LC Ecological Services

APPENDIX 4.5 -
HAZEL DORMOUSE SURVEYS

HAMBLE AIRFIELD
HAMBLE LE RICE
HAMPSHIRE

NOVEMBER 2021

ON BEHALF OF CEMEX

The Old Squash Court,
Rempstone Hall,
Rempstone,
Corfe Castle,
Wareham,
Dorset,
BH20 5JQ
www.ecological-services.co.uk

Telephone: 01929 477115
E-mail: enquiries@ecological-services.co.uk

Authorisation

	Name	Date
Report prepared by:	ARH	24.11.2021
Report checked by:	JS	25.11.2021

The contents of this report were correct at the time of the last survey visit. The report is provided for the sole se of the named client and is confidential.

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SUMMARY

1. LC Ecological Services Limited (LCES) were commissioned by CEMEX UK to conduct standard presence / absence surveys for hazel dormouse on the land at the former Hamble Airfield, Hamble Lane, Hamble-le-Rice, Eastleigh, Hampshire. These surveys were required to support a planning application for a quarrying project.

2. The scrub, native hedgerows and broadleaved woodland on site have potential to support hazel dormice. The site also has connectivity with further suitable habitat for dormice to the north-east, north and north-west, including areas of broadleaved woodland, stands of scrub and hedgerows.

3. No records of dormice were returned in the desk study, however the species is known to be present within the wider locality to the east.

4. Standard presence / absence surveys for hazel dormouse were conducted on site by LCES in 2015, 2019 and 2021. No dormice, or evidence thereof was recorded during the survey work. It is assumed that dormice are likely absent from the site and immediate surrounding area. No further actions are required.

1.0 INTRODUCTION

LC Ecological Services Limited (LCES) were commissioned by CEMEX UK to conduct presence / absence surveys for hazel dormouse (*Muscardinus avellanarius*) on the land at Hamble Airfield, Hamble-le-Rice, Hampshire, SO31 4NL (approximate central Grid Ref: SU 47765 07807) to support a planning application for phased aggregate extraction on the site, including the erection of a processing plant with silt lagoons and associated infrastructure, and post-quarrying restoration of the land.

Section 2 of the report provides some background information on legislative requirements and relevant policy. Section 3 details the methodologies adopted for the surveys conducted and section 4 provides an account of the survey results. Section 5 provides information on the relevance of the survey results to a potential development and makes recommendations if required.

2.0 LEGISLATION AND POLICY

2.1 Legislation

The following legislation may be of relevance to the proposed works. Full details of statutory obligations with respect to biodiversity and the planning system can be found in DCLG Circular 06/2005.

- **The Conservation of Habitats and Species (Amendments) Regulations 2017:** This transposes the EU Habitats Directive (Council Directive 92/43/EEC) into domestic law. The Regulations provide protection for a number of species including **hazel dormouse**.

  This legislation makes it an offence to deliberately capture, kill or injure individuals of these species listed on Schedule 2 and damage or destroy their breeding site or place of shelter. It is also illegal to deliberately disturb these species in such a way as to be likely to significantly affect: (i) the ability of any significant group of the species to survive, breed or rear or nurture their young; or (ii) the local distribution or abundance of the species[1].

[1] The *Conservation of Habitats and Species (Amendments) Regulations 2017* consolidated the numerous amendments that were made to the Conservation (Natural Habitats, &c.) Regulations 1994. Of particular relevance are amendments made in August 2007and January 2009 which increased the threshold of illegal levels of disturbance to European Protected Species (EPS). An offence is only committed if the deliberate disturbance would result in significant impacts to the EPS population. However, it should be noted that activities that cause low levels of disturbance to these species continue to constitute an offence under Section 9 of the Wildlife and Countryside Act (see below).

This legal protection means that where development has the potential to impact on bats, or other species of national interest[2], the results of a protected species survey must be submitted with a planning application.

- **The Wildlife and Countryside Act 1981 (and amendments):** Protected fauna and flora are listed under Schedules 1, 5 & 8 of the Act. Species include **hazel dormouse**. It is an offence to intentionally kill, injure or take hazel dormouse, intentionally or recklessly damage, destroy, obstruct access to hazel dormouse nests, or disturb them whilst in a nest.

- **Natural Environment and Rural Communities Act (NERC) 2006**: This Act enforces a duty on the planning authority and local council to conserve biodiversity (section 40). Additionally, section 41 encourages the local councils to be aware of the species and habitats of 'principal importance' and to act accordingly to protect and manage these habitats and species.

- **The Countryside and Rights of Way Act 2000:** This Act strengthens nature conservation and wildlife protection. It places a duty on Government Ministers and Departments to conserve biological diversity, provides police with stronger powers relating to wildlife crimes, and improves protection and management of SSSIs.

- **Wild Mammals (Protection) Act 1996:** This Act provides protection for all wild animals from intentional acts of cruelty.

- **Hedgerow Regulations 1997:** These Regulations establish a set of criteria for assessing the importance of hedgerows. Where a hedgerow is deemed to be 'important' its removal is prohibited without consent from the local Planning Authority. This includes hedgerows known to support dormice.

2.2 Policy

The following policy is of relevance to the proposed works:

- **National Planning Policy Framework (NPPF):** This sets out the Government's vision for biodiversity in England with the broad aim that planning, construction, development and regeneration should maintain and enhance, restore, or add to biodiversity and geological conservation interests. NPPF (2021) includes sections on legally protected species and sites in section 15 (2) (see section 2.1).

- **Local Sites (including Sites of Nature Conservation Interest (SNCIs), Local Nature Reserves (LNR), and Biological Notification Sites (BNSs)/Local Wildlife Sites (LWSs)):** These are a network of sites designated for their nature conservation importance in a local context. Where such development is permitted, the local planning

[2] Species of wild fauna and flora as listed in Annex II, IV or V of the Habitats Directive.

authority will use conditions and/or planning obligations to minimise the damage and to provide compensatory and site management measures where appropriate.

- **Natural England Protected Species Standing Advice**: The standing advice is used by local authorities as a fallback position when in pre-application consultation or during the determination period to define habitat and species survey efforts and mitigation proposals.

- **Biodiversity Action Plans (BAPs):** BAPs set out policy for protecting and restoring priority species and habitats as part of the UK's response as signatories to the Convention on Biological Diversity. BAPs operate at both a national and local level with priority species and habitats identified at a national level and a series of Local BAPs that identify ecological features of particular importance to a particular area of the country. The requirement to consider and contribute towards BAP targets is derived from the NERC Act 2006 and was strengthened through the Countryside and Rights of Way Act 2000. Species Action Plans include **hazel dormouse (UK BAP).**

3.0 METHODOLOGY

3.1 Desk study

Hampshire Biodiversity Information Centre (HBIC) provided protected species records within two kilometres of the site boundary. The Multi-Agency Geographical Information for the Countryside (MAGIC) website was used to provide any information relating to granted European Protected Species Mitigation (EPSM) licences for hazel dormouse within two kilometres of the site boundary.

3.2 Protected species assessment

Hazel dormouse

The habitat on the site was assessed for the potential to support hazel dormouse, which are found in habitats such as woodlands, scrub and hedgerows with good connectivity and suitable food plants. A visual inspection for their distinctive nests was undertaken. Satellite imagery was also used to assess the connectivity of any suitable habitat present on the site to other areas of woodland and hedgerow networks.

Nest tube presence / absence surveys 2015, 2019 and 2021

Artificial dormouse nesting tubes were deployed within suitable habitat on site, namely the scrub stands, north-eastern boundary hedgerows, and stands of regenerating broadleaved woodland in the north-west of the site. The nest tubes were sited at least 10 metres apart, and at a height of 1 to 2 metres above ground level, as per the guidelines in Bright *et al*., (2006). A total of 50 nest tubes were deployed on site during the 2015 survey (largely in habitat around the northern boundaries of the site), a total of 110 were deployed during the 2019 survey (in habitats alongside the majority of the site perimeter), and a total of 144 were deployed during the 2021 survey (mostly alongside the site perimeter). The nest tube locations are illustrated on the respective survey plans included as appendix I.

Each round of survey work was completed between the months of April and October (inclusive) and a sufficient number of monthly checks of the nest tubes were undertaken to ensure a minimum search effort score of 20 points was achieved (following Bright et al., 2006).

During the survey checks each nest tube was inspected for characteristic signs of dormice, including the following:

- Presence of dormice themselves.
- Presence of dormouse nests. Typically, these are grapefruit-sized and woven from strips of honeysuckle bark or similar material with whole fresh green leaves

incorporated into the outer layers. The nests are spherical and lack an obvious entrance hole.
- Presence of droppings. Typically, these are larger and crinklier compared to droppings of other small rodents. However, identification of faecal pellets is not fully reliable and should not be used to confirm presence or absence of dormice.
- Presence of characteristically gnawed hazelnuts or other hard fruit: dormice leave a smooth round hole with few tooth marks on the surface.

Limitations and constraints

The set up of the 2021 presence / absence survey (deployment of nest tubes on site) was scheduled to be undertaken in April 2021, however due a supplier shortage of artificial nest tubes it was therefore not possible to setup the survey until May 2021. Subsequent monthly survey checks of the nest tubes should then have continued up to and including November in order to achieve the required survey effort score of 20 points (Bright *et al*., 2006). However, one of LCES' subcontractors responsible for undertaking this work mistakenly collected in the nest tubes from site in October 2021 and by the time this error was identified it was then too late to redeploy nest tubes on site to complete a final November survey check. Consequently, a survey effort score of 18 points was achieved during the 2021 survey.

Despite this error, it is considered that the conclusions in this report remain valid as LCES have undertaken a substantial level of presence / absence survey work on the site for hazel dormice, comprising three recent surveys in the years 2015, 2019 and 2021 with high numbers of nest tubes deployed in 2019 and 2021.

4.0 RESULTS

4.1 Desk study

Protected species records

No records of dormice or any European protected species mitigation (EPSM) licences for the species were identified within two kilometres of the site during the desk study. However, they are known to be present within the wider locality and there is a cluster of granted EPSM licences for the species located between 3.9 and 6.3 kilometres to the east of the site. It was therefore considered possible that dormouse could be present on site.

4.2 Field survey

Hazel dormouse

The scrub, native hedgerows and broadleaved woodland on site all provide suitable habitat for hazel dormouse, with a good range of food sources, such as bramble (*Rubus fruticosus* agg.), hazel (*Corylus avellana*), hawthorn (*Crataegus monogyna*) and blackthorn (*Prunus spinosa*), and dense woody vegetation suitable for constructing nests within. The site also has connectivity with further suitable habitat for dormice to the north-east, north and north-west, including areas of broadleaved woodland, stands of scrub and hedgerows. There is some arboreal connectivity across both Satchell Lane to the north-east and Hamble Lane to the north-west, and the site directly links with stands of scrub along the rail line cuttings to the north.

2015 survey

The dormouse presence / absence survey undertaken on site during May to September 2015 recorded no dormice or evidence thereof. The results from the five survey visits are presented in table 1 below.

Table 1: Dormouse survey results (2015)

Date	Weather (Cloud cover)	Temp (°C)	Results
21/05/2015	Breezy and sunny, 1/8	15	No dormice recorded
18/06/2015	Hot and sunny	26	No dormice recorded
30/07/2015	Warm	16	No dormice recorded. One wood mouse (*Apodemus sylvaticus*) nest recorded in the north of the site
28/08/2015	Hot with sunshine	18	No dormice recorded. One wood mouse nest recorded in the north of the site
18/09/2015	Warm with 5/8 cloud cover	14	No dormice recorded

2019 survey

The dormouse presence / absence survey undertaken on site during May to September 2019 recorded no dormice or evidence thereof. The results from the five survey visits are presented in table 2 below.

Table 2: Dormouse survey results 2019

Visit	Date	Time	Weather	Temp (°C)	Results
1	10/05/2019	10:15	Warm & sunny, 1/8, F1-2, no rain	11 - 16	No dormice or evidence thereof recorded. Wood mouse nests (*Apodemus sylvaticus*) were identified in the south-east of the site.
2	03/06/2019	09:00	10 min heavy rain, Warm, Partially clouded 4/8, wind 3/12	17	No dormice or evidence thereof recorded. Wood mouse nests were identified in the south-east of the site.
3	02/07/2019	11:15	Sunny, warm 4/8, 2/12	18	No dormice or evidence thereof recorded. Evidence of wood mouse recorded along the eastern boundary of the site.
4	01/08/2019	10:00	Overcast, warm 8/8, 2/12	18	No dormice or evidence thereof recorded. Wood mice and their nests recorded along the eastern boundary of the site.
5	02/09/2019	11:00	Sunny, warm 1/8, 1/12	20	No dormice or evidence thereof recorded. Evidence of wood mouse recorded along the eastern boundary of the site.

2021 survey

The dormouse presence / absence survey undertaken on site during June to October 2021 recorded no dormice or evidence thereof. The results from the five survey visits are presented in table 3 below.

Table 3: Dormouse survey results 2021

Visit	Date	Time	Weather	Temp (°C)	Results
1	25/06/2021	14:00	Warm and breezy.	19	No dormice, or evidence of dormice recorded.
2	27/07/2021	10:30	Overcast and breezy.	20	No dormice, or evidence of dormice recorded.
3	19/08/2021	08:15	Overcast and humid.	15-17	No dormice, or evidence of dormice recorded. Active wood mouse (*Apodemus sylvaticus*) nests in tubes A19 and A22.
4	24/09/2021	09:00	Warm and sunny.	14-18	No dormice, or evidence of dormice recorded. Wood mouse recorded in tube D94, active wood mouse nests in tubes A6, A21, A22, C65-67, D93, D98, D107, D109, and D139.
5	14/10/2021	08:30	Sunny and clear	13-17	No dormice, or evidence of dormice recorded. Wood mouse recorded in tube D98, active wood mouse nests in tubes A1, A2, A5, A19, A21, A24, B32, D93, and D97.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of findings

The scrub, native hedgerows and broadleaved woodland on site all provide suitable habitat for hazel dormouse, with a good range of food sources, such as bramble, hazel, hawthorn and blackthorn, and dense woody vegetation suitable for constructing nests within. The site also has connectivity with further suitable habitat for dormice to the north-east, north and north-west, including areas of broadleaved woodland, stands of scrub and hedgerows. No records of dormice were returned in the desk study, however the species is known to be present within the wider locality to the east.

Given that no hazel dormice or evidence thereof was recorded during the survey work, it is therefore considered that the species is likely absent from the site and immediate surrounding land. No further actions are required.

6.0 REFERENCES

Bright, P., Morris. P and Mitchell-Jones, T. (2006) *The dormice conservation handbook, second edition.* English Nature.

Hampshire Biodiversity Information Centre (2021). *Data search reference - HBIC Ref 10193, The former Hamble Airfield site.*

Multi-Agency Geographical Information for the Countryside (MAGIC) Website at www.magic.gov.uk.

APPENDIX I: Dormouse nest tube survey plans

2015

2019


45-69
22-44
70-83
1-21
84-110
Legend
Site boundary
Dormouse tubes 2019
Google Satellite
Map data ©2020 Google
0 50 100 150 m
N
Notes Dormouse survey
Project Hamble Airfield
Date 18.11.2021
Draft v.1
Drawn by Stuart Woodley
QGIS
LC Ecological Services

2021


C43-77
B25-42
D78-139
A1-24
D140-144
Legend
Site boundary
Dormouse tubes
Google Satellite
Map data ©2020 Google
0 50 100 150 m
N
Notes Dormouse survey
Project Hamble Airfield
Date 02.11.2021
Draft v.1
Drawn by Stuart Woodley
QGIS
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