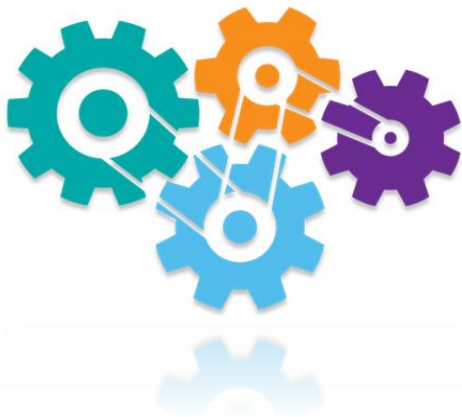




Former Mepal
Outdoor Centre,
A142 Ireton's
Way,
Ely,
Cambridgeshire

Water Vole and Otter Report

August 2021



19-6364

QUALITY STANDARDS CONTROL

The signatories below verify that this document has been prepared in accordance with our quality control requirements. These procedures do not affect the content and views expressed by the originator.

This document must only be treated as a draft unless it is has been signed by the originators and approved by a director.

Revision	-	2
Date	3 July 2020	16/08/2021
Prepared by	Alexandra Ash BSc	P.Holden
Checked by	S. Prior	
Authorised by	P.Holden MSc	P.Holden

Note

The advice which we have prepared and provided within this report is in accordance with the CIEEM Code of Professional Conduct. We confirm that the opinions expressed are our true and professional opinions. Opinions and information provided in the report are based on Syntegra Group Ltd using reasonable skill, care and diligence in the preparation of the same in compliance with the CIEEM Code of Professional Conduct.

Validity of Data

The findings of the site survey are valid for a period of 24 months from the date of the survey. If approved works have not commenced by this date, then an updated site survey could be required to inform any changes on site in order to inform any updated mitigation and or precautionary measures required on site.

LIMITATIONS

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The conclusions and recommendations contained in this report are based upon information provided by others and upon the assumption that all relevant information has been provided by those parties from whom it has been requested and that such information is accurate. Information obtained by SC has not been independently verified by SC, unless otherwise stated in the report.

The methodology adopted and the sources of information used by SC in providing its services are outlined in this report. The work described in this report was undertaken in **2020** and is based on the conditions encountered and the information available during the said period of time. The scope of this report and the services are accordingly factually limited by these circumstances.

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No allowance has been made for changes in prices or exchange rates or changes in any other conditions which may result in price fluctuations in the future. Where assessments of works or costs necessary to achieve compliance have been made, these are based upon measures which, in SC’s experience, could normally be negotiated with the relevant authorities under present legislation and enforcement practice, assuming a pro-active and reasonable approach by site management.

Forecast cost estimates do not include such costs associated with any negotiations, appeals or other non- technical actions associated with the agreement on measures to meet the requirements of the authorities, nor are potential business loss and interruption costs considered that may be incurred as part of any technical measures.

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1 INTRODUCTION

1.1. Syntegra Group was commissioned by The CDS Group to undertake a water vole (*Arvicola amphibious*) and otter (*Lutra lutra*) survey at Land at the Former Mepal Outdoor Centre, A142 Ireton's Way, Ely, CB6 2AY (Grid Ref: TL 42274 82982).

1.2. The preliminary ecological appraisal was carried out in November 2019 by Syntegra Group. The survey noted a large lake that consists of a flooded gravel pit, where a narrow-intermittent fringe of marginal vegetation is present along the majority of the shore. As the site's habitats and features were identified as potential habitat for water voles and otters, further surveys were required to determine if a population of water voles and otters are present on site. The surveys were required to support the planning application.

1.3. This report details the water vole and otter survey results along with the mitigation and compensation proposals for the land at the Former Mepal Outdoor Centre.

1.4. The aim of the survey and report was to:

- To identify any known records and/or populations of otter or water vole in the vicinity of the project site boundary;
- To Carry out a survey for the presence or likely absence of water voles and otters that may materially impact on the proposals;
- To highlight any initial potential ecological constraints in respect to otter and water vole;
- To Make recommendations for further surveys or any other work as required in order to develop a mitigation strategy for the species if present.

2 LIMITATIONS

2.1. This report only applies to plans drawn up at the time of survey. Any alterations to plans may render the report void and/or require further surveys and should be communicated to the ecologist at the earliest opportunity.

2.2. At the time of the field survey, a boat could not be provided to assess some banks and an island in the lake that was inaccessible by foot. Therefore, potential field signs of otter and water vole informing likely presence or likely absence may have been missed at these locations. Despite this, the majority of the lake was able to be accessed, and field signs were found for otters informing likely presence.

2.3. The client is responsible for reading and understanding the advice given in this report. The client must ensure that, where recommended, avoidance, mitigation and compensation is followed through.

3 LEGISLATION

Otter Legislation

3.1. Otters are fully protected as a European protected species (EPS) under The Conservation of Habitats and Species Regulations 2010 and is also protected under sections 9 and 11 of the Wildlife and Countryside Act 1981. It is illegal to:

- capture, kill, disturb or injure otters (on purpose or by not taking enough care);
- damage or destroy a breeding or resting place (deliberately or by not taking enough care);
- obstruct access to their resting or sheltering places (deliberately or by not taking enough care);
- or to possess, sell, control or transport live or dead otters, or parts of otters.

3.2. If you're found guilty of an offence you could get an unlimited fine and up to 6 months in prison.

Water Vole Legislation

3.3. The European water vole is protected under schedule 5 of the Wildlife and Countryside Act 1981 (as amended), for which the following are offences:

- Intentionally killing, injuring or taking;
 - Intentionally or recklessly damaging/destroying a place of shelter/protection;
 - Intentionally or recklessly disturbing an animal in its place of shelter/protection;
 - Intentionally or recklessly obstructing access to its place of shelter/protection;
- And
- Possession (live or dead, including derivatives), sale and offering for sale.

4 METHODOLOGY

4.1. The PEA Survey in November 2019 identified areas of the site that were considered suitable for European water voles and otters. These included the vegetation surrounding the lake, consisting of common reed, water mint, jointed rush. A narrow intermittent fringe of marginal vegetation is present along the majority of the shore, particularly along the western and south-eastern sides of the lake. These identified areas and features had the potential to provide complex habitats suitable for use by water voles and otters, particularly

as there are historical records in close proximity to the site for these species, indicating suitable surrounding habitat and possible presence within the locality.

4.2. Surveys at the Former Mepal Outdoor Centre were undertaken on the 12th June 2020 by John Johnson BSc (Hons) student CIEEM and Alexandra Ash BSc, skilled in animal and botanical habitat surveys and have extensive experience of identifying field signs and assessing habitats for use by Otter and Water Vole.

4.3. Weather conditions for the survey are described below in table 1 and were suitable conditions to carry out the survey.

Table 1. Weather conditions recorded during the field survey.				
Date	Air temperature	Cloud Cover	Wind Speed and Direction	Precipitation
12/06/20	22°C	80%	7.1 Easterly	20%

4.4. Otter and water vole surveying methodology followed guidance from The Mammal Society (Dean et al., 2016) and the Chartered Institute of Ecology and Environmental Management (CIEEM 2016).

Desk Study

4.5. Syntegra Consulting undertook a basic internet-based search of statutory designated sites within 2km of the site using the Natural England/DEFRA web-based MAGIC database (www.MAGIC.gov.uk). The applicant has also commissioned a local biological records search carried out by Cambridgeshire and Peterborough Environmental Records Centre, CPERC, due to sensitivity of records, the exact locations of protected species are not disclosed in this report.

4.6. The Fenland Local Plan (2014) was consulted for details on policies relevant to designated sites, protected species and general ecology protection.

Otter Survey

4.7. The habitat in and surrounding the large lake present on site, a flooded gravel pit, was initially assessed on its suitability for Otters.

- 4.8. The survey then comprised of a detailed search for otter activity including;
- Holt entrances – holes characteristically in riverbanks or under tree roots at river edges.
 - Couch – typically an above-ground nest-like structure used as a resting place;



- Footprints – five toes which arch around the front of a large pad. Often seen in sand or soft mud deposits along rivers and under river bridges;
- Otter trails through vegetation – otters use the same routes within their territory to access rivers, so the paths are usually worn leading down the banks to the river and may have a ‘slide’ at the end of well-worn mud as they slide into the water;
- Spraint – found in prominent locations adjacent or along a river, for example on tree stumps, large rocks and ledges under bridges. Spraints are made up of clearly visible fish bones and scales, with some other small bones, fur, feather and insect fragments sometimes present. Fresh spraint is usually black, tarry and sticky. It has a distinctive sweet-musky odour, which is not unpleasant;
- Anal jelly – a jelly-like secretion that smells strongly of otter and can vary in colour from pale brown, greenish to amber; and
- Other signs – for example, occasionally remains of dead otters can be seen on roads.

4.9. A background data search (gathering data from national websites, local record centres, councils, and local wildlife groups *etc.*) was also completed and the results are provided in section 5.1.

Water Vole Survey

4.10. A detailed Water Vole survey was undertaken in line with guidance from The Mammal Society (Dean *et al.*, 2016) and the Chartered Institute of Ecology and Environmental Management (CIEEM 2016) and comprised:

- Background Data Search (gathering information from national websites, local record centers, councils, local wildlife groups *etc.*);
- a field assessment of the suitability of the habitat for Water Vole; and detailed surveys for field signs indicating presence, or probable presence, of Water Vole).

4.11. The survey methodology involved recording all evidence of water vole activity, which is detailed below.

- Faeces – these are 8 – 12mm long and 4 – 5mm wide, with a smooth ‘tic tac’ like shape, varying in colour from green to black, and odourless with a putty-like texture;
- Latrines – found throughout the territory, often comprising a pile of flattened droppings, with fresh droppings on top, used to mark range boundaries or favoured spots close to burrows;

- Feeding stations – comprise a neat pile of chewed feeding remains, often comprising lengths of vegetation up to 10cm long, showing the marks of the two large incisors;
- Burrows – these are typically wider than they are high, with a diameter of 4 – 8cm, and are usually located along the water’s edge;
- Lawns – around burrows there is often an area of grazed vegetation, surrounded by taller vegetation, these are most often produced when the female is nursing young;
- Nests – these comprise a large ball of shredded material, often woven into the bases of rushes and reeds, and are normally found in areas where the water table is high, such as wetlands;
- Footprints – as with other rodents, the footprints of the fore foot, show four toes in a star arrangement, with the hindfoot showing five toes. The size of footprints for the hindfoot is 26-34mm; and,
- Runways – these are low tunnels within the vegetation, often adjacent to the water’s edge; and

4.12. A background data search (gathering data from national websites, local record centres, councils, and local wildlife groups *etc.*) was also completed and the results are provided in Section 5.1.

5 RESULTS

Desk Study Results

5.1. The designated sites and species records of otters and water voles within proximity to the Former Mepal Outdoor Centre are listed in Table 2 and 3 below.

Otter

5.1.1 Results from the data search showed five historical records for otter within the study area. These records are from 10m to 100m within the study area. Three of these records were from field signs of otter spraint. The other two records were from road traffic accidents, with one being an adult female.

Dates	No. of records	Approximate Location	Grid Reference	The Distance of Record to Application Boundary
09/01/2018	1	A142, Mepal	TL423829	100m
28/01/2012	1	Blockmoor Fen, Sutton	TL419808	100m

28/01/2012	1	Mepal Fen	TL430821	100m
08/02/2005	1	A142, Chatteris	TL42028337	10m
15/01/2004	1	Ouse Washes (Mepal)	TL436813	100m

Water Vole

5.1.2. Results from the data search showed four historical records for water vole within 100m to 1km of the study area. These records showed evidence of water vole field signs in the area with droppings, runs in the vegetation, and latrines found present. However, no individuals were ever seen.

Table 3. Water Vole data records surrounding Former Mepal Outdoor Centre				
Dates	No. of records	Approximate Location	Grid Reference	The Distance of Record to Application Boundary
1999	1	Mepal	TL440820	100m
15/08/2000	1	Mepal	TL440820	100m
05/08/2008	1	Block Fen, Chatteris	TL4383	1km
28/01/2012	1	Old Bedford River, Mepal	TL436813	100m

Otter Field Survey Results

5.2. Habitat in and around the large lake located at the Former Mepal Outdoor Centre was identified as suitable for otter presence. The lake and surrounding banks were surveyed for potential otter presence by walking alongside the banks and top of the bank.

5.3. Evidence of otter field signs were found and recorded on the south-eastern banks of the lake (Appendix I). These signs included spraint (Appendix II), trails (Appendix III), slides (Appendix IV), and feeding remains (Appendix V).

5.4. All field signs of otter were present within 10m of each other on the south-east banks of the lake. Feeding remains included an otter kill of a common carp (*Cyprinus carpio*) which is known to be present in the lake. Additionally, fish scales were also found in and around the slide where the otter had dragged the common carp onto the banks of the lake.

Water Vole Field Survey Results

5.5. Habitat in and around the lake located on the Former Mepal Outdoor Centre site was identified as suitable for water vole presence. A water vole survey was undertaken in the surrounding habitat and banks of the lake to look for field signs of water vole by walking alongside the banks and top of the bank.

5.6. No field signs of water vole were recorded at the lake. Water vole faeces, latrines, feeding stations, burrows, lawns, nests, footprints, and runways were not found.

6 IMPACTS AND RECOMMENDATIONS

6.1. The survey conducted on the 12th of June 2020 was to determine the presence or likely absence of otter and water vole on site. Evidence of otter activity was confirmed by otter field signs present. As a single otter spraint was found, it could indicate that this habitat is only occasionally used by otters. However, as there are local intermittent records of otters in close proximity to the site, including road traffic accidents, otters are still active in the locality.

6.2. Alternatively, suitable habitat for water voles may indicate presence on-site in the past, however, results from the field survey suggested no evidence of current water vole activity. It should be noted that because of steep banks and dense vegetation that some areas were inaccessible for survey. Therefore, signs may have been missed. Despite these constraints, it does appear likely that water voles are absent from the survey area.

6.3. Most of the banksides surrounding the lake provide suitable habitat for otter and water vole where an intermittent fringe of marginal vegetation is present, particularly along the western and south-eastern sides of the lake. This is notable as otter activity was recorded within this habitat. The southern banks provide suitable burrowing opportunities for water voles and the presence of bankside vegetation around most sides of the lake provides both feeding and sheltering opportunities for water vole.

6.4. Proposals could be constrained by presence of otters if habitat around the banksides of the lake are to be altered, affecting the feeding, sheltering, and burrowing opportunities of these species. As otters have a confirmed presence and use the lake to forage, any proposals impacting aspects of the lake itself and its banksides may impact the ecology of these species. Impacts, mitigation and avoidance, and compensation measures are detailed in Table 4.

6.5. For the proposed works within the proximity of the surveyed water body, the impacts for otters may include:

- habitat loss or degradation in or near water bodies;
- habitats being cut off and becoming fragmented;
- holts and resting places being removed;
- disturbance to resting and feeding places;
- disturbing their usual routes, eg road bridge or culvert works forcing otters to use roads or bridges that might mean it's more likely that otters will be killed or injured on the road;
- or changes to water quality which could also affect food sources.

6.6. No evidence of water vole presence was found during the survey and therefore no impacts are considered (or mitigation put forward) for this species.

6.7. Negative impacts to protected species should always be avoided where possible. If possible, any works that are carried out within close proximity (within 10m) of the lake, and especially around the known otter habitat should be avoided. Night works are not advised and must be avoided. It is recommended to avoid working the two hours before sunset and two hours after sunrise. If possible, leaving a buffer zone of at least 10m around the lake is advised.

6.8. The presence of ash and sycamore trees have been cited as particularly important in providing potential den sites as well as oak and elm trees. If mature specimens of these species are present on the banks of the lake, then they should be left as they have ecological value for otters present.

6.9. If works cannot be avoided altogether, or night work must be carried out, mitigation measures can help to reduce the impact. These would include retaining the otter habitat along the southeast of the water body and bank. In doing so would also help to protect their likely main food source within the water body (*Cyprinus carpio*). While proposed works are happening elsewhere on site, the use of otter-proof fences (Appendix VII) to stop otters getting into development sites is recommended.

6.10. Additionally, compensation measures can be used to offset any remaining negative impacts on otters if disturbance or harm to otters is likely to happen. In these instances, an EPS mitigation license may be necessary. You should be able to avoid harm to otters and damage or blocking access to their habitat; however, if this is unavoidable then an EPS mitigation license will be required. These compensation measures should result in no net

loss of breeding or resting sites, provide an enhanced habitat post works, and remedy any loss of otter access and habitat connectivity. Compensation measures can include the following but are not limited to:

- constructing artificial holts (Appendix VIII) to replace those that will be damaged or removed;
- and restoring or improving habitats to compensate for those that will be lost.

6.11. Further, as the habitat in and surrounding the lake is used by otters, it is recommended to enhance the habitat and increase its ecological and conservation value for these protected species. Providing suitable habitat for potential den sites is beneficial, this can be done by retaining and enhancing the presence of trees (oak, elm, ash, and sycamore) and shrubs around the lake which also adds to availability of invertebrate prey for fish populations.

6.12. In addition to this, we also recommend retaining and enhancing the herbaceous bankside vegetation around the lake should water voles be present.

6.13. Additional surveys may need to be carried out pre-construction and throughout works to check for any new holts or resting places that may arise after the original surveys.

Table 4. Potential Key Species/Habitats on Site and Proposed Avoidance, Mitigation, Compensation and Enhancement			
Species/Habitats	Impact	Avoidance and Mitigation	Compensation and Enhancements
Otter dens (holts)	Potential loss of den sites.	Retain ash, sycamore, oak and elm trees around the lake wherever possible. Avoid the destruction of den sites, temporary fencing may be used to help avoid these areas.	If destruction of otter holt or potential otter holt is necessary, carry out works when otters are not present. Fence off area around holts to discourage the return of otters to particular holt; and clearance of holt supervised by an ecologist. Replace holts with artificial otter holts. If valuable tree species are lost, then replacement and restoration of these habitats should occur.
Otters	Potential disturbance or harm to otters within their habitat.	Avoid night works involving flood lights and noisy machinery, and working within 10m of otter habitat. Use temporary mammal fencing to delineate safe route for otters away from construction site.	
Lake side boundary habitat	Potential destruction of suitable otter habitat surrounding the lake (marginal vegetation surrounding the lake as well as valuable tree species).	Include of zone of undeveloped land surrounding the lake to retain otter habitat of tall grasses, reed beds, trees, scrub, and rock piles within 10m of water body.	Restore or improve habitats to compensate those that were lost during construction. It is recommended in using the same native species when restoring or enhancing the habitat, for example: Common reed, Gipsywort, great Willow herb, Water figwort, Purple loosestrife, Jointed rush, and Brook weed are all present in the marginal vegetation surrounding the lake.
All	Potential pollution damage during construction works.	Adherence of standard pollution prevention measures from GOV.UK; fuel kits to be kept on site and fuelling of all vehicles done off-site.	

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Appendix I: The marked location of where otter field signs were recorded around the lake.



Appendix II: Broken up otter spraint.



Appendix III: Potential otter trails through vegetation.





Appendix IV: Otter slide with feeding remains (Common carp scales) present.



Appendix V: Otter feeding remains of fish scales and a dead common carp.







Appendix VI: Photo of site.



Appendix VII: Otter-proof fencing.

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Appendix VIII: Example of an artificial otter holt.

