Kenson River Restoration

Water Vole and Otter Survey

Final Report

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Contract

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This report describes work commissioned by Natural Resources Wales. Hannah Webster of JBA Consulting carried out this work.

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The methodology adopted and the sources of information used by JBA in providing its services are outlined in this Report. The work described in this Report was undertaken in January 2025 and is based on the conditions encountered and the information available during the said period. The scope of this Report and the services are accordingly factually limited by these circumstances. Where field investigations are carried out, these have been restricted to a level of detail required to meet the stated objectives of the services. The results of any measurements taken may vary spatially or with time and further confirmatory measurements should be made after any significant delay in issuing this Report.

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Abbreviations

CIEEM	Chartered Institute of Ecology and Environmental Management
EPS	European Protected Species
GIS	Geographic Information System
INNS	Invasive Non-Native Species
JNCC	Joint Nature Conservation Committee
NRW	Natural Resources Wales
PEA	Preliminary Ecological Appraisal
SAC	Special Area of Conservation
SEWBReC	South East Wales Biodiversity Records Centre
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
UKHab	UK Habitat Classification
WCA	Wildlife and Countryside Act

1 Introduction

1.1 Project Background

JBA Consulting (JBA) were commissioned by Natural Resources Wales (NRW) to carry out Water Vole *Arvicola amphibius* and Otter *Lutra Lutra* surveys to help inform the Outline and Detailed Design of restoration opportunities for the Kenson River at Fonmon Estate, in the Vale of Glamorgan. The surveys were required to determine the presence or absence of Water Vole and Otter at the site, and to inform the need for further survey or mitigation to facilitate the proposed works.

The proposed works consist of undertaking an extensive river restoration design on a 2.2km section of the Kenson River, between Kenson Hill (NE) to the location where the Kenson River passes under the B4265. The site location and survey boundary are shown below in Figure 1-1.

The development will include changes to the floodplain and the channel of the Kenson River. The restoration of the river corridor will establish a sinuous river planform and improve in-channel habitats using nature-based solutions (NBS) to replicate and reinstate natural channel dynamics and increase habitat diversity. Meanwhile, elements added and changed across the floodplain will increase lateral connectivity and restore habitats alongside the river. The works will consist of:

- Creating backwater areas in the current channel
- Bed raising
- Re-profiling and re-grading sections of riverbank
- Installing in-channel features, such as woody material and in-channel berms
- Reconnecting palaeo channels and channel infilling
- Floodplain lowering
- Improving riparian corridor
- Installing a new footbridge

The restoration will improve the resilience of habitats and increase biodiversity within the Kenson River. The restoration works should also improve water quality by reducing the amount of sediment entering the watercourses. Improving riparian buffer strip integrity will also help protect the banks from erosion. These gains will all contribute towards improving the WFD status of the Kenson River, with the added benefit of helping transform the site into more pleasant areas for local residents using the PRoWs and visitors to Fonmon Castle to enjoy.

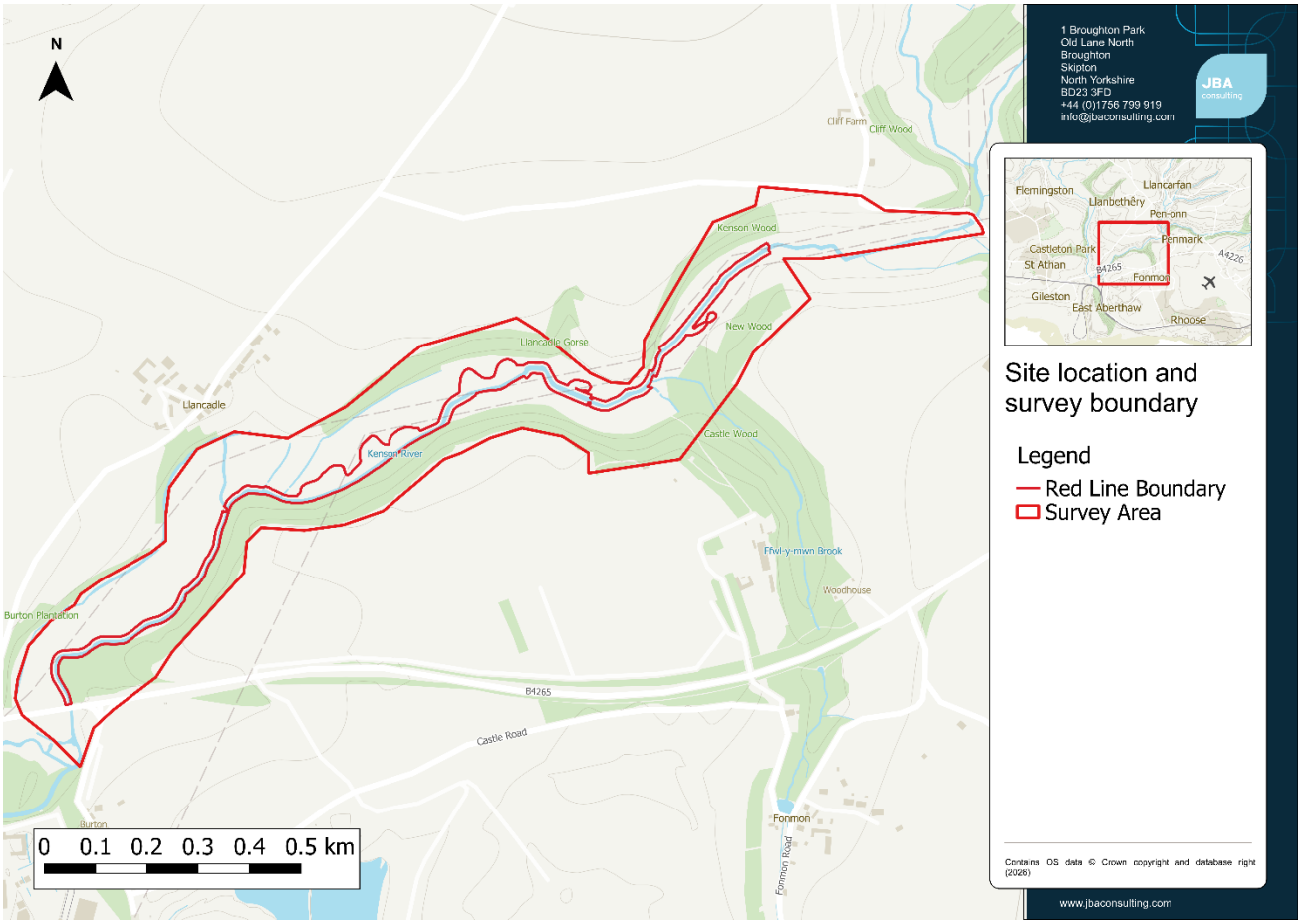

Figure 1-1: Site Location and Survey Boundary

1.2 Legislation

1.2.1 Water Vole

Water Voles receive full protection under Section 9 of Schedule 5 of the Wildlife and Countryside Act 1981 (as amended), making it an offence to:

- Intentionally kill, injure or take wild Water Voles. Section 9 (1);
- Possess or control live or dead Water Voles or any derivative part of a Water Vole. Section 9 (2);
- Intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection. Section 9 (4);
- Intentionally or recklessly disturb Water Voles whilst occupying a structure or place used for that purpose. Section 9 (4b);
- Intentionally or recklessly obstruct access to any structure or place which Water Vole uses for shelter or protection. Section 9 (4c);
- Sell Water Voles or offer or expose for sale or transport for sale. Section 9 (5a);
- Publish or cause to be published any advertisement which conveys the buying or selling of Water Voles. Section 9 (5b).

Water Voles are also listed as a rare and most threatened species under Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006).

1.2.2 Otter

The European Otter is a European Protected Species protected under the Conservation of Habitats and Species Regulations 2010, making it an offence to:

- Deliberately capture, injure or kill an Otter;
- Deliberately disturb an Otter such as to affect local populations or breeding success;
- Damage or destroy an Otter holt, possess or transport an Otter or any part of an Otter;
- Sell or exchange an Otter.

Otters also receive protection under the Wildlife and Countryside Act 1981 (as amended), this makes it an offence to:

- Intentionally or recklessly disturb any Otter whilst within a holt;
- Intentionally or recklessly obstruct access to a holt.

2 Methods

2.1 Desk Based Assessment

As part of the Preliminary Ecological Appraisal (PEA) completed in April 2025 (JBA 2025) records held by South East Wales Biodiversity Records Centre (SEWBReC) were reviewed for information on protected and priority species records within the survey area.

There are no recent records of Water Vole on the Kenson River within the site boundary. The most recent record of Water Vole within the survey area is from 1980, supporting anecdotal landowner knowledge that advises that Water Vole were present in the study site until the 1980s.

Water Vole reintroduction has been proposed within the lower River Thaw as part of the Wildlife Trust for South and West Wales (WTSWW)' strategy to bring back the Water Vole (https://www.welshwildlife.org/about-us/what-we-do/wildlife-conservation/our-projects/water-vole-project). The Lower Kenson Valley and Fonmon estate has been identified as an ideal location to reintroduce Water Voles and the WTSWW have the support of the estate owner and tenant farmer.

There are a number of recent Otter records along the stretch of river within the site boundary and the landowner has reported seeing Otter moving through the site on a number of occasions particularly in the area around the main footbridge.

2.2 Survey Details

Experienced ecologist Hannah Webster undertook two Water Vole and Otter surveys on the 23rd January 2025 and the 23rd April 2025. The surveyed area comprised the stretch of the River Kenson between Kenson Hill (NE) to the location where the Kenson River passes under the B4265, as shown in Figure 1-1, totalling an approximate length of 2.2km.

Water Vole surveys are typically completed during the peak active season from March to September/October however due to project timing restrictions the surveys were completed in January and April. There is therefore potential that signs of Water Vole were missed due to the surveys being completed at a time where Water voles are less active, making them harder to detect.

Otter surveys can be completed all year-round and therefore the surveys completed as part of this report likely to accurately reflect Otter activity through the site.

2.3 Water Vole Survey

Any field signs observed within the survey area, informed by Strachan et al. (2011) and Dean (2021), were noted and the location recorded using a mobile phone georeferencing app accurate to c. 5m. The most important, diagnostic field sign for Water Vole is the presence of latrine sites. These are locations repeatedly used by Water Vole to deposit their droppings, often in prominent locations along the bank. Occasionally, Water Voles can be heard entering the water, making a plop sound. These were also recorded. Other field

signs include the presence of burrows, feeding piles, lawns and footprints. Although these other signs provide indications of presence and are useful supporting evidence to latrines, they are of limited value on their own.

Due to challenges presented by the steep banks present throughout the survey reach it was deemed unsafe to get in the channel and therefore the surveys were completed from both bank tops. Large sections of the river were obscured due to dense riparian vegetation and where therefore unable to be surveyed.

2.4 Otter Survey

The Kenson River watercourse and surrounding areas within the site were assessed for their potential to support Otter based on RSPB (1994) and Chanin (2003). This involved walking the survey section and recording any spraints (droppings), slides, feeding remains and footprints. A search was also made for possible holt and couch (resting) sites. Otters are extremely difficult to observe, and this method provides the most effective and efficient means of investigating presence or absence.

Due to challenges presented by the steep banks present throughout the survey reach it was deemed unsafe to get in the channel and therefore the surveys were completed from both bank tops. Large sections of the river were obscured due to dense riparian vegetation and where therefore unable to be surveyed.

3 Results

3.1 Water Vole

No Water Vole field signs or burrows were observed within the survey area during either of the two surveys. However, signs of activity could have been missed on account of the poor bankside visibility due to dense vegetation growth and the inability to survey in-channel due to unsafe access and egress.

The river and tributaries present within in the site have the potential to provide suitable habitat for Water Vole with soft earth banks that are suitable for burrowing and vegetation present suitable for refuge and foraging.

3.2 Otter

No direct evidence of Otter, such as spraints, holts or resting sites, were observed during the survey however large sections of the river were obscured due to dense riparian vegetation and steep banks.

The river and tributaries within the site provide suitable Otter commuting and foraging habitat, particularly where trees and scrub along the banks provide cover, as well as potential holt-building habitats under roots.

3.3 Further Sightings and Observations

Himalayan balsam *Impatiens glandulifera* was recorded in dense patches throughout the middle section of the survey reach on both banks extending further than previously recorded during past site visits. Dense patches were recorded downstream of the main footbridge on right bank (ST 04374 68410) and extending along the left bank (from ST 04150 68390 to ST 04370 68398).

4 Recommendations

4.1 Water Vole

No evidence of Water Vole was found during the two surveys however large sections of the river could not be surveyed due to poor bankside visibility due to dense vegetation growth and the inability to survey in-channel due to unsafe access and egress and therefore signs of activity could have been missed. It is therefore recommended that during the vegetation clearance of bankside vegetation a suitably qualified Ecological Clerk of Works (ECOW) should be present to survey areas of the channel that were previously obscured. A toolbox talk should be provided to all site staff on the identification features of Water Vole, should a Water Vole be encountered on site during the works, all works should cease immediately, and advice be obtained from an experienced ecologist.

Should any Water Vole field signs be observed following vegetation clearance all works should be stopped and displacement will be necessary.

Displacement is a method of encouraging Water Voles to relocate by means of destroying the burrow system and suitable habitat within the immediate vicinity. This would need to be done under licence from NRW, and the removal of vegetation including marginal vegetation must take place and be completed during the period between the 15th September to 31st October (inclusive) or the 15th February to 15th April (inclusive). Works to and within the River Kenson would therefore have to wait until the displacement can be carried out. This includes:

- No removal of bankside or in-channel vegetation
- No heavy machinery within 3m of the channel
- No storage of materials within 3m of the channel
- Spill containment kits should be made available for plant works, to prevent pollutants from entering the channel.

The appropriate scale for displacement is ≤50m (a length of up to 50m on each side of the same stretch of watercourse) and therefore if a larger area than 50m of the channel is to be affected relocation of Water Vole by trapping may be required.

The Kenson River restoration project aims to improve biodiversity and increase habitat resilience. The restoration opportunities including riparian improvements, creation of in-channel berms and installation of woody material will likely benefit Water Vole populations creating optimal habitat with areas for foraging and refuge.

4.2 Otter

Despite not recording any sign of Otter during the site visits, Otters are known to have been present onsite, with a number of recent records returned in the desk study and anecdotal records provided by the landowner. Large sections of the river were obscured due to dense riparian vegetation and steep banks and therefore were unable to be surveyed, as a result signs of activity could have been missed. For this reason, it is recommended that a pre-

works survey should be completed during vegetation clearance in order to survey areas that were inaccessible due to dense scrub and to identify any potential new holts or resting areas within the proposed site.

Works near the watercourses should not be undertaken at night and watercourses should not be illuminated by lighting during the works e.g. security lights. Any excavations of land should be left open for the minimum possible time, taking particular care to seal all excavations overnight. If, for any reason, excavations must be left open overnight they should either be covered securely or fitted with an escape ramp (no steeper than 45°) to allow accidentally trapped animals to escape. Materials to cover excavations or create escape ramps should remain onsite at all times so that excavated areas can be made safe before leaving site. All materials stored on site should be stacked securely so as to prevent accidental collapse if investigated by an Otter, or other large mammals.

A toolbox talk should be provided to all site staff on the identification features of Otter, should an Otter be encountered on site during the works, all works should cease immediately, and advice be obtained from an experienced ecologist.

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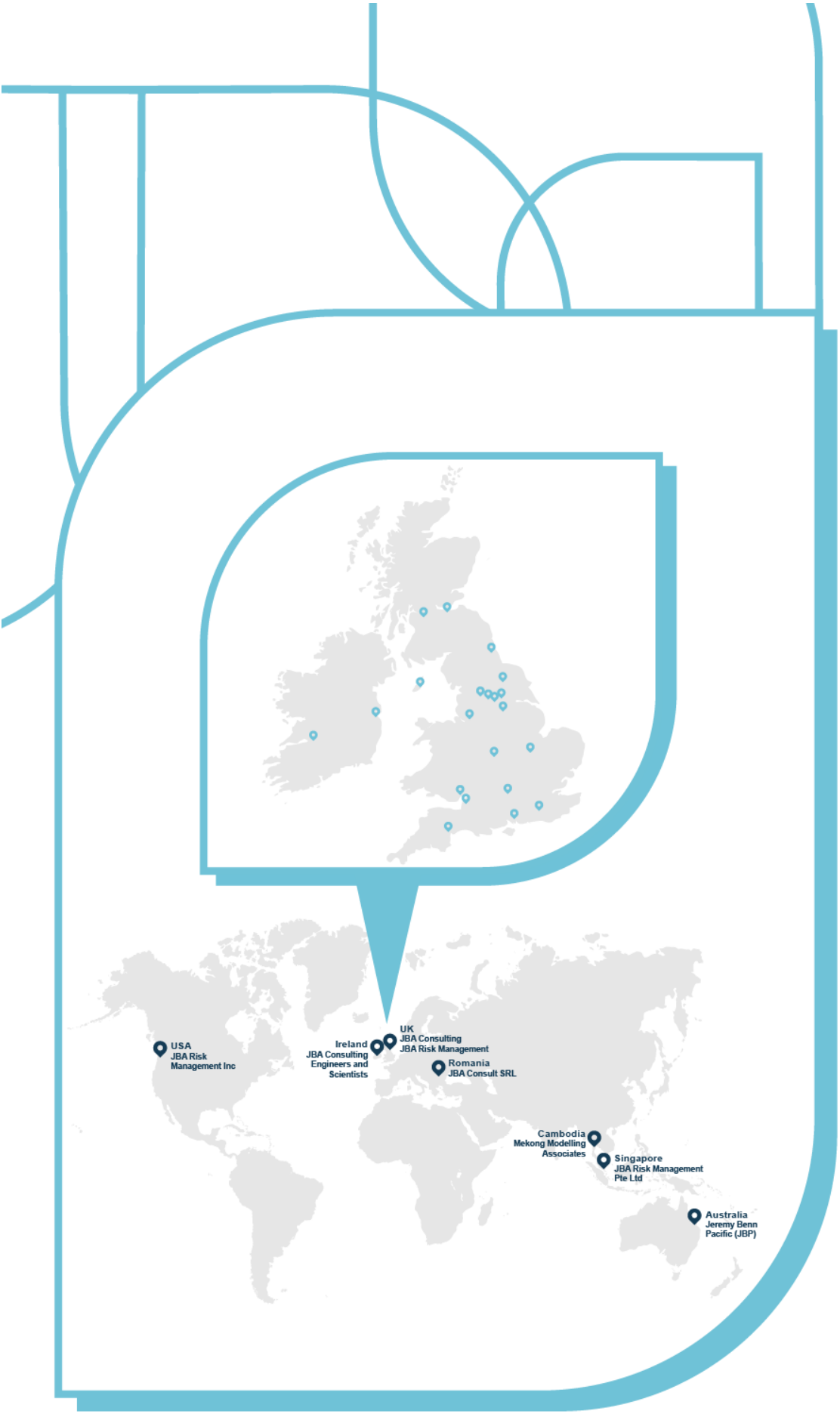

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