

"Providing Common-sense Solutions for Sustainable Development"

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Sytch Road, Brown Edge

Harvest Mouse Presence /Absence Survey Report

October 2018



Harvest Mouse Transect Survey

<u>At</u>

Sytch Road Brown Edge Staffordshire

For

Mr. Gez Willard (Agent)

0. Executive Summary

0.1 <u>Report Rationale</u>

This report relates to the land off Sytch Road, Brown Edge, Staffordshire (OS Grid Reference: SJ 90759 53255). The works, commissioned by Mr Gez Willard (Agent), was to carry out a Harvest Mouse transect survey of the site. To fulfil this brief, both a desk-based study and site surveys were carried out on 10th October and 25th October 2018.

0.2 Proposed Works

Under the current proposals, the site is set to be cleared for the development of residential dwellings.

0.3 Ecological Impact Assessment

Harvest Mouse Presence/absence Survey

The predicted impact on the local colonies of the species would appear to be negligblie because, at present, the site is not being used for nesting or foraging purposes. Thus, no colonies are present on the site itself.

Nest ecology of species onsite

Based upon the lack of features onsite during the transect surveys, it is anticipated that no Harvest Mice are currently present in the proposed development area.

Ecological Value of the Site

From the results of the transect surveys, it would appear that the site does not currently support any nesting features for Harvest Mice. With this being the case, the site is considered to have a negligible foraging and nesting value.

0.4 Recommendations

The proposed recommendations for the works at the 'Sytch Road, Brown Edge' are outlined in 'section 5 – Recommendations'.

Harvest Mouse Transect Survey

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1. INTRODUCTION

1.1 Background

This report relates to land off Sytch Road, Brown Edge, Staffordshire (OS Grid Reference: SJ 90779 53259). The work, commissioned by Gez Willard (Agent), was to carry out a Harvest Mouse (*Micromys minutus*) transect survey of the site.

To fulfil this brief, both a desk-based study and site surveys were carried out in 10th October and 25th October 2018.

1.2 Site Description

The site is situated in the village of Brown Edge, Staffordshire. The site consists of various habitats/features - tall ruderal, marshy grassland, scattered trees, and a ditch.

Within the wider landscape, habitats such as housing estates, parkland, heathland, woodland, pastureland, arable land and water bodies (in the form of rivers and ponds) are all present.

1.3 **Proposed Works**

Under the current proposal, part of the land is set to be cleared and developed into residential dwellings. For specific plans, please refer to Appendix Two.

Figure 1: An aerial image (red outline) showing where the surveys were undertaken and some of the neighbouring habitats.



1.4 Aims of survey

The actions of the surveyors both on the site and during the production of the report were conducted in accordance with The Mammal Society Survey Guidelines. The aim was to undertake two separate transect surveys of the area in its entirety, and to record whether any Harvest Mice were present on the site. If so, notes were taken as to highlight where they were seen, and what activities they were undertaking (i.e. foraging, nesting etc.).

The results of these transect surveys will be used in conjunction with the knowledge of the proposed works to determine:

- What impact the proposed works are likely to have on any protected species found at the site.
- The need for any Natural England development licence application to be made in respect of activities concerning protected species.
- Recommendations for any mitigation measures that would be required.

2 METHODOLOGIES

2.1 Nesting Sites

The harvest mouse is the only British mammal to build nests of woven grass well above ground. Nests tend to be found in dense vegetation such as grasses, rushes, cereals, grassy hedgerows, ditches, and brambles. They are generally located on the stalk zone of grasses, at least 30cm above the ground. The size of the nest can vary from only 5cm in diameter for non-breeding nests to 10cm in diameter for breeding nests (Mammal Society, 2018). The site consists of approximately 95% tall ruderal vegetation and 5% marshland, which were searched as part of the survey due to both being potentially suitable habitats for Harvest Mice.

2.2 Harvest Mouse Activity Transects

Two walked transects were undertaken along pre-set routes (Figure 2), in accordance with best practice guidelines for harvest mouse summer nest surveys (Mammal Society, 2006). Transects were carried out during October once the vegetation had started to reced, as nest searches during the summer months are difficult due to the abundance of green vegetation.



Figure 2: An aerial photograph which illustrates the transect routes undertaken by each of the surveyors during the two transect surveys.

Each of the two surveys were carried out by two ecologists (for health and safety reasons) by walking the site, where accessible, in a uniform manner to determine the presence or absence of the species.

When using transect surveys to monitor Harvest Mice for development projects, the objective is to find all parts of the site which are used by Harvest Mice. Therefore, it is an advantage to:

- Undertake transects (clockwise and anti-clockwise in the same survey);
- Change the transect to look at a different area; and/or
- Stop and start transects depending on the level or type of activity.

2.3 Environmental Variables

Table 1: The environmental variables recorded during the four transect surveys.

<u>Date</u>	<u>Survey</u> <u>Type</u>	Temperature (°C)	<u>Humidity</u> <u>(%)</u>	<u>Cloud</u> <u>Cover</u> <u>(%)</u>	<u>Wind</u>	<u>Rain</u> (Y/N)
10/10/2018	Harvest Mouse Walkover	17°c	15%	0	Low	No
25/10/2018	Harvest Mouse Walkover	11°c	89%	100	Low	No

2.4 <u>Surveyors</u>

The surveys were undertaken by members of the Chartered Institute of Ecology & Environmental Management (CIEEM):

Mr. Paul Keeling BSc (Hons) MCIEEM – Ecologist, Natural England Bat Survey Licence Number: 2016-26861-CLS-CLS Bat Survey Level 2. [Principal Ecologist].

Miss. Tiffany Jenkinson Level 3 Extended Diploma in Countryside and Conservation Management [Assistant Ecologist].

Mrs. Kerry Bose MSci (Hons) AMRSB [Assistant Ecologist].

3 RESULTS

3.1 Pre-survey data search

Staffordshire Ecological Record (SER) was commissioned to carry out an ecological data search of all protected species and designated sites recorded within a 2km radius of the site.

A map showing the locations of the records obtained through the ecological data search can be found in Appendix B.

3.1.1 Designated sites

A number of designated sites have been revealed within a 2km radius of the site. These are of statutory sites, 15 non-statutory sites, two ancient & semi-natural woodlands, and one regionally important geological site. For a breakdown of these sites, please refer to the Preliminary Ecological Appraisal report.

The nearest of these to the proposed application site is the 'Tinster Wood' (approximately 615m to the south-east).

3.2 Field Surveys

3.2.1 Habitat description

The site is situated in the village of Brown Edge, Staffordshire. The proposed development site consists of tall ruderal, marshy grassland, and a stream.

Additionally, residential/commercial properties, gardens/yards, amenity grassland, and hard standing ground, all dominate the immediately adjacent land in all directions.

The site is surrounded by houses and as such is isolated from the wider landscape. This suggests that Harvest mouse activity would be limited to the site.

3.2.2 Transect Survey Results

Two transect activity surveys were undertaken on the site at Sytch Road, Brown Edge, during October as this is when the vegetation starts to recede, and their nests start to become visible. The first survey was undertaken on the 10th of October 2018 and the second was undertaken on the 25th of October 2018.

During the first Harvest Mouse transect survey undertaken on the 10th of October 2018, and no evidence of Harvest Mice was found to be at the site.

During the second transect activity survey, undertaken on the 25th of October 2018, and no evidence of nesting or foraging Harvest Mice was identified.

The results from the two surveys suggest that no foraging or nesting Harvest Mice are present within the site.

4 IMPACT ASSESSMENT

4.1 Constraints on survey information

The transect surveys were carried out within the survey period specified by the Mammal Society (Oct/Nov). With this being the case, Evolution Ecology Ltd feels confident that this survey report produces an accurate representation of the site's potential for supporting local Harvest mouse populations.

4.2 Constraints on equipment used

No constraints were present with regards to the equipment used during the survey (i.e. PPE).

4.3 Potential impacts of the proposed works

Based upon the current planning proposal, whereby:

 Under the current proposals, a section of the land is set to be cleared and developed into dwellings. For specific plans, please refer to Appendix Two.

- The potential impacts have been identified as follows:

4.3.1 Designated sites

The ecological data searches supplied by SER have revealed that no designated sites are situated either on or immediately adjacent to the site of interest. Therefore, the proposed works would not negatively affect any habitats of conservation concern.

4.3.2 Nests

Short-term Impacts: Disturbance

[Negligible]

From the results obtained from the transect surveys, it has been determined that the site of interest currently hosts no Harvest Mice. Therefore, the short-term impact of disturbance on these species is deemed as being negligible.

Long-term Impacts: Roost Modification	[Negligible]
Same as 'Short-term impacts: Disturbance.'	
Long-term Impacts: Roost Loss	[Negligible]
Same as 'Short-term impacts: Disturbance.'	

4.3.3 Foraging and commuting habitat

At present, the site consists predominantly of tall ruderal, which offers little nesting potential for Harvest Mice. However, the site was not witnessed to be in use by Harvest Mice. Therefore, the proposed development of the site is likely to have a Negligible impact on nesting or foraging Harvest Mice.

4.4 Legislation and policy guidance

<u>Biodiversity 2020:</u> Sets out to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people. The government's policy is aimed at individuals, communities, local authorities, charities, business and government, which all have a role to play in delivering Biodiversity 2020.

National Planning Policy Framework, Section 11: The recently published framework in 2012, replaces the previous Planning Policy Statement 9. Section 11: Conserving and enhancing the natural environment, reaffirms the government's commitment to maintaining green belt protections and preventing urban sprawl, retains the protection of designated sites and preserves wildlife, aims to improve the quality of the natural environment and halt declines in species and habitats, protects and enhances biodiversity and promotes wildlife corridors.

<u>Article 10 of the EC Habitats Directive:</u> The published article requires government to develop features such as 'stepping stones' on the landscape, such as clusters of ponds, tracts of rough grassland or scrubland and vegetated railway line embankments.

Section 41 (England) of the NERC Act (2006) The Harvest mouse is classified as a "Species of principal importance for the purpose of conserving biodiversity" and therefore need to be taken into consideration by a public body when performing any of its functions with a view to conserving biodiversity.

5 RECOMMENDATIONS

The results from the two transect activity surveys have revealed that the site is currently not in use by Harvest Mice. There are no recommendations for the site.

6 REFERENCES

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7 APPENDICIES

Appendix A: Site Plans

Appendix B: Eco Data Map

Appendix C: Additional Photographic Records





This plan is just for illustration purposes. Please contact Mr. Gez Willard (Agent) for a clearer image <u>gez.willard@icloud.com</u>

Appendix B: The eco data map, provided by Staffordshire Ecological Record (SER). The approximate location of the 'Land off Sytch Road', Brown Edge is indicated by the yellow star.



Staffordshire Ecological Record A legend to the map showing									
Stafford. ST17 OWT Tel: 01889 880100 Fac: 01889 880101 Imail: info@maffs-coology.org.uk Nature Conservation Sites and Specie									
Introduction These colours are used on the site alert mapping within the SWT GIS, but SER cannot guarantee the same colours are used in any other mapping system, particularly those based on ArcView.									
Statutory Designations from Natural England's web-site									
National Nature Re	serves 📩 📩 NNR	(bound	dary not available owing to OS restrictions)						
Sites of Special Sci	entific Interest 🛛 🛧 SSSI (bound	lary not available owing to OS restrictions)						
Local Nature Reser	ves 🔺 LNR (bound	lary not available owing to OS restrictions)						
Non-statutory Desig	nations from the Staff	ordsh	ire Grading System (1995 onwards)						
Site of Biological In	mportance (ex Grade 1 SBI)	equiv	alent to "Local Wildlife Site"						
Biodiversity Alert S	Site (ex Grade 2 SBI)								
Proposed/potential	Site of Biological Importanc	e							
Geological Sites									
Regionally Importa	nt Geological/geomorpholog	gical S	ite (= Local Geological Site)						
Staffordshire Wildli	fe Trust Sites								
SWT Nature Reserv	ves		Ancient Woodland Inventory						
Other Nature Reser	res		Ancient & Semi-natural Woodland						
Royal Society for th	e Protection of Birds		Ancient Replanted Woodland						
Species Information									
A Mammals excluding	g those listed below		Amphibians and reptiles excluding those below						
Otter (Lutra lutra)		0	Great Crested Newt (Triturus cristatus)						
 Badger (Meles mele 	es) - not normally supplied	÷	Native Crayfish (Austropotamobius pallipes)						
Water Vole (Arvice	ola terrestris)	\forall	Flowering plants except those below						
All bat species		0	Bluebell (Hyacinthoides non-scripta)						
All bird species		0	Butterflies and Moths						
 Any other protected 	species (precise to 100m)	۲	BAP Species Records (precise to 100m)						
All Protected Speci	es Records (precise to 1km)		BAP Species Records (precise to 1km)						
Notes:									
The Local Nature Reserve and other nature reserve boundaries can overlay the current grading when both layers are actively visible									
Where there are multi obscure the dots for o	Where there are multiple species records for the same grid reference the dot for one species may obscure the dots for other species - all species records will be displayed in the accompanying spreadsheet								
Not all the above categories may be present on the accompanying map									
Version 2.0 July 2011 M:Worksper/SER/EnquiryLegend.wor									

Appendix B: The Nature Conservation Site map provided by Staffordshire Ecological Record (SER). The approximate location of the 'Land off Sytch Road', Brown Edge is indicated by the yellow star.



Appendix C: Additional Photographic Records

Plate 1: An image showing the site, dominated by tall ruderal habitat.



Plate 2: A photograph showing the marshland area at the south of the site.



Plate 3: A photograph showing an overview of the site from the direction of north.



Appendix D - Harvest Mouse (Micromys minutus) Biology

http://www.mammal.org.uk/species-hub/full-species-hub/discovermammals/species-harvest-mouse/



Taxon: Rodentia

Habitat: Grassland, arable land

Description: Blunt nose, small eyes, and small hairy ears in contrast to other British species of mice and also much smaller; prehensile tail the same length as the head and body; russet orange fur with a white underside. **Size:** 50-70mm.

Weight: 4-6g.

Lifespan: 18 months on average.

Origin & Distribution: The harvest mouse is a native species. The harvest mouse is mainly found from central Yorkshire southwards. Isolated records from Scotland and Wales probably result from the release of captive animals. Areas of tall grass provide favourable habitats, such as cereals, road side verges, hedgerows, reed beds, dykes and salt mashes where nests can be built.

Diet: They eat a mixture of seeds, berries and insects, although moss, roots and fungi may also be taken. Harvest mice sometimes take grain from cereal heads, leaving characteristic sickle-shaped remains. Noticeable damage to cereal crops is extremely rare.

General Ecology: Harvest mice are extremely active climbers and feed in the stalk zone of long grasses and reeds, particularly around dusk and dawn. Their hearing is acute and they will react sharply; they either freeze or drop into cover in response to rustling sounds up to 7m away. Harvest mice have high energy requirements; the cost of being warm blooded and coping with a high surface to volume ratio.

Breeding nests are the most obvious sign indicating the presence of harvest mice. The harvest mouse is the only British mammal to build nests of woven grass well above ground. Nests tend to be found in dense vegetation such as grasses, rushes, cereals, grassy hedgerows, ditches and brambles. They are generally located on the stalk zone of grasses, at least 30cm above ground in short grasses and up to a metre in tall reeds. The size of the nest can vary from only 5cm in diameter for non-breeding nests to 10cm in diameter for breeding nests.

Harvest mice have many predators: weasels, stoats, foxes, cats, owls, hawks, crows, even pheasants.

Breeding: Harvest mice usually have two or three litters a year in the wild, between late May and October, but even into December if the weather is mild. Most litters are born in August. Cold wet weather is a major cause of mortality. There are usually around six young in a litter. The young are born blind and hairless but grow extremely quickly and start to explore outside the nest by the 11th day. The young are abandoned after about 16 days, but continue using the nest which may at then start to look rather dilapidated. A fresh nest is built for each litter.

Conservation Status: Harvest mice are listed as a BAP (Biodiversity Action Plan) Species because they are thought to have become much scarcer in recent years and they require conservation plans to reverse the decline. Changes in habitat management and agricultural methods are thought to be the main cause for the loss of populations from certain areas, although there have been no reliable studies to quantify this change.

8 LIMITING CONDITIONS/DISCLAIMERS (Unless stated otherwise)

8.1 The Service

9.1 Evolution Ecology agrees to supply ecological consulting services of a preliminary nature or a more thorough service as advised or as commissioned.

10 **Fees**

- 10.1 The client(s) will settle the agreed fee in full, within 30 days of receiving the invoice. Reports will remain the property of Evolution Ecology until full payment has been received. No liability is accepted for the contents of a report that is not paid in full. Any queries should be notified to Evolution Ecology within 7 days of the invoice date.
- 10.2 If the client(s) fails to pay within the time specified in 2.1 then Evolution Ecology shall charge the client(s) interest on the outstanding fee, both before and after any judgment, at the rate of 4% per annum above the HSBC Bank base rate, until payment is made in full (A part of a month being treated as a full month for the purposes of calculating interest).
- 10.3 In the event that it is necessary to recover any outstanding fees from the client(s), the client(s) will fully reimburse any costs and expenses incurred during the recovery period, including court costs. Evolution Ecology reserves the right to make a charge for every letter sent and telephone/fax call made, in connection with the recovery.

11 The Report

- 11.1 If any part of the report is lost, or altered without the written consent of Evolution Ecology, then the entire report becomes invalid.
- 11.2 The general format of reports is a certified product and cannot be shown, copied or distributed to third parties without the permission of Evolution Ecology. No liability is accepted for the contents of the report, other than to that of the client(s).
- 11.3 The report will purport not to express any opinion or comment as to the condition or structural integrity of any building and no reliance should be made on any such comments.

12.1 Insurance Cover

12.2 All work carried out by Evolution Ecology is covered by a £1,000,000 professional indemnity insurance.

13.1 Quality of Craftsmanship

- 13.2 When appointing an Ecologist, please use only suitably qualified and experienced companies (The Local Authority and the Institute of Ecology and Environmental Managers may be able to provide a select list of such companies)
- 13.3 Evolution Ecology will not accept liability for any works undertaken by any other companies, or contractors.