

CARDIGAN TIDAL FLOOD RISK MANAGEMENT SCHEME

Appendix 6.5 - Otter survey report



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Natural Resources Wales



THE OTTER CONSULTANCY

CARDIGAN FLOOD RISK MANAGEMENT

OTTER SURVEY REPORT June 2nd 2025 (updated 20/6/2025)

A report for: Heilyn Williams, Senior Specialist Advisor – Environmental Assessment, NRW.

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Appendix
Background to otters

1. INTRODUCTION

Natural Resources Wales (NRW) are developing a scheme to reduce the risk of flooding to the Strand area of Cardigan (Fig.1).

Fig 1 Map showing the location of the proposed flood risk management scheme (north bank).



Otter (*Lutra lutra*) activity along this tidal stretch of the Afon Teifi is known to be high. A preliminary ecological appraisal has been undertaken by Binnies UK Ltd., during which evidence of otter activity was recorded.

A more detailed follow-up otter survey is required to identify the level of otter activity; presence of resting sites; potential impacts of the proposed scheme on otters; and otter protection / mitigation measures.

This report describes an otter survey of the proposed scheme carried out on April 29th by Geoff Liles & Amy Chapman-Parsons and includes recommendations for otter protection / mitigation measures. A short description of otter ecology is given in "Background to otters" in the Appendix.

The survey area included the north bank of the A. Teifi between the two bridges, and a short stretch of the south bank that is likely to be used by contractors for access and storage (Fig 1).

A short stretch of the north bank of the river downriver from the Castle Street bridge (Fig 1) was not included in the surveys as no works will be carried out downriver from the old bridge. In addition, surveys of the north bank downriver from the old bridge - carried out by the author in the last 5 years – identified sprainting sites but no resting sites. As no works will be carried out along this stretch, further surveys here are not necessary.

2. SURVEY METHODS

The otter survey was carried out by Geoff Liles & Amy Chapman-Parsons on April 29th 2025 in dry weather & at low tide.

Information collected during the survey was marked on a large scale map of the site and described in notes, and photographs were taken using a digital camera. The location of key sites was recorded as 10 figure grid references using a hand-held GPS.

The aims of the otter survey were to:

- Record evidence of otter activity,
- Locate and describe potential resting & breeding sites, and travel routes,
- Identify the likely impact on otters of the proposed scheme,
- Recommend protection / mitigation measures, if necessary, to reduce impact on otters.

During the survey a search was made for:

- **signs of otters** – spraints (droppings), footprints, rolling places, pathways through vegetation, couches, food remains (fish scales and carcasses);
- **resting sites** - potential sites / features where otters could sleep during the day;
- **breeding sites** – habitats suitable for breeding (based on Liles, 2003) & recorded as actual, possible or potential depending on evidence of use;
- **feeding areas** – in particular, sites with abundant amphibians;
- **overland travel routes** - including short-cuts between sites.

The survey was carried out in wellington boots to allow access to river banks.

Sites are identified as being resting sites if they are typical of the places known to be used by otters for lying up, and show evidence of use. Two categories are used to describe resting sites, depending on the strength of evidence available. A third category is used (Potential Resting site), to record cover or sites which could be used as resting sites by otters.

- Actual Resting Site* – signs that the site is well used by otters are present, including a trampled entrance, spraints or footprints.
- Possible Resting site* - the site is typical of an otter resting site, with obvious evidence that it is being used by a mammal, but no signs are present that otters use the site.

A third category is used - Potential Resting site - to record the existence of cover or sites which could be used as resting sites by otters.

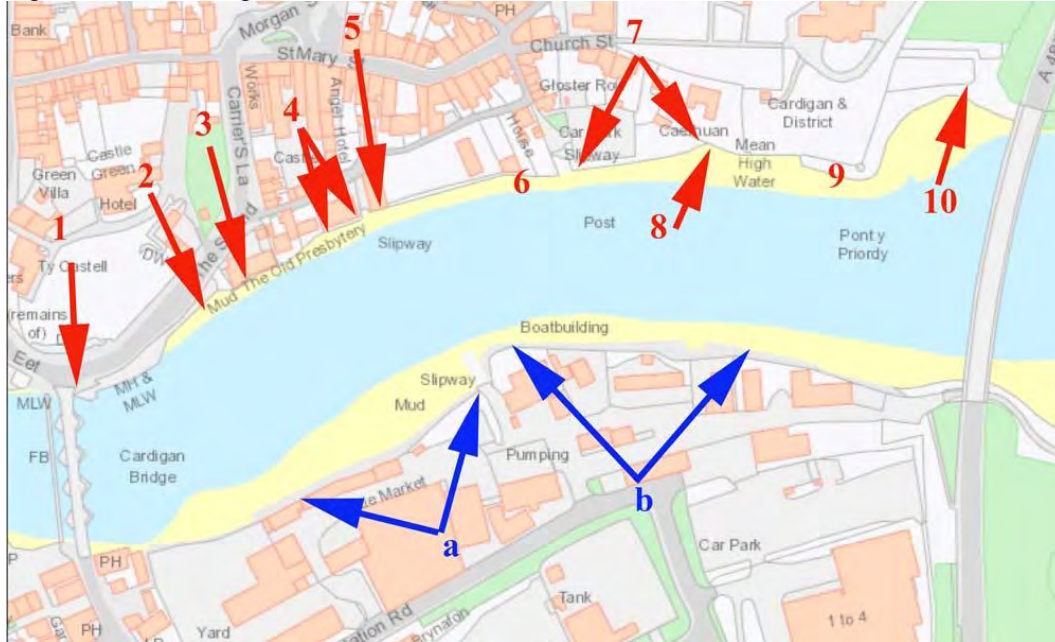
- Potential Resting site* - the site is typical of an otter resting site, but there are no signs of use (e.g. an entrance), by any mammal.

3. RESULTS: A. NORTHERN BANK (Target sites shown in Fig. 2)

Key: LB = Left bank. RB = Right Bank. Bh = Bank height. PRS = Potential Resting Site.

Sprints – F = Fresh, R = Recent 'O' = Old.

Fig 2 Numbered target sites.



TARGET SITE DESCRIPTION

- 1) End of retaining wall by the bridge with a cavity (Plate 1). PRS but could not be checked due to deep mud.
- 2) A stretch of grass bank beneath the sitting area (Plate 2).
- 3) Stone retaining wall beneath timber building (Kitchen centre).
- 4) 1m wide strip of scrub and young sycamore along the top of the wall adjacent to a corrugated shed (Plate 3). No evidence of otter use. Grass bank along toe of retaining wall (Plate 4) with 1 F, 2 R and an otter path through the grass.
- 5) Boat House (blue) with gaps at the base of the corrugated walls, but no evidence of otter use (Plate 5).
- 6) Downriver from the main slipway is stone retaining wall with no cavities (Plate 6) and a veranda with vegetation below it (Plate 7) but no cavities in the retaining stone wall.
- 7) Upriver from the slipway is a long stretch of gabion basket retaining wall beneath a public carpark (Plate 8). A long stretch of grass bank along the toe of the retaining wall is exposed at low tide, with several sprints and a well-used otter path through the grass.
- 8) Scrub forming large area of cover at the end of the gabion wall (Plate 9) but too open to provide security for a RS.
- 9) Stone wall below former hospital site (Plate 9) but no useful cavities for PRS. Otter path continues along grassy bank to the reed bed, with F & R sprints.
- 10) A large area of trees and scrub with a small stream outlet (Plate 10) close to the bypass bridge. A well-used human path runs through the cover (Plate 11) but there are also areas of dense cover created by a fallen tree (Plate 12) with possible mammal paths leading into it from the water – so a PRS. The large stones beneath the bypass bridge provide a well-used sprinting site, with several F, R & Old sprints (Plate 13)

Plate 1 Site 1 Cavity in stone wall



Plate 2 Site 2. Grassy bank below sitting area



Plate 3 Site 4 Scrub adjacent to shed



Plate 4 Site 4 Grass bank with *spraints* & otter path



Plate 5 Site 5 Boat Hs with cavities



Plate 6 Site 6 Stone wall dr from slipway



Plate 7 Site 6 Bank beneath veranda



Plate 8 Site 7 Gabion retaining wall.



Plate 9 Sites 8 & 9 Scrub at end of gabion wall



Plate 10 Site 10 Area of scrub & trees



Plate 11 Site 10 Human path



Plate 12 Site 10 Fallen tree **PRS**



Plate 13 Site10 Spraint beneath bypass bridge



4. CONCLUSIONS

- a) **Otter activity** along this stretch is likely to be frequent – fresh, recent & old spraints were found during the survey together with well-used otter paths, and sprainting sites show signs of use over a long period of time. In addition, local people report regular sightings of otters on this stretch.

The Teifi marshes nature reserve is likely to be an otter breeding site. In the three months following parturition, when the cubs remain at the natal den, it is highly likely that the female will travel from the natal den site downriver through Cardigan town in order to feed in the estuary.

- b) **Potential Resting Sites.**

TS 1. The cavity in the dry stone wall close to the old bridge could not be investigated. It is unlikely to be a PRS because otters need fresh water to wash off salt from their coats. However, otters do use cavities associated with collapsed masonry so it should be considered to be a PRS, and if likely to be affected by the flood defence scheme, should be checked by accessing the site from above using ropes etc.

NOTE: A follow-up survey of the wall cavity was carried out on June 18th 2025 at the request of NRW. The cavity and the long stretch of wall adjacent to it were examined closely for evidence of otter activity, using a kayak at high tide (2pm).

The cavity (Plates a & b) is relatively shallow and not deep enough to conceal and otter. It is approx. 80cm above the high tide level on top of a sheer wall – there was no evidence of otter use (e.g. flattened areas or spraints) within the cavity (Plate b). The long wall adjacent to the cavity is intact, with no otter access haul outs (e.g. low banks or collapsed wall sections) that would enable otters to climb onto the top of the wall.

Plate a Cavity at base of wall



Plate b Cavity internal view



- c) **TS 10.** The scrub & tree covered inlet with the small stream / ditch is the most likely PRS along this stretch, partly because it has dense cover (at the fallen tree) and fresh water close by in the stream / ditch. Although the cover is suitable for a PRS, the presence of human disturbance may affect its use.

d) Potential impacts on otters.

Potential impacts on otters are:

- i. Damage to / loss of the PRS at TS 10.
- ii. Disturbance to otters travelling through the stretch during construction works. (Otters are occasionally seen travelling through during daylight hours).
Note – disturbance to travelling otters is likely to be minimal because they can avoid the disturbance by using the middle of the river, or by swimming underwater.
- iii. The loss of the earth banks adjacent to the retaining walls – if they were removed as part of the scheme. Well-used otter paths are present along some of these banks and are probably used by otters to provide an easy travel route when travelling up river during high water flows. This could be particularly important if a female is travelling with young cubs.
- iv. The removal of vegetation growing along the retaining walls is unlikely to impact otters.

5. OTTER & HABITAT PROTECTION / MITIGATION MEASURES

5.1 PRS 10.

This area of scrub / woodland habitat should be retained if possible. Protection measures could include installing a sheep netting fence along the river-side edge of the human footpath (unless it's possible to prevent human access to the area).

5.2 Earth banks along river edges

If possible, earth banks along the river edge should be retained, or replaced if they are removed to facilitate construction works.

5.3 Construction materials must be stored well away from the river bank to ensure that otters do not use voids etc. for lying up.

5.4 No pits or trenches should be left open at the end of each day's work. Pits & trenches should be either covered securely or fitted with a simple ramp so that otters (and other mammals) can climb out.

**Geoff Liles
June 2nd 2025**

Appendix 1 Background to otters.

Otters are nomadic, and each animal inhabits a large home range (up to 40 km of waterway for an adult male). Otters use every type of water habitat, including rivers and streams; ditches; wetlands; lakes, ponds and reservoirs; estuaries & the coast. They live at all altitudes in the UK, and utilize even the smallest watercourses. Although mainly nocturnal, otters will travel and hunt during the day.

Within the home range many different daytime resting sites will normally be available to the otter. Each resting site may be used only infrequently, with otters sleeping in a different place almost every day. The level of security provided by a particular resting site required by an otter is partly dependent on the general level of disturbance in the area. In undisturbed rural areas, otters will sleep in relatively exposed places (e.g. within grass tussocks). Where disturbance is high (close to a footpath, or near towns and villages for example), otters need to be well hidden and choose secure resting sites such as tunnels or cavities under tree root systems and man-made structures, and large areas of dense scrub.

Typical resting sites include: tree root systems (especially oak, ash and sycamore); dense scrub thickets; piles of timber or rocks; earth tunnels and ledges; and couches in rough grassland and reedbeds. Otter resting sites are protected from damage and destruction, & disturbance, under the Wildlife & Countryside Act 1981 and the EC Habitats Directive 1992.

Breeding can take place at any time of year, but most births occur during the autumn & winter. Otter breeding sites are usually very large areas (> 0.5ha) of undisturbed cover such as woodland, scrub, reed-beds and wetlands. Cub rearing is carried out by the female alone – an arduous job because cubs remain with, and are dependent on their mother for almost a year.

Otters feed mainly on fish (both fresh water and marine species) choosing those species (such as eels) that are abundant and easily caught. The diet also includes amphibians (particularly important in the late winter / early spring), birds and some small mammals.

Otters will travel for several kilometres during a night. Although much of their travel is along watercourses they regularly take short-cuts across land (e.g. across river meanders), sometimes travelling long distances away from water.

The level of otter activity in an area, and whether otters have been present in the recent past, can usually be determined by searching for otter spraints (droppings) left by otters as territory markers at prominent site. In habitats with soft substrates (mud or sand) otter footprints can also be used. *However, an absence of otter signs on the day of the survey does not indicate that a site or area is not used by otters. Otters are now widespread throughout much of the UK: it should be assumed that otters are using all water & wetland habitats.*

We are not yet able to count individual animals in an area to get an idea of population size. However, because otters are solitary and each animal needs a large home range, it is likely that the number of otters living on a river system will be low.

Liles, G. (2003). Otter Breeding Sites: Conservation and Management. *Conserving Natura 2000 Rivers* Conservation Techniques Series No. 5, English Nature, Peterborough.