

Ecological Mitigation Compensation and Enhancement Measures: Visitor Facilities Phase

Havant Thicket Reservoir, Hampshire

A Report To: Portsmouth Water
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Quality Assurance

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Declaration of Compliance

This study has been undertaken in accordance with British Standard 42020:2013 "Biodiversity, Code of Practice for Planning and Development". The information which we have prepared is true, and has been prepared and provided in accordance with the Chartered Institute of Ecology and Environmental Management's Code of Professional Conduct. We confirm that the opinions expressed are our true and professional bona fide opinions.

Disclaimer

The contents of this report are 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.

Middlemarch Environmental Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

Validity of Data

The findings of this study are valid for a period of 24 months from the date of survey. If works have not commenced by this date, it may be necessary to undertake an updated survey to assess any changes in the status of species on site, and to inform a review of the conclusions and recommendations made.

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1. Introduction

1.1 Project Background and Site Description

In June 2026, Urban Fabric Architects LLP commissioned Middlemarch Environmental Ltd to produce an Ecological Mitigation, Compensation and Enhancement Report associated with the development of the Havant Thicket Reservoir. Middlemarch has previously carried out the following assessments in 2025 and 2026 for Portsmouth Water at this site:

- Ecological Review (RT-MME-182586);
- Ecological Review – RIBA Stage 3 (RT-MME-183532); and
- Response to Stakeholder Comments (RT-MME-184792).

In October 2021 Portsmouth Water received planning permission (reference APP/20/00990) from Havant Borough Council for the following development at Havant Thicket, adjacent to Sir George Staunton Country Park, Havant (hereafter referred to as ‘the site’):

“1) Full Planning permission for Development of a reservoir for raw water storage, A pumped storage reservoir, with the minimum required total storage capacity of 8,700 million litres (Ml), to support the planned bulk supply transfer of at least 21Ml/d in extreme (currently defined as 1:200 year) drought conditions; Construction of an earth embankment adjacent to Staunton Country Park; Construction of an overflow discharge/spillway at the south-western side of the reservoir and associated works; Construction of a new junction on the B2149 Manor Lodge Road and a new junction on Swanmore Road. Provision of viewing areas on the southern embankment and western edge of the reservoir.

2) Outline application for (matters to be considered outlined in Table 2.2 in the submitted Development Specification) control house partially incorporated within landscaped earth mounding adjacent to the south west embankment; together with provision of other earth embankments. Construction of a visitor centre / cafe, with storage areas and welfare facilities to the northwest of the reservoir to be used for recreational and education purposes; Provision of picnic area(s) and children's play area(s). Access routes from both junctions to the visitor car park; visitor car park comprising 193 car parking spaces and between 70 and 75 overflow spaces plus spaces for staff, coach/minibus and disabled drivers sited to the north west of the reservoir. Creation of a permanent wetland on the northern side of the reservoir and construction of bird watching hide/screen(s); recreational facilities for public amenity. Provision of perimeter tracks and a network of bridleways, cycle paths and footpaths; Construction of a slipway on the western bank of the reservoir for operational use only and a small section of the proposed pipeline (210m).”

Once constructed, the reservoir will be filled with surplus water drawn from springs at Bedhampton when flows are highest in winter via a new pipeline, providing water supplies to Portsmouth Water customers as required in summer. The scheme will also enable additional water to be supplied to Southern Water, who has identified a likely deficit in water resources in the Hampshire area.

Table 1.1 provides a brief overview of the site.

Attribute	Description
Project name and address	Havant Thicket Reservoir Hampshire PO9 6BA
Author organisation	Middlemarch
Planning authority	Havant Borough Council
Planning reference (if applicable)	APP/20/00990
National Grid Reference	SU 715 097
Total Site Area (ha)	296

Table 1.1: Brief Site Overview

This report focuses on Visitor Facilities Phase of the development, focusing on the habitat loss, creation and enhancement within the north-western part of the wider reservoir site. Reference to other phases of the development is made where relevant.

1.2 Relevant Planning Conditions and Legislative Drivers

This document is required as part of a reserved matters application and in alignment with the Condition 36 of the planning consent. Condition 36 states as follows:

“No phase of the development approved under Condition 4 shall commence until full details of all ecological mitigation, compensation and enhancement measures (to be informed as necessary by up-to-date survey and assessment) and on-going monitoring of mitigation measures required for each reserved matters application (including both ecological works directly related to that Development Phase reserved matters area and any works associated with that area but lying outside of the boundary of that area) shall be submitted for approval to the Local Planning Authority. Such details shall be in accordance with the ecological mitigation, compensation and enhancement measures detailed within the Outline Biodiversity Mitigation and Compensation Strategy (ECOSA, September 2020), the Habitats Regulations Assessment (Atkins/Portsmouth Water, September 2020) and the Implementation Plan for Off Site Biodiversity Mitigation and Compensation (Atkins, April 2021). Any such approved measures shall thereafter be implemented in strict accordance with the agreed details and with all measures maintained in perpetuity, unless otherwise agreed in writing by the Local Planning Authority.

Reason: *To protect and enhance biodiversity in accordance with the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, NERC Act 2006, NPPF and Policy CS 11 of the Havant Borough Core Strategy March 2011.”*

Relevant legislation with regards to species protection is detailed in Appendix A.

1.3 Purpose of this Report

The overall aim of the Ecological Mitigation, Compensation and Enhancement Report is to outline the potential impacts to ecological receptors that could occur as a result of the proposed habitat creation and enhancement and the development of the Visitor Centre. The report details control measures and mitigation proposals that will be implemented to ensure that the works proceed without breaching wildlife legislation, and that the favourable conservation status of potential ecological receptors will be maintained. The content of this document is guided by wildlife legislation, relevant planning policy and biodiversity targets.

This report:

- Provides ecological mitigation, compensation and enhancement measures;
- Demonstrates compliance with planning conditions and environmental legislation; and
- Outlines monitoring and management requirements.

1.4 Project Objectives

The overall objectives of the project are to create an environmentally-led design based on the mitigation hierarchy approach of avoid, minimise, or compensate. Appropriate mitigation and compensation will be implemented for protected and notable species. A mosaic of new and high-quality habitats will be created that will be managed in the long-term for the benefit of biodiversity.

A Biodiversity Mitigation and Compensation Strategy for the Havant Thicket Reservoir Project was produced by AtkinsRealis in August 2024 (HTR-ATK-ZZ-ZZ-RP-Y-0001). The Strategy was based on the following core elements for on-site mitigation and compensation, as set out within the Outline Biodiversity Mitigation and Compensation Strategy:

- Create an environmentally-led design based on the mitigation hierarchy approach of avoid, minimise, or compensate. As far as practical, compensation will be provided on-site for the key impacts;
- Ensure appropriate mitigation and compensation is implemented for protected and notable species;
- Create a mosaic of new and high-quality habitats, including a new open waterbody with a retained wetland, a variety of vegetation types and islands for added habitat complexity and to act as roosting and nesting sites for birds;
- Long-term management for biodiversity; and
- Delivery of on-site aquatic habitat mitigation, compensation and enhancements.

1.5 Project Design - Visitor Centre

The landscape design for the proposed Visitor Centre and associated recreational facilities within the north-western part of the site is led by the following sustainable design principles:

- Retain existing infrastructure, where possible;
- Re-use existing material on site; and
- Enhance existing landscape and biodiversity.

The key principles include using natural, local, sustainable materials, improving water and soil health and establishing a diverse, sustainable range of habitats. The north-western part of the site will include a car park, play area, a cycle and pedestrian network and a network of green infrastructure.

The Visitor Centre is positioned, within the fixed parameters of the approved Visitor Centre location zone. The Visitor Centre will be accessed from The Terrace by a discrete drawbridge and will overlook the wetlands.

Amenity areas are located on land to the south-west of the Visitor Centre, along with reedbeds, wildflower meadow, a dipping pond and an Educational Bird Hide located to the north of the Visitor

Centre. The Visitor Centre is positioned within an area which will be a focal point for visitors entering the site before dispersing, providing connectivity with amenity areas and to the areas created for the benefit of wildlife at the northern edge of the reservoir.

The mosaic of landscape character types is proposed in response to Policy CS18 for Havant Thicket Reservoir, which states that natural and rural character should be conserved in particular by limiting impacts on biodiversity including the creation of additional habitats; compensating for the loss of, and effects on, sites of importance for nature conservation, the listed park and conservation area; enhancing adjacent sites of importance for nature conservation.

The wildflower meadow and woodland provide a buffer between the wetlands and areas of highest visitor activity. An Educational Bird Hide and dipping pond offer outside education spaces. The reedbeds will be a valuable resource for wildlife, as well as serving to act as a deterrent to large numbers of people from accessing the northern parts of the site, which have been designed for their benefit to wildlife. The wetland habitats will be accessible to visitors via boardwalks, which will limit deviation into the reedbeds by humans and dogs. Information regarding guidance for dog walkers will be provided within the Visitor Centre.

2. Designated Sites

An ecological desk study was carried out to identify the statutory and non-statutory nature conservation sites located in proximity to the proposed development site, which are summarised in Table 2.1.

Site Name	Designation	Location	Description
International Statutory Sites (< 10 km)			
Solent & Isle of Wight Lagoons	SAC	5.59 km	<p>The Solent, on the south coast of England, encompasses a series of coastal lagoons. The lagoons show a range of salinities and substrates, ranging from soft mud to muddy sand with a high proportion of shingle, which support a diverse fauna including large populations of three notable species: the nationally rare foxtail stonewort <i>Lamprothamnium papulosum</i>, the nationally scarce lagoon sand shrimp <i>Gammarus insensibilis</i>, and the nationally scarce starlet sea anemone <i>Nematostella vectensis</i>. Other habitats include a network of ditches and ponds within the saltmarsh and marsh pasture. Many of the lagoons support a high species diversity.</p>
Solent Maritime	SAC	3.58 km	<p>The Solent Maritime SAC is a complex, major estuarine system and is a unique mixture of functionally linked estuarine and marine habitats.</p> <p>Habitats present within the SAC include:</p> <ul style="list-style-type: none"> ● Intertidal mudflats and sandflats which support eelgrass <i>Zostera</i> sp; ● Subtidal sandbanks; ● Saltmarsh; ● Natural shoreline transitions such as drift line vegetation; ● Coastal lagoons; and ● Sand dunes <p>The site supports all four species of cordgrass <i>Spartina</i> spp. found in the UK, including the rare native small cordgrass <i>Spartina maritima</i>.</p> <p>At the time of designation, some of the coastal lagoon and sand dune supported a population</p>

Site Name	Designation	Location	Description
			of the rare Desmoulin's whorl snail <i>Vertigo moulinsiana</i> .
Chichester and Langstone Harbours	SPA, Ramsar	3.58 km	This designation covers two large estuarine basins, with habitats including extensive intertidal mudflats and sandflats, seagrass beds, saltmarsh, shallow coastal waters, coastal lagoons, coastal grazing marsh and shingle ridges and islands. The site is designated for its internationally important numbers of breeding and wintering bird species.
Solent and Dorset Coast	SPA	3.58 km	This is a large site covering areas of both on land and offshore. The site is designated for its breeding tern colonies with species including common tern <i>Sterna hirundo</i> , little tern <i>Sterna albifrons</i> and sandwich tern <i>Thalasseus sandvicensis</i> .
Portsmouth Harbour	SPA, Ramsar, SSSI	7.22 km	Designated for the numerous and extensive marine-estuarine habitats that are present, including eelgrass beds, saltmarsh and mudflats that support an important assemblage of wintering wader and wildfowl species.
Kingley Vale	SAC, SSSI	7.64 km	<p>Kingley Vale SAC is approximately 208.5 hectares in size, and the yew <i>Taxus baccata</i> woodlands are considered to be among the largest and best in Europe. It also contains an important grove of ancient yews, some of which are at least 500 years old. The woodlands provide habitat for breeding species including red kite <i>Milvus milvus</i>, forester moth <i>Adscita statice</i> and the nationally rare fly, <i>Doros Sonopseus</i>. The site contains the following nationally uncommon habitats: chalk grassland, juniper scrub and yew scrub.</p> <p>The chalk grasslands contain a number of nationally uncommon plant species and orchids.</p>
Butser Hill	SAC, SSSI	6.74 km	Butser Hill is located on the east Hampshire chalk that forms part of the South Downs. Much of the site consists of sheep's-fescue – meadow oat-grass (<i>Festuca ovina</i> – <i>Helictotrichon pratense</i>) grassland and has a

Site Name	Designation	Location	Description
			<p>varied range of slope gradients and aspects which has a strong influence on the vegetation composition. A particular feature of the site is its lower plant assemblage. It has a rich chalk grassland lichen flora and also supports the distinctive southern hepatic mat association of leafy liverworts and mosses on north-facing chalk slopes.</p> <p>The site was designated for the following habitats:</p> <ul style="list-style-type: none"> ● Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>); and ● <i>Taxus baccata</i> woods.
National Statutory Sites (<2 km)			
Hazelton Common	LNR	885 m	Plants include 26 ancient woodland species. Regular butterfly transects since 1996 and species include Essex, small and grizzled skipper. Good breeding populations of stonechat and the common is good for kestrel, sparrowhawk and buzzard. The common may be a potential Site of Importance to Nature Conservation (SINC) site for its dragonflies. 43 species of spiders have been identified including three nationally notable and one not found in England before. The main pond has great crested newts <i>Triturus cristatus</i> .
Dell Piece West	LNR	1.8 km	Well-wooded borders, unimproved grassland, damp marshy ground and a large shallow pond provide habitat for a rich variety of wildlife that includes various butterflies, dragonflies and reptiles.
Key: SAC: Special Area of Conservation SPA: Special Protection Area Ramsar: Wetland of international importance designated under the Convention on Wetlands. SSSI: Site of Special Scientific Interest LNR: Local Nature Reserve			

Table 2.1: Summary of Nature Conservation Sites within 10km of the Site

The site falls within the SSSI Impact Risk Zone for Langstone Harbour (3.55 km away), Warblington Meadow (3.82 km away) and Chichester Harbour (6.07km away). The designations are separated from the site by the town of Havant. It is unlikely that the SSSI's will be directly impacted if the necessary mitigation measures are in place during the construction and operational phase.

Additionally, the following SINCs were identified within 2 km of the site:

- Thicket Bottom;
- Thicket Bottom Woods and Lake;
- Middle Clearing; - Havant Thicket;
- Havant Thicket South West Corner;
- Bell's Copse;
- Cabbagefield Row;
- Idsworth Common;
- Thicket Lawn;
- High Lawn;
- High Lawn;
- Blendworth Common North and South;
- Dunsbury Hill Grassland 2;
- Meadow by Bell's Copse;
- The Holt; and
- Dunsbury Hill Wood.

2.1 Impact Assessment

No direct impacts are anticipated upon any designated site. The shadow Habitats Regulations Assessment (sHRA) undertaken in 2021 concluded that the reservoir site does not represent an area of functionally linked land for the species of the Chichester & Langstone Harbour SPA and Ramsar.

Pre and Mid Development/ Construction Phase Impacts

In the absence of mitigation, there is potential for habitats and faunal species to be adversely impacted as a result of a localised increase in pollutants, dust and contaminated run-off from construction activities, in addition to increased noise and disturbance to the Northern Access Route working area.

Long-Term/ Operational Phase Impacts

Upon completion, it is anticipated the reservoir site will receive 319,000 visitors. This has the potential to result in increased recreational disturbance within the ancient woodlands.

In the absence of mitigation, there is potential for habitats and faunal species to be adversely impacted as a result of a localised increase in lighting, noise and pollutants from the development and its operation.

2.2 Avoidance and Mitigation Measures

Construction Phase Measures

The likelihood of nutrient pollution is low due to the decline of nitrates as a result of the reservoir. However, phosphate-related impacts may occur. Implementation of good practice measures during construction, to reduce the risk of mobilisation of sediments or existing contamination and to reduce the risk of pollution from the spillage of chemicals, materials and waste.

The avoidance and mitigation measures proposed will:

- Ensure that ecologically valuable habitats are retained and protected during construction; and
- Reduce the risk of long-term impacts on retained and created habitats during the operational life of the development.

There will be a 15 m buffer zone around all ancient woodlands. A suitably qualified arboriculturist will advise on any work that is required within the buffer zone throughout construction.

2.3 Compensation and Enhancement Measures

Habitat Creation, Restoration and/ or Enhancement

A number of habitat enhancement and compensation measures have been and will be undertaken in respect of designated sites for the scheme overall, including grassland creation and enhancement, woodland replanting and ride management and coppicing. No specific compensation in respect of designated sites is required as a result of the Visitor Facilities Phase of the development. The visitor facilities, once operational, will however provide an alternative recreational resource for visitors and information and guidance about the importance of wildlife areas for biodiversity will be provided at the Visitor Centre.

3. Species and Habitat Enhancements

This section details the species and habitat enhancements, alongside a summary of the ecological baseline of the site. The landscape strategy for the wetlands has been designed to provide extensive biodiversity enhancement.

The following sections will focus on each of the ecological receptors that have been identified as potential constraints to the development of the site. The following sections relate to individual species/groups:

- Section 4: Habitats
- Section 5: Badgers
- Section 6: Bats
- Section 7: Birds
- Section 8: Invertebrates
- Section 9: Amphibians and Reptiles
- Section 10: Hazel Dormouse
- Section 11: Mammals – Otter and Water Vole

Each section provides a summary of the potential impacts of the development on the receptor in the absence of mitigation and then outlines mitigation proposals that will be implemented to address each of these impacts and ensure no loss of favourable conservation status. Detail regarding post-construction management is also provided, where known.

4. Habitats

Baseline Data

The baseline habitats present within the site included open grassland, woodland (including ancient woodland), hedgerows and ditches. Consideration of the baseline habitats within the site is provided throughout the report.

The reservoir site mostly comprised low-quality semi-improved neutral grassland. Developing rush pasture was found to form a substantial component of the grassland within the reservoir site, however swards were species-poor and lacked the frequency of indicator species to suggest habitat conformed with priority habitat. Smaller areas associated with stream margins did exhibit species richness required to conform with purple moor-grass and rush pasture priority habitat. The majority of the pipeline corridor comprised hard-standing and amenity grassland. The northern part of the route, however, passes through Thicket Lawn SINC. Vegetation surveys undertaken in 2018 recorded 16 plant species within the reservoir site that are 'vulnerable' or 'near threatened'.

At the centre of the reservoir was an area of ancient woodland known as 'The Avenue', along with three other areas known as 'Middle Clearing', 'Round Wood' and 'Corsican Pine Plantation'. The woodland to the north of the site is owned and managed by Forestry England.

Impact Assessment

Pre- and Mid-Development/Construction Phase Impacts

Several habitat parcels have been lost as a result of the overall development of the reservoir, which are summarised below.

Habitat	Area Lost (ha)
Lowland dry acid grassland	1.21
Semi-improved neutral grassland	< 120
Wood pasture and parkland	1.21
Deciduous woodland	6.31
Wet woodland	0.19
Ancient woodland	13.67

Table 4.1: Habitat Loss due to Development Proposals.

The following mitigation prescriptions have been completed:

- **Grassland preparation:** Most grassland within the wetland construction footprint was trimmed in 2023 using a two-stage approach under ecological supervision to encourage fauna to disperse from the working area prior to vegetation clearance. Topsoil was subsequently stripped from areas in the north, west and south of the site.
- **Habitat retention and restoration:** Areas of damp grassland/rush pasture were carefully stripped, with the topsoil stored separately to preserve the existing seed bank and soil

characteristics. This material will be reused to reinstate habitats outside the embankment footprint following construction.

Long-Term/ Operational Phase Impacts

Limited or inappropriate management of retained and created habitats could lead to a decline in their conservation status in the long-term. For example, inappropriate management of hedgerows could result in vegetation becoming too dense, which could reduce their value to support nesting birds and other fauna. Inappropriate management of grassland and scrub mosaic could result in a loss of botanical diversity and succession to coarser vegetation types. Inappropriate management of other newly created habitats such as ephemeral pools and reedbeds could lead to failure to achieve their proposed condition or succession into other less distinctive habitats.

Avoidance and Mitigation Measures

Habitat Retention

The development has been designed to avoid and minimise the loss of notable habitats, whilst creating corridors to Havant Thicket, Bells Copse and Staunton Country Park.

General Construction Phase Measures

To avoid and mitigate for construction impacts on retained habitats and species, the following measures are proposed:

- Implementation of buffer zones and use of protective fencing around ancient woodland where necessary;
- Implementation of pollution prevention measures; and
- Control of dust.

Operational Phase Measures

- Creation of buffers between the Visitor Centre and associated play areas, and the wetlands through reedbed planting;
- Boardwalks through the wetland will limit deviation into the new reedbed habitats by humans and dogs; and
- Information and guidance for dog walkers about the importance of the wetland habitat for biodiversity will be provided.

Compensation and Enhancement Measures

Habitat Creation, Restoration and/ or Enhancement

To compensate for the loss of habitats on site, a series of habitat creation and enhancement proposals have been incorporated into the landscaping scheme for the proposed development:

- New reedbed planting in the northern part of the site, which also provides some compensation for the area of water covered by the Visitor Centre. The water level within the reedbed will alter seasonally, while shallow margins, small seasonal ponds and islands will provide a diverse range of habitats;
- A wildflower meadow will offer benefits for pollinators, as well as a foraging resource for small mammals and birds;
- Dipping ponds provide a resource for amphibians, reptiles and invertebrates, while acting as an additional educational resource; and

- Woodland and tree planting through a combination of block planting as well as natural regeneration. The planting aims to create corridors between the site and Havant Thicket, Bells Copse and Staunton Country Park. Species will be native and of local provenance wherever possible.

5. Badgers

Baseline Data

Records of badgers *Meles meles* within a 2 km radius of the site are summarised in Table 5.1.

Species	Record and Survey Work Summary	Species of Principal Importance?	Legislation/ Conservation Status
Badger	<p>Only two records of badgers were within 2 km* of the reservoir site during the badger surveys undertaken in 2018 and 2020.</p> <p>The survey work in 2018 identified two inactive and one disused outlier setts within the reservoir and a single active main sett outside the reservoir site.</p>	-	WCA 6, PBA
<p>Key:</p> <p>WCA 6: Schedule 6 of Wildlife and Countryside Act 1981 (as amended). Animals which may not be killed or taken by certain methods.</p> <p>PBA: Protection of Badgers Act 1992.</p> <p><i>*Badger records are confidential and therefore precise proximity is not provided within the report.</i></p>			

Table 5.1: Badger Records Within 2 km of the Site

Impact Assessment

The proposed plans indicate that no badger setts, as far as is known at the time of writing, will be impacted by this phase of the development. Badger setts, if located outside the reservoir site, may still be indirectly impacted by construction works, increased noise, dust, vibration and human activity.

Pre- and Mid Development/ Construction Phase Impacts

The survey work in 2018 identified only two inactive setts and one disused outlier sett within the reservoir boundary as described above. Since those surveys were undertaken, there has been closure of badger setts within the construction area under licence.

Construction activities still may have the potential to result in indirect impacts across the site should badgers have colonised the site since, including disturbance from noise and vibration, increased artificial lighting and dust deposition affecting foraging suitability. Therefore, in the absence of mitigation, development works could still result in adverse indirect impacts to this species if present at the time of construction.

Long-Term/ Operational Phase Impacts

No long term or operational phase impacts are anticipated as a result of the development of the Visitor Centre and associated facilities.

Avoidance and Mitigation Measures

A walkover should be undertaken prior to construction. No additional badger setts found will be closed without a licence.

The avoidance and mitigation measures proposed will:

- Prevent killing or injury of badgers, destruction or disturbance of a badger sett; and
- Minimise disturbance to foraging and commuting badgers.

General Construction Phase Measures

Toolbox Talks and Site Briefings

Prior to construction commencing, all site operatives will be given a site induction and toolbox talk by an Ecological Clerk of Works, which will include information regarding the ecological constraints on site. Site operatives will be made aware of the need to ensure that good working practice is adhered to so as to ensure no breaches of legislation with regard to badgers. Any new members of staff attending site throughout the construction process will also receive a site induction and toolbox talk.

Excavations

Throughout the development works, any excavations will be closed overnight. If excavations must be left open overnight, they will have one sloping side or be fitted with a suitable ramp to allow foraging badgers and other fauna that might enter the works to escape safely.

Compensation and Enhancement Measures

Habitat Creation, Restoration and/or Enhancement

Created and enhanced grassland, woodland and scrub habitat will provide badgers new foraging opportunities and locations for sett building. The creation of wildflower grassland and woodland habitats will provide resources for badger and connectivity with off-site suitable habitats. Measures undertaken within Havant Thicket woodland will also benefit badgers by opening up new foraging areas.

Post-Development Management and Monitoring

If any badger setts are discovered in the site during the pre-commencement walkover survey and a Natural England Badger Development Licence is required, any post-development monitoring will be carried out in accordance with the licence.

6. Bats

Baseline Data

Records of bats within a 5 km radius of the site are summarised in Table 6.1.

Species	Record and Survey Work Summary	Species of Principal Importance?	Legislation/ Conservation Status
Bechstein's bat <i>Myotis bechsteinii</i>	The desk study returned records of 13 species of bat within 3 km and 91 records of roosts within 5 km of the reservoir site; and 66 records of roosts within 5 km of the pipeline corridor.	✓	ECH 2, ECH 4, WCA 5, WCA 6
Brown long-eared bat <i>Plecotus auritus</i>	A suite of bat surveys was carried out between 2005 and 2020, including trapping, vantage point surveys, tree climbing and transects. At least 13 species were recorded, and the following roosts were identified: <ul style="list-style-type: none"> ● Four Bechstein's day roosts; ● One Bechstein's night roost; ● One Natterer's <i>Myotis nattereri</i> day roost; ● One brown long-eared bat <i>Plecotus auritus</i> maternity roost; and ● Six day/night roosts of brown long-eared bat. 	✓	ECH 4, WCA 5, WCA 6
Natterer's bat <i>Myotis nattereri</i>		-	ECH 4, WCA 5, WCA 6
Key: ECH 2: Annex II of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest whose conservation requires the designation of Special Areas of Conservation. ECH 4: Annex IV of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest in need of strict protection. WCA 5: Schedule 5 of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds). WCA 6: Schedule 6 of Wildlife and Countryside Act 1981 (as amended). Animals which may not be killed or taken by certain methods.			

Table 6.1: Bat Records Within 5 km of the Site

Impact Assessment

Pre- and Mid Development/ Construction Phase Impacts

The scheme overall results in the loss of 14 ha of woodland and over 120 ha of grassland, which held high habitat value for bats.

Multiple confirmed roosts for common bat species were identified within the trees as described in the desk study. In the absence of mitigation, the development was found to result in a major and adverse impact on species utilising the roosts. Permanent mitigation is required to compensate for the loss and disturbance of roost locations and no unlicensed works can be undertaken at the site.

Construction activities also have the potential to result in indirect impacts across the site, including disturbance from noise and vibration, increased artificial lighting, dust deposition affecting roost suitability and changes to microclimatic conditions within roost structures.

Long Term/ Operational Phase Measures

In the absence of mitigation, the development has the potential to result in ongoing disturbance to bats through increased artificial lighting.

Avoidance and Mitigation Measures:

A European Protected Species Mitigation (EPSM) licence was obtained for impacts of the development on bats. The EPSM licence still covers the construction site (020-50625-EPS-AD2-6), along with a Natural Environment and Rural Communities Act (2006) (NERC) Act agreement and Habitat Management and Monitoring Plan (HMMP) for bats. The package of mitigation measures in respect of bats is set out within the Biodiversity Mitigation Compensation Strategy, 2024 (HTR-ATK-ZZ-ZZ-RP-Y-0001).

All lighting used for the Visitor Centre and associated recreational areas will satisfy the Five Principles for Responsible Outdoor Lighting (Liebel & Ruskin, 2020):

1. Useful - lighting only where needed and should have a clear purpose;
2. Targeted - direct light so it falls only where it is needed;
3. Low level - light should be no brighter than necessary. Use the lowest light level required. Be mindful of surface conditions, and reflectivity;
4. Controlled - use lights only when it is needed. Use controllers and timers or motion detectors to ensure that light is available when it is needed, dimmed where possible and turned off when not needed; and
5. Warm-coloured - use warmer lights where possible, limit the amount of shorter wavelength (blue violet) light to the least amount needed.

No additional lighting will be installed on site (either during or post-development) which will cause illumination to new roost access points or commuting routes.

The lighting strategy will be carefully designed to minimise any light spill, and night-time ecological disruption and conform to the guidance of the Bat Conservation Trust. Shielded, low-intensity, and sensor-based lighting solutions will be considered. The lighting strategy will be developed with the requirement for a dark area due to the rural nature of the site.

A curfew for all external lighting will be implemented and it is proposed that this is linked to the operational hours of the Visitor Centre, or 30 minutes following dusk to allow visitors and staff to

safely leave. While occasional night-time use of the Visitor Centre is proposed, it is not anticipated that regular night-time illumination of the Visitor Centre will be required.

Specifically for the protection of bats the lighting chosen will minimise the UV content and utilise LEDs at the warmer end of the spectrum. LED lights emit lower levels of UV and therefore have less impact on bats. Lux levels will be as low as possible, while enabling lighting to meet its objectives safely.

All external lighting will be hooded, cowled or otherwise shielded to prevent uplighting of the sky. No lighting will be faced towards vegetation, particularly boundary trees, hedgerows and wetland vegetation.

Compensation and Enhancement Measures

The proposed landscaping plans indicate that the following habitat proposals will be enhanced and created as part of the development to improve opportunities for roosting, foraging and commuting bats:

- Wetland creation;
- Species rich grassland creation;
- Woodland planting; and
- Avenue tree planting.

All these habitats provide a variety of valuable resources for foraging and commuting bats.

Post Development Management and Monitoring

The site will be subject to a monitoring period post-development any post-development monitoring in accordance with the EPSM licence.

7. Birds

Baseline Data

Records of protected birds within a 2 km radius of the site are summarised in Table 7.1.

Species	Record and Survey Work Summary	Species of Principal Importance?	Legislation/ Conservation Status
Nightjar <i>Caprimulgus Europaeus</i>	The desk study returned records of 3005 priority and notable species within 1 km of the reservoir site and 7138 within 1 km of the pipeline corridor. A suite of wintering and breeding bird surveys were carried out between 2005 and 2018, along with specific nightjar surveys. The 2018 breeding bird survey identified 29 species holding territories or breeding. A total of 55 species were recorded during the 2017/2018 wintering bird surveys, including species which are qualifying features of the Chichester & Langstone Harbours SPA and Ramsar, such as teal, Mediterranean gull and black-headed gull.	-	-
Teal <i>Anas crecca</i>		-	-
Mediterranean gull <i>Ichthyaetus melanocephalus</i>		-	WCA 1i
Black-headed gull <i>Chroicocephalus ridibundus</i>	The sHRA concluded that the reservoir site does not represent an area of functionally linked land for the species of the Chichester & Langstone Harbours SPA and Ramsar. The sHRA considered impacts upon these European sites and concluded that impacts from the Visitor Facilities Phase of the development will not have a likely significant effect upon any qualifying feature.	-	-
Key: WCA 1i: Schedule 1 Part 1 of the Wildlife and Countryside Act 1981 (as amended). Birds protected by special penalties at all times.			

Table 7.1: Bird Records Within 2km of the Site

Impact Assessment

The overall loss of lowland mixed deciduous woodland, veteran trees, lowland dry acid grassland and aquatic habitat to facilitate the development results in a reduction of suitable habitats for a range of breeding bird species within the site.

Pre- and Mid Development/Construction Phase Impacts

Noise and visual disturbance during construction works could lead to the displacement of breeding and foraging birds from the site.

Long-Term/Operational Phase Impacts

Inappropriate management of retained and created habitats could limit the availability of nesting and food resources within the site. Management activities timed to occur within the nesting bird season could lead to the injury or death of birds which would be in breach of the Wildlife and Countryside Act 1981 (as amended).

An increased presence of humans and dogs within the site following the completion of the Visitor Centre could also result in greater disturbance of suitable habitat for wetland birds within or adjacent to the site.

During the operational phase there is a risk of bird strike incidents due to the presence of the Visitor Centre, which will include large glass facades.

Avoidance and Mitigation

The avoidance and mitigation measures proposed will:

- Prevent the killing or injury of nesting birds; and
- Minimise disturbance of nesting birds during construction works.

General Construction Phase Measures

To minimise the construction impacts on breeding birds, any vegetation clearance should be undertaken outside the bird nesting season. The bird nesting season is weather-dependent but generally extends between March and September inclusive (peak period March to August). If this is not possible, then any vegetation to be removed or disturbed should be checked by an experienced ecologist for nesting birds immediately prior to works commencing. If birds are found to be nesting any works which may affect them would have to be delayed until the young have fledged and the nest has been abandoned naturally, e.g. via the implementation of a buffer zone (species dependent) around the nest in which no disturbance is permitted until the nest is no longer in use.

Operational Phase Measures

New habitat creation is proposed within the site as part of the Visitor Facilities Phase of the development. These include habitats which are of high value to birds for providing key foraging and nesting opportunities, such as woodland, wetland, reedbeds, ephemeral shallows and islands, and avenue trees.

Regular breeding bird and wintering bird surveys are being undertaken around the main reservoir site, as detailed in Landscape Ecological Management Plan (LEMP) (HTR-POR-ZZ-ZZ-RP-K-0004).

In order to minimise the risk of collisions within the Visitor Centre glass, Portsmouth Water has committed to exploring options to reduce the risk of bird strike. As part of the detailed design of the Visitor Centre, measures such as glass films or coatings, or fritted glass will be incorporated into the building to reduce the risk of collision events.

Compensation and Enhancement Measures

The compensation and enhancement measures proposed aim to:

- Ensure the favourable conservation status of bird populations is maintained;
- Provide new wetland features to support a new assemblage of wetland birds; and
- Provide additional habitat for both nesting and foraging birds.

Habitat Creation and Enhancement

The habitats which are to be created and enhanced as part of the proposed development will include those of value to nesting and foraging birds. Those habitats are listed below:

- Wetland creation;
- Species rich grassland creation;
- Woodland planting; and
- Avenue tree planting.

8. Invertebrates (Glow Worms)

Baseline Data

Glow worms *Lampyris noctiluca* are known to be present within the local area and within Havant Thicket woodland. The presence of glow worms was raised during stakeholder events held in 2025 and 2026.

Impact Assessment

The loss of grassland and woodland habitats to facilitate the proposed development results in a reduction of habitat which is potentially suitable for glow worms.

Pre- and Mid Development/Construction Phase Impacts

The scheme overall results in the loss of 14 ha of woodland and over 120 ha of grassland, which reduces suitable habitat available for glow worm. However, retained habitat enhancement and created habitats including species-rich grassland, woodland, hedgerows, glades and rides will provide suitable new habitat within the site.

Long-Term/Operational Phase Impacts

Management of woodland and the creation of species-rich grassland will provide long-term suitable new habitat.

Connectivity between habitat areas suitable for glow worm to facilitate movement between populations and prevent isolation may be affected and should be considered.

Avoidance and Mitigation Measures

Construction Phase Measures

Glow worm has been recorded within Havant Thicket woodland however their presence has not been confirmed within the area of the proposed Visitor Centre and associated recreational facilities. No construction impacts in respect of the Visitor Facilities Phase are anticipated during construction. Regular monitoring surveys are being undertaken around the main reservoir site as detailed in LEMP (document reference HTR-POR-ZZ-ZZ-RP-K-0004).

Operational Phase Measures

The lighting measures outlined in Section 6 in respect of bats and lighting requirements will also ensure that glow worms are not disturbed as a result of artificial lighting.

Compensation and Enhancement Measures

Habitat Creation, Restoration and/ or Enhancement

The overall development will provide new and enhanced habitat suitable for glow worm, including enhancement within Havant Thicket woodland. Woodland and tree planting, wetland creation and wildflower grassland creation will serve to support invertebrates, including glow worm.

Within the Visitor Facilities Phase, the following habitat enhancements are proposed which will benefit glow worm and other invertebrates:

- Creation of species-rich grassland to provide a diversified sward height in order to curate suitable micro-habitats for invertebrates; and
- Diversification of foreshore landforms, establishment of species-rich grassland around reservoir margins, and long-term grassland management will provide a mosaic of microhabitats that support a diverse invertebrate assemblage, including suitable foraging, shelter, and breeding habitat for glow-worms;

9. Amphibians and Reptiles

Baseline Data

Records of amphibians and reptiles within a 2 km radius of the site are provided and summarised in Table 9.1.

The site is not located within 10 km of any statutory nature conservation sites designated for the presence of great crested newts.

Species	Record and Survey Work Summary	Species of Principal Importance?	Legislation/ Conservation Status
Great crested newt	<p>The desk study returned three records of great crested newt within 2 km of the reservoir site and two records within 2 km of the pipeline corridor. Forestry England confirmed a record of one female great crested newt in Havant Thicket.</p> <p>Surveys were undertaken in 2005 and 2006, and the species was not recorded in any waterbody within 500 m of the reservoir footprint. Environmental DNA (eDNA) surveys were carried out in 2018, and positive results were returned for three ponds. It was determined that there was a small population within Havant Thicket. While waterbodies were recorded within 500 m of the pipeline corridor, barriers to dispersal were determined to make the presence of the species unlikely.</p>	✓	ECH 2, ECH 4, WCA 5
Adder <i>Vipera berus</i>	<p>The desk study returned 35 records of adder, 50 records of slow worm <i>Anguis fragilis</i>, 12 records of common lizard and 16 records of grass snake within 2 km of the reservoir site.</p> <p>Reptile surveys were carried out between 2005 and 2008 and identified exceptional populations of slow worm, grass snake, common lizard and adder. Surveys in 2018 identified an exceptional population of slow worm, good population of common</p>	✓	WCA 5 S9(1), WCA 5 S9(5)
Common lizard <i>Zootoca vivipara</i>		✓	WCA 5 S9(1), WCA 5 S9(5)
Grass snake <i>Natrix natrix</i>		✓	WCA 5 S9(1), WCA 5 S9(5)

Species	Record and Survey Work Summary	Species of Principal Importance?	Legislation/ Conservation Status
Slow worm <i>Anguis fragilis</i>	lizard and a low population of adder and grass snake.	✓	WCA 5 S9(1), WCA 5 S9(5)
Key: ECH 2: Annex II of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest whose conservation requires the designation of Special Areas of Conservation. ECH 4: Annex IV of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest in need of strict protection. WCA 5 S9(1): Schedule 5 Section 9(1) of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds). Protection limited to intentional killing, injury or taking. WCA 5 S9(5): Schedule 5 Section 9(5) of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds). Protection limited to selling, offering for sale, processing or transporting for purpose of sale, or advertising for sale, any live or dead animal, or any part of, or anything derived from, such animal.			

Table 9.1: Amphibian and Reptile Records Within 2km of the Site

Impact Assessment

In the absence of appropriate mitigation, the proposed development could potentially result in the following impacts on amphibian populations that may be utilising the suitable habitats on site:

- Direct injury or harm to reptiles during site clearance works;
- Loss of suitable habitat; and
- Fragmentation of habitat, limiting dispersal through the site.

Pre- and Mid Development/ Construction Phase Impacts

During construction there is the potential for the killing, injury or disturbance of individual reptiles and amphibians utilising habitats at the site. Without mitigation, individual reptiles and amphibians could be harmed during vegetation clearance works.

Long-Term/ Operational Phase Impacts

Inappropriate management of retained and created habitats could limit the availability of resources for reptiles and amphibians within the site. An increased presence of humans and dogs within the site following the completion of the Visitor Centre could also result in greater disturbance of suitable habitat for species within or adjacent to the site.

Further losses or degradation of existing reptile and amphibian habitat may occur as part of routine landscape maintenance works during the operational phases of the development scheme.

Avoidance and Mitigation Measures

Mitigation Measures that have been Completed:

- Slow worm, common lizard, common toad *Bufo bufo*, common frog *Rana temporaria* and field vole *Microtus agrestis* were translocated during supervision of the two-stage grass cut. The grassland was then continuously managed to keep a short sward by a tractor for the remainder of summer 2023. The translocation is ongoing and great crested newt were found within the NAR pond in 2024. Under the provisions of the EPSM licence (2025-70547-EPS-MIT), up to 50 GCN can be translocated off-site;
- Ditches across the site were strimmed (using two-stage cut process), tree stumps removed and topsoil stripped, all under ecological supervision. Sections of the ditch network were also subject to draining under ecological supervision. A small pump was used to lower the water level to ensure all animals had been removed prior to removing tree stumps/roots along the ditch network; and
- The Upper Lake was drained in late February/early March 2024 under ecological supervision and no fish or amphibians were found.

General Construction Phase Measures

Implementation of the following additional measures will ensure that there are no impacts on reptiles and amphibians during the construction period of the Visitor Facilities Phase of the development:

- Protection of retained vegetation, which may provide suitable terrestrial habitat features for reptiles and amphibians;
- Prevention of trapping reptiles, amphibians and other fauna in open excavations: If any excavations are required to be left open overnight, ramps will be left within them to allow fauna to easily exit. Open excavations will be inspected at start of each day to ensure fauna have not become trapped; and
- Staff awareness: All contractors should be made aware of the potential presence of reptiles and amphibians (including great crested newts) on site during the initial site induction. Staff should demonstrate awareness when working and moving materials. Should reptiles or amphibians be found, they should be gently moved, for example in a clean bucket, to a suitable location within the habitat well away from the working area.

Operational Phase Measures

New habitats provided will ensure a range of resources are available during the operational phase of the development. The presence of boardwalks and provision of interpretation for visitors will limit incursion into more undisturbed areas of the wetland and grassland, with the aim of reducing human disturbance.

Compensation and Enhancement Measures

Habitat Creation, Restoration and/ or Enhancement

New wetland, grassland and woodland edge habitat will provide foraging, basking and hibernating opportunities for reptiles. Grass snake's preferred habitat includes wetlands and marshes, also making use of the surrounding terrestrial habitat such as grassland, scrub and woodland. The wetland area will provide suitable basking and foraging habitat for grass snake which feed mostly on amphibians and small fish.

10. Dormouse

Baseline Data

Records of hazel dormouse *Muscardinus avellanarius* within a 2 km radius of the site are summarised in Table 10.1.

Species	Record and Survey Work Summary	Species of Principal Importance?	Legislation/ Conservation Status
Hazel Dormouse	The desk study returned six records of dormouse within 2 km of the reservoir site and five within 2 km of the pipeline corridor. Surveys, using nest tubes and boxes, were carried out between 2005 and 2009, followed by an updated habitat suitability assessment in 2018. Surveys identified that the reservoir site supported a small population of dormouse.	✓	ECH 4, WCA 5, WCA 6
Key: ECH 4: Annex IV of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest in need of strict protection. WCA 5: Schedule 5 of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds). WCA 6: Schedule 6 of Wildlife and Countryside Act 1981 (as amended). Animals which may not be killed or taken by certain methods			

Table 10.1: Hazel Dormouse Records Within 2 km of the Site

Impact Assessment

Pre- and Mid Development/ Construction Phase Impacts

The scheme overall results in the loss of 14 ha of suitable dormouse habitat, as well as removing an ecological corridor between Havant Thicket and Staunton Park. The species will also be indirectly impacted by the construction works, including increased noise, dust, vibration and human activity.

Long-Term/ Operational Phase Impacts

No operational phase impacts are anticipated as a result of the operation of the Visitor Centre and its associated facilities.

Avoidance and Mitigation Measures

A EPSM licence has been obtained for impacts of the scheme on hazel dormice and their habitat (2020-50257-EPS-AD2-4). Measures to protect hazel dormice from harm and disturbance, and to protect their habitat from damage or disturbance, are set out in the EPSM licence, which is the mechanism for implementation of the mitigation and reporting of licensable activities, and the licence measures will be implemented during construction as part of the Construction Environmental Management Plan (CEMP) (see Section 13).

Operational Phase Measures

No further operational phase measures will be required.

Compensation and Enhancement Measures

Habitat Creation, Restoration and/ or Enhancement

The proposed development includes habitat creation east of the site and on the main reservoir embankment, including woodland, hedgerow and grassland planting. The creation of new woodland habitat will provide additional resources for dormouse during operation.

11. Mammals - Other (Otter and Water Vole)

Baseline Data

Records of otters *Lutra lutra* and water vole *Arvicola amphibius* within a 2 km radius of the site are summarised in Table 11.1.

Species	Record and Survey Work Summary	Species of Principal Importance?	Legislation/ Conservation Status
Otter	The desk study returned no records of otter within 2 km of the site. Watercourses within the reservoir footprint were surveyed in between 2005 and 2018 and no evidence of otter activity has been recorded.	✓	ECH 2, ECH 4, WCA 5, WCA 6
Water Vole	The desk study returned no records of water vole within 2 km of the reservoir site and the closest record to the pipeline was 740 m east. Watercourses within the reservoir footprint were surveyed between 2005 and 2018 and no evidence of water vole activity has been recorded.	✓	WCA 5
Key: ECH 2: Annex II of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest whose conservation requires the designation of Special Areas of Conservation. ECH 4: Annex IV of the European Communities Council Directive on the Conservation of Natural Habitats and Wild Fauna and Flora. Animal and plant species of community interest in need of strict protection. WCA 5: Schedule 5 of Wildlife and Countryside Act 1981 (as amended). Protected animals (other than birds). WCA 6: Schedule 6 of Wildlife and Countryside Act 1981 (as amended). Animals which may not be killed or taken by certain methods			

Table 11.1: Water Vole and Otters Within 2 km of the Site.

Impact Assessment

The desk study concluded that there are no anticipated impacts likely to occur for either otters and/or water voles due to their lack of presence on site.

Therefore, no mitigation is necessary.

General Construction Phase Measures

Site Briefings

Although there is no record of water voles or otters on-site, during site clearance, groundworks, and construction, a precautionary pre-clearance survey should still be undertaken in the event of a sign of the presence of water voles and/ or otters. Without mitigation, individual otters and water voles could be harmed during vegetation clearance works.

Operational Phase Measures

No further operational phase measures will be required.

Enhancement Measures

Habitat Creation, Restoration and/ or Enhancement

It is understood that the following habitats will be enhanced to encourage ecological movement and provide suitable habitats for water vole and otters:

- Reedbed planting;
- Wet woodland enhancement; and
- Wetland creation.

12. Summary of Proposed Mitigation, Compensation and Enhancement Measures

This chapter provides an overall summary of the extent of habitat loss and gain as a result of habitat loss and gain as a result of the proposed development and outlines the biodiversity benefits that are predicted following implementation of proposed enhancement measures.

Habitat Losses and Gains

The development overall will result in a loss of habitats such as ancient woodland, purple moor-grass and rush pasture, resulting in potential species loss. However, habitat creation and enhancement proposals such as the planting of additional native tree species, woodland, wetland and ephemeral scrapes will provide alternative opportunities for notable species, such as the provision of foraging and nesting opportunities.

Summary of Mitigation and Compensation Measures Contributing to Biodiversity Targets

Table 12.1 details the proposed mitigation and / or compensation measures for species in response to construction and operational phases. Table 12.1 also depicts on-site habitat creation and enhancement proposals that will benefit a range of species such as bats, birds and glow worms.

Receptor	Mitigation and Compensation Measures
Habitats	<ul style="list-style-type: none">● Implementation of buffer zones and use of protective fencing to protect notable habitats, pollution prevention measures and control of dust.● Creation of buffers between the Visitor Centre and associated play areas, and the wetlands through reedbed planting. Boardwalks through the wetland will limit deviation into the new reedbed habitats by humans and dogs; and● Information and guidance for dog walkers about the importance of the wetland habitat for biodiversity will be provided.● Woodland and tree planting through a combination of block planting as well as natural regeneration.● New reedbed planting in the northern part of the site, which also provides some compensation for the area of water covered by the Visitor Centre. The water level within the reedbed will alter seasonally, while shallow margins, small seasonal ponds and islands will provide a diverse range of habitats.

Receptor	Mitigation and Compensation Measures
	<ul style="list-style-type: none"> ● A wildflower meadow will offer benefits for pollinators, as well as a foraging resource for small mammals and birds. ● Dipping ponds provide a resource for amphibians, reptiles and invertebrates, while acting as an additional educational resource.
Badgers	<ul style="list-style-type: none"> ● A walkover will be completed before construction works to identify whether badger has colonised the area prior to commencement. ● New and enhanced grassland, woodland and scrub habitat will provide new foraging opportunities and locations for sett building.
Bats	<ul style="list-style-type: none"> ● Implementation of a CEMP during construction and works in accordance with EPSM licence. ● Wetland creation providing additional water and foraging resources, with the wetland providing a higher density of insects. ● Planting of local native tree species and wood pasture creation will provide foraging and roosting opportunities. ● A sensitive lighting scheme will be developed to prevent disturbance caused by artificial light.
Birds	<ul style="list-style-type: none"> ● Wetland creation provides important foraging and resting habitat for wetland birds, including wader, duck and gull species, by supporting aquatic invertebrates, vegetation and areas of open water. Wetland features also provide opportunities for refuge and roosting. ● Grassland diversification through retained and new grassland provides open foraging areas for ground-feeding birds and supports insect communities that contribute to prey availability. Taller, rough grassland can also provide cover and potential nesting habitat for species such as nightjar. ● Woodland layers create sheltered habitat and increase structural diversity, providing nesting, roosting and foraging opportunities for a range of bird species. Woodland edges can support increased insect abundance, benefiting species that rely on terrestrial invertebrates. ● Scrub enhancement and planting provide dense cover for nesting, shelter and protection from disturbance, while also supporting insects and fruiting plants that contribute to food resources. Transitional scrub habitats can benefit species that use woodland–grassland mosaics.

Receptor	Mitigation and Compensation Measures
	<ul style="list-style-type: none"> ● Anti-bird strike measures to be incorporated into the Visitor Centre to prevent bird injury or death.
Invertebrates	<ul style="list-style-type: none"> ● Wetland habitats will support a range of invertebrates such as glow worms, butterflies and moths. ● Installation of hibernacula and log piles to increase the availability of refugia for invertebrates. ● A diversification of grassland sward and creation of forest glades within Havant Thicket will increase habitat suitability.
Amphibians and Reptiles	<ul style="list-style-type: none"> ● Implementation of a CEMP during construction and works in accordance with EPSM licence. ● Measures will be implemented to prevent reptiles, amphibians and other small fauna becoming trapped in excavations. ● New wetland pools, grassland and woodland will provide suitable locations for breeding, foraging and hibernating for great crested newts. ● Retained features such as hedgerows and trees to maintain ecological connectivity.
Hazel Dormouse	<ul style="list-style-type: none"> ● Implementation of a CEMP during construction and works in accordance with EPSM licence. ● Woodland, grassland and hedgerow planting combined with retained habitat features will create a structurally diverse habitat network that is well suited to hazel dormice. The establishment of a stratified woodland structure, comprising canopy, understorey and shrub layers, together with species-rich hedgerows, will provide opportunities for nesting, shelter and dispersal, while improving habitat connectivity across the site. ● A diversified ground flora and shrub layer will increase the availability of seasonal food resources, including flowers, fruits, seeds and insects, throughout the active period of dormice. ● These measures will enhance habitat quality and resilience, supporting the long-term conservation of hazel dormice within the local landscape.
Otter and Water Vole	<ul style="list-style-type: none"> ● Reedbed enhancement through reedbed planting will help in the establishment of riparian corridors and provide opportunities for shelter, foraging and movement, improving connectivity between the site and wider wetland habitats.

Receptor	Mitigation and Compensation Measures
	<ul style="list-style-type: none"> ● Otter and water vole are key indicator species associated with high-quality wetland habitats. While no evidence of either species has been identified within the site, the proposed wetland creation and habitat enhancements will increase the suitability of the site for future use.

Table 12.1: Summary of Mitigation, Compensation and Enhancement Measures

13. Construction Environmental Management

A Construction Environmental Management Plan will be prepared in respect of the construction of the Visitor Facilities Phase of the development, and will be submitted to the local planning authority to discharge Condition 5 of the planning consent. Condition 5 states:

“No phase of the development approved under Condition 4 shall commence until a phase specific Construction Environmental Management Plan for that parcel has been submitted to, and approved in writing by, the Local Planning Authority. The CEMP shall be based upon, and be in broad accordance with, Volume 4 Appendix A2.1 of the application Environmental Statement (Outline Environmental Management Plan). It should demonstrate that the risk to controlled waters will be appropriately managed, and include both temporary and permanent construction features and detail information on locations of proposed techniques such as cofferdams, culverting and piping and the associated flood risks and mitigation measures. The development shall be carried out strictly in accordance with the approved details.

Reason: *To ensure that the construction process is carried out in a manner which will minimise disturbance, pollution & nuisance to neighbouring properties or within the public realm. To avoid inappropriate parking practices, and turning and manoeuvring of construction vehicles which adversely impact either the use- or safety- of the public highway. This condition is imposed having due regard to policies DM10 & CS15 (Havant Borough Local Plan (Core Strategy) 2011), and the National Planning Policy Framework 2019.”*

The CEMP will be a ‘live’ document and will be maintained by Future Water throughout the life of the development. The CEMP will be developed into the Handover Environmental Management Plan (HEMP) upon completion of the construction works to pass crucial environmental information to those bodies responsible for future maintenance and operation of the asset. Future Water will be responsible for preparing the HEMP and Construction Phase Health and Safety Plan on completion of construction, for handover to the managing agent.

Portsmouth Water, Future Water and its subcontractors are all responsible for adhering to and complying with the scheme objectives, environmental policy, relevant environmental legislation, bylaws and regulations. It is a requirement that all site personnel are made aware of their duty of care to the environment, including local communities, and will be provided with adequate training, supervision or instruction in the form of tool box talks, site induction modules and specific method statements as necessary.

Responsibilities for site environmental management will be delegated to key personnel by Future Water. These personnel will be responsible for the implementation, reporting and monitoring of environmental mitigation during construction. Where required, environmental specialists will provide advice on specific issues or site activities. In order to assist the appointed contractors, Ecological Clerk of Works (ECoW) will be appointed to ensure requirements in respect of biodiversity are met. The ECoW will be full time on site during site preparation and clearance and during any works in sensitive areas, and to undertake regular monitoring visits throughout construction programme.

14. Post-construction Environmental Management Responsibilities

The Principal Contractor will produce a Site Management Plan for the site, which is a requirement of the Section 106 Agreement, and which is to be approved by Havant Borough Council, East Hampshire District Council and Hampshire County Council. The Site Management Plan will confirm roles and responsibilities for the management and maintenance of the site for as long as the scheme remains open and operational. The Site Management Plan will be administered by a Site Management Board.

The LEMP was produced by Atkins in 2022 (document reference: HTRATK-ZZ-ZZ-RP-L-0002), updated by Portsmouth Waer in 2025 (document reference: HTR-POR-ZZ-ZZ-RP-K-0004), and sets out the long-term management of habitat creation and enhancement measures undertaken within the site as compensation for each phase of the development. The LEMP includes objectives for the management of important landscape and biodiversity features and provides a schedule of works. It also sets out the means for the delivery of commitments within this report.

Due to the phasing of the design and construction works, certain elements of the design may not be finalised at the time of issue of the LEMP document. Therefore, the LEMP includes a framework for the management proposed which will be updated with each phase of the works and developed as detailed design is submitted for each Reserved Matter.

15. Record of Environmental Actions and Commitments

The Record of Environmental Actions and Commitments (REAC) summarises the committed mitigation measures within the chapters of the published Environmental Statement (Atkins, 2020) and associated appendices and when the action is to be implemented (e.g. at pre-construction, construction and/or operation).

The construction stage actions and commitments will be included in the CEMP which will be submitted to the local planning authority to discharge planning condition 5. Ecological commitments identified in the REAC / CEMP that are relevant to the Visitor Facilities Phase of the development are provided in Table 15.1.

Objective	Actions/ Mitigation	Timing	Monitoring and Reporting Requirements
To assist appointed construction contractor in meeting biodiversity requirements.	Ecological Clerk of Works to be present during site preparation and clearance and during any works in sensitive areas, and to undertake regular monitoring visits throughout construction programme.	Pre-construction and Construction	Quarterly ECoW progress reports to be provided to the Local Planning Authority (LPA).
To minimise disturbance of sensitive, retained habitats and species	Project design and ecological management plan will include measures to control and direct visitor access to minimise disturbance in sensitive areas.	Pre-construction	Detailed design and Ecological Management Plan (EcMP) to be agreed by LPA.
To protect areas of SINCs and ancient woodland outside the working areas from accidental incursion	Install protective fencing at the edge of the working area, including protecting all retained woodland, scrub and grassland areas and a 15 m buffer zone around all ancient woodlands where practicable, and with expert arboricultural advice where work is required within 15m, and maintain throughout construction.	Pre-construction and Construction	Integrity of adjacent areas to be monitored on weekly basis by ECoW. Updates to be included in quarterly ECoW progress report to LPA.
Compensate for habitat losses	Design new habitats during detailed design, including detailed design of wetlands that maximises retention of woodland. Create new wetland in accordance with design. Create species-rich grassland and plant new woodland and avenue trees.	Pre-construction and Construction	Agreement of detailed Biodiversity Mitigation and Compensation Strategy by LPA. Agreement of detailed wetland design by LPA.

Objective	Actions/ Mitigation	Timing	Monitoring and Reporting Requirements
			Quarterly ECoW progress reports to be provided to LPA during construction.
To protect any watercourses from construction related pollution risk	The Principal Contractor will adopt best practice to avoid pollution of watercourses. This is to include, but is not limited to, adherence to Guidelines for Pollution Prevention (GPP), latest Environment Agency pollution guidance available from data.gov, and Construction Industry Research and Information Association (CIRIA) guidance on the control of water pollution from construction sites.	Construction	Translocation undertaken successfully and species becomes established at the receptor site. No deleterious material is transferred to the receptor site (e.g. invasive non-native species).
Protection of bats and compensation for loss of roosting opportunities	Felling methods to minimise risks to individual bats will be followed as set out in the bat licence method statement (for roost trees) and (for non-roost trees) a Precautionary Method of Working. These will set out timing and methods of working. Inclusive of any bat boxes required under the licence, at least one bat box will be erected for each tree with high or moderate bat potential that is felled.	Construction	Work to be undertaken in accordance with monitoring requirements of EPSM licence. Quarterly ECoW progress reports to be provided to LPA during construction.
Protection of bats from indirect harm	Work to be undertaken in accordance with EPSM licence. A lighting strategy will be carefully produced in order to minimise any light spill in accordance with the Bat Conservation Trust guidelines. Permanent lighting will comprise hooded luminaire, directed away from vegetation, particularly woodland, the wetland and treelines.	Pre-Construction, Construction and Operation	Work to be undertaken in accordance with monitoring requirements of EPSM licence. Quarterly ECoW progress reports to be provided to LPA during construction.

Objective	Actions/ Mitigation	Timing	Monitoring and Reporting Requirements
	Lux levels will be as low as possible to balance biodiversity requirements and site safety.		
Protection of dormice and compensation for habitat loss	Vegetation clearance and tree felling methods to minimise risks to individual dormice will be followed as set out in the dormouse licence method statement. This will set out timing and methods of working.	Pre-construction and Construction	Work to be undertaken in accordance with monitoring requirements of EPSM licence. Quarterly ECoW progress reports to be provided to LPA during construction.
Protection of otters	Precautionary pre-clearance survey will be undertaken at watercourses and areas of scrub and woodland linked to watercourses. Vegetation clearance in these areas will follow a Precautionary Method of Working. Light spill on watercourses will be avoided.	Pre-construction and Construction	Quarterly ECoW progress reports to be provided to LPA during construction.
Protection of badgers	Precautionary pre-clearance survey will be undertaken at areas of suitable habitat. Vegetation clearance in these areas will follow a Precautionary Method of Working.	Pre-construction and Construction	Quarterly ECoW progress reports to be provided to LPA during construction.
Protection of nesting birds	Precautionary pre-clearance survey will be undertaken at areas of suitable habitat if clearance is required in the nesting season (typically March to August). Vegetation clearance in these areas will follow Precautionary Method of Working.	Pre-construction and Construction	Quarterly ECoW progress reports to be provided to LPA during construction.

Objective	Actions/ Mitigation	Timing	Monitoring and Reporting Requirements
Protection of reptiles	Retained vegetation will be protected for use as receptor sites. Clearance of suitable habitat will follow a Precautionary Method of Works. This is likely to include a combination of translocation and displacement of animals into enhanced adjacent retained habitat. The PMW will set out the season and method of clearance.	Pre-construction and Construction	Quarterly ECoW progress reports to be provided to LPA during construction.
Protection of great crested newts and other species.	<p>Vegetation clearance methods to minimise risks to individual GCN will be followed as set out in the licence method statement.</p> <p>As best practice, common amphibians encountered during site clearance will be moved to safe areas of retained habitat in accordance with the provisions of the EPSM licence.</p>	Construction	<p>Work to be undertaken in accordance with monitoring requirements of EPSM licence.</p> <p>Quarterly ECoW progress reports to be provided to LPA during construction.</p>
Avoid climate change impacts on habitats in the wetland.	Active management of water levels in the wetland to improve its resilience to climate change.	Operation	Maintenance and inspection schedule of the wetland.
Report as required under EPSM licences.	Monitoring requirements will be met, as set out in the EPSM licences.	Pre-construction, Construction and Operation	Reports to be provided to Natural England and LPA in accordance with EPSM licence requirements.

Table 15.1: Record of Environmental Actions and Commitments

16. Monitoring

During construction, monitoring will be undertaken in accordance with the requirements to be set out within the CEMP for the Visitor Facilities Phase of the development. Other legally protected, priority or notable species may utilise the site in the future therefore such species will be taken into consideration during monitoring of the site.

Following the implementation of mitigation and compensation measures for important ecological features, it will be necessary to monitor their effectiveness against the specific objectives for each feature. This includes:

- A record of actions/operations undertaken to provide biodiversity mitigation and compensation as set out in this report, including dates and who carried out the action/operation;
- Monitoring of the successful establishment of planted trees, woodland and shrubs, newly seeded grassland, and planted wetland areas;
- Monitoring of the presence of invasive non-native species;
- Annual surveys of the Site to establish the status of habitats and species populations in relation to targets for management success set out in the LEMP and site-specific management plans (surveys will be undertaken by specialists as necessary); and
- Monitoring in accordance with the EPSM licence conditions.

Where monitoring identifies that the objectives of ecological mitigation, compensation and enhancement are not being met, remedial action will be undertaken. Any remedial management shall be reported within quarterly ECoW progress reports.

Appendix A

Relevant Species Legislation

Bats

Bats and the places they use for shelter or protection (i.e. roosts) receive legal protection under the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (Habitats Regulations 2019). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that bats, and the places they use for shelter or protection, are capable of being a material consideration in the planning process.

Regulation 41 of the Habitats Regulations 2017, states that a person commits an offence if they:

- deliberately capture, injure or kill a bat;
- deliberately disturb bats; or
- damage or destroy a bat roost (breeding site or resting place).

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.

It is an offence under the Habitats Regulations 2017 for any person to have in his possession or control, to transport, to sell or exchange or to offer for sale, any live or dead bats, part of a bat or anything derived from bats, which has been unlawfully taken from the wild.

Changes have been made to parts of the Habitats Regulations 2017 so that they operate effectively from 1st January 2021. The changes are made by the Habitats Regulations 2019, which transfer functions from the European Commission to the appropriate authorities in England and Wales.

All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.

The obligations of a competent authority in the 2017 Regulations for the protection of species do not change. A competent authority is a public body, statutory undertaker, minister or department of government, or anyone holding public office.

Whilst broadly similar to the above legislation, the WCA 1981 (as amended) differs in the following ways:

- Section 9(1) of the WCA makes it an offence to *intentionally* kill, injure or take any protected species.
- Section 9(4)(a) of the WCA makes it an offence to *intentionally or recklessly** damage or destroy, *or obstruct access to*, any structure or place which a protected species uses for shelter or protection.
- Section 9(4)(b) of the WCA makes it an offence to *intentionally or recklessly** disturb any protected species *while it is occupying a structure or place which it uses for shelter or protection*.

*Reckless offences were added by the Countryside and Rights of Way (CROW) Act 2000.

As bats re-use the same roosts (breeding site or resting place) after periods of vacancy, legal opinion is that roosts are protected whether or not bats are present.

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

The following bat species are Species of Principal Importance for Nature Conservation in England: barbastelle bat *Barbastella barbastellus*, Bechstein's bat *Myotis bechsteinii*, noctule *Nyctalus noctula*, soprano pipistrelle *Pipistrellus pygmaeus*, brown long-eared bat *Plecotus auritus*, greater horseshoe bat *Rhinolophus ferrumequinum* and lesser horseshoe bat *Rhinolophus hipposideros*. Species of Principal Importance for Nature Conservation in England are material considerations in the planning process. The list of species is derived from Section 41 list of the Natural Environmental and Rural Communities (NERC) Act 2006.

Badger

Badgers and their setts are protected under the Protection of Badgers Act 1992. The Protection of Badgers Act 1992 is based primarily on the need to protect badgers from baiting and deliberate harm or injury, badgers are not protected for conservation reasons. The following are criminal offences:

- To intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it.
- To wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so.

A badger sett is defined in the legislation as:

- 'Any structure or place that displays signs indicating current use by a badger'.

'Current use' is not synonymous with current occupation and a sett is defined as such (and thus protected) as long as signs of current usage are present. Therefore, a sett is protected until such a time as the field signs deteriorate to such an extent that they no longer indicate 'current usage'.

Badger sett interference can result from a multitude of operations including excavation and coring, even if there is no direct damage to the sett, such as through the disturbance of badgers whilst occupying the sett. Any intentional or reckless work that results in the interference of badger setts is illegal without a licence from Natural England. In England a licence must be obtained from Natural England before any interference with a badger sett occurs.

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

Common amphibians

Common frogs, common toad, smooth newt and palmate newt are protected in Britain under Schedule 5 of the Wildlife and Countryside Act (1981, as amended) with respect to sale only. They are also listed under Annex III of the Bern Convention 1979. Any exploitation of wild fauna specified in Appendix III shall be regulated in order to keep the populations out of danger. The convention seeks to prohibit the use of all indiscriminate means of capture and killing and the use of all means capable of causing local disappearance of, or serious disturbance to, populations of a species.

Common toad is listed as a Species of Principal Importance for Nature Conservation in England.

Great crested newts

Great crested newts (GCN) and the places they use for shelter or protection receive legal protection under the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (Habitats Regulations 2019). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that GCN, and the places they use for shelter or protection, are capable of being a material consideration in the planning process. Regulation 41 of the Habitats Regulations 2017 states that a person commits an offence if they:

- Deliberately capture, injure or kill a GCN;
- Deliberately disturb GCN;
- Deliberately take or destroy eggs of a GCN; or
- Damage or destroy a GCN breeding site or resting place.

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.

It is an offence under the Habitats Regulations 2017 for any person to have in his possession or control, to transport, to sell or exchange or to offer for sale, any live or dead GCN, part of a GCN or anything derived from GCN, which has been unlawfully taken from the wild. This legislation applies to all life stages of GCN.

Changes have been made to parts of the Habitats Regulations 2017 so that they operate effectively from 1st January 2021. The changes are made by the Habitats Regulations 2019, which transfer functions from the European Commission to the appropriate authorities in England and Wales.

All other processes or terms in the 2017 Regulations remain unchanged, and existing guidance is still relevant.

The obligations of a competent authority in the 2017 Regulations for the protection of species do not change. A competent authority is a public body, statutory undertaker, minister or department of government, or anyone holding public office.

Whilst broadly similar to the above legislation, the WCA 1981 (as amended) differs in the following ways:

- Section 9(1) of the WCA makes it an offence to intentionally kill, injure or take any protected species.
- Section 9(4)(a) of the WCA makes it an offence to intentionally or recklessly* damage or destroy, or obstruct access to, any structure or place which a protected species uses for shelter or protection.
- Section 9(4)(b) of the WCA makes it an offence to intentionally or recklessly* disturb any protected species while it is occupying a structure or place which it uses for shelter or protection.

*Reckless offences were added by the Countryside and Rights of Way (CROW) Act 2000.

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

GCN are listed a Species of Principal Importance for Nature Conservation in England which means they are a material consideration in the planning process. The list of species is derived from Section 41 list of the Natural Environmental and Rural Communities (NERC) Act 2006.

Nesting Birds

The Conservation of Habitats and Species Regulations 2017, (Habitats Regulations 2017) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (Habitats Regulations 2019) places a duty on public bodies to take measures to preserve, maintain and re-establish habitat for wild birds.

Nesting and nest building birds are protected under the Wildlife and Countryside Act WCA 1981 (as amended).

Subject to the provisions of the act, if any person intentionally:

- kills, injures or takes any wild bird;
- takes, damages or destroys the nest of any wild bird while that nest is in use or being built; or
- takes or destroys an egg of any wild bird, he shall be guilty of an offence.

Some species (listed in Schedule 1 of the WCA) are protected by special penalties. Subject to the provisions of the act, if any person intentionally or recklessly:

- disturbs any wild bird included in Schedule 1 while it is building a nest or is in, on or near a nest containing eggs or young; or
- disturbs dependent young of such a bird, he shall be guilty of an offence.

Several bird species are Species of Principal Importance for Nature Conservation in England, making them capable of being material considerations in the planning process.

Dormouse

Dormice and the places they use for shelter or protection receive European protection under The Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that dormice, and the places they use for shelter or protection, are capable of being a material consideration in the planning process.

Regulation 41 of the Habitats Regulations 2017, states that a person commits an offence if they:

- Deliberately capture, injure or kill a dormouse;
- Deliberately disturb dormice; or
- Damage or destroy a breeding site or resting place.

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.

It is an offence under the Habitats Regulations 2017 for any person to have in his possession or control, to transport, to sell or exchange or to offer for sale, any live or dead dormouse, part of

a dormouse or anything derived from a dormouse, which has been unlawfully taken from the wild.

Whilst broadly similar to the above legislation, the WCA 1981 (as amended) differs in the following ways:

- Section 9(1) of the WCA makes it an offence to *intentionally* kill, injure or take any protected species.
- Section 9(4)(a) of the WCA makes it an offence to *intentionally or recklessly** damage or destroy, or obstruct access to, any structure or place which a protected species uses for shelter or protection.
- Section 9(4)(b) of the WCA makes it an offence to *intentionally or recklessly** disturb any protected species *while it is occupying a structure or place which it uses for shelter or protection*.

*Reckless offences were added by the Countryside and Rights of Way (CROW) Act 2000.

Water Vole

Water voles receive protection under the Wildlife and Countryside Act 1981 (as amended), which makes it an offence to:

- Intentionally kill, injure or take (capture) a water vole;
- Possess or control live or dead water voles or any 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, offer for sale or advertise for live or dead water voles.

*Reckless offences were added by the Countryside and Rights of Way (CROW) Act 2000.

Water voles are listed as Species of Principal Importance, which means they are a material consideration in the planning process.

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

Otter

The otter benefits from world-wide protection under Appendix I of the Convention on International Trade in Endangered Species of Wild Flora and Fauna. It also receives legal protection under Appendix II of the Bern Convention and Annexes II and IV of the EU Habitats Directive 94/43/EEC, which is transposed into UK Law by means of the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (Habitats Regulations 2019).

Regulation 41 of the Habitats Regulations 2017, states that a person commits an offence if they:

- deliberately capture, injure or kill an otter;
- deliberately disturb otters; or
- damage or destroy a breeding site or resting place.

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.

It is an offence under the Habitats Regulations 2017 for any person to have in his possession or control, to transport, to sell or exchange or to offer for sale, any live or dead otter, part of an otter or anything derived from an otter which has been unlawfully taken from the wild.

Changes have been made to parts of the Habitats Regulations 2017 so that they operate effectively from 1st January 2021. The changes are made by the Habitats Regulations 2019, which transfer functions from the European Commission to the appropriate authorities in England and Wales.

All other processes or terms in the 2017 Regulations remain unchanged and existing guidance is still relevant.

The obligations of a competent authority in the 2017 Regulations for the protection of species do not change. A competent authority is a public body, statutory undertaker, minister or department of government, or anyone holding public office.

Whilst broadly similar to the above legislation, the WCA 1981 (as amended) differs in the following ways:

- Section 9(1) of the WCA makes it an offence to *intentionally* kill, injure or take any protected species.
- Section 9(4)(a) of the WCA makes it an offence to *intentionally or recklessly** damage or destroy, *or obstruct access to*, any structure or place which a protected species uses for shelter or protection.
- Section 9(4)(b) of the WCA makes it an offence to *intentionally or recklessly** disturb any protected species *while it is occupying a structure or place which it uses for shelter or protection*.

*Reckless offences were added by the Countryside and Rights of Way (CROW) Act 2000.

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

Reptiles

All of the UK's native reptiles are protected by law. The two rarest species – sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca* – benefit from the greatest protection.

Common lizard *Zootoca vivipara*, slow-worm *Anguis fragilis*, adder *Vipera berus* and grass snake *Natrix helvetica* are protected under the Wildlife and Countryside Act 1981 (as amended) from intentional killing or injuring.

Sand lizard and smooth snake are protected under the Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017) and the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 (Habitats Regulations 2019). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. This protection means that it is illegal to kill, injure, capture, handle or disturb these animals. Places they use for breeding, resting, shelter and protection are also protected from being damaged or destroyed. In addition, it is illegal to obstruct these animals from using such areas.

All native reptile species are listed as Species of Principal Importance for Nature Conservation in England and as such are material considerations in the planning process.

This is a simplified description of the legislation. In particular, the offences mentioned here may be absolute, intentional, deliberate or reckless. Note that where it is predictable that reptiles are likely to be killed or injured by activities such as site clearance, this could legally constitute intentional killing or injuring.

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