



JCB EXCAVATORS LIMITED

R&D AND VVIP BUILDINGS AT WREDON QUARRY

ECOLOGY ASSESSMENT REPORT

MARCH 2021

DATE ISSUED: 04 March 2021

JOB NUMBER: ST13894

REPORT NUMBER: 013

JCB EXCAVATORS LIMITED EXCAVATORS LTD

R&D BUILDING AND VVIP BUILDING, WREDON QUARRY, STAFFORDSHIRE

ECOLOGICAL ASSESSMENT REPORT

MARCH 2021

PREPARED BY:

Robyn Murphy Graduate Ecologist

REVIEWED BY:

Ceridwyn Adkins Associate Director

APPROVED BY:

Chris Bean Technical Director

This report has been prepared by Wardell Armstrong LLP with all reasonable skill, care and diligence, within the terms of the Contract with the Client. The report is confidential to the Client and Wardell Armstrong LLP accepts no responsibility of whatever nature to third parties to whom this report may be made known.

No part of this document may be reproduced without the prior written approval of Wardell Armstrong LLP.



Wardell Armstrong is the trading name of Wardell Armstrong LLP, Registered in England No. OC307138.

Registered office: Sir Henry Doulton House, Forge Lane, Etruria, Stoke-on-Trent, ST1 5BD, United Kingdom

UK Offices: Stoke-on-Trent, Birmingham, Bolton, Bury St Edmunds, Cardiff, Carlisle, Edinburgh, Glasgow, Leeds, London, Newcastle upon Tyne, Shefford and Truro. International Offices: Almaty and Moscow.

ENERGY AND CLIMATE CHANGE
ENVIRONMENT AND SUSTAINABILITY
INFRASTRUCTURE AND UTILITIES
LAND AND PROPERTY
MINING AND MINERAL PROCESSING
MINERAL ESTATES
WASTE RESOURCE MANAGEMENT

CONTENTS

EXECUTIVE SUMMARY	1
1 INTRODUCTION	2
1.1 Terms of Reference	2
2 METHODOLOGY	5
2.1 Desk Study	5
2.2 Ecological Assessment.....	5
2.3 Caveat.....	5
2.4 Quality Assurance & Environmental Management	5
3 RESULTS.....	6
3.1 Desk Study.....	6
3.2 Phase 1 Habitat Survey	6
3.3 Protected Species Assessment.....	7
4 DISCUSSION AND RECOMMENDATIONS	8
5 REFERENCES.....	9

APPENDICES

Appendix 1 Legislation and Policy Summary

EXECUTIVE SUMMARY

Wardell Armstrong LLP (WA) was commissioned by JCB Excavators Ltd to undertake an ecological assessment of R&D and VVIP buildings at Wredon Quarry, to inform the proposed building extension and associated landscaping of the R&D Building and the retrospective extension to the VVIP Building. Methods comprised of a review of the previous desk study data and a site survey in February 2021.

WA has undertaken a variety of surveys and reports at Wredon Quarry since 2014, which include great crested newts, badgers, botanical surveys, bat roost assessment, ecological appraisal and pond and woodland monitoring.

Badgers are known within the wider quarry area; peregrines are present in the quarry; and trees with bat roost potential are present on the peripheries of the quarry. Under the current proposals the R&D building extension is considered to have negligible impact on roosting bats and nesting birds. Although the VVIP has already been undertaken, the area has been previously been surveyed as part of the access to the quarry bowl report and was considered to provide negligible ecological value.

No further surveys or enhancements are provided due to the negligible potential the proposals to flora and fauna.

1 INTRODUCTION

1.1 Terms of Reference

- 1.1.1 Wardell Armstrong LLP (WA) was commissioned by JCB Excavators Ltd to undertake an ecological assessment including ground level roost assessment for bats in support of a planning application for a proposed extension of the R&D building and review of the VVIP building and its impact to the area at Wredon Quarry, Staffordshire, central Ordnance Survey (OS) grid reference SK 08145 47488 (hereafter known as the 'Site').
- 1.1.2 This report has been produced with reference to current guidelines for Phase 1 Habitat Survey (Joint Nature Conservation Committee, 2010), Guidelines for Ecological Appraisal (Chartered Institute of Ecology and Environmental Management, 2017) and British Standards for Biodiversity – Code of Practice for Planning and Development (British Standards Institute, 2013).
- 1.1.3 The purpose of the PEA is to identify the likely ecological constraints associated with a project; any mitigation measures or additional surveys likely to be required; and the opportunities offered by the project to deliver ecological enhancement.
- 1.1.4 The following ecological features have been considered:
- Statutory and non-statutory designated conservation areas;
 - Areas of Ancient Woodland;
 - Legally Protected Species;
 - Priority Habitats and Species¹; and
 - Invasive species.
- 1.1.5 Legislation and policies pertaining to protected and notable designated sites, habitats and species is provided in Appendix 1.
- 1.1.6 WA has been undertaking ecological surveys at the site since 2014, including ecological assessment, botanical surveys, badger and nocturnal bat surveys.

¹ Priority habitats and species are as follows:

- In England, those under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006
- Those listed as being a priority for conservation within the relevant Local Biodiversity Action Plan (BAP)
- Those Red Listed using International Union for the Conservation of Nature (IUCN) criteria
- Those in the Birds of Conservation Concern (BoCC) listed as Red or Amber
- Those listed at Nationally Rare or Nationally Scarce species

1.1.7 This report pertains to these results only; recommendations included within this report are the professional opinion of an experienced ecologist and therefore the view of WA. The survey(s) are undertaken as part of this review and subsequent report are prepared in accordance with the British Standard for Biodiversity Code of Practice for Planning and Development (BS42020:2013).

1.1.8 Site Context

1.1.9 The site is located within the Wredon Quarry bowl Rue Hill Cauldon Lowe, Staffordshire, ST10 3HA. The site comprises a quarry which is now used under an interim planning permission for testing and demonstrating JCB machinery and its uses within a quarry setting. The surrounding land use is predominately arable (see Figure 1 and 2).



Figure 1: R&D Building extensions area²

² The metal building present on the plan, no longer exists



Figure 2: VVIP Building extensions area

- 1.1.10 The term Zone of Influence is used to describe the geographic extent of potential impacts of a proposed development. The Zone of Influence is determined by the nature of the development and in relation to designated sites, habitats or species which might be affected by the proposals.
- 1.1.11 For this site, the Zone of Influence is considered to be the quarry only due to the small-scale impacts of the proposals and within an existing operating quarry.

2 METHODOLOGY

2.1 Desk Study

2.1.1 The desktop study was informed by review of existing available information provided by SER (Staffordshire Ecological Records) for a 2km search radius around the site boundary and from available internet-based resources including MAGIC up to a 5km search radius from site central grid reference. Ordnance Survey (OS) and satellite mapping was also used to gain contextual habitat information.

2.2 Ecological Assessment

2.2.1 A Phase 1 Habitat Survey and Protected Species Assessment was conducted on the 25th February 2021, using standard techniques and methodologies (JNCC, 2010) and the nomenclature of Stace (2005).

2.2.2 The habitats on Site were assessed for their suitability for supporting any legally protected or notable species that would be affected by the proposed development.

2.2.3 Any incidental sightings of individual species or field signs such as footprints, latrines or feeding remains discovered during the survey were noted. In the case of great crested newts and bats, specific quantitative assessment methodologies have been adopted industry wide and details of these are provided below.

2.3 Caveat

2.3.1 The desk study data is third party controlled data, purchased for the purposes of this report only. WA cannot vouch for its accuracy and cannot be held liable for any error(s) in these data.

2.3.2 It should be noted that whilst every effort has been made to provide a comprehensive description of the site, no investigation could ensure the complete characterisation and prediction of the natural environment.

2.4 Quality Assurance & Environmental Management

2.4.1 The survey and assessment have been overseen by and the report checked and verified by an experienced, licensed bat surveyor and member of CIEEM, who is bound by its code of professional conduct. All surveys and assessments have been undertaken with reference to the recommendations given in British Standard BS 42020, and as stated within specialist guidance, as appropriate and referenced separately.

3 RESULTS

3.1 Desk Study

3.1.1 No European Statutory Designated sites were recorded, and no Statutory Designated Sites were recorded within 1km. Numerous protected species were recorded in the wider area. Badgers are the closest known protected species but were over 30m away from the VVIP building.

3.1.2 Records are available upon request.

3.2 Phase 1 Habitat Survey

3.2.1 The R&D building is located to the entrance of the quarry, with an existing in use building and hardstanding areas only.



Figure 3: R&D Building area to be extended

- 3.2.2 The VVIP building is located further into the quarry with an existing building present. The works include extension of the building and tarmacking the existing hardstanding gravel area. This area was and the access to the application area was subject to previous planning applications for works within the quarry bowl.

3.3 **Protected Species Assessment**

- 3.3.1 Due to the lack of suitable habitats, the site is not considered likely to support any legally protected or notable species.
- 3.3.2 None of the buildings on site provided suitable habitat for nesting birds and roosting bats.

4 DISCUSSION AND RECOMMENDATIONS

- 4.1.1 No protected plant or animal species were observed in the proposed extension areas or the area where works have been undertaken, as the habitats are predominately hard standing the opportunities for protected or notable species is negligible. No further surveys or assessments are required.
- 4.1.2 Although no further surveys or assessments are required, it is recommended to avoid impacts to local fauna , that night working should be avoided where possible and any artificial lighting to be hooded and directed to works to prevent light spillage.
- 4.1.3 In line with recommendations from the NPPF (2019), development should not result in a loss of biodiversity and where possible should implement measures by which to increase the existing biodiversity. It is considered that the development is unlikely to result in a net loss of biodiversity as the proposed plans are within hard standing areas and the buildings themselves provide negligible potential for nesting birds and roosting bats. As discussed above, providing hoods and directing lighting to prevent light spill, along with timed lighting is considered sufficient to reduce impacts to biodiversity.

5 REFERENCES

Bat Conservation Trust (2018). Bats and Artificial Lighting in the UK Guidance Note 08/18.

British Standards Institute. (2013). *Biodiversity – Code of Practice for Planning and Development*. BS 42020:2013.

Brooks B., Burrows L., Collins J., Fure A., Neeve G., Renshaw K., Williams C., Howard A (2018). *Bats and artificial lighting in the UK*. Bat Conservation Trust, London.

Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3rd edn). The Bat Conservation Trust, London.

CIEEM (2017b) Guidelines for Ecological report Writing (2nd edn.). Chartered Institute of Ecology and Environmental Management, Winchester.

Department of Communities & Local Government, 2018. *National Planning Policy Framework*, London: DCLG.

Institute of Environmental Assessment. (1995). *Guidelines for Baseline Ecological Assessment*.

Wardell Armstrong (2014-2020) Ecology reports include:

Report Number	Report Title	Date
005	Great Crested Newt Survey Report	Jul-14
006	Preliminary Ecological Appraisal	Jul-14
008	Badger Report	Sep-14
0013	Addendum to Badger Survey Report September 2014	Oct-15
014	Badger Method Statement (Sett 17 Closure)	Oct-15
014	Great Crested Newt Interim Report - Receptor Site Photographs	Nov-16
015	Badger Method Statement (Sett 10 Closure)	Oct-16
BOT-001	Botanical Survey Report and Interim Restoration and Advanced Landscape Management Scheme	May-17
BOT-001	Botanical Survey Report and Interim Restoration and Advanced Landscape Management Scheme	Oct-18
BOT-002	Grassland Mitigation Strategy	Dec-18
MON-001	Condition 37 - Pond and Woodland Monitoring	Oct-18
ECO-001	Proposed tilt table, control office and loading tower at Wredon Quarry - Technical Note, Ecology (incl. Confidential Badger Annex)	Jan-19
ECO-002	Badger Method Statement	Jul-19
ECO-003	NVH EcIA	Dec-19
ECO-004	NVH Landscape and Ecology Management Plan	Dec-20

Report Number	Report Title	Date
ECO-005	NVH Construction Environmental Management Plan (Biodiversity)	Dec-19
ECO-006		
ECO-007	Wredon Developments (tilt table etc)	Sep-19
ECO-008	Confidential Badger Report for Wredon Developments	Sep-19
MON-002	Condition 37 - Pond and Woodland Monitoring	Oct-19
ECO009	Bat Roost Assessment Report	Oct-20
ECO010	Badger Mitigation Licence Method Statement	Dec-20
ECO11	Kevin South Grandstand	Dec-20
ECO012	Wheelwash Ecology Report	Dec-20
ECO013	R&D and VVIP Building EA	Mar-21

Appendix 1

Legislation and Policy Summary

Appendix 1 – Legislation and Policy Summary

Legislation for Habitats/Sites

Designated Site/Habitat	Status
Ramsar Sites	Ramsar Sites are wetlands of international importance designated following The Ramsar Convention. RAMSAR sites have the same level of protection as SSSIs under the Wildlife and Countryside Act 1981 (as amended).
SPA (Special Protection Areas)	SPAs are classified in accordance with Article 4 of the EC Directive on the Conservation of Wild Birds (79/409/EEC), the Birds Directive. They are they seek to protect the habitats of rare and vulnerable birds, listed in Annex I of the Birds Directive, and for regularly occurring migratory species. The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 implement the Birds Directive in the UK.
SAC (Special Areas for Conservation)	SACs are strictly protected areas which represent typical European Union of habitats and (non-bird) species listed in Annexes I and II of the EC Habitats Directive. The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2017 implement the Habitats Directive in the UK.
SSSI (Sites of Special Scientific Interest)	SSSIs protect the best examples of the UK's flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981 (as amended). Modified provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000.
NNR (National Nature Reserves)	NNRs are examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. NNRs are declared by the statutory country conservation agencies under the National Parks and Access to the Countryside Act 1949 and the Wildlife and Countryside Act 1981 (as amended). Legal protection of NNRs is provided under The Wildlife and Countryside Act 1981 (as amended).
Hedgerows	All hedgerows are protected by the Hedgerows Regulations 1997, under which it is an offence to remove or destroy certain hedgerows without planning consent or permission from the Local Planning Authority. These regulations do not apply to any hedgerow within the curtilage of, or marking the boundary of the curtilage of, a dwelling house.
LNR (Local Nature Reserves)	Designated by the National Parks and Access to the Countryside Act 1949, LNRs may be declared for nature conservation by local authorities after consultation with the relevant statutory nature conservation agency. Legal protection of LNRs is provided under The Wildlife and Countryside Act 1981 (as amended).

Legislation for Species

Species	Legal Status
<i>European Legislation</i>	
Creeping Marshwort, Early Gentian, Fen Orchid, Floating-leaved Water Plantain, Killarney Fern, Lady's Slipper, Shore Dock, Slender Naiad, Yellow Marsh Saxifrage	Under the Conservation of Habitats and Species Regulations 2017 (and as amended), it is illegal to deliberately pick, collect, uproot or destroy any such species.
Bats, Dormouse, Otter, Wild Cat, Great Crested Newt, Natterjack Toad, Sand Lizard, Smooth Snake, Large Blue Butterfly	These animals and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats and Species Regulations 2017 (and as amended), which makes it illegal to: • Deliberately capture, injure or kill any such animal or to deliberately take or destroy their eggs; • Deliberately disturb³ such an animal; and • Damage or destroy a breeding site or resting place of such an animal. European Protected Species (EPS) licenses can be granted by Natural England in respect of development to permit activities that would otherwise be unlawful under the Conservation Regulations, providing that the following 3 tests (set out in the EC Habitats Directive) are passed, namely: • The development is for reasons of overriding public interest; • There is no satisfactory alternative; and • The favourable conservation status of the species concerned will be maintained and/or enhanced. Under Regulation 9(5) of the Conservation Regulations, Planning Authorities have a duty to 'have regard to the requirements of the EC Habitats Directive' i.e. LPA's must consider the above 3 'tests' when determining whether Planning Permission should be granted for developments likely to cause an offence under the Conservation Regulations.
<i>Domestic (UK) Legislations</i>	

³ Under the Conservation Regulations, disturbance of protected animals includes in particular any disturbance which is likely to: (i) impair their ability to survive, breed or reproduce, or to rear or nurture their young or to hibernate or migrate; (ii) significantly affect the local distribution or abundance of the species in question.

Species	Legal Status
Bats, Dormouse, Great Crested Newt, Heath Fritillary, High Brown Fritillary, Large Blue, Marsh Fritillary, Natterjack Toad, Pine Martin, Otter, Red Squirrel, Sand Lizard, Smooth Snake, Swallowtail, Water Vole, Wildcat	These animals receive full protection under the Wildlife and Countryside Act 1981 (and as amended), which makes it illegal (subject to certain exceptions) to: • Intentionally kill, injure or take any such animal; • Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any such animal; and • Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.
Adder, Common Lizard, Grass Snake, Slow Worm, White-clawed Crayfish	These animals receive partial protection under The Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which provide protection against intentional killing or injury of any such animal.
Nesting Birds	All wild birds (as defined by the act) are protected under the Wildlife and Countryside Act 1981 (and as amended), which makes it illegal (subject to exceptions) to: • Intentionally kill, injure or take any wild bird; • Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.
WCA Schedule 1 listed Birds	Additional protection is provided to birds listed on Schedule 1 of the Wildlife and Countryside Act 1981 (and as amended). In addition to the offences detailed above relating to all wild birds, it is illegal to: • Intentionally or recklessly disturb any bird listed on Schedule 1, or their dependent young while nesting.
Badgers	The Protection of Badgers Act 1992 makes it illegal to wilfully kill or injure a Badger, or attempt to do so and to intentionally or recklessly interfere with a Badger sett. This includes: • damaging or destroying an active sett; • obstructing access to a sett; and • disturbing a Badger while it is occupying a sett. Licences can be granted to permit sett closure and/or disturbance between July and November inclusive (i.e. outside the sow pregnancy/birth period).
Wild Mammals	The Wild Mammals (Protection) Act 1996 provides legal protection to all wild mammals (as defined by the act) against the following actions: mutilate, kick, beat, nail, or otherwise impale, stab, burn, stone, drown, crush, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.
<i>Invasive Species</i>	

Species	Legal Status
WCA Schedule 9 listed animals (Part 1) and plants (part 2)	Certain species of plants and animals that do not naturally occur in Great Britain have become established in the wild and represent a threat to the natural fauna and flora. Section 14 of the Wildlife & Countryside Act prohibits the release of any animal species that are: <i>“not ordinarily resident in and is not a regular visitor to Great Britain in a wild state”</i>

Policy Summary

Section 40 of the Natural Environment and Rural Communities (NERC) Act imposes a legal duty on Planning Authorities to ‘have regard’ to the conservation of biodiversity when considering planning applications.

Section 41 of the NERC Act requires the Secretary of State to publish a list of species and habitats of principal importance for conserving biodiversity in the UK. Such Biodiversity Action Plan (BAP) Habitats and Species (2007) do not offer the species any specific protection but help to highlight the species importance at a national level. This list is used by Local Planning Authorities to identify the species and habitats that should be afforded priority when applying the requirements of the National Planning Policy Framework (NPPF).

The NPPF underpins the Government’s planning policies for England and how these are to be applied. The central theme of the NPPF is a presumption in favour of sustainable development. This presumption does not apply where development requiring Appropriate Assessment because of its potential impact on a habitats site is being planned or determined.

The NPPF states:

Planning policies and decisions should contribute to and enhance the natural and local environment by:

- if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;;*

- *development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons⁵⁸ and a suitable compensation strategy exists; and;*
- *development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity;*
- *The following should be given the same protection as habitats sites:*
 - a) potential Special Protection Areas and possible Special Areas of Conservation;*
 - b) listed or proposed Ramsar sites; and*
 - c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.*

The presumption in favour of sustainable development does not apply where development requiring appropriate assessment because of its potential impact on a habitats site is being planned or determined.

The NPPF requires the Planning Authority to have a responsibility to promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets, and identify suitable indicators for monitoring biodiversity in the plan. In addition, the planning system should contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

STOKE-ON-TRENT

Sir Henry Doulton House
Forge Lane
Etruria
Stoke-on-Trent
ST1 5BD
Tel: +44 (0)1782 276 700

BIRMINGHAM

Two Devon Way
Longbridge Technology Park
Longbridge
Birmingham
B31 2TS
Tel: +44 (0)121 580 0909

BOLTON

41-50 Futura Park
Aspinall Way
Middlebrook
Bolton
BL6 6SU
Tel: +44 (0)1204 227 227

BURY ST EDMUNDS

6 Brunel Business Court
Eastern Way
Bury St Edmunds
Suffolk
IP32 7AJ
Tel: +44 (0)1284 765 210

CARDIFF

Tudor House
16 Cathedral Road
Cardiff
CF11 9LJ
Tel: +44 (0)292 072 9191

CARLISLE

Marconi Road
Burgh Road Industrial
Estate Carlisle
Cumbria
CA2 7NA
Tel: +44 (0)1228 550 575

EDINBURGH

Great Michael House
14 Links Place
Edinburgh
EH6 7EZ
Tel: +44 (0)131 555 3311

GLASGOW

2 West Regent Street
Glasgow
G2 1RW
Tel: +44 (0)141 433 7210

LEEDS

36 Park Row
Leeds
LS1 5JL
Tel: +44 (0)113 831 5533

LONDON

Third Floor
46 Chancery Lane
London
WC2A 1JE
Tel: +44 (0)207 242 3243

NEWCASTLE UPON TYNE

City Quadrant
11 Waterloo Square
Newcastle upon Tyne
NE1 4DP
Tel: +44 (0)191 232 0943

SHEFFORD

PI House
R/O 23 Clifton Road
Shefford
Bedfordshire
SG17 5AF
Tel: +44 (0)1462 850 483

TRURO

Baldhu House
Wheal Jane Earth Science Park
Baldhu
Truro
TR3 6EH
Tel: +44 (0)187 256 0738

International offices:

ALMATY

29/6 Satpaev Avenue Regency
Hotel
Office Tower
Almaty
Kazakhstan
050040
Tel: +7(727) 334 1310

MOSCOW

21/5 Kuznetskiy Most St.
Moscow
Russia
Tel: +7(495) 626 07 67