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# **Battlemead Common, Maidenhead, Berkshire – Willow Woodland**

## **Otter and Water Vole Survey**

For Royal Borough of Windsor and Maidenhead

September 2021

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<b>Project Number</b>	0286.08
<b>Client Reference</b>	Royal Borough of Windsor and Maidenhead
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## 1. Non-technical Summary

- 1.1.1. The Royal Borough of Windsor and Maidenhead (RBWM) are exploring the possibility of creating a boardwalk and footpath in the south-east of Battlemead Common (hereafter referred to as "the Site") to create a circular walking route. The Site was identified during an ecological walkover survey of the wider Battlemead Common area as having the potential to support both otters and water voles. Austin Foot Ecology was commissioned by RBWM to undertake targeted surveys for these species to determine any ecological constraints and opportunities associated with the proposals and the Site.
- 1.1.2. Signs of otters (otter spraint) were identified on roots/rocks adjacent to the River Thames in the east with numerous potential "laying-up" Sites (otter resting places) identified within the woodland within the Site (in tree roots, log piles, etc.). Trail cameras installed on trees adjacent to SW1 in the east of the Site and along the White Brook recorded otters using SW1 on two occasions between June and September 2021.
- 1.1.3. The White Brook in the west of the Site supported dense marginal vegetation offering potentially suitable foraging and sheltering habitat for water voles. However, no signs of water voles were identified along the White Brook. Images of North American mink were captured on the trail cameras installed on SW1. This species is a significant water vole predator whose presence has contributed to declines of this species through the UK. The presence of mink is likely the primary reason for water voles being found to be absent at the Site. However, fragmentation of habitats, lack of commuting local routes and habitat loss elsewhere are also likely to be important factors influencing the distribution of water voles locally and their colonisation of the Site.
- 1.1.4. Opening up of the woodland including the construction of a boardwalk has the potential to deter otters from using the Site in future with the possible destruction off of potential resting places also occurring as a result of proposals. In light of this, it is recommended that opening this area to the public and dogs be avoided with management of habitats in this area also being undertaken sensitively. The creation of new large log and brash piles would enhance this area for otters providing additional potential laying up Sites/resting places.
- 1.1.5. Given that water voles were found to be absent, no impacts upon water voles are predicted to occur as a result of proposals. The creation of new riparian habitat (reed planting etc.) would enhance the water course/wetland areas for this species. However, in order to make the Site suitable for this species it would be necessary to control the presence of north American mink with ongoing control likely to be required in order to keep the numbers of mink in check, particularly given the close proximity of the River Thames and ease of colonisation of this species from nearby areas. This would be a costly and labour-intensive measure if pursued and may not be viable as a result.

## 2. Introduction

### 2.1. Project Description

- 2.1.1. The Site that is the subject of this report predominantly comprises parcels of woodland in the south-eastern corner of Battlemead Common. The central grid reference is SU 90592, 83577. The Site is bordered to the east by a public footpath and the River Thames, to the west by an Environment Agency flood defence bund with Maidenhead Court and White Brook Business Park beyond, to the north by wetland habitat and grassland within Battlemead Common and to the south by woodland and residential development. The Site covers an area of approximately 3.15ha comprising semi-natural broadleaved woodland, plantation woodland, a stretch of the White Brook, wetland habitat (including a waterbody) and a small area of grassland and tall ruderal vegetation in the north-west. The Site boundary is shown in Figure 1.
- 2.1.2. The Royal Borough of Windsor and Maidenhead (RBWM) are exploring options to install a pathway/boardwalk (including the reinstatement of a bridge across the White Brook) through the plantation woodland to allow for a circular route to be created around the wider Battlemead Common Site. The boardwalk is to be fenced (with dog-proof fencing) either side with fencing also proposed around the perimeter of the Site. This option is being pursued as an alternative to avoid the need for crossing the causeway over the brook to the north (given sensitivities to over-wintering birds). The proposed route of the boardwalk and footpath is shown in Figure 3.

### 2.2. Ecological Context

- 2.2.1. A number of ecological surveys have been undertaken on the wider Battlemead Common Site and those that are of relevance to this study are summarised below.
- 2.2.2. An Ecological Appraisal consisting of an ecological desk study, extended Phase 1 habitat survey, River Corridor Survey (RCS) and Habitat Suitability Index (HSI) assessment of waterbodies within the wider Battlemead Common area was undertaken in May 2019 (Austin Foot Ecology, 2019a). The desk study highlighted the presence of a number of otter (*Lutra lutra*) records. The closest of these were records of otter spraint from the banks of the River Thames on the eastern boundary of the Site. Evidence of use of the Brook corridor by North American mink (*Neovison vison*) was also noted during the Phase 1 habitat survey. The ecological appraisal concluded that Battlemead Common had the potential to be used on occasional basis by otters with the willow woodland offering some potential sheltering opportunities. The presence of water voles (*Arvicola amphibius*) was thought to be likely absent given the signs of north American mink noted (a significant predator of water voles (Austin Foot Ecology, 2019).

### 2.3. Summary of Relevant Legislation

- 2.3.1. The otter is fully protected under the Conservation of Habitats and Species Regulations 2017 (as amended) and the Wildlife and Countryside Act 1981 (as amended). Further details are provided in Appendix 3; however, in summary otters themselves are protected from killing, injury and disturbance. It is also illegal to damage, destroy or obstruct access to a breeding Site or resting place used by this species. This protection can be set-aside (derogation) through the issuing of licences. The licences in England are currently determined by Natural England (NE)

for development works. Note that licences will only be granted where certain requirements are met; further details are provided in Appendix 4.

- 2.3.2. In addition, otters are listed as species of principal importance to the conservation of biodiversity in England. This list was drawn up in response to the requirements of section 41 of the Natural Environment and Rural Communities (NERC) Act 2006; it is often referred to as the 'S41 list'. The S41 list is used to guide decision-makers such as public bodies, including local and regional authorities, in implementing their duty under the related section 40 of the NERC Act, to have regard to the conservation of biodiversity in England, when carrying out their normal functions. The presence of a S41 species on Site is therefore a material consideration in the planning process.
- 2.3.3. The water vole and its habitats are protected by the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to intentionally or recklessly:
  - Kill, injure or take water voles;
  - Possess or control live or dead water voles;
  - Damage, destroy or obstruct access to any shelter or place which water voles uses for shelter or protection; or
  - Disturb water voles while they are using such a place.
- 2.3.4. Although the law provides strict protection to water voles and their burrows, it also allows this protection to be set aside (derogation) through the issuing of licences. The licences in England are currently determined by Natural England (NE). In addition, water voles are also listed as species of principal importance to the conservation of biodiversity in England (see above). Further details are provided in Appendix 3.

## **2.4. Aims of Study**

- 2.4.1. Austin Foot Ecology was commissioned to undertake otter and water vole surveys on the Site. The main aims of this survey and subsequent report are to:
  - Detail the methods used during the otter and water vole surveys
  - Present the results of the otter and water vole surveys;
  - Set out the legislative protection afforded to both otters and water voles; and
  - Present a preliminary assessment of any potential ecological impacts of the proposals based on the survey findings and current proposals;
  - Provide recommendations for any further surveys if considered necessary; and
  - Provide recommendations on potential mitigation and compensation to ensure that the proposals will remain acceptable in legislative terms.

### **3. Method**

#### **3.1. Survey Area**

- 3.1.1. The Survey Area (Site) extended from the bank of the River Thames in the east to the EA flood defence bund in the west. The northern boundary followed the woodland edge with the southern boundary running along a tributary of the White Brook (dry at the time of survey) (see Figure 1). A 200m stretch of the bank of the adjacent River Thames, Waterbody SW1 in the east of the woodland and a stretch of the White Brook to the west (approx. 200m) was included in the assessment.

#### **3.2. Otter survey**

- 3.2.1. The otter survey conformed to standard methodology for otter survey (Chanin, 2003). Signs that otter may be present were searched for including characteristic spraints (droppings), holts, resting places, otter paw prints and pathways through vegetation along or down the bank (slides). Particular attention was paid to crossing points and bridges during the course of the otter survey as these can be focus of activity. The survey visits were undertaken on 8<sup>th</sup> June and 6<sup>th</sup> September 2021 (see below).
- 3.2.2. In addition, a digital trail-cameras were used in an attempt to obtain photographs of otters using the Site and to gain a greater understanding of any use of the Site by this species. A total of four cameras were used and were installed in four locations. The locations are listed below:
- Camera 1: Installed on a tree monitoring a log floating in SW1 in the east of the Site;
  - Camera 2: Installed on a tree monitoring a fallen tree in SW1 in the east of the Site;
  - Camera 3: Monitoring the White Brook adjacent to the remnants of a footbridge;
  - Camera 4: Installed on a tree monitoring a flooded area of land in semi-natural broadleaved woodland adjacent to the White Brook.
- 3.2.3. These locations are shown on Figure 2. The cameras were installed on 8<sup>th</sup> June 2021 and were collected on 6<sup>th</sup> September 2021.

#### **3.3. Water vole survey**

- 3.3.1. A survey for water voles was undertaken within the Survey Area as defined in Section 3.1. The survey involved the vegetation on the bank edge of watercourses/waterbodies being thoroughly searched for field signs indicating the presence of water voles. Field signs were also searched for up to 1m out into the water and at least 1m up the bank (Dean *et al*/ 2016). Signs indicating water vole presence searched for included feeding remains, characteristic grass lawns, burrows, runs, footprints, latrines and water vole droppings (Strachan, Moorhouse & Gelling, 2011). As per current best practice guidance two survey visits were undertaken (see dates and weather conditions in Table 1) with one during the early part of the season and the other in the later part of the season.

*Table 1: Survey Dates and Weather Conditions*

<b>Survey No.</b>	<b>Date</b>	<b>Weather Conditions</b>
1	08/06/21	Dry with partially cloudy skies (cloud cover 4/8) with a light breeze (Beaufort scale F2) and air temperatures ranging between 14°C and 16°C during the survey.
2	06/09/21	Dry and partially cloudy skies (cloud cover 4/8-6/8) with a light breeze (Beaufort Scale F1-F2). Air temperatures ranged between 23°C and 25°C during the survey.

*Population Size Estimate for Water Voles*

- 3.3.2. The water vole mitigation guidelines state that "*the numbers of latrines recorded during the survey visits will give an indication of relative population size*" (Dean *et.al*, 2016). This information can also be helpful in determining the most value areas of a Site for this species. Table 2 below shows relative population sizes based on the numbers of latrines.

*Table 2: Water Vole Population Size (Dean et al, 2016)*

<b>Relative Population Density</b>	<b>Approximate number of latrines per 100m of bankside</b>	
	<b>First half of survey season (mid-April to end of June)</b>	<b>Second half of survey season (July to September)</b>
High	10 or more	20 or more
Medium	3-9	6-19
Low	< 2 (or none, but with other confirmatory field signs)	< 5 (or none, but with other confirmatory field signs)

**3.4. Survey Personnel**

- 3.4.1. The otter and water vole survey were undertaken by Stephen Foot MCIEEM and Edward Austin MCIEEM.
- 3.4.2. Stephen has worked as a professional ecologist since 2005 and during this time has undertaken numerous surveys for both otter and water voles. He has a good knowledge of both otter and water vole ecology, behaviour and signs indicating presence in-line with the requirements of the Competencies for Species Survey (CSS) prepared by CIEEM (CIEEM, 2013). He is a volunteer water vole surveyor for the Berks, Bucks and Oxon Wildlife Trust (BBOWT) and has been involved in water vole translocation programmes and in licensable activities in relation to the closure of an otter holt under licence from Natural England.
- 3.4.3. Ed has been a full-time professional ecologist since 2004. During this time Ed has also undertaken a number of otter and water vole surveys using standard methods and has a good knowledge of both otter and water vole ecology, behaviour and signs indicating presence. He has also completed and assisted with translocations of water voles using habitat management and trapping methods.

### **3.5. Survey Limitations**

- 3.5.1. During the field survey, dense overhanging bankside vegetation prevented access to the water's edge along the White Brook in some locations. However, it was possible to access the majority of areas (particularly those suitable for water voles) and good views were possible from other locations on the banks. Whilst this meant that the exact location of certain features could not be accurately mapped, the margin of error is within a few metres.
- 3.5.2. Despite the limited access in a few areas, there are not considered to be any limitations to the water vole and otter assessment as the majority of the banks could be thoroughly searched. In addition, the use of static photography enabled consideration of Site use by otter over a longer period of time than a standard two-visit survey would otherwise have allowed.

## 4. Results and Interpretation

- 4.1.1. This section sets out the results of the otter and water vole surveys. Findings gathered during the surveys are included in Appendix 1 and shown on Figure 2. The implications of the results are then explored with reference to current legislation.

### 4.2. Otter survey results

- 4.2.1. Signs of otter spraint were noted on tree roots/rocks on the banks of the River Thames immediately to the east of the Site and on fallen trees/logs over SW1 in the east of the Site.
- 4.2.2. In addition, footage of otters was recorded on the trail cameras on two occasions. The first of these was on 26<sup>th</sup> June 2021 at camera location 1 with the 2<sup>nd</sup> image captured on 21<sup>st</sup> August 2021 at camera location 2 (see Appendix 2).
- 4.2.3. The River Thames to the east and its surrounding woodland and the woodland on Site does support numerous places where otters could potentially layup/shelter with both the Thames and White Brook also supporting a population of fish upon which otters could potentially forage. Given the above findings it is likely that otters use the Brook and woodland as a foraging resource (predating upon fish and waterfowl) on occasion and could use the brook when moving through the local landscape. The otter has suffered serious declines throughout most of its European range, and by the mid-1970s the UK otter population had decreased to such an extent that otters were only found to be present in Scotland, parts of Wales and the West Country, with a few remnant populations in other parts of England (Crawford, 2010). The Environment Agency has been surveying 2,940 Sites across England revealing the presence of otters in just 5.8% of the Sites in 1977-79, rising to 36.3% in 2000-02 and 58.8% in 2009-10 (Environment Agency, 2010).
- 4.2.4. Eurasian otters are known to occupy large territories with the mean length of river and stream used found to be 38.8km+/- 23.4km for males 18.7km+/-3.5km for females in a study of Scottish rivers (Durbin, 1998 and Kruuk, 2006). In a study undertaken in lowland water courses in East Anglia it was found that radio-tracked otters inland spent 53% of the day in or alongside woodland (Jefferies *et al*, 1986). The relatively dense bankside vegetation and woodland on Site provide potential refuge and sheltering places for otters.

### 4.3. Water vole survey results

- 4.3.1. No evidence of water vole activity was recorded anywhere in the survey area. The White Brook within the Site is suitable for this species providing good quality habitat for water voles with soil/earth banks in which burrows can be excavated and areas of dense fringing marginal vegetation offering potential sheltering and foraging opportunities for this species. However, given a lack of evidence of water vole activity, the brook and waterbodies on Site are therefore not considered to support active populations of water voles at the time of this survey.
- 4.3.2. American mink (*Neovision vision*) paw prints were noted in silt on the adjacent to the White Brook in a previous survey (Austin Foot Ecology, 2019) with this species captured on camera on numerous occasions on waterbody SW1 to the south of the brook (see Appendix 2). Mink are

known to be a voracious predator of the water vole and have been a major contributory factor to the decline of this species throughout the UK. The presence of an active population of mink on the watercourses within and adjacent to the Site drastically reduces the likelihood of water voles to be present despite the brook providing suitable habitat.

#### **4.4. Site Evaluation**

- 4.4.1. The Site was found to be used on an occasional basis by otters with this species recorded moving through the area. The woodland may also be used as sheltering resource and given a current lack of disturbance could also support a holt in some years. The brook and SW1 may also provide a foraging resource for this species along with the adjacent River Thames. The Site is therefore considered to be of local value to otters.
- 4.4.2. Water voles were found to be absent from the Site during the targeted survey effort conducted in 2021. In light of these survey findings the Site is assessed as being of negligible value to water voles.
- 4.4.3. The Site does have the potential to be used in the future by water voles if populations within the county increase. Targeted habitat management and creation has the potential to further improve the importance of the Site and the value of the populations of these two species using the Site in the future (see Section 5).

#### **4.5. Incidental Species**

- 4.5.1. A number of species were recorded on the trail cameras during their deployment at the four locations. These are included in Table 3 below.

*Table 3: Species recorded on Trail Cameras*

Common Name	Scientific Name
<i>Mammals</i>	
Badger	<i>Meles meles</i>
Bat (likely brown long-eared bat)	<i>Plecotus auritus</i>
Brown rat	<i>Rattus norvegicus</i>
Fox	<i>Vulpes vulpes</i>
Grey squirrel	<i>Sciurus carolinensis</i>
Muntjac deer	<i>Muntiacus reevesi</i>
Roe deer	<i>Capreolus capreolus</i>
Water shrew	<i>Neomys fodiens</i>
Wood mouse	<i>Apodemus sylvaticus</i>
<i>Birds</i>	
Grey heron	<i>Ardea cinerea</i>
Jackdaw	<i>Coloeus monedula</i>

Common Name	Scientific Name
Mallard	<i>Anas platyrhynchos</i>
Mandarin duck	<i>Aix galericulata</i>
Mute swan	<i>Cygnus olor</i>
Kingfisher	<i>Alcedo atthis</i>
Wood pigeon	<i>Columba palumbus</i>

## 5. Outline Impacts and Recommendations

- 5.1.1. This section details potential impacts upon otters and water voles in relation to the proposals for the Site and provides recommendations as to how these can be avoided/overcome.

### 5.2. Otters

#### *Potential Impacts*

- 5.2.1. Given that use of the woodland, waterbody SW1 within the woodland and likely the brook are used by otters on at least an occasional basis, the opening up of this area to members of the public including the creation of a boardwalk could adversely affect this species. Impacts could include:

- Disturbance of otters using potential refuge areas (fallen trees, tree root boles, etc.) resulting in this species avoiding the area;
- Damage/destruction of these potential refuge areas to allow for construction of the boardwalk;
- Insensitive management of habitats present could also result in disturbance of otters using the Site; and
- Possible pollution events impacting the White Brook

#### *Avoidance and Mitigation Measures*

- 5.2.2. The avoidance of opening up of this area to the public, i.e. not creating the boardwalk in this area, would allow the Site to remain undisturbed and to continue to function as a potential refuge area for otters. This would also avoid the need to clear any potential refuge features (fallen trees, etc.) which may be being used by this species as resting places.

- 5.2.3. Future management of this area of woodland should be undertaken sensitively given that the birth of cubs appears to be aseasonal in the UK (cubs can be born in any month of the year) (Harris & Yalden, 2008). Therefore, works must avoid damaging/destroying any of the existing potential refuge areas that are present, with areas to be cleared to be first checked by an ecologist.

- 5.2.4. The reinstatement of the footbridge across the White Brook and the possible use of machinery to construct the boardwalk would need to be carefully considered. In order to avoid direct impacts upon the White Brook, the waterbody in the east and wetland habitat within the woodland (and species including otters), the general environmental protection measures as listed below must be implemented during the construction of the boardwalk/bridge. Such measures include best environmental practice guidance outlined in the Environment Agency's Pollution Prevention Advice and Guidance (Environment Agency, 2007) (now archived) and those outlined by the Construction Industry Research and Information Association guidance (CIRIA, 2015). The following minimum standards must be adhered to prevent ecological impacts beyond the Site boundary:

- Measures must be taken to prevent dust and other emissions from construction affecting land beyond the Site.

- Chemicals and fuels must be stored in secure containers. Spill kits must be available.
  - Noise and vibration must be controlled and kept to the minimum necessary.
- 5.2.5. As stated in the EMP the creation of additional large log/brash piles within the woodland would provide additional potential sheltering habitat for otters (Austin Foot Ecology, 2021).

### **5.3. Water Voles**

#### *Potential Impacts*

- 5.3.1. As stated in the results of this report, at present surveys findings show that this species is absent from the Site. Therefore, creating a new bridge across the brook would not adversely impact this species.
- 5.3.2. In order to encourage this species onto Site the creation of new wetland habitat and the proliferation of marginal plants i.e. common reed, etc., would create optimal foraging habitat for this species. However, given the presence of North American mink it is unlikely that water voles will be able to repopulate the riparian habitat on Site without assistance. The control of mink is likely to be needed to remove this predator from the Site followed by the release of water voles onto Site from a captured/captive bred population. However, given the proximity of the Site to the River Thames and that removal of individual mink would likely result in other mink readily colonising the Site and therefore on-going control would be required. In light of this, the ongoing control of mink may be too labour intensive as ongoing control would be necessary. An increase in the local otter population may also deter mink from using the Site in the future as otters are known to predate this species.

## 6. Conclusion

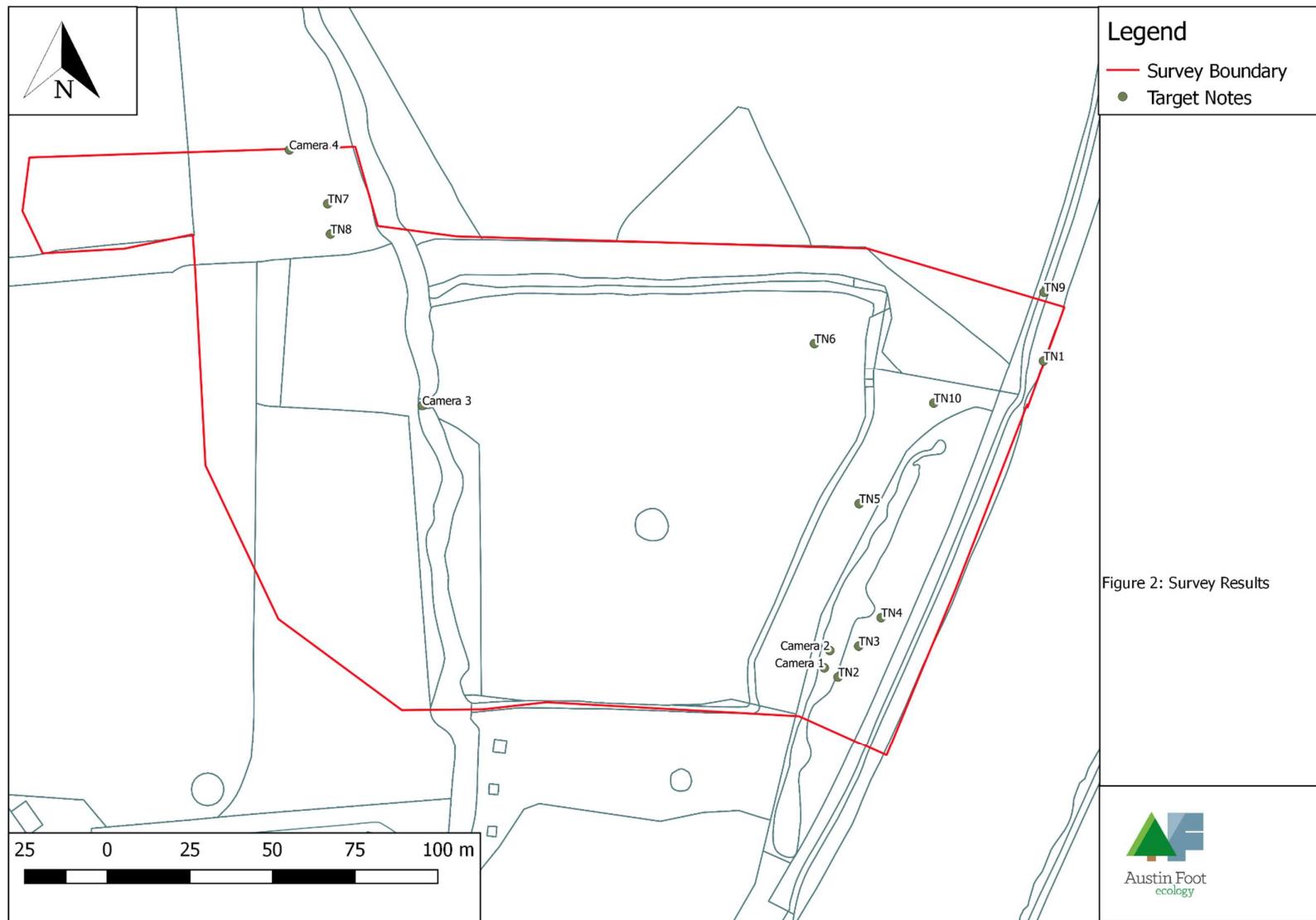
- 6.1.1. The otter and water vole surveys completed in 2021 in the Willow woodland and White Brook in the south-east of Battlemead Common found evidence of use of the Site by otters with water voles found to be absent.
- 6.1.2. In light of these findings, it is recommended that opening up of the woodland to the public along with the construction of a boardwalk and new bridge be avoided with an alternative sought in order to prevent adverse impacts upon otters (a European protected species). Providing management of the woodland is undertaken sensitively there are unlikely to be any adverse impacts upon otters as a result of future management of the Site.
- 6.1.3. In order for water voles to re-colonise the Site, enhancement of riparian habitat is necessary along with control of North American mink. Given the close proximity of the Thames and scope for mink to colonise the Site it is unlikely that control would of mink would be practicable in this instance.

## 7. References

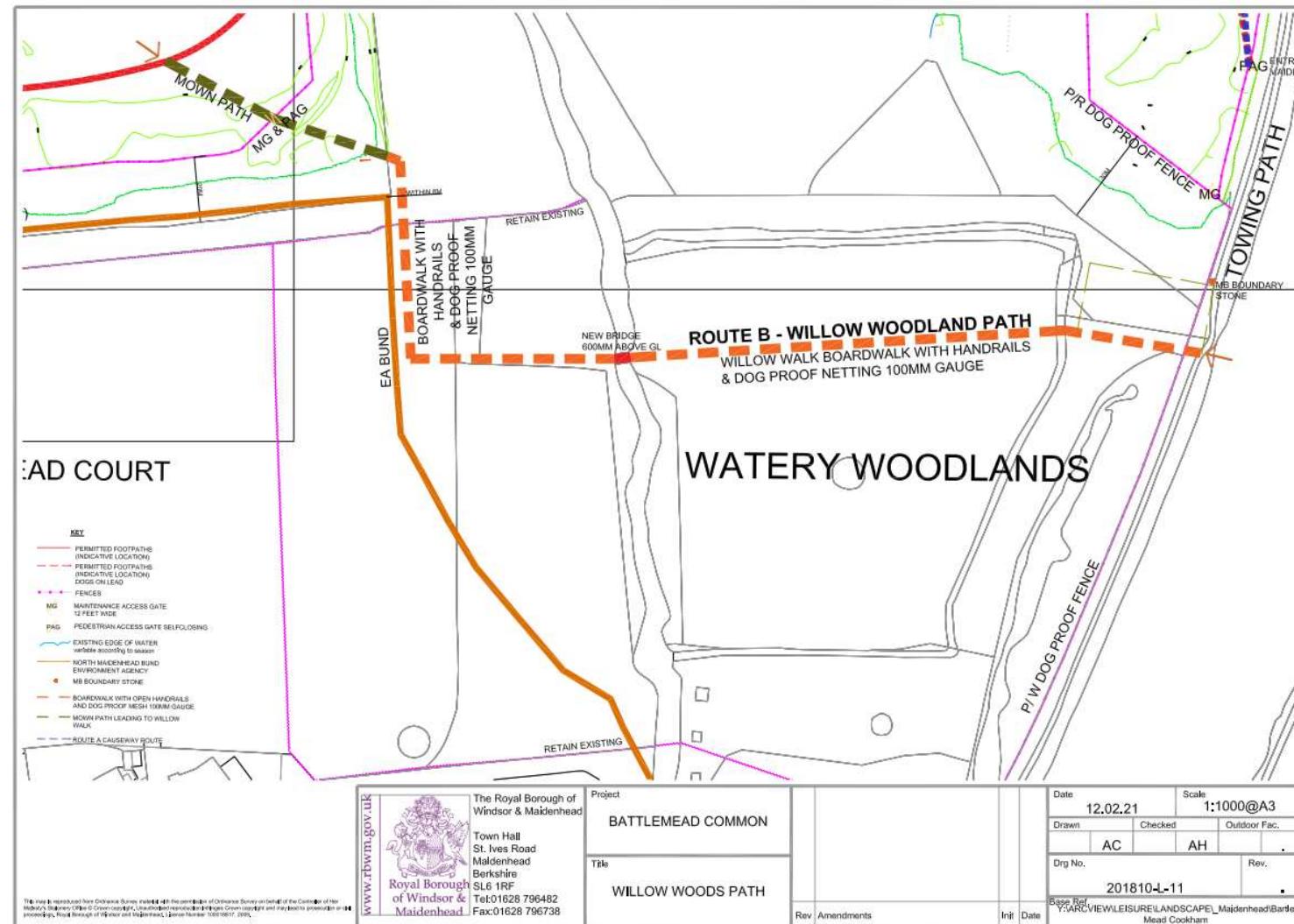
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## **8. Figures**





*Figure 3: Proposed Footpath/Boardwalk Route*



## 9. Appendix 1 – Otter and Water vole Target Notes

Target Note	Description
TN1	Possible otter spraint on rock on banks of the Thames
TN2	Potential otter laying up Site beneath root bole of fallen tree by SW1
TN3	Possible otter spraint on log
TN4	Potential otter laying up Site
TN5	Well-used mammal path
TN6	Fallen tree offering potential sheltering opportunities to otters
TN7	Fallen tree on edge of White Brook with roots offering potential sheltering opportunities to otters
TN8	Brown rat tracks on bank of White Brook
TN9	Jelly from otter anal scent gland on rock adjacent to the Thames
TN10	Possible resting place in hollow tree trunk

## 10. Appendix 2 – Photographs



**Photograph 1:** Otter at camera location 1 with badger crossing the log over the waterbody



**Photograph 2:** Otter crossing the log shortly after Photograph 1 above.



Photograph 3: Otter diving off log at camera location 2 in August 2021.  
8 17 C TRAILCAM01 ● 08/21/2021 11:58PM



Photograph 4: Mink crossing the floating log at camera location 1 in July 2021  
8 17 C TRAILCAM02 ○ 07/10/2021 11:00AM



Photograph 5: Mink crossing the fallen tree at camera location 2 in June 2021



Photograph 6: Mink crossing the fallen tree at camera location 2 in September.



**Photograph 7:** Possible otter spraint on rock adjacent to the River Thames TN1



**Photograph 8:** Possible laying up Site beneath roots of fallen tree at Camera Location 1 (TN2)



**Photograph 9:** Possible resting place for otters in hollow trunk (TN10)



**Photograph 10:** Brown rat prints (TN8)

## 11. Appendix 3 – Relevant Legislation

11.1.1. This section briefly summarises the relevant legislation pertaining to the species mentioned within this report. Please note that the following text does not constitute legal advice.

### 11.2. Relevant Legislation

#### *Otters*

11.2.1. The original (1994) "Habitat Regulations" transposed the EC Habitats Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Council Directive 92/43/EEC) into national law. The Conservation of Habitats and Species Regulations 2017 (as amended) consolidates the various amendments that have been made to the Regulations.

11.2.2. "European protected species" (EPS) are those which are present on Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended) and includes all UK bat species. These species are subject to the provisions of Regulation 41 of those Regulations. All EPS are also protected under the Wildlife and Countryside Act 1981 (as amended). Taken together, these pieces of legislation make it an offence to:

- Intentionally or deliberately capture, injure or kill any wild animal included amongst these species
- Possess or control any live or dead specimens or any part of, or anything derived from these species
- deliberately disturb wild animals of any such species
- deliberately take or destroy the eggs of such an animal, or
- intentionally, deliberately or recklessly damage or destroy a breeding Site or resting place of such an animal, or obstruct access to such a place

11.2.3. For the purposes of paragraph (c), disturbance of animals includes in particular any disturbance which is likely—

- to impair their ability to survive, to breed or reproduce, or to rear or nurture their young,
- or in the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- to affect significantly the local distribution or abundance of the species to which they belong.

11.2.4. Although the law provides strict protection to these species, it also allows this protection to be set aside (derogation) through the issuing of licences. The licences in England are currently determined by Natural England (NE) for development works. In accordance with the requirements of the Regulations (2010), a licence can only be issued where the following requirements are satisfied:

- The proposal is necessary 'to preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment'
- 'There is no satisfactory alternative'
- The proposals 'will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range'.

*Water voles*

11.2.5. The water vole and its habitats are protected by the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to intentionally or recklessly:

- Kill, injure or take water voles;
- Possess or control live or dead water voles;
- Damage, destroy or obstruct access to any shelter or place which water voles uses for shelter or protection; or
- Disturb water voles while they are using such a place.

11.2.6. Although the law provides strict protection to water voles and their burrows, it also allows this protection to be set aside (derogation) through the issuing of licences. The licences in England are currently determined by Natural England (NE).