

Water vole survey on Laughton Level via [REDACTED] Farm

Grid reference: [REDACTED]
[REDACTED] Farm, Ripe, East Sussex

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Introduction

The Ecologist undertook a water vole survey on the Laughton Level under the ownership of ■■■ Farm. It was found that there is a potential of water voles being present.

This report is split into:

- **Survey methods and site information** (on page 3) which provides details of the habitat types, landscape, survey methods etc.
- **Survey results and data** (on page 4) which provide details of all water vole field signs.
- **Survey analysis** (on page 5) which provides the reader with a breakdown of the data collected and future directions.
- **Discussion** (page 6)
- **Maps** (on pages 8 to 10) showing general area and ditches surveyed.
- **Appendixes 1 – 7** (pages 11 to 15)
 - Appendix 1: Vegetation cover of each watercourse
 - Appendix 2: Bank profiles, water depths etc of each watercourse
 - Appendix 3: Water vole signs found on each ditch
 - Appendix 4: Comparison with previous data.
 - Appendix 5: Pictures of water vole field signs in general
 - Appendix 6: Pictures of water vole field signs from survey site
 - Appendix 7: Picture of good quality water vole habitat from site

Acknowledgements

I would like to thank the landowners for their help and support during the survey. I would like to thank staff at the Sussex Biological Records Centre and Sussex Wildlife Trust for the data provided.

Survey methods and site information

The Field Ecologist undertook a water vole survey on land under the ownership of [REDACTED] Farm in October 2008.

This site is not within a Site of Special Scientific Interest Area (SSSI). It is, however, within the Low Weald and Pevensey Natural Area.

Surveys are undertaken between April and October. In general, each watercourse is searched over a distance of 500 m as a minimum. In this survey, the average ditch length was 200 m. In total, 3 adjacent ditches, 2 ponds and one main watercourse was surveyed. One bank of each watercourse was searched for field signs.

The main signs that were looked for were feeding piles, latrines and burrows. Latrines are droppings left to mark territory boundaries and active burrows during the breeding season. Feeding piles are heaps of chewed vegetation which are left in favoured places.

A standard water vole survey form is used to record information such as bank profile, water depth and flow, surrounding habitats and bank side vegetation types.

The water levels of the ditches were assessed with the use of a 2 m stick where access was permitted. Information on watercourses with health and safety concerns and/or poor access was obtained from the relevant landowners.

Surveys were undertaken in good weather conditions. This is particularly important as field signs are washed away in very wet weather.

Surrounding habitats were grasslands for grazing, temporary/permanent grassland and arable land.

Survey results and data

All water vole field signs found ditches and ponds were recorded using a GPS 10 figure grid reference. These are outlined below.

Survey results from 21st October 2008

Grid ref	Ditch no	Field signs found
TQ	Ditch 1	Old feeding pile (unconfirmed)
TQ	Ditch 1	Chewed vegetation (unconfirmed)
TQ	Ditch 1	Chewed vegetation (unconfirmed)
	Ditch 2	Not surveyed due to poor access
	Ditch 3	Not surveyed due to poor access
	Pond 1	Not surveyed due to poor access
	Pond 2	Not surveyed due to poor access
	Pond 3	Not surveyed due to poor access

Survey analysis

The survey has revealed that there is potential of water vole being present.

The presence of water voles at a site is determined by a number of factors including suitability of habitat, absence of mink and the presence of other water vole colonies nearby. Some of these factors are discussed below.

Water voles require bankside and marginal vegetation such as tall grasses, rushes, sedges and herbs. They require a large amount of plant cover. This provides them with food and shelter from predators. Scattered bankside trees/shrubs are important as these provide the voles with food over the winter, notably willow. Ditches which have become overgrown and scrubbed over are generally avoided. Water voles do not tolerate fluctuating water levels such as prolonged flooding or drought.

Overall, the ditches under the ownership of [REDACTED] Farm were considered to be good quality habitat for water vole. This was based on the fact that there was abundant growth of reed, sedges, rushes, tall grasses, herbs and scattered bushes.

Some potential signs were found on Ditch 1. However, the signs were insufficient to confirm the presence of water vole. This was based on the fact that no latrines were found.

It is possible that the weather conditions may have influenced the survey results eg cold weather, wet conditions. However, this is unlikely as the survey was undertaken in mild weather with no recent precipitation.

A search undertaken by Sussex Biological Records Centre revealed that there was a sighting reported in 2001 in the general area (approx 2 km). In 2005 there was a sighting reported near [REDACTED] [REDACTED] (approx 2.5 km) [source Natural England].

Mink is a non-native species which has a major impact on water vole populations as a predator. Mink are believed to be present in the general area although no signs were found during the survey.

Summary

There is potential of water voles being present on land under the ownership of ■■■ Farm. This has been based on the fact that field signs found were insufficient. There are other reports of water vole in the general area in 2001 and 2005.

Future directions

There is scope for repeating the survey to confirm the presence of water vole. I would suggest a survey in 2 – 3 years time.

Water vole protection

Water voles have undergone one of the fastest declines of any British mammal. Their numbers have crashed drastically over the last 25 years. Reasons for this decline include habitat loss, development, pollution and predation by mink.

The water vole received limited legal protection in April 1998 through its inclusion in Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) for some offences. This protection has been extended (April 2008), so the water vole is now fully protected under Section 9.

Legal protection makes it an offence to:

- intentionally kill, injure or take (capture) a water vole;
- possess or control a live or dead water vole, or any part of a water vole;
- intentionally or recklessly damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection or disturb water voles while they are using such a place;
- sell, offer for sale or advertise for live or dead water voles.

Discussion

The survey revealed that there is a potential of water voles being present. This has been based on the fact that no latrines were present on one ditch. Therefore, more evidence is required to confirm that water voles are definitely present.

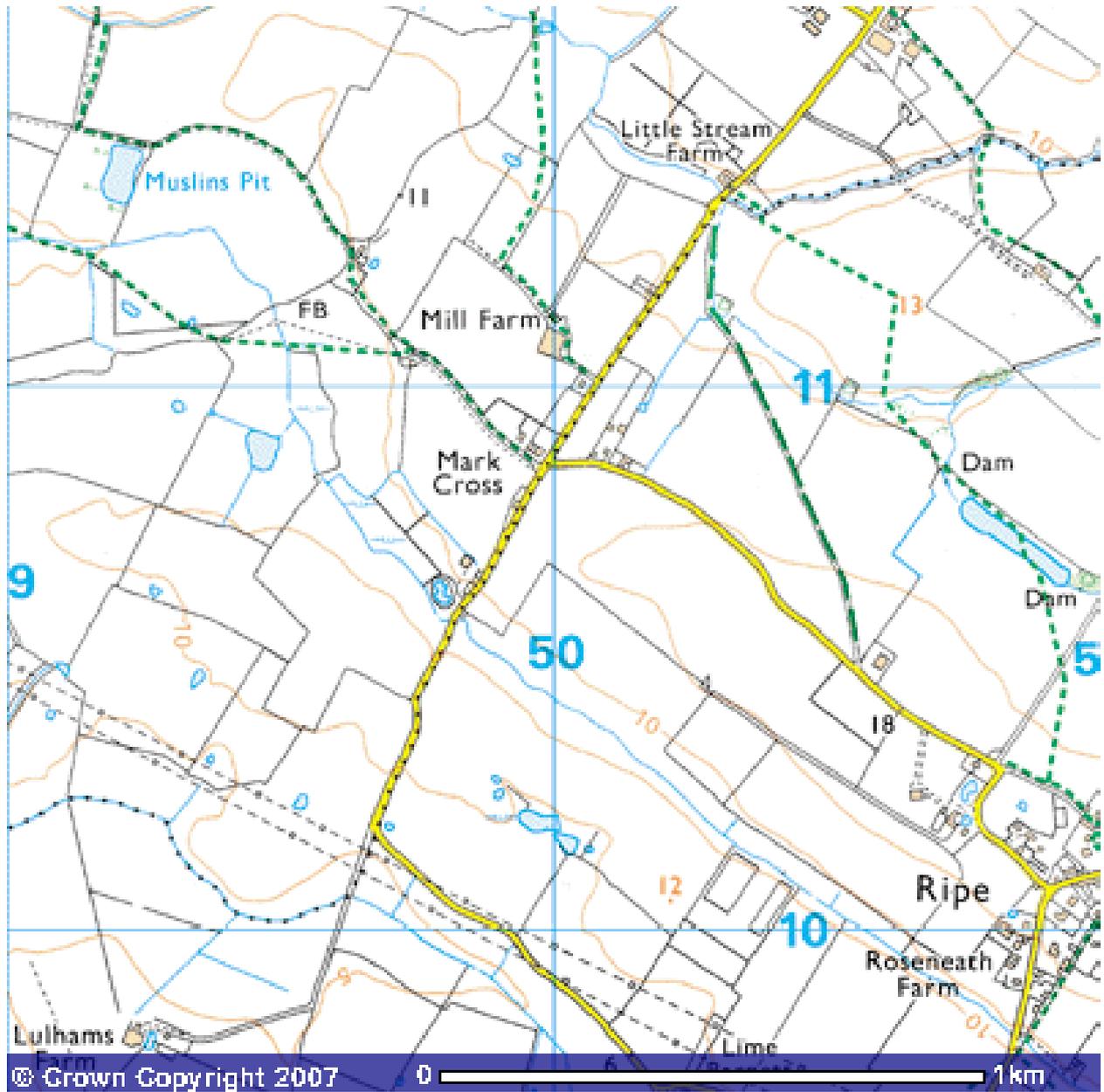
The majority of water vole field signs were present on one ditch. Water voles are known to move around a site depending on **habitat management** and **water levels**. It is possible that this is a factor influencing some survey results.

The presence of water voles at a site is determined by a number of factors such as the **availability of suitable habitats**. It is likely that this is a factor as it was felt that the ditches were considered to be suitable habitat.

Some ditches were considered unsuitable as they had dried out or were scrubbed over. Water voles are known to **move into sub-optimal habitats** later in the year as the best areas become full. Although no signs were found on these ditches, it is possible that water voles may use them as a migratory route.

One ditch had poached banks on one side. Poaching of banks by livestock is detrimental to water voles as it results in the collapse of burrows and the bank profile is often altered. On sites which are heavily grazed bankside vegetation becomes sparse.

General area



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Section adjacent to Cleaver's Bridge and Mark's Cross

Blue = water voles not present;
no signs found

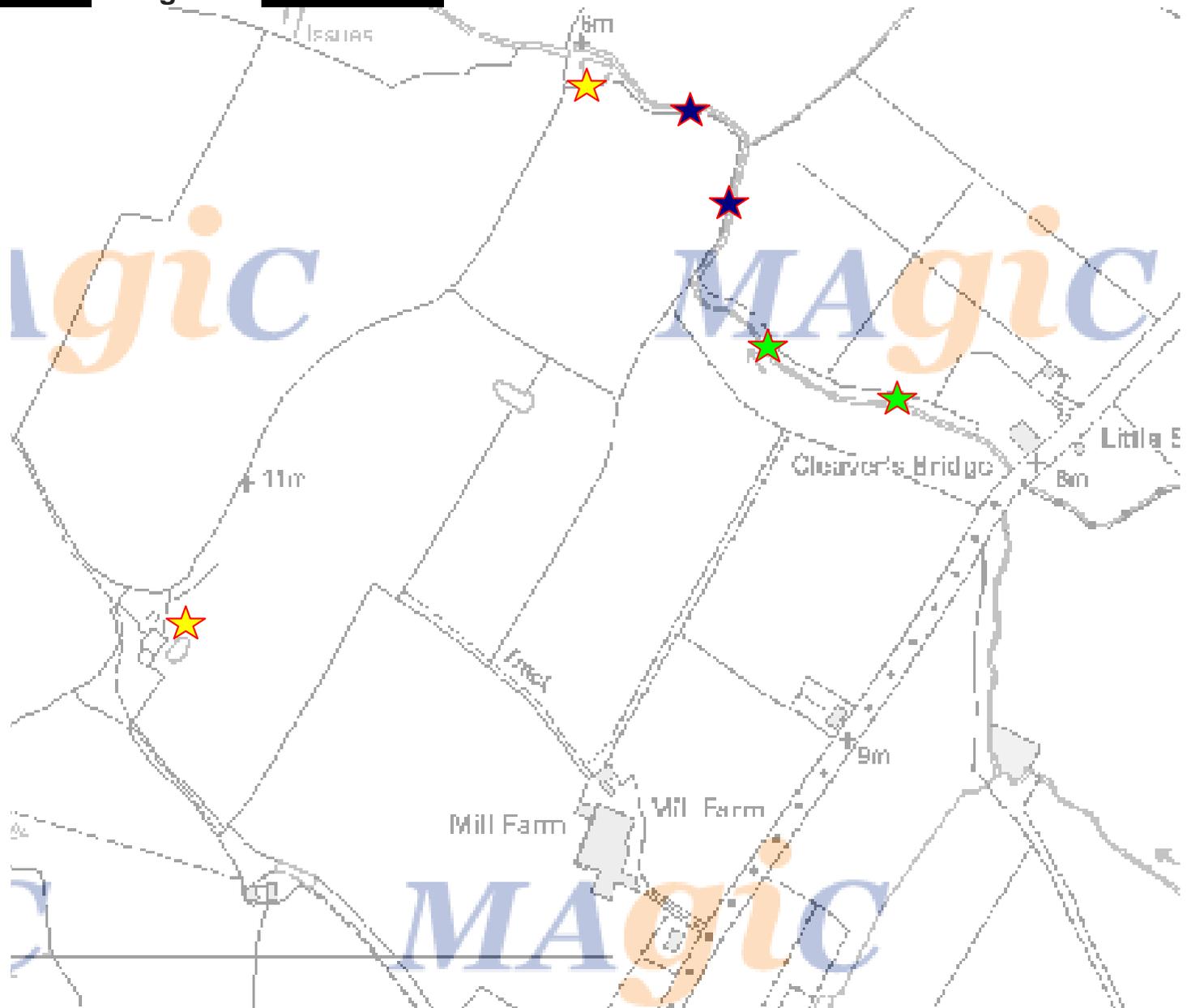
≈

Green = water voles may be
present (signs found have not
been confirmed as water vole)

≈

Yellow = ditch/pond not
surveyed due to poor access
and/or health and safety
concerns

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Section adjacent [redacted] and [redacted]

Blue = water voles not present;
no signs found

≈

Green = water voles may be
present (signs found have not
been confirmed as water vole)

≈

Yellow = ditch/pond not
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Appendix 1: vegetation cover present on each watercourse

GRID REF	Ditch no	VEGETATION TYPES (DAFORN)						Water voles present
		Bankside trees	Bushes	Herbs	Submerged weed	Reeds/sedges	Tall grasses	
	Ditch 1	Abundant	Abundant	Abundant	None	Frequent	Abundant	Unconfirmed
	Ditch 2	Rare	Rare	Abundant	Occasional	Abundant	Abundant	Unknown
	Ditch 3	Dominant	Dominant	Rare	None	None	None	Unknown
	Pond 1	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
	Pond 2	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
	Pond 3	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown

KEY TO VEGETATION TYPES (DAFORN):

Dominant	=	81 – 100% cover
Abundant	=	61 – 80% cover
Frequent	=	41 – 60% cover
Occasional	=	21 – 40% cover
Rare	=	1 – 20% cover
None	=	0%

Appendix 3: Field signs of water vole found on ditches

GRID REF	Ditch no	Latrines	Feeding piles	Burrows	Pathways in vegetation	Sighting
	Ditch 1		Old feeding pile (unconfirmed)			
	Ditch 1		Chewed vegetation (unconfirmed)			
	Ditch 1		Chewed vegetation (unconfirmed)			

Appendix 4: Comparison of data with other years

Grid ref	Ditch no (2008)	Previous surveys*	2008 survey	Data analysis and assumption
██████	Ditch 1	No records for this ditch. However, sighting reported in 2001 (approx 2 km away).	Potential field signs found at ██████████, ██████████	Water vole known to be present in the general area.
██████	Ditch 2	No records for this ditch. However, sighting reported (2 km away) in 2005 [source Natural England].	Section of ditch under ownership of ██████ Farm not surveyed due to poor access. However, ditch was assessed as being good quality water vole habitat further downstream.	Water vole known to be present in the general area.

*Source of data: Sussex Biological Records Centre

Appendix 5: Water vole field signs

Latrines and droppings

Droppings vary in colour from green, brown or black depending on what has been eaten. They are always cylindrical with blunted ends. These are usually 8 – 12 mm long and 4 – 5 mm wide.

Latrines are droppings which are deposited at maintained latrine sites between March to October. Latrines are left to mark territory boundaries and active burrows during the breeding season

This picture was taken on a sluice pipe although latrines may be found on bare mud, along runs and outside burrows.



Feeding piles

Feeding piles are left in favoured places. They are neat piles of chopped vegetation.

Vegetation is usually up to 10 cm long. Water vole will usually leave an angle at the end of the vegetation (but not always).

Although this picture does not show it clearly, there are bits of vegetation with the typical angle.

Field vole feeding remains are usually a few centimeters long and do not show the angle made by water vole.



Please note that these pictures were not taken from the survey site. The latrine picture was taken on a site on Isle of Sheppey in 2005 and the feeding pile picture was taken at a site near Rye in 2007.