

**MOUNTFIELD FIRST TIME SEWERAGE SCHEME,  
EAST SUSSEX**

**WATER VOLE SURVEY**

A Report to The Clancy Group Plc

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EAST SUSSEX

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01 OF 02

01 THE CLANCY GROUP PLC  
02 MIDDLEMARCH ENVIRONMENTAL LTD

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*This report is the responsibility of Middlemarch Environmental Ltd,  
It should be noted that whilst every effort is made to meet the client's brief  
no site investigation can ensure complete assessment  
or prediction of the natural environment*

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## 1. INTRODUCTION

### 1.1 PROJECT INTRODUCTION

In December 2013, The Clancy Group Plc commissioned Middlemarch Environmental Ltd to undertake a series of ecological surveys at the proposed sewerage system and Wastewater Treatment Works at Mountfield in East Sussex. This report details the findings of the survey for water vole *Arvicola amphibius* at River Line which bisects the river at TQ742 199 in East Sussex.

Middlemarch Environmental Ltd has also carried out the following surveys on this site:

**Great Crested Newt HSI:** Middlemarch Environmental Ltd Report number RT-MME-115661-01;

**Badger Survey:** Middlemarch Environmental Ltd Report number RT-MME-115661-03;

**White-Clawed Crayfish Habitat Assessment:** Middlemarch Environmental Ltd Report number RT-MME-115661-04; and,

**Dormouse Survey:** Middlemarch Environmental Ltd Report number RT-MME-115661-05 and,

**Ecological Protection Strategy:** Middlemarch Environmental Ltd Report number RT-MME-115661-06.

### 1.2 SITE INTRODUCTION

The site is located in Mountfield, East Sussex and is centred at National Grid Reference TQ 744 201. The site is located within the High Weald Area of Outstanding Natural Beauty (AONB). Areas of Outstanding Natural Beauty are areas of high scenic quality that have statutory protection in order to conserve and enhance the natural beauty of their landscapes. The proposed works involve the installation of a pipeline through various areas between TQ 736 199 and TQ 741 197. As well as construction of Water Waste Treatment Works and a compound with pumping station. The area through which the pipeline route is proposed comprises a mixture of amenity grassland, improved grassland, semi-improved grassland, broad-leaved woodland, mixed wood, arable land, dense scrub, buildings and running and standing water.

### 1.3 SURVEY CONSTRAINTS

Only a water vole habitat survey was undertaken as water vole presence/absence surveys can only be undertaken between March and September (weather dependant) when water voles are active above ground.

### 1.4 WATER VOLE ECOLOGY

Water voles *Arvicola amphibius* are closely associated with fresh water habitats, generally slow-flowing, less than 3 m wide and approximately 1 m deep, including rivers, ditches, lakes and canals. They favour well vegetated steep banks, which need to be suitable for burrowing. Their diet is almost exclusively vegetarian, including grasses, reeds and other herbaceous vegetation. Strachan and Moorhouse (2006) states that depending on overall population density, season and habitat quality the length of territory can vary from 30 m

to 150 m for females and 60 - 300 m for males (the larger sizes occur when the population density is low and habitat poor).

## **1.5 LEGISLATION**

The Wildlife and Countryside Act 1981 (as amended) make it an offence to:

- Intentionally kill, injure or take water vole from the wild;
- Possess or control live or dead water voles or derivatives;
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place which water voles use for shelter or protection;
- Intentionally or recklessly disturb water voles whilst occupying a structure or place used for that purpose; or
- Sell water voles or offer or offer or expose for sale or transport for sale.

In England and Wales, this Act has been amended by the Countryside and Rights of Way Act 2000 (CroW), which adds an extra offence, makes species offences arrestable, increases the time limits for some prosecutions and increases penalties. The Natural Environment and Rural Communities (NERC) Act 2006 places a duty on Government Departments to have regard for the conservation of biodiversity and maintains lists of species and habitats which are of principal importance for the purposes of conserving biodiversity in England and Wales. These lists include water vole.

Water voles are also listed as priority species on the Species of Principal Importance.

The reader should refer to the original legislation for definitive interpretation.

## **2. METHODOLOGY**

### **2.1 Desk Study**

A desk study was undertaken as part of an Ecological Constraints Report by Atkins in 2012 to determine records of water vole within a 1 km radius of the site. This involved contacting appropriate statutory and non-statutory organisations which hold ecological data relating to the survey area.

The results of this desk study are detailed in Section 3.1.

### **2.2 Water Vole Habitat Survey**

The survey will consist of an assessment of the River Line where it bisects the site and 100 m both upstream and downstream of the site where access allows. The survey assessed the habitat suitability for water voles. This can be undertaken at any time of the year, however cannot be done in high water levels.

### 3. RESULTS

#### 3.1 DESK STUDY

The desk study identified no records of water vole within a 1 km radius of the proposed pipeline route.

#### 3.2 SURVEY INTRODUCTION

The water vole survey was undertaken on 16<sup>th</sup> December 2013 by David Smith (Ecology and Landscapes Director). Weather conditions at the time of the survey are presented in Table 3.1.

Parameter	Condition
Temperature (°C)	12
Cloud Cover (%)	90
Wind Force (Beaufort)	F1
Precipitation	None

**Table 3.1: Weather Conditions During Survey**

#### 3.3 SURVEY RESULTS

This section describes the habitat characteristics along the section of the river surveyed. Photographs of the area surveys are included in Plates 3.1 and 3.2.

The section of River Line surveyed was approximately 400m in length. This section of river was heavily shaded with steep bare earth banks with dense leaf litter scattered throughout. The river was approximately 1-1.5 m wide and 400mm deep (Plate 3.1 and 3.2). The river was turbid with poor visibility, the river bed comprised silt with a dense accumulation of detritus. The vegetation lining the river banks comprised scattered trees and scrub species included bramble *Rubus fruticosus* agg, Willow *Salix* sp., nettle *Urtica dioica* and dock *Rumex* sp. No marginal vegetation was present along this section of river.



**Plate 3.1: River Line**



**Plate 3.2: River Line**

No evidence of water voles, or evidence of recent activity of water voles, e.g. burrows, footprints, latrines, feeding stations or lawns were recorded along the river banks.



## **4. CONCLUSIONS AND RECOMMENDATIONS**

### **4.1 CONCLUSIONS**

The section of the River Line surveyed is deemed as sub-optimal for water voles, water voles require a continuous area of marginal vegetation to provide areas of foraging and refuge from predators and fast currents. This section of the river was heavily shaded suppressing any marginal vegetation to establish. It is therefore concluded this section of river is of a negligible potential for water voles.

Therefore no further survey work is required and the development can proceed as planned with regards to water voles.

### **4.2 RECOMMENDATIONS**

**R1** If development works have not commenced within 18 months this survey should be updated as water vole usage of the river may have change.

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**MIDDLEMARCH ENVIRONMENTAL LTD**

**QUALITY ASSURANCE**

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