

VAYNOR QUARRY

Appendix 7/6 to EclA - Breeding Bird Survey Report

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CONTENTS

1.0 INTRODUCTION	1
1.1 Background	1
1.2 Legislative Context	1
1.3 Objectives of the Study	2
2.0 METHODOLOGY	3
2.1 Desk Study	3
2.2 Field Survey	3
2.3 Survey Personnel	3
2.4 Limitations	4
2.5 Nomenclature	4
3.0 RESULTS	5
3.1 Desk Study	5
3.2 Field Survey Results	5
4.0 DISCUSSION AND CONCLUSION	7
5.0 SUMMARY	8

DOCUMENT REFERENCES

TABLES

Table 3-2 Survey Timings and Weather Conditions	5
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DRAWINGS

Drawing EC6: Summary of Breeding Bird Survey

APPENDICES

Appendix 1: Raw data

1.0 Introduction

This report has been prepared by SLR Consulting Limited (SLR) on behalf of Hanson UK (Hanson) and summarises the findings of a breeding bird survey undertaken at Vaynor Quarry in Merthyr Tydfil, hereafter referred to as 'the site'.

The site is located immediately north of Trefechan and is centred on the National Grid Reference (NGR) SO 035 103 due to its extent it occurs within both the Merthyr Tydfil County Borough Council (MTCBC) and Brecon Beacons National Park Authority (BBNPA) administrative areas.

1.1 Background

In March 2017, SLR completed an initial desk-based report¹ to inform Baseline Hydrological/Hydrogeological Surveys at the site as required to inform a Hydrological Impact Assessment (HIA).

Following this in March 2018, an initial site habitat survey was undertaken in order to review the baseline ecological conditions at the site and help inform the requirement and scope of any follow-on surveys needed to complete an Ecological Impact Assessment (EcIA). This identified habitats with the potential to support a range of breeding bird species and so a survey specifically for breeding birds was undertaken as set out in this report.

1.2 Legislative Context

Section 1, Part I of the Wildlife and Countryside Act 1981 (as amended) (WCA 1981) makes it an offence (with certain limited exceptions and in the absence of a licence) intentionally to:

- kill, injure or take any wild bird;
- damage, take or destroy its nest while that nest is in use or being built; or
- take or destroy its eggs.

A person shall also be guilty of an offence if they possess or control any live or dead wild bird or any part of, or anything derived, from such a bird, or an egg of a wild bird or any part of such an egg. Further, the Act affords additional protection to specific species of birds listed in Schedule 1 of the Act. It is an offence intentionally or recklessly to:

- disturb a bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young; or
- disturb the dependent young of such a bird.

The Environment (Wales) Act puts in place the legislation needed to plan and manage Wales' natural resources in a more proactive, sustainable and joined-up way. Part 1 Section 6 of the Act introduces a new biodiversity duty, which replaces and enhances the biodiversity duties set out in the NERC Act 2006 and requires public authorities to seek to maintain and enhance biodiversity in the exercise of their functions and in so doing promote the resilience of ecosystems.

Section 7 of the Act lists living organisms and types of habitat in Wales, considered to be of key significance to sustain and improve biodiversity in relation to Wales, there are 51 species of bird listed.

¹ SLR Reference 406.00027.00434

1.3 Objectives of the Study

The principle aim of the survey was to establish the breeding bird assemblage in the context of the site to enable further assessment of any potential impacts that may arise in relation to the resumption of quarrying activities at the site.

The EcIA then sets out information relating to the potential impacts to breeding birds and the approach to mitigation, compensation and enhancement.

2.0 Methodology

2.1 Desk Study

As part of the EclA, a background search for records of protected and notable species (including birds) was undertaken.

The South East Wales Biodiversity Records Centre (SEWBRc) was contacted for information on pre-existing biological records within 2km.

2.2 Field Survey

The breeding bird survey was undertaken following an adapted form of the British Trust for Ornithology (BTO) Common Bird Census (CBC) methodology (Marchant, 1983).

The site was systematically surveyed for breeding/territorial activity during three survey visits undertaken During May and June 2018, i.e. within the main bird breeding period. During each survey visit, the site was walked, covering all parts of the site. All visual and auditory contact with birds was recorded on a field map using BTO species and activity codes.

Field signs characteristic of confirmed breeding include:

- Nest building or excavation;
- Adult(s) carrying food;
- The presence of nestlings or newly fledged young; and
- Adult(s) removing faecal matter.

Field signs characteristic of holding a territory include:

- Song and territorial display; and
- Courtship.

This was used to estimate the number and positions of territories of species during the breeding season. According to the field signs observed, species observed within the site were classified as follows:

- Confirmed territory – single birds or pairs exhibiting behaviour characteristic of confirmed breeding (including attending nests with eggs/young and adults carrying food/removing faecal sacs); single birds or pairs exhibiting territorial behaviour in the same area on multiple visits;
- Probable territory – presence of single birds or pairs in suitable breeding habitat on one occasion, exhibiting territorial behaviour;
- Possible territory – birds observed in suitable breeding habitat but not exhibiting breeding behaviour with no other field signs of breeding;
- Unlikely to be breeding – birds recorded foraging, roosting, commuting or flying, but which (a) are unlikely to breed within the site due to sub-optimal habitat, and (b) did not show signs of attachment to the site; and
- Non-breeding – birds recorded on the site, but which are extremely unlikely to breed within the site due to the absence of suitable habitat.

2.3 Survey Personnel

The survey was conducted by Mr Andrew Jayne, an experienced ornithologist from Link Ecology on behalf of SLR.

2.4 Limitations

No significant constraints that would prevent the study objectives from being met have been identified.

It should be noted however that lack of evidence of a protected species does not necessarily preclude them being present at a later date. Some bird species are migratory and therefore may not always be present during a particular time of year or year on year.

2.5 Nomenclature

The scientific nomenclature follows the British List 9th Edition², as updated by recommendations of the British Ornithologists' Union Records Committee (BOURC) Taxonomic Sub-Committee³.

English names broadly follow Birds of the Western Palearctic (BWP)⁴ and generally concur with those in common usage.

² McNerny, C. J., Musgrove, A. J., Stoddart, A., Harrop, A. H. J., Dudley, S. P., and The British Ornithologists' Union Records Committee (BOU). (2018) The British List: A CheckList of Birds of Britain (9th edition). *Ibis* 160: 190-240.

³ Sangster, G., Collinson, J. M., Crochet, P. A., Knox, A. G., Parkin, D. T., Svensson, L. and Votier, S. C. (2011) Taxonomic recommendations for British birds: Seventh report. *Ibis* 153: 883-892.

⁴ Cramp, S., Simmonds, K.E.M. & Perrins, C.M. [Eds] (1977-1994) *The Birds of the Western Palearctic*. Volumes 1-9. Oxford University Press, Oxford.

3.0 Results

3.1 Desk Study

The desk study identified 54 species or recognised conservation priority within the 2km data search area.

This included Bewick's swan (*Cygnus columbianus*), black grouse (*Tetrao tetrix*), black-headed gull (*Chroicocephalus ridibundus*), black-throated diver (*Gavia arctica*), brambling (*Fringilla montifringilla*), bullfinch (*Pyrrhula pyrrhula*), common crossbill (*Loxia curvirostra*), common cuckoo (*Cuculus canorus*), common goldeneye (*Bucephala clangula*), common grasshopper warbler (*Locustella naevia*), common kestrel (*Falco tinnunculus*), common kingfisher (*Alcedo atthis*), common linnet (*Linaria cannabina*), cuckoo (*Cuculus canorus*), nightjar (*Caprimulgus europaeus*), fieldfare (*Turdus pilaris*), goldeneye (*Bucephala clangula*), goshawk (*Accipiter gentilis*), great northern diver (*Gavia immer*), greenshank (*Tringa nebularia*), hawfinch (*Coccothraustes Coccothraustes*), hen harrier (*Circus cyaneus*), hobby (*Falco subbuteo*), house sparrow (*Passer domesticus*), kestrel (*Falco tinnunculus*), kingfisher (*Alcedo atthis*), lapwing (*Vanellus vanellus*), lesser redpoll (*Acanthis cabaret*), lesser spotted woodpecker (*Dendrocopos minor*), linnet (*Linaria cannabina*), little ringed plover (*Charadrius dubius*), long-tailed duck (*Clangula hyemalis*), merlin (*Falco columbarius*), osprey (*Pandion haliaetus*), peregrine (*Falco peregrinus*), pied flycatcher (*Ficedula hypoleuca*), pintail (*Anas acuta*), red kite (*Milvus milvus*), redwing (*Turdus iliacus*), reed bunting (*Emberiza schoeniclus*), ring ouzel (*Turdus torquatus*), ringed plover (*Charadrius hiaticula*), scaup (*Aythya marila*), skylark (*Alauda arvensis*), snow bunting (*Plectrophenax nivalis*), song thrush (*Turdus philomelos*), spotted flycatcher (*Muscicapa striata*), starling (*Sturnus vulgaris*), tree pipit (*Anthus trivialis*), whooper swan (*Cygnus cygnus*), willow ptarmigan (*Lagopus lagopus*), willow tit (*Poecile montana*), wood warbler (*Phylloscopus sibilatrix*) and yellowhammer (*Emberiza citrinella*).

3.2 Field Survey Results

The survey visits were carried out on the 15th May, 23rd May and 7th June 2018 during suitable weather conditions. Table 3-2 below displays the survey timings and weather conditions for each of the three visits.

Table 3-1
Survey Timings and Weather Conditions

Survey Visit Date	Survey Effort and Timing	Weather Conditions
15 th May 2018	Start time: 07:00 End time: 11:00	11°C, cloud cover 0/8, calm (Beaufort scale 0).
23 rd May 2018	Start time: 07:00 End time: 11:00	10.5°C, cloud cover 1/8, light breeze (Beaufort scale 2).
7 th June 2018	Start time: 07:00 End time: 11:00	13°C, cloud cover 7/8, light breeze (Beaufort scale 2).

A total of 45 bird species were recorded, of which 20 bird species are recognised priority for concern, during the 2018 survey as shown in Appendix 1.

Of these, just three species were identified as confirmed breeders and were recorded in the grasslands on the central spine within the main worked area and are detailed on Drawing EC6, this included willow warbler (*Phylloscopus trochilus*), whinchat (*Saxicola rubetra*) and meadow pipit (*Anthus pratensis*).

A further seven species not recognised as priority for conservation concern species were also identified as confirmed breeders within the main worked area including, jackdaw (*Coloeus monedula*), raven (*Corvus corone*),

great tit (*Parus major*), blackbird (*Turdus merula*), redstart (*Phoenicurus phoenicurus*), stonechat (*Saxicola rubicola*) and pied wagtail (*Motacilla alba*).

Probable breeders within the site include 16 bird species of which five are priority of conservation concern species including, skylark (*Alauda arvensis*), song thrush (*Turdus philomelos*), whinchat (*Saxicola rubetra*), linnet (*Linaria cannabina*) and lesser redpoll (*Acanthis cabaret*).

Possible breeders within the site include 12 bird species of which six are priority for conservation concern included cuckoo (*Cuculus canorus*), kestrel (*Apus apus*), mistle thrush (*Turdus viscivorus*), spotted flycatcher (*Muscicapa striata*), bullfinch (*Pyrrhula pyrrhula*) and dunnoek (*Prunella modularis*).

Of note, peregrine falcon (*Falco peregrinus*), presumed to be male throughout the surveys was present within the western void of the main worked area. No nests were located however historic records detail the presence of nesting peregrine within the site and so this species cannot be discounted from future breeding due to the suitability of nesting habitat present within the site, in particular the western void.

4.0 Discussion and Conclusion

In total 45 bird species were recorded within the site boundary during the 2018 breeding bird surveys, of these 20 species were recognised as being of local or national conservation priority. Of these, willow warbler, whinchat and meadow pipit were identified as confirmed breeders due to being recorded as carrying food/faecal sacs indicating an active nest, although, these nest sites were not visually identified. The results of the three surveys suggest however that the nests exist within the vegetation on the central spine of the quarry, indicated by the locations noted for each of these species performing breeding behaviours.

Another 16 bird species of which six are priority for conservation concern were noted as probably breeders and a further 12 bird species of which six are priority for conservation concern were recorded as possible breeders within the site.

Subject to the timing of the site operations resuming, it may be necessary to undertake advance checks of areas to be worked if disturbances of these does not take place outside of the main nesting season (March to end of August).

The presence of the peregrine falcon, a Schedule 1 species, will also require advance consideration when resuming operations.

5.0 Summary

The breeding bird surveys conducted in 2018 confirmed the presence of 45 bird species including 20 species that are recognised priorities for conservation.

Of these, only a low number were confirmed breeders although the potential impacts and mitigation requirements are considered in more detail in the main EclA.

APPENDIX 1

Survey Results

Vaynor Quarry 2018				Breeding status & estimate of pairs/singing males				
	Species	Scientific Name		Confirmed	Probable	Possible	Non-breeding/flyover	Comments
1	Grey Heron	<i>Ardea cinerea</i>					1	Flushed from quarry pool.
2	Red Kite	<i>Milvus milvus</i>					1	Flew east on 23/05/18.
3	Buzzard	<i>Buteo buteo</i>				1		Unlikely to be breeding within site boundary.
4	Curlew	<i>Numenius arquata</i>			1			Displaying just OUTSIDE and north of the quarry on 15/05/18.
5	Woodpigeon	<i>Columba palumbus</i>				1	1	
6	Cuckoo	<i>Cuculus canorus</i>				1		
7	Swift	<i>Apus apus</i>					2	
8	Green Woodpecker	<i>Picus viridis</i>				1		Recorded on each visit, but any nest likely to be outside of quarry site.
9	Kestrel	<i>Falco tinnunculus</i>				1		
10	Peregrine	<i>Falco peregrinus</i>				1		Presumed male present throughout, but inactive and no nest located.
11	Jackdaw	<i>Coloeus monedula</i>		c.33	20+			Estimate of 50+ breeding pairs, but could easily be 100+.
12	Carrion Crow	<i>Corvus corone</i>			1	1		
13	Raven	<i>Corvus corax</i>		1				Disused nest - young fledged before first visit.
14	Blue Tit	<i>Cyanistes caeruleus</i>			1	2		
15	Great Tit	<i>Parus major</i>		1	5			
16	Skylark	<i>Alauda arvensis</i>			2			
17	Sand Martin	<i>Riparia riparia</i>					1	
18	Swallow	<i>Hirundo rustica</i>				1		Two regularly around buildings in south of quarry , but no nest located.
19	House Martin	<i>Delichon urbicum</i>					1	
20	Willow Warbler	<i>Phylloscopus trochilus</i>		2	4	3		
21	Chiffchaff	<i>Phylloscopus collybita</i>			1			
22	Blackcap	<i>Sylvia atricapilla</i>				1		
23	Wren	<i>Troglodytes troglodytes</i>			7	1		
24	Treecreeper	<i>Certhia familiaris</i>			1			
25	Starling	<i>Sturnus vulgaris</i>					30	
26	Blackbird	<i>Turdus merula</i>		2	4			
27	Song Thrush	<i>Turdus philomelos</i>			1	2		
28	Mistle Thrush	<i>Turdus viscivorus</i>				1		
29	Spotted Flycatcher	<i>Muscicapa striata</i>				1		
30	Robin	<i>Erithacus rubecula</i>			2	1		
31	Redstart	<i>Phoenicurus phoenicurus</i>		2	3			Breeding in rock crevices.
32	Whinchat	<i>Saxicola rubetra</i>		2	2	1		4, possibly 5 pairs, at N end including 2 carrying food.

33	Stonechat	<i>Saxicola rubicola</i>	1	1			At least 3 fledged young present on last visit.
34	Wheatear	<i>Oenanthe oenanthe</i>		1	1		Probably just 1 pair.
35	Dunnock	<i>Prunella modularis</i>			2		
36	Grey Wagtail	<i>Motacilla cinerea</i>				1	Feeding in wet area of quarry 07/06/18.
37	Pied Wagtail	<i>Motacilla alba</i>	1	1			Adult feeding juv & another agitated adult,probably from a different pair.
38	Meadow Pipit	<i>Anthus pratensis</i>	1	5			
39	Chaffinch	<i>Fringilla coelebs</i>		1	2		
40	Bullfinch	<i>Pyrrhula pyrrhula</i>			3		3 singles noted around south end of quarry
41	Greenfinch	<i>Chloris chloris</i>		1			
42	Linnet	<i>Linaria cannabina</i>		3	1		
43	Lesser Redpoll	<i>Acanthis cabaret</i>		2			
44	Crossbill	<i>Loxia curvirostra</i>				2	Flew south-west on 07/06/18.
45	Goldfinch	<i>Carduelis carduelis</i>		3			Mobile, including flock of 8, but probably 3 pairs on territory.

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