

# Rush Wall Solar Park

## Environmental Statement

### Appendix 5.7

#### Water Vole survey

# Water Vole Survey Rush Wall Solar Park April 2020

Report no: WVole-526.1

A report by

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## Report details

Site name: Rush Wall Solar Park  
Site address: Redwick, Newport  
Grid reference: ST 416 853  
Report date: 30<sup>th</sup> April 2020  
Report author: James Gilroy BSc (Hons), MSc  
Checked by: Colin Hicks BSc (Hons) MCIEEM

Report no: WVole-526.1

## Declaration of compliance

### BS 42020:2013

This study has been undertaken in accordance with British Standard 42020:2013 Biodiversity, Code of Practice for Planning and Development.

### Code of Professional Conduct

The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

## Validity of survey data and report

The findings of this report are valid for 24 months from the date of survey. If work has not commenced within this period, an updated survey by a suitably qualified ecologist will be required.

## Revisions

Date	Report no:	Comment
21/05/2020	WVole-526.1	Original report

## Table of contents

1. Introduction .....	5
1.1. Survey aims.....	5
2. Methodology .....	6
2.1. Desktop survey.....	6
2.2. Field survey .....	6
2.3. Survey constraints .....	6
3. Results .....	7
3.1. Desktop survey.....	7
3.2. Habitat Assessment.....	7
3.3. Field survey.....	7
Map 1. Field survey results.....	8
4. Water Voles and the Law .....	9
5. Assessment of the site value for Water Vole .....	10
6. References.....	11

# 1. Introduction

Western Ecology has been commissioned to complete a Water Vole survey on an area of land for the proposed Rush Wall Solar Park near Redwick.

## 1.1. Survey aims

The aim of this survey is to ascertain whether Water Voles are present within this site.

Where appropriate, the survey will provide the information required to determine the appropriate level of mitigation required to ensure compliance with wildlife legislation and relevant planning policy.

## 2. Methodology

### 2.1. Desktop survey

The data search collated existing biological records of Water Voles within 2km that are held by South East Wales Biodiversity Records Centre.

This data was examined and an assessment was then made, based on known habitat preferences, as to whether these species may be present within the site and how they may be affected by the proposal.

### 2.2. Field survey

All areas within 10 metres of watercourses associated with the site were carefully searched for field signs of Water Vole by an ecologist who meets the required competency level for Water Vole surveys (CIEEM, 2016).

Field signs include;

- Burrows - holes along the waters edge, and in the bank above, that are wider than high with a diameter of 4-8cm,
- Latrines - collections of droppings that are 8-12mm long, 4-5mm wide, cylindrical with blunt ends, green/brown/black and have no odour,
- Grazed lawns - nursing females on the nest graze vegetation around the burrow entrance short to form a 'lawn',
- Feeding remains - neat piles of chewed lengths of vegetation up to 10cm long and with 45 degree cuts to their ends,
- Runways in vegetation - low runs or tunnels 5-10cm wide pushed through the vegetation leading to the water's edge, burrow entrances or favoured feeding areas,
- Water Voles sightings.

The survey was completed on 8<sup>th</sup> April 2020 between 10:00 and 16:00 with an air temperature of 18°C, light winds, dry and 30% cloud cover.

### 2.3. Survey constraints

All areas of the immediate development site were readily accessible. The optimal survey period for Water Vole is between April and late September.

## 3. Results

### 3.1. Desktop survey

The biological record search returned 2707 records for Water Vole within 2km of the Site.

The records include a number that are attributed to Gwent Wildlife Trust Water Vole Re-introduction Monitoring Surveys. This re-introduction released more than 200 Water Voles into their Magor Marsh reserve, the western-most part of which is located just approximately 500 metres to the south east, and included mink control measures. Gwent Wildlife Trust were consulted with regards to records they may hold for Water Vole, but they did not respond.

It is very likely that Water Vole are present within this area.

### 3.2. Habitat Assessment

The wider Site is predominantly comprised of agricultural grasslands with negligible value for Water Vole. However, the field margins comprise a network of reens (drainage ditches) that are fringed with semi-natural vegetation comprising Bulrush *Typha* sp., Common Reed *Phragmites australis*, Soft Rush *Juncus effusus*, Bramble *Rubus fruticosus* agg., Hawthorn *Crataegus monogyna*, sedges and common grasses.

Water quality is good in most areas, although discrete sections of the reens featured extensive algal cover, likely due to nutrification from associated agricultural run off. The extent of aquatic habitat is extensive with potential to escape predators. Mink monitoring rafts were present on the northern boundary, indicating that this site is important for Water Vole.

Bank clearance & reprofiling work had been conducted along a limited stretch of a reen in the eastern section of the Site, with all bankside vegetation removed and the bank scraped and compacted. As a result, Water Vole are unlikely to be associated with this particular area.

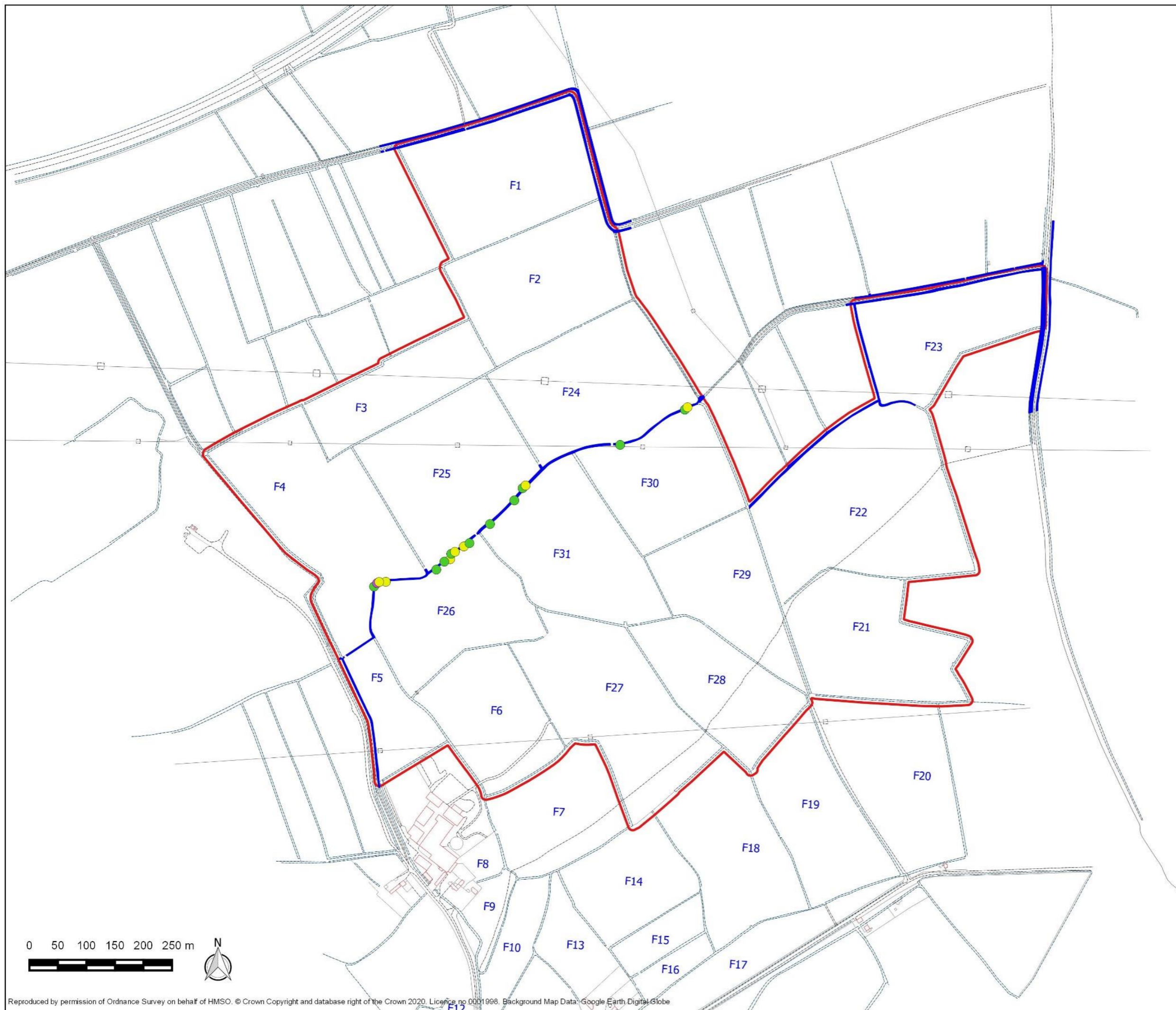
### 3.3. Field survey

The extent of the Water Vole survey is shown on Map 1. During this survey, historical evidence of Water Vole was identified across the majority of the survey area. This evidence consisted of occasional burrows along the bank sides and at the waterline, however no recent signs of activity (although no fresh evidence, such as grazed lawns, latrines or feeding remains) were recorded. Mammal monitoring stations that were present within two of the reens in the northern and eastern areas also lacked any evidence such as droppings or latrines.

A high concentration of recent evidence of Water Vole was recorded along a stretch of reen, approximately 820m in length and located within the central area of the Site (shown in Map 1). A total of 7 potential burrows and approximately 11 fresh latrines were recorded along this stretch. Several areas exhibiting characteristically grazed vegetation were also recorded.

**Legend**

- Development footprint
- Reens surveyed for Water Vole
- Water Vole burrow with signs of activity
- Water Vole latrine



Title: Map 1. Field survey results

Project: Rush Wall Solar Park

Checked by: CDH    Version: 01  
Date: 21/05/2020



## 4. Water Voles and the Law

Water Vole is protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Under the Act it is an offence to:

- intentionally capture, kill, disturb or injure Water Voles (on purpose or by not taking enough care);
- destroy or block access to their places of shelter or protection;
- possess, sell, control or transport live or dead bats, or parts of them.

Water Vole are listed under Section 7 of the Environment (Wales) Act 2016.

## 5. Conservation strategy

### 5.1. Assessment of potential impacts

Although the majority of the site lacked recent evidence of Water Vole, a limited area within the centre of the site exhibited a high concentration of field signs of recent activity.

Water Vole are known to be in the local area, and as the reens are generally well connected across the Site, it is safe to conclude that Water Vole are present across the wider site.

Existing access tracks and reen crossings will be used during the construction and operation phases.

During the construction phase, the primary pathway of adverse effect would be through impacts to reens and ditches, such as direct habitat loss and damage, and changes in water quality and water levels. There is also potential for direct harm or injury and mitigation should be adopted during the construction phase.

During the operational phase, the primary pathway of effect would also be through impacts to reens and ditches. However, this will be a positive benefit to this animal with improved water quality associated with reduced management pressures on land that is currently an intensively managed grassland habitat, and the creation of additional grassland habitats that is currently in arable rotation will minimize chemical/nutrient inputs and sediment transfer to watercourses.

There will also be a benefit associated with the ditch management plan in years 1 to 7 of the operational phase. Casting and scrub removal associated with this plan is very unlikely to affect Water Vole as they would not be present within ditch habitats to be re-habilitated. Once ditches are opened up and can support emergent and bankside vegetation, this will create additional Water Vole habitat.

It is likely that the operational phase will have a positive effect on local Water Vole habitats.

### 5.2. Protective measures to minimise impacts

Protective measures will be adopted during the construction phase to avoid damage to reens and ditches. This will comprise exclusion zones of 12.5 metres from reens and 7 metres from ditches delineated by a suitable fence. There will be no access, storage of materials, ground disturbance, burning or contamination within the fenced areas.

Measures to protect water quality and avoid accidental pollution during the construction phase are detailed within the CEMP and include sediment and silt control, waste management, fuel/chemical storage and controlling run-off.

This will protect Water Vole habitat from physical damage during the majority of construction operations.

Cable routes will pass beneath reens by HDD drilling. Siting of HDD drilling rigs will be informed by pre-construction Water Vole surveys to ensure they will not harm Water Vole nor damage their holes. These surveys will be completed by the ECoW.

### 5.3. Compensatory habitats

There will no loss of Water Vole habitat and no compensatory habitat is required.

### 5.4. Timings of Water Vole conservation measures

Construction will need to take account of activities detailed in this conservation strategy.

Table 1. Timing of Water Vole conservation measures

Phase	Activity	Comments
Pre-construction	CEMP adopted	
Pre-construction	Exclusion zones established to reens (12.5 metres) and ditches (7 metres)	Delineated by a suitable fence and maintained for the construction and operation phases of the development.
Pre-construction	Updated Water Vole surveys in locations of HDD	To allow informed siting of HDD drilling rigs

### 5.5. Long-term monitoring

No long-term monitoring of Water Vole is required for this development.

## 6. Ecological compliance audit

Table 2 provides measures to ensure ecological compliance is maintained. At each stage measures will be checked and sign-off by the Site Manager or Ecological Clerk of Works and will be submitted to competent authorities, if requested.

Table 2. Ecological compliance audit form

Phase of development	Timing (Year following completion of development)	Measure	Name	Date	Signature
Pre- construction	Y0	Exclusion zones established to reens (12.5 metres) and ditches (7 metres)			
Pre- construction	Y0	Updated Water Vole surveys in locations of HDD			

## 6. References

BSI, 2013. *British Standard 42020: 2013. Biodiversity – Code of practice for planning and development*. British Standards Institution, London.

CIEEM, 2016. Technical Guidance Series. Competency for species survey: Water Vole. Downloaded on 03/11/2016 from [http://www.cieem.net/data/files/Resource\\_Library/Technical\\_Guidance\\_Series/CSS/CSS\\_-\\_WATER\\_VOLE\\_April\\_2013.pdf](http://www.cieem.net/data/files/Resource_Library/Technical_Guidance_Series/CSS/CSS_-_WATER_VOLE_April_2013.pdf)