km	n/a
Water Vole	No records within 1km	n/a
Hazel Dormouse	No records within 1km	n/a
Badger	No records within 1km	n/a
Marsh Fritillary	1 record from 2018	511m from site

N.B. The birds listed in the above table are species that are provided special protection under the Wildlife and Countryside Act being that it is an offense to intentionally or recklessly disturb them while they are building a nest or are in, on or near their nest with eggs or young; or to disturb the dependent young of such a bird. However, it should be noted that all wild U.K. birds are fully protected by law from:

- Intentional killing, injuring or taking from the wild
- Intentional taking of, damage to or destruction of any wild bird nest while it is being built or in use.
- Intentional taking of or destruction of any wild bird egg
- Having in one's possession or control of any wild bird (dead or alive), part of a wild bird or egg of a wild bird.



3.2 Site Walkover Observations

3.2.1 General Habitat

The site predominantly consists of grazed to the ground grass and bare ground with some tall ruderal vegetation and a small wooded area along the western edge.



Figure 3 – A mixture of bare ground and grazed to the ground grass.



Figure 4 – Tall ruderal vegetation



Figure 6 – Small wooded area.

The site was checked for any evidence of protected species including but not limited to droppings, runs, setts, holes, nests or footprints. There was no evidence discovered of any protected species within the site area during the walkover however there is a very low potential for reptiles, amphibians and nesting birds to utilise the site.

None of the trees present within the potential works area have suitable features for bats to utilise.



3.3 Results Summary

3.3.1 Habitat

Overall habitat quality is poor with limited connectivity to the surrounding SINC and SSSI sites. It is unlikely to house any protected species especially with the quality habitat in surrounding areas. However, this does not mean that there is no possibility for the presence of protected species within the site area.

3.3.2 Bird Species

The survey was undertaken outside of the typical bird breeding season (March-August) and therefore no birds were found utilising the habitat at the time. The data search showed no records of birds within the site; however, this does not eliminate the possibility of birds using the small wooded area during the next breeding season. There is low potential for breeding birds to be present on site during the works.

3.3.3 Bat Species

No trees were identified with features suitable for use by any bat species.

3.3.4 Common Mammal Species

No evidence or records of any of the U.K.'s protected mammals were found within the site boundary. It is therefore very unlikely that species such as badger, otter, water vole and hazel dormouse will utilise the available habitat.

3.3.5 Common Reptile Species

No reptiles or evidence of reptiles were found upon the site visit and there are no records of any common reptile species within 1km of the site area. The habitat available does however hold a low potential for use by reptiles.

3.3.6 Amphibian Species

As with reptiles, no evidence was discovered on site of any amphibian presence, however there is a recent record of great crested newt within 500m of the site. Great crested newt are known to breed in the ponds present in Cwm-Glo a Glyndyrus and Winchfawr West according to the 2017 Local Development Plan for Merthyr Tydfil. The habitat available holds low potential for use by amphibians.

3.3.7 Invertebrates

Marsh Fritillary were recorded over 500m from site in areas with Devil's-bit Scabious present in 2018. Devil's-bit Scabious (*Succisa pratensis*) is important to note as it is the main food plant of Marsh Fritillary. No evidence of Marsh Fritillary caterpillars/webs or Devil's-bit Scabious was discovered during the survey.

3.3.8 Invasive Species

No invasive species were identified within the site boundary, however some Japanese knotweed *Fallopia japonica* was identified close by in another area of land.



4 Recommendations

4.1 Bat Species

All British bats and any place used for shelter or protection or a breeding site or resting place (their roosts) are fully protected under the Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 (as amended).

No suitable features were identified with the potential to house any bat species on site. It is however likely that bats use the area to forage so it can be recommended to not conduct any night work so as to eliminate the risk of disrupting natural bat foraging. No additional lightening should be used with regards to the construction work for the project.

In the unlikely event that a bat roost is identified in any trees then mitigation and an NRW EPS license may be required. Bat Licensing can take up to 8 weeks to be granted or longer depending on desired input by the legislator. Additional emergence / return to roost bat surveys would also be required to inform the license and mitigation requirements.

As enhancements to the area one bat box should be installed on a suitable tree on the boundary of site. Location will be advised by a suitably trained ecologist.

4.2 Bird Species

All breeding birds are protected by U.K. law.

While no birds were identified using the site at the time of the survey it is possible that breeding birds could move in during construction work. It is recommended that to avoid encountering this issue works should be conducted outside of the breeding bird season (March-August).

If, however the works do take place during the breeding season a supervising ecologist will undertake a visual survey to check for nesting birds prior to works. Should a nest be encountered, it requires approximately a 5-10 metre exclusion zone of vegetation that will remain until the young birds have fledged and left the nest and the adults have abandoned the nest.

4.3 Common Reptiles & Amphibians

All commonly occurring reptile species (common lizard, slow worm, grass snake and adder) are protected by UK law, making it an offence to injure or kill them. Care must be taken to avoid killing or injuring reptiles & amphibians during site clearance.

No common reptile and amphibian species were found during the site visit and only one record of a common toad was found within 1km of the site. The site does have a low potential to be used by reptiles and amphibians though due to the small amount of vegetation cover present and plentiful basking areas. Ideally any works that require topsoil stripping should occur outside of winter hibernation periods.

A full method statement isn't deemed necessary due to the low risk of reptiles/amphibians on site, the nature of the ground and the small scale of the works. However, as a precaution to the low possibility of encountering reptiles and amphibians during works, the principle contractor will contact an ecologist prior to any ground works and any initial disturbance works will be supervised.

As potential enhancements for the area reptile hibernacula will be constructed on site under the supervision of a suitably trained ecologist.



4.4 Invertebrates

Marsh Fritillary are a UK BAP Priority Species and are protected under the 1981 Wildlife and Countryside Act.

No Marsh Fritillary caterpillars/webs or Devil's-bit Scabious were discovered on site during the survey. Marsh Fritillary were recorded over 500m from site in 2018. Due to the lack of suitability the site has as habitat and the lack of connectivity to the surrounding area, it is unlikely that the proposed works will have any impact on Marsh Fritillary.

4.5 Designated Sites

Proposed works are not expected to harm any known designated sites.

4.6 Invasive Species

No invasive species were identified within the site works area; however it should be noted that Japanese knotweed *Fallopia japonica* was identified in adjacent land and care should be taken when works commence so as to avoid this area. It should also be noted that the PEA was done in winter so any Japanese knotweed present on site may have been missed due to the natural dying back of the plant so if any vegetation clearance is required a suitably qualified Ecologist should check for Japanese knotweed first.

4.7 Other Protected Species

The only other European Protected species that has the potential to use the site is Great Crested Newt as they have been recorded in the nearby area. The potential is however low due to the poor ecological connectivity of the site therefore the same guidance as with reptiles and amphibians can be followed.

There is no record of any badger, hazel dormice, water vole or otter within 1km of the work site. The habitat shows no evidence of use by any of these species and holds very little potential for use. Site personnel should be briefed on European Protected Species (EPS) identification so they can remain vigilant to the low possibility of encountering any of these species. If an EPS is encountered works shall stop immediately and a suitably qualified Ecologists consulted before works can proceed.



5 References

Bat Conservation Trust (2012). Bat Surveys Good Practice Guidelines. BCT, London; and Arboricultural Association (2003) Trees and Bats Guidance Notes.

Cresswell, P., Harris, S. and Jefferies, D.J. (1990). The History, Distribution, Status and Habitat Requirements of the Badger in Britain. Nature Conservancy Council, Peterborough.

English Nature (2004). Reptiles: Guidelines for Developers. Published by English Nature.

Environment Agency (2006). The knotweed code of practice – Managing Japanese knotweed on development sites.

Environmental Permitting (England and Wales) Regulations 2007. Environmental Protection (Duty of Care) Regulations 1991.

Harris, S. Cresswell, P and Jefferies, D. (1989) Surveying Badgers. The Mammal Society Publication No. 9 Mammal Society.

Institute for Ecology and Environmental Management (2012). Guidelines for Preliminary Ecological Appraisal.

Joint Nature Conservation Committee (2010) Handbook for Phase 1 Habitat Survey - A Technique for Environmental Audit, Revised print, Joint Nature Conservation Committee, Peterborough.

Jones (2017). Merthyr Tydfil County Borough Council Local Development Plan (2016-2031). Merthyr Tydfil County Borough Council.

Countryside Council for Wales. (2008). Site of Special Scientific Interest: Citation, Merthyr Tydfil, Cwm Glo a Glyndryys.

Rose, F. (1991). The Wild Flower Key. British Isles - N. W. Europe. Published by the Penguin Group. Penguin Books Ltd.

Stace, C. (2010). New Flora of the British Isles (third edition). Cambridge University Press. The Conservation of Habitats and Species Regulations 2010.

The Countryside and Rights of Way (CROW) Act 2000.

The Natural Environment and Rural Communities (NERC) Act 2006. The Protection of Badgers Act 1992.

Wales Biodiversity Partnership (2008). Guidelines for the Selection of Wildlife Sites in Wales. Wildlife and Countryside Act 1981 (as amended).



6 Appendix 1.

The following abbreviations are used to indicate the nature conservation status of each species:

Abbreviation	Species status
BA	Protection of Badgers Act
UKBAP	UK Biodiversity Action Plan Priority
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	Bonn Convention on Conservation of Migratory Species of Wild Animals
CITES	Convention on International Trade in Endangered Species
EPS	European Protected Species
HDir	EU Habitats Directive Species
NE	Natural England
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)
S42	Natural Environment and Rural Communities Act 2006 (Section 42)
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
LI (SEWBRc)	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 ##