

# Havant Thicket Reservoir Project

## **Environmental Statement Volume 4 - Appendices**

### **Appendix A9 Biodiversity**

#### **A9.1 Desk Study**

Portsmouth Water Ltd.

04/09/20

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# Notice

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## Client signoff

|                            |                                  |
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| Client                     | Portsmouth Water Ltd.            |
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## Appendix A9.1 Desk Study

## Introduction

### Biodiversity Features

- 1.1. This Appendix presents the findings of the desk-based study in relation to the following biodiversity features:
- Statutory designated sites for nature conservation;
  - Non-statutory designated sites for nature conservation;
  - Irreplaceable habitats – ancient woodland, veteran trees and notable trees;
  - Priority habitats;
  - Protected and priority species; and,
  - Invasive non-native plant species (INNPS).

### The Site

- 1.2. The Site includes the Havant Thicket Reservoir Site (the Reservoir Site) and the Pipeline Corridor, that runs between the Reservoir Site and the Bedhampton and Havant Springs Pumping Site. Records throughout this appendix are discussed in relation to their distance from these separate sites that combined together form the Site.

### The Study Area

- 1.3. The extent of the EZoI (the study area) for the desk study and field survey was reviewed and re-defined prior to the assessment of potential impacts based on the results of the desk study and field surveys, and the refined design.
- 1.4. The desk study was carried out by Atkins in May 2020 taking account of the confirmed planning application boundary. The EZoI for this desk study is provided in Table 1.

**Table 1 - Desk Study Ecological Zone of Influence (EZoI)**

| Data Type                                                                                                                                                                                            | Search area – distance from site |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| SACs where bats are one of the qualifying species                                                                                                                                                    | 30 km                            |
| Statutory designated sites: Special Areas of Conservation (SACs and cSACs), Special Protected Areas (SPAs and pSPAs), Wetlands of International Importance (Ramsar sites) and potential Ramsar sites | 5 km                             |
| Statutory designated sites: Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) and Local Nature Reserves (LNRs)                                                           | 2 km                             |
| Non-statutory designated sites for nature conservation and ancient woodland                                                                                                                          | 2 km                             |
| Bechstein's bat and barbastelle bats                                                                                                                                                                 | 10 km                            |
| Other bat species                                                                                                                                                                                    | 3 km                             |
| Legally protected species (except bats)                                                                                                                                                              | 2 km                             |
| Priority habitats and species and invasive non-native plant species (INNPS) and invasive non-native animal species                                                                                   | 1 km                             |
| Waterbodies that may potentially be utilised by breeding great crested newts                                                                                                                         | 500 m                            |
| Veteran and Notable Trees                                                                                                                                                                            | 50 m                             |
| Aquatic habitats and species (watercourses and standing waterbodies) <sup>1</sup>                                                                                                                    | 2 km                             |

<sup>1</sup> An initial desk study area of 150 m was used for the identification of aquatic features (watercourses and standing waterbodies) that could potentially be affected by the Scheme. Where a watercourse was identified within 150 m of the Scheme, the desk study area was extended up to 2 km upstream and downstream on that watercourse to identify any species/habitat records for the specific feature to inform the baseline conditions. Further details on aquatic ecology study area are provided in Chapter 9 Biodiversity - **Appendix A9.3** of the Environment Statement.

## Legislative and Policy Framework

- 1.5. The biodiversity regulatory and policy framework relevant to the Scheme is summarised below.

### National Planning Policy

#### The National Planning Policy Framework (2019)

- 1.6. The National Planning Policy Framework (NPPF) – revised 19 February 2019, sets out the Government’s planning policies for England and provides a framework within which the appropriate local authority can produce local and neighbourhood plans; the NPPF is a material consideration in making planning decisions.
- 1.7. The NPPF sets out three overarching objectives in achieving sustainable development, these are interdependent and need to be considered in mutually supportive ways. Economic, social and environmental objectives should be delivered through the preparation and implementation of plans and application of the policies within the NPPF. The NPPF also notes the importance that planning policies and decisions should play in providing an active role in guiding development towards sustainable solutions, which should also respond to local circumstances, reflecting local character and the needs and opportunities of each area. Key parts of the NPPF of relevance to this EIA are:
- Chapter 14 Meeting the challenge of climate change, flooding and coastal change
  - Planning for climate change
  - Paragraph 149: Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures.

#### Chapter 15 Conserving and enhancing the natural environment

- 1.8. As set out within Paragraph 11 of the NPPF ‘Plans and decisions should apply a presumption in favour of sustainable development’. However, Paragraph 177 goes on to state that ‘The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that there will be no adverse effect from the plan or project on the integrity of the habitats site.’
- 1.9. The general impetus of the NPPF in relation to ecology and biodiversity is for development proposals to not only minimise the impacts on biodiversity but also to provide enhancement. Paragraph 170 states that the planning system should contribute to and enhance the natural environment by ‘...minimising impacts on biodiversity and providing net gains in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures...’.
- 1.10. A number of principles are set out in Paragraph 175, including that where harm cannot be adequately avoided then it should be mitigated for, or as a last resort, compensated for. Where impacts occur on nationally designated sites, the benefits must clearly outweigh any adverse impact and incorporating biodiversity in and around developments should be encouraged. Specific reference is also made to the protection of irreplaceable habitats. Where loss to irreplaceable habitats occur planning permission would normally be refused unless there are wholly exceptional reasons and an adequate compensation strategy is in place. Paragraph, 175, Note 58 confirms that wholly exceptional reasons would include infrastructure projects where the public benefit would clearly outweigh the loss or deterioration of habitat.
- 1.11. Paragraph 175 also states ‘development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity’. Protection of sites proposed as Special Protection Areas (SPAs), Special Areas of Conservation (SACs) and Ramsar sites or acting as compensation for SPAs, SACs and Ramsar sites, should receive the same protection as habitat sites.
- 1.12. In addition to the NPPF, Circular 06/05 provides guidance on the application of the law relating to planning and nature conservation as it applies in England. Paragraph 98 states ‘the presence of a protected species is a material consideration when a planning authority is considering a development proposal that, if carried out, would be likely to result in harm to the species or its habitat’. Whilst paragraph 99 states ‘it is essential that the presence or otherwise of a protected

*species, and the extent that they may be affected by the proposed development, is established before planning permission is granted'.*

- 1.13. The full text for Chapter 15 – Conserving and enhancing the natural environment is given below:
- 1.14. Paragraph 170: Planning policies and decisions should contribute to and enhance the natural and local environment by:
  - a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
  - b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
  - c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
  - d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;
  - e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
  - f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.
- 1.15. Paragraph 171: Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework ; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.
- 1.16. Paragraph 172: Great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks, the Broads and Areas of Outstanding Natural Beauty, which have the highest status of protection in relation to these issues. The conservation and enhancement of wildlife and cultural heritage are also important considerations in these areas and should be given great weight in National Parks and the Broads. The scale and extent of development within these designated areas should be limited. Planning permission should be refused for major development other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. Consideration of such applications should include an assessment of:
  - a) the need for the development, including in terms of any national considerations, and the impact of permitting it, or refusing it, upon the local economy;
  - b) the cost of, and scope for, developing outside the designated area, or meeting the need for it in some other way; and
  - c) any detrimental effect on the environment, the landscape and recreational opportunities, and the extent to which that could be moderated.
- 1.17. Paragraph 173: Within areas defined as Heritage Coast (and that do not already fall within one of the designated areas mentioned in paragraph 172), planning policies and decisions should be consistent with the special character of the area and the importance of its conservation. Major development within a Heritage Coast is unlikely to be appropriate, unless it is compatible with its special character.  
[Habitats and biodiversity](#)
- 1.18. Paragraph 174: To protect and enhance biodiversity and geodiversity, plans should:
  - a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity ; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and

b) promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

1.19. Paragraph 175: When determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to incorporate biodiversity improvements in and around developments should be encouraged, especially where this can secure measurable net gains for biodiversity.

1.20. Paragraph 176: The following should be given the same protection as habitats sites:

a) potential Special Protection Areas and possible Special Areas of Conservation;

b) listed or proposed Ramsar sites; and

c) sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

1.21. Paragraph 177: The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.

## Local Planning Policy (Current)

1.22. The site boundary straddles two Hampshire districts, Havant and East Hampshire. The boundary of these districts passes through the centre of The Avenue, effectively splitting the site in half. As a result, Local Planning Policy from both Havant Borough Council and East Hampshire District Council has been included.

1.23. The HTWSR site is safeguarded in the existing 2014 East Hampshire District Council Core Strategy 2014, the reservoir and associated pipeline is safeguarded in the Havant Borough Council Core Strategy 2011. The reservoir site is also safeguarded in the emerging Local Plans for East Hampshire District Council and Havant Borough Council.

## Havant Borough Council Core Strategy (2011)

1.24. The Havant Borough Council 'Core Strategy' is the current planning policy for Havant along with the 'Local Plan (Allocations)' 2014. The Core Strategy was adopted in 2011 and sets out the planning framework until 2026. The Local Plan 2036 (currently in draft format) will replace the core strategy and is hoped to be adopted in 2020.

1.25. Policies within the Local Plan (Core Strategy) that are relevant to the Ecological Impact Assessment are:

### Policy CS11 Protecting and Enhancing the Special Environment and Heritage of Havant Borough

1.26. This policy refers in part to biodiversity stating that planning permission will be granted for development that protects and, where possible, enhances the borough's statutory and non-statutory designated habitats and features of biological interest through appropriate adaptation and mitigation

measures, has particular regard for nature conservation designations with international designations given the highest regard, protects wildlife habitats and corridors to prevent fragmentation and to allow species to adapt to climate change and acknowledges the emerging evidence from the Solent Disturbance and Mitigation Project and published recommendations and further research.

#### Policy CS13 Green Infrastructure

- 1.27. This policy states that development will be permitted that:
1. Maintains and manages the network of green infrastructure identified at the sub regional and local levels.
  2. Incorporates, where appropriate, improvements to existing green infrastructure through the restoration, enhancement or creation of additional resources.
  3. Does not undermine the functional integrity of the green infrastructure.
  4. Creates, where appropriate, new green infrastructure (including access management measures) either through on site provision or financial contributions.
- 1.28. Development proposals that adversely affect green infrastructure will not be permitted unless superior alternative provision can be provided or where it is part of a service provider's plans to provide improved local services in equally accessible locations.
- 1.29. Green infrastructure sites will be allocated in the Development Delivery (Allocations) Plan.

#### Policy CS18 Strategic Site Delivery (Strategic Site 2 Havant Thicket Reservoir)

- 1.30. This policy details that Portsmouth Water Company has identified a winter storage reservoir as a key infrastructure requirement to meet the demand for increased water supply in South Hampshire. The policy identifies that an Environmental Impact Assessment (EIA) leading to the production of an environmental statement is required in accordance with Schedule 2 of the Town and Country Planning Act (Environmental Impact Assessment) (England and Wales) Regulation 1999. This is a result of the following key constraints:
1. Sites of Importance for Nature Conservation (SINC) within or adjacent to the site;
  2. The adjacent Sir George Staunton Conservation Area, including The Avenue and the registered park and garden of special historic interest (grade II\* listed building);
  3. Areas of ancient semi-natural woodland and planted woodland; and
  4. Great Copse (in relation to routeing of the pipeline).

#### Policy DM9: Development in the Coastal Zone

- 1.31. This policy refers to the protection of the coastal zone. The relevant part of the policy with regards to ecology states that permission will only be granted in the coastal zone where it can be demonstrated that there will be no harmful effects on nature conservation within the Chichester and Langstone Harbour SSSIs and SPA, Solent Maritime SAC and Ramsar site, or any SINC's and Local Nature Reserves.

Within the emerging Havant Borough Council Local Plan 2036 there is a specific policy KP9 which relates to HTWSR.

#### Policy KP9: Havant Thicket Reservoir

- 1.32. The specific points which relate directly to ecology include the requirement that the natural character is conserved in particular by;
1. Limiting impacts on biodiversity including the creation of additional habitats;
  2. Compensating for the loss of, and effects on, Sites of Importance for Nature Conservation (SINC's);
  3. Ensuring that the pipeline avoids Great Copse, which should be protected during construction;
  4. Integrating the reservoir into the existing landscape of the area;
  5. Minimising the loss of ancient woodland and trees;
  6. Appropriate mitigation measures, including buffers, are put in place for Bechstein's bat in line with Policy E15;
  7. The potential impacts on the Langstone and Chichester Harbours as well as the Hermitage Stream have been assessed under the appropriate regulations and any necessary avoidance and mitigation measures included in the scheme design;

8. Opportunities for biodiversity enhancements associated with the reservoir and the Hermitage Stream are realised wherever possible; and
9. Opportunities arising from the new pipe works are taken to enhance the habitats along the stream corridors.

## Havant Borough Council Local Plan (Allocations) Adopted Version (2014)

- 1.33. The Havant Brough Local Plan (Allocations) follows on from the Havant Borough Local Plan (Core Strategy) which together provides up to date polices for the borough. The Allocations plan was adopted in 2014. Policies within the Allocation Plan that are relevant to the Ecological Impact Assessment are:  
[Policy AL6 Havant Thicket Reservoir Pipeline](#)
- 1.34. This policy states that planning permission will be granted for development proposals that help deliver the Havant Thicket Reservoir pipeline as shown on the Policies Map. Development proposals will not be permitted in the pipeline route buffer zone, where it could prevent the future delivery of the pipeline.
- 1.35. Havant Thicket Reservoir is a proposed winter water storage facility on the border of Havant Borough and East Hampshire District. This is an allocated strategic site in Core Strategy Policy CS18, as it is a key piece of infrastructure required to meet the demand for increased water supply in South Hampshire. In order to serve the reservoir, a pipeline needs to be constructed from the Havant and Bedhampton Springs.
- 1.36. The pipeline route, shown on the Policies Map, has been identified by Portsmouth Water Company (the infrastructure provider) in consultation with Havant Borough Council, Portsmouth City Council and Hampshire County Council. The company has sought to ensure that where practicable the proposed route will run through the open space alongside the Hermitage Stream and Riders Lane Stream. Every effort has been made to avoid the main roads through Bedhampton and Leigh Park, as well as private gardens and allotments. Only short sections of the trench will be excavated at any one time to help minimise local disruption.
- 1.37. The pipeline route includes a core buffer zone extending five metres either side of the pipeline. Development will not be permitted in this core buffer zone. An outer buffer of a further five metres either side of the core buffer has also been identified and Portsmouth Water will be consulted on any planning applications within this area. This is to make sure that new development allows the effective delivery of the pipeline route. Carefully planned development in this outer buffer is less likely to affect the delivery of the pipeline, however, applicants should still demonstrate that the developments can function well together.
- 1.38. A slightly wider safeguarded zone (up to 25m wide) is identified on the pipeline route immediately north and south of Purbrook Way, in order to accommodate underground chambers required in association with the use of the pipeline. The ground above the chambers would be reinstated to grass to restore the current public open space use on completion of the construction.
- 1.39. Two routes at the north end of High Lawn Way are shown as safeguarded for the pipeline. The preferred route will be determined at the planning application stage when more information is available, including an environmental impact assessment.

### [Policy AL7 Hermitage Stream](#)

- 1.40. This policy states that planning permission will be granted for development proposals that positively contribute to the improvement of the Hermitage Stream, as shown on the Policies Map.
- 1.41. Planning applications for development proposals within proximity of the Hermitage Stream that prevent improvements to the Hermitage Stream being delivered, may be refused.
- 1.42. The Hermitage Stream Restoration Project is a project being coordinated by Havant Borough Council, the Environment Agency, Hampshire Wildlife Trust, Groundwork Solent and Hampshire County Council (for the Park School section). The aim of the project is to restore five reaches of the canalised Hermitage Stream to a more natural setting. These improvements are planned for the land adjacent to the stream as well as the channel itself. These are mostly in the Leigh Park area, with a small section in Havant and Bedhampton.

### [Policy AL8 Local Green Spaces](#)

- 1.43. This policy states that Planning permission will be granted for development proposals that protect or enhance the Local Green Spaces, as shown on the Policies Map.
  - 1.44. Development proposals that would be harmful to these Local Green Spaces will not be permitted other than in very special circumstances.
  - 1.45. The NPPF allows local authorities to designate green space for special protection as Local Green Space. The government makes it very clear in paragraphs 76 and 77 of the NPPF that this designation should not be applied to most green areas or open space. A Local Green Space is a space that is in reasonably close proximity to the community it serves; where it is demonstrably special to the local community and holds a particular significance, for example because of its beauty, historic significance, recreational value (including as a playing field), tranquillity or richness of its wildlife; and where it is local in character and is not an extensive tract of land. A number of Local Green Spaces have been designated across the five areas of the Borough. These are shown on the Policies Map and are listed in the relevant area section of the plan.
  - 1.46. The Local Green Spaces were nominated by the local community as part of the public consultation on the Draft Allocations Plan published in December 2012. Most of the strategic open spaces designated under CS1 of the Core Strategy have also been designated as Local Green Spaces. The methodology for designating these sites along with a full list of nominated sites is set out in the background document Local Green Spaces in Havant Borough (2013). In accordance with the NPPF these spaces are local in character and are not extensive tracts of land. They are all demonstrably special to the local community for a wide variety of reasons including beauty, historical significance, recreational value, tranquillity or richness of wildlife.
  - 1.47. Planning permission will only be granted for development proposals in very special circumstances. These exceptions are set out in paragraphs 89 and 90 of the NPPF and include essential utility development, the provision of appropriate facilities for outdoor sport and recreation and appropriate extensions or alterations to existing buildings
- Policy DM23 Sites for Brent Geese and Waders**
- 1.48. This policy states that planning permission will be granted for developments that avoid important sites for Brent Geese and/or waders outside of the statutory designated areas, identified on the Policies Map.
  - 1.49. Where this cannot be avoided, development proposals on or adjacent to an important Brent Goose and/or wader site outside of the statutory designated areas will need to demonstrate levels of impact, alone and in combination with other proposals subject to the tests of the Habitats Regulations. Where a negative impact upon a site cannot be avoided or satisfactorily mitigated, and the tests of the Habitats Regulations are met as necessary, replacement feeding/roosting habitat, on a no net loss basis, will be sought.
  - 1.50. Where a negative impact upon an important site cannot be avoided or mitigated and replacement feeding/roosting habitat is not or cannot be provided on a no net loss basis, the proposal will be refused.
  - 1.51. Planning permission will be granted for development on or adjacent to uncertain sites for Brent Geese and/or waders outside of the statutory designated areas, where appropriate surveys are undertaken, and it is determined that the site has no importance.
  - 1.52. Havant Borough is an internationally important wintering location for Brent Geese and wading bird species and as a result the coastal areas around Chichester and Langstone Harbours have been designated as Special Protection Areas (SPAs). Brent Geese and wading bird species are dependent on a network of habitats for feeding and roosting that fall outside of the SPAs. The sites of value have been identified in the Solent Waders and Brent Goose Strategy (2010) and identified as sites of 'important' or 'uncertain' value. These sites are critically linked to the integrity of the European and internationally designated sites and their development should be avoided where possible, and where this cannot be avoided negative impacts should be mitigated.
  - 1.53. Proposals on or adjacent to important Brent Geese and wading bird sites must be assessed and subject to the tests of the Habitats Regulations, in order to demonstrate levels of impact, alone and in combination with other proposals. Suitable avoidance and mitigation measures will be required, proportionate to the level of risk to the SPA bird populations, and those measures put in place prior to development taking place. These measures may include carrying out construction works outside of the core winter period (October-March inclusive) or enhancing the feeding or roosting site to

increase its capacity through favourable management. Such measures should be subject to consultation between the council and Natural England.

- 1.54. Where a negative impact upon a site cannot be avoided or satisfactorily mitigated, and the tests of the Habitats Regulations are met as necessary, replacement habitat may be considered. Replacement habitat may include the creation of new feeding or roosting sites (or 'refuges'), or improvements to the management of less frequently used sites to provide an equivalent level of resource. Given the right conditions (location, size, habitat and appropriate management), it is possible that coastal birds will exploit new sites or refuges. The important factors to consider in the creation of new sites or refuges for this purpose have been identified in the Solent Waders and Brent Goose Strategy (2010). Any replacement habitat must be subject to meeting the tests of the Habitats Regulations. Advice must also be sought from Natural England as to the most appropriate course of action on a case-by-case basis. Where a negative impact upon an important site cannot be avoided or mitigated, or appropriate replacement habitat is not or cannot be provided, the proposal will be refused.
- 1.55. Where data on sites of 'important' or 'uncertain' value is limited or out of date, site surveys should be undertaken to determine their level of importance. The authority recommends that the survey methodology set out in the Solent Waders and Brent Geese Strategy (2010) is followed. Appropriate methodologies should be approved by a professional ecologist and prepared in consultation with Natural England. For surveys to be considered valid, reasonable measures should be taken not to reduce the site's suitability for Brent Geese and waders during the survey period. In all cases, three consecutive years of recent survey data should ideally be carried out across the overwintering seasons and a record of any sightings on or adjacent to the application site will be required. Existing records for Brent Geese and wading bird species in Langstone Harbour are held by the Hampshire Biodiversity Information Centre, and records for Chichester Harbour are held by the Chichester Harbour Conservancy.
- 1.56. The Allocations Plan has been subject to an Appropriate Assessment under the Habitats Regulations, to help identify any potential negative impacts on the European wildlife sites, and means to avoid or mitigate such impacts, including those to the network of Brent Geese and wader sites outside of the SPAs. This forms part of the evidence base. It is considered that this policy provides sufficient flexibility to allow allocated sites that are designated as 'uncertain' sites for Brent Geese and/or waders to come forward for development within the plan period.

### East Hampshire District Council Local Plan: Joint Core Strategy (2014)

- 1.57. The Joint Core Strategy is the current Local Plan for East Hampshire, created as a joint effort between East Hampshire District Council and the South Downs National Park Authority. It was adopted in 2014 and replaced the previous 2006 local plan. A new draft local plan is due to be adopted by the end of 2020, this follows the Governments legal requirements introduced in 2018 that local plans must be reviewed every five years. The South Downs National Park have subsequently adopted a separate local plan in 2019 (as discussed below)
- 1.58. Policies within the Joint Core Strategy that are relevant to the Ecological Impact Assessment are:  
[Policy CP21 Biodiversity](#)
- 1.59. This policy refers to the need to maintain, enhance and protect district-wide biodiversity. The policy specifically refers to the requirement for new development to:
  1. Protect designated sites including those of international, national and local importance;
  2. Protect other features which are of local value for wildlife with examples listed including hedgerow, important trees and river corridors;
  3. Contribute towards district wide network of local sites;
  4. Ensure net gains in biodiversity and ensuring adverse impacts are avoided or mitigated for; and
  5. Protect and strengthen populations of legally protected species.  
[Full CP21 Text](#)
- 1.60. Development proposals must maintain, enhance and protect the District's biodiversity and its surrounding environment.
- 1.61. New development will be required to:

- a) maintain, enhance and protect district wide biodiversity, in particular the nature conservation designations (see Map 2).
- i) Special Protection Areas (SPA), Special Areas of Conservation (SAC) and Ramsar (International);
- ii) Sites of Special Scientific Interest (SSSI) and National Nature Reserves (National);
- iii) Sites of Importance for Nature Conservation (SINC) (Hampshire) and Local Nature Reserves (LNR).
- b) extend specific protection to, and encourage enhancement of, other sites and features which are of local value for wildlife, for example important trees, rivers, river corridors and hedgerows, but which are not included in designated sites.
- c) contribute towards maintaining a district-wide network of local wildlife sites, wildlife corridors and steppingstones between designated sites and other areas of biodiversity value or natural green space. This will help to prevent the fragmentation of existing habitats and allow species to respond to the impacts of climate change by making provision for habitat adaptation and species migration. This is supported by Policy CP28 (Green Infrastructure) and the District's Green Infrastructure work.
- d) ensure wildlife enhancements are incorporated into the design to achieve a net gain in biodiversity by designing in wildlife and by ensuring that any adverse impacts are avoided where possible or, if unavoidable, they are appropriately mitigated for, with compensatory measures only used as a last resort.
- e) protect and, where appropriate, strengthen populations of protected species;

#### Policy CP22 Internationally Designated Sites

- 1.62. This policy specifically states that any development within 400m of the Wealden Heaths Phase II SPA will be required to undertake a project specific Habitats Regulations Assessment. The policy requires that development complies with the findings of any forthcoming work provided by the Solent Disturbance and Mitigation Project in relation to the Solent SAC, SPA and Ramsar sites.

#### Policy CP28 Green Infrastructure

- 1.63. This policy states that Development will be permitted provided that it maintains, manages and enhances the network of new and existing green infrastructure. Development will need to take forward the objectives and priorities presented in the District's Green Infrastructure Study and Strategy, the South Hampshire Green Infrastructure Strategy and its Implementation Framework and the avoidance and mitigation measures set out in the Joint Core Strategy's Habitats Regulations Assessment. Account will also need to be taken of other relevant joint core strategy policies such as landscape, historic environment, biodiversity, flood risk and design. New green infrastructure must be provided either through on-site provision or financial contributions. The size of contribution will be linked to the scale of the development and the resulting new green infrastructure must be located as close as possible to the development it is intended to serve.

## Local Planning Policy (Draft to be adopted)

### Havant Borough Council Local Plan 2036 – Pre-submission Draft (2019)

- 1.64. The Havant Borough Council's Local Plan 2036 is currently in draft form and will replace the core strategy (see 11.2.6) It is hoped the Local Plan will be formally adopted in 2020. The Plan sets out the council strategic development vision up to 2036. Policies within the Draft Local Plan that are relevant to the Ecological Impact Assessment are:

#### KP9 Havant Thicket Reservoir:

- 1.65. The specific points which relate directly to ecology include the requirement that the natural character is conserved in particular by;
1. Limiting impacts on biodiversity including the creation of additional habitats;
  2. Compensating for the loss of, and effects on, Sites of Importance for Nature Conservation (SINCs);
  3. Ensuring that the pipeline avoids Great Copse, which should be protected during construction;
  4. Integrating the reservoir into the existing landscape of the area;
  5. Minimising the loss of ancient woodland and trees;

6. Appropriate mitigation measures, including buffers, are put in place for Bechstein's bat in line with Policy E15;
7. The potential impacts on the Langstone and Chichester Harbours as well as the Hermitage Stream have been assessed under the appropriate regulations and any necessary avoidance and mitigation measures included in the scheme design;
8. Opportunities for biodiversity enhancements associated with the reservoir and the Hermitage Stream are realised wherever possible; and
9. Opportunities arising from the new pipe works are taken to enhance the habitats along the stream corridors.

- 1.66. The emerging 2036 Local Plan contains three other policies which are relevant to ecology, E14, E15 and E18.

#### E14 The Local Ecological Network

- 1.67. Policy E14 relates to the local ecological network and states that planning permission will only be granted where:
1. The development avoids fragmentation of the Local Ecological Network;
  2. The applicant has identified and assessed the level of ecological value of the site through adequate and proportionate information and any matters arising have been addressed through an avoidance or mitigation plan; and
  3. Any necessary mitigation plan includes provision for ongoing management and maintenance.
- 1.68. The policy also includes reference to international, national and local nature conservation designations. Developments which have the potential to have an impact international sites should be supported by a Habitat Regulations Assessment and, if necessary, an Appropriate Assessment. Where developments are likely to have an adverse effect in the integrity of an international sites necessary avoidance or mitigation should be secured.
- 1.69. Nationally designated sites should not be adversely impacted by developments, with exceptions made where the benefit clearly outweighs the impact on the feature. In this instance mitigation and / or compensation should be secured to offset likely impacts.
- 1.70. Planning permission will only be granted on or adjacent to locally designated sites where the value of locally designated sites should be retained, and where possible enhanced through avoidance and / or mitigation measures, or the benefit of the development can be clearly shown to outweigh the conservation value of the site.

#### E15 Protected Species

- 1.71. Development proposals that are likely to affect protected species should be supported by appropriate surveys to establish their presence / likely absence. Where protected species are recorded impacts on these species should be avoided in the first instance. Where avoidance cannot be achieved planning applications should be supported by a mitigation or compensation plan, and a monitoring and review plan.
- 1.72. Bechstein's bat is specifically referenced in Policy E15, and the following wording is included:
- 1.73. *'In instances where Bechstein's bat is likely to be found onsite and/or nearby, survey methods appropriate to Bechstein's bat must be used and undertaken by a suitably qualified ecologist. If the presence of Bechstein's bat is established onsite and/or nearby, planning permission will only be granted where*
1. *Impacts on Bechstein's bat breeding habitat (i.e. net loss of/excessive disturbance to woodland or trees containing roosts) are avoided;*
  2. *Proposals include appropriate buffers to woodlands, trees, hedgerows and other flight corridors, considering the location of roosts and foraging/commuting habitats; and*
  3. *Review and monitoring plans are put in place.'*

#### E18 Trees, hedgerows and woodland

- 1.74. The points in this policy relevant to this assessment include the requirement to adequately protect existing trees and hedgerows during construction. The requirement of developments to have no loss or deterioration of ancient woodland and ancient or veteran trees. Provision is made to override

these requirements in the event that the need, and benefits of a development in the specific location clearly outweigh the impact of the development.

## East Hampshire District Council Draft Local Plan 2017-2036 (2019)

- 1.75. East Hampshire District Council have produced a new draft Local Plan which is due to be adopted by the end of 2020. The Plan sets out the Council's strategic development vision up to 2036. Policies within the Draft Local Plan that are relevant to the Ecological Impact Assessment are:
  - 1.76. Policy DM25 The Local Ecological Network
  - 1.77. This policy refers to the importance of ecological networks and biodiversity and promotes coherent networks which provide more resilience to current and future pressure. The policy specifically refers to:
    1. EHDC refusing permission for developments which result in harm to the local ecological network, unless it can be proven that the need and benefits of the development will outweigh the harm. Where harm cannot be avoided measures, which mitigate or compensate for the harm will be required.
    2. Applications for developments must include adequate and proportionate information to assess the implications of a scheme on the ecological network. They must also be supported by mitigation and / or compensation plans which will deliver a net-gain for biodiversity and which set out the long-term management of any measures.
- Policy DM26: Trees, hedgerows and woodland**
- 1.78. This policy is mainly related to protection and retention of woody vegetation. Particularly relevant points include that planning permission will not be granted for schemes that would result in the loss or deterioration of irreplaceable habitats including ancient woodland and ancient or veteran trees, unless the need for, and benefits of, the development clearly outweigh the loss, and adequate mitigation and compensation measures can be agreed with the Local Planning Authority.
- Policy S22: Solent Special Protection Areas**
- 1.79. This policy specifically relates to the potential impact of residential developments in relation to the Solent European Sites (See Chapter B). Planning permission will only be granted where an Appropriate Assessment concludes that there would be no adverse effects on the integrity of the Solent SPAs.
- Policy S23 Green Infrastructure**
- 1.80. The incorporation and development of green infrastructure within developments is encouraged to follow the East Hampshire District Council Green Infrastructure Strategy. Where green infrastructure is included within a development, suitable arrangements for future funding, maintenance and management should be in place.
- Policy S31: Havant thicket reservoir**
- 1.81. The scheme should conserve natural and rural character in particular by:
  1. Limiting impacts on biodiversity including the creation of additional habitats;
  2. Compensating for the loss of, and effects on, Sites of Importance for Nature Conservation (SINCs), the listed park and conservation area;
  3. Enhancing adjacent sites of importance for nature conservation;
  4. Minimising the loss of ancient woodland and trees.
  5. Opportunities for biodiversity enhancements associated with the reservoir are realised wherever possible.

## Methodology

### Desk Study Data Sources

- 1.82. The geographical area for obtaining ecological data through desk studies has been determined using professional judgement. Baseline data has been gathered from a range of sources through data requests, consultation, and using online resources as outlined below. This included data gathering in relation to statutory and non-statutory designated sites for nature conservation and

protected and priority species. The study areas used for the data gathering are detailed in Table 1 - Desk Study Ecological Zone of Influence (EZoI) The desk study was undertaken on 4 May 2020. For species records collected, only those within 10 years of the data collection date have been considered within the assessment.

- 1.83. The Hampshire Biodiversity Information Centre (HBIC) and Sussex Biodiversity Record Centre (SxBRC) were contacted in May 2020 for records no older than 10 years (circa 2009).
- 1.84. The following data was requested from HBIC and SxBRC in May 2020:
  - Records of non-statutory designated sites for nature conservation (Local Wildlife Sites (LWSs), Sites of Importance for Nature Conservation (SINCs) and Sites of Interest for Nature Conservation (SINCs));
  - Records of priority habitats and legally protected and priority flora;
  - Records of all bat species within 3 km of the Site;
  - Records of bat roosts within 5 km of the Site;
  - Records of Bechstein's bat and barbastelle bats within 10 km of the Site;
  - Protected and Priority habitats and species and invasive non-native plant species within 1 km of the Site; and,
  - Notable species including species considered of note by recorders for local areas or particular species groups.
- 1.85. Ancient and veteran tree records within 50 m of the Site were sourced from the Woodland Trust public accessible ancient tree inventory website<sup>2</sup> in May 2020.
- 1.86. The Multi-Agency Geographic Information for the Countryside (MAGIC) online resource was reviewed on several occasions with the latest review in May 2020 to establish the following:
  - The location of statutory designated sites for nature conservation; Special Protected Areas (SPAs and pSPAs), Special Areas of Conservation (SACs and pSACs), Wetlands of International Importance (Ramsar sites), Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) and Local Nature Reserves (LNRs);
  - Ancient woodland; and,
  - European Protected Species Mitigation Licences (EPSMLs).
- 1.87. Ordnance Survey maps and the Grid Reference Finder website (<https://gridreferencefinder.com/>) were used to clarify the presence of waterbodies that have previously been recorded by ECOSA<sup>3</sup> and to check for any additional waterbodies within 500 m of the Application Site boundary. The presence and location of waterbodies within 500 m of the Site have been used to establish if the land within and immediately surrounding the Site could be used as terrestrial habitat for great crested newt. This species typically uses suitable terrestrial habitat up to 500 m from a breeding pond. However, there is a notable decrease in great crested newt abundance beyond a distance of 250 m from a breeding pond<sup>4</sup>.

## Results

### Statutory Designated Sites

- 1.88. There are no statutory designated sites for nature conservation located within the Site.
- 1.89. There are three SACs with bats listed as a reason for designation within 30 km of the Site, these are:
  - Singleton and Cocking Tunnels SAC located approximately 15.7 km east of the Site;
  - Bridesford Copses SAC located 20 km south of the Site but is located on the Isle of Wight and separated from the mainland by the Solent, (approximately 6 km of open sea water); and,

<sup>2</sup> <https://ati.woodlandtrust.org.uk/tree-search/?v=1693508&ml=map&z=16&nwLat=50.878633181474946&nwLng=-0.9931598476358383&seLat=50.873623466042936&seLng=-0.9660588077493637>

<sup>3</sup> Havant Thicket Winter Storage Reservoir, Rowland's Castle, Hampshire, Ecological Impact Assessment Report, Chapter K, Great Crested Newt Assessment

<sup>4</sup> Natural England (2004) An assessment of the efficiency of capture techniques and the value of different habitats for the great crested newt (ENRR576). <http://publications.naturalengland.org.uk/publication/134002>.

- Ebernoe Common SAC is located approximately 29 km east of the Site.
- 1.90. The closest statutory designated sites within 5 km of the Site where there is a hydrological connection to the Site, via the Riders Stream and Hermitage Stream, is the Chichester and Langstone Harbours SPA and Ramsar site, and Solent Maritime SAC. These statutory designated sites are located approximately 1 km downstream from the Site at Bedhampton and Havant Springs (the pumping site and most southerly point of the pipeline) and approximately 3.85 km from the Reservoir Site. These sites are also the closest international sites to the Site.
- 1.91. The Solent and Dorset Marine Coast SPA is located approximately 4.2 km south west from the Pipeline Corridor. The nearest point of the SPA is within Portcreek Junction.
- 1.92. The Solent and Isle of Wight Lagoon SAC includes fourteen coastal lagoons; Shut Lake is the nearest lagoon to the Site. Shut Lake is located approximately 5 km west of the Site at Bedhampton and Havant Springs (the pumping site and most southerly point of the pipeline).
- 1.93. There are two SSSIs within 2 km of the Site; Langstone Harbour SSSI is located approximately 1 km south of the Pipeline Corridor and Chichester Harbour SSSI is located approximately 2 km south east of the Pipeline Corridor.
- 1.94. There are three LNRs located within 2 km of the Site. Hazelton Common LNR is located approximately 890 m north west of the Reservoir Site, Farlington Marshes LNR is located approximately 1.6 km south west of the Pipeline Corridor and Dell Piece West LNR is located approximately 1.8 km north west of the Reservoir Site.
- 1.95. There are no National Nature Reserve's (NNR's) within 2 km of the Site.
- 1.96. The statutory designated sites discussed above are detailed in Table 2 and shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0024. in Appendix A

**Table 2 - Statutory Designated Sites**

| Site Name                         | Grid Ref | Area      | Distance from Site                 | Description                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------|----------|-----------|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Singleton and Cocking Tunnels SAC | SU872140 | 1.88 ha   | 15.7 km east of the Reservoir Site | The SAC is two disused railways tunnels, which are home to hundreds of hibernating bats in the winter. Species recorded hibernating include barbastelles and greater horseshoe bats along with the sole remaining greater mouse-eared bat colony in Britain. The site is also important for bats in the autumn where large numbers congregate to swarm which includes mating. |
| Briddlesford Copses SAC           | SZ548906 | 165.44 ha | 20 km South                        | The Briddlesford Copse complex of woodlands represents the most varied, structurally diverse and species-rich cluster of ancient broadleaved woodland on the Isle of Wight and supports an important breeding population of the rare Bechstein's bat. The bats use holes and crevices in mature trees for roosting and the interconnecting woodlands for feeding.             |
| Ebernoe Common SAC                | SU975271 | 234.93 ha | 29 km east of the Reservoir Site   | The SAC is a complex of woodlands featuring both barbastelle and Bechstein's bat maternity roosts. Sites with maternity roosts are important as these are where female bats come together in the late spring and summer to give birth to and raise                                                                                                                            |

| Site Name                                     | Grid Ref | Area         | Distance from Site                                                          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------|----------|--------------|-----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                               |          |              |                                                                             | their young and are therefore critical to the conservation of the species.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Chichester and Langstone Harbours Ramsar Site | SU740019 | 5,810 ha     | 3.85 km south of the Reservoir Site and 1 km south of the Pipeline Corridor | Two large estuarine basins linked by the channel which divides Hayling Island from the main Hampshire coastline. The site includes extensive intertidal mudflats, saltmarsh, sand and shingle spits and sand dunes. The mudflats support beds of <i>Zostera</i> and <i>Enteromorpha</i> , whilst the lower saltmarsh is dominated by common cordgrass. Although many areas bordering the site have been developed, some grassland and brackish/freshwater marshes with reedbeds remain. Peak counts of wintering water birds regularly exceed 20,000 individuals, including internationally important numbers <sup>5</sup> .                                                                                     |
| Chichester and Langstone Harbours SPA         | SU703053 | 5810.95 ha   | 3.85 km south of the Reservoir Site and 1 km south of the Pipeline Corridor | Chichester and Langstone Harbours SPA covers two large, estuarine basins. Urban development surrounds the west of Langstone Harbour, whereas farmland surrounds the majority of Chichester Harbour. Together, with neighbouring Portsmouth Harbour, the area forms one of the most sheltered intertidal areas on the South Coast of England. Both Chichester and Langstone Harbours contain extensive intertidal mudflats and sandflats with areas of seagrass beds, saltmarsh, shallow coastal waters, coastal lagoons, coastal grazing marsh and shingle ridges and islands. These habitats support internationally and nationally important numbers of overwintering and breeding bird species <sup>6</sup> . |
| The Solent Maritime SAC                       | SU703053 | 11,243.12 ha | 3.85 km south of the Reservoir Site and 1 km south of the Pipeline Corridor | The Solent encompasses a major estuarine system on the south coast of England with four coastal plain estuaries (Yar, Medina, King's Quay Shore, Hamble) and four bar-built estuaries (Newtown Harbour, Beaulieu, Langstone Harbour and Chichester Harbour). The site is the only one in the series to contain more than one physiographic sub-type of estuary and is the only cluster site. The Solent and its inlets are unique in                                                                                                                                                                                                                                                                             |

<sup>5</sup> <https://rsis.ramsar.org/ris/378>

<sup>6</sup> <https://designatedsites.naturalengland.org.uk/Marine/MarineSiteDetail.aspx?SiteCode=UK9011011&HasCA=1&NumMarineSeasonality=18&SiteNameDisplay=Chichester%20and%20Langstone%20Harbours%20SPA#SiteInfo>

| Site Name                               | Grid Ref | Area         | Distance from Site                                                                              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------|----------|--------------|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                         |          |              |                                                                                                 | Britain and Europe for their hydrographic regime of four tides each day, and for the complexity of the marine and estuarine habitats present within the area. Sediment habitats within the estuaries include extensive estuarine flats, shingle spits, and natural shoreline transitions. The mudflats range from low and variable salinity in the upper reaches of the estuaries to very sheltered almost fully marine muds in Chichester and Langstone Harbours <sup>7</sup> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| The Solent and Isle of Wight Lagoon SAC | SZ332940 | 37.93 ha     | 3 km north east of the Pipeline Corridor                                                        | The Lagoon SAC encompasses a series of lagoons on the south coast of England, located in the marshes at Keyhaven – Pennington area, at Farlington Marshes in Langstone Harbour, behind the sea-wall at Bembridge Harbour and at Gilkicker, near Gosport.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Solent and Dorset Coast SPA             | SU669041 | 89,078.02 ha | 4.2 km south of the Pipeline Corridor at the nearest point of the SPA within Portcreek Junction | The SPA protects important foraging areas at sea used by qualifying interest features from colonies within already classified SPAs. These qualifying interest features are three species of tern: common tern, Sandwich tern and little tern <sup>8</sup> . Chichester and Langstone Harbour SPA is one of the four, adjacent, already existing SPA's within the greater Solent where qualifying features will be subject to further protection from the Solent and Dorset SPA due to the inclusion of sub-tidal areas not currently encompassed in the existing SPAs. The landward boundary is set at Mean Low Water (MLW) where it abuts any existing SPA which has terns as existing features to avoid overlapping sites so as to afford the birds protection within the intertidal areas which are used for foraging. The site covers all the waters of the Solent, Southampton Water, Portsmouth Harbour, Christchurch Harbour, Poole Bay and also stretches along the Sussex Coast |
| Langstone Harbour SSSI                  | SU704053 | 2,085 ha     | 3.85 km south of the Reservoir Site                                                             | Langstone Harbour is a tidal basin which at high water resembles an almost landlocked lake. At low water                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

<sup>7</sup> <https://sac.jncc.gov.uk/site/UK0030059>

<sup>8</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/560623/solent-dorset-summary.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/560623/solent-dorset-summary.pdf)

| Site Name               | Grid Ref | Area     | Distance from Site                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------|----------|----------|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         |          |          | and 1 km south of the Pipeline Corridor  | <p>extensive mud flats are exposed, drained by three main channels which unite to make a common and narrow exit to the sea. The harbour includes one of the largest areas of mixed saltmarsh on the south coast, and extensive common cordgrass marsh in an advanced state of degeneration.</p> <p>The SSSI includes Farlington Marshes, a peninsula of grassland and marsh on reclaimed tidal silt protected by a sea wall; and a similar but much smaller area at Southmoor in the north-east of the harbour. The harbour is of international importance as a rich intertidal system supporting high densities of intertidal invertebrates and large populations of migrant and overwintering waders and wildfowl, dependent upon them and upon the extensive beds of eelgrass<sup>9</sup>.</p> |
| Chichester Harbour SSSI | SU721051 | 3,733 ha | 2 km south east of the Pipeline Corridor | <p>Chichester Harbour is a large estuarine basin in which at low tide extensive mud and sandflats are exposed, drained by channels which unite to make a common exit to the sea. The site is of particular significance for wintering wildfowl and waders and also breeding birds both within the Harbour and in the surrounding permanent pasture fields and woodlands. There is a wide range of habitats which have important plant communities<sup>10</sup>.</p>                                                                                                                                                                                                                                                                                                                               |
| Hazleton Common LNR     | SU703119 | 17.44 ha | 944 m north west of the Reservoir Site   | <p>Designated for supporting ancient woodland plant species and a range of butterfly species including Essex skipper small skipper grizzled skipper. Good breeding populations of stonechat are present and the common provides habitat for kestrel sparrow hawk and buzzard. The main pond supports great crested newt.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Dell Piece West LNR     | SU700126 | 4 ha     | 1.7 km north west of the Reservoir Site  | <p>Designated for supporting a range of habitats including well wooded borders, unimproved grassland, damp marshy ground and a large shallow pond. These features provide habitat for a rich variety of wildlife that includes various butterflies, dragonflies and reptiles.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

<sup>9</sup> <https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1001182>

<sup>10</sup> <https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=s1003245>

| Site Name              | Grid Ref | Area   | Distance from Site                         | Description                                                                                                                                                                                                                                                                                                                                  |
|------------------------|----------|--------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Farlington Marshes LNR | SU689054 | 125 ha | 1.6 km south west of the Pipeline Corridor | Farlington Marshes is 125 ha (308 acres) of flower-rich grazing marsh on the northern shore of Langstone Harbour between Portsmouth and Havant. Farlington is internationally important for the bird populations that it supports, as well as being a blaze of colour in spring and summer with many flowers and butterflies <sup>11</sup> . |

## Non-Statutory Designated Sites

- 1.97. HBIC provided records of 80 Sites of Importance for Nature Conservation (SINCs) within 2 km of the Scheme, which include 60 SINCs within 2km of the Reservoir site and 65 SINCs within 2 km of the pipeline corridor. The SINCs listed in Table 3 - Non-Statutory Designated Sites within , (below) are SINCs within and immediately adjacent to the reservoir site and pipeline corridor.
- 1.98. SxBRc provided one non-statutory designated site within 2 km of the Site. This is Stanstead Forest LWS, located approximately 1.2 km east of the Site.
- 1.99. Of the 80 SINCs within 2 km of the Scheme; eight are within the Reservoir Site and seven are located immediately adjacent to the Reservoir Site. These are listed in Table 3.
- 1.100. There are three SINCs within the Pipeline Corridor, these are Thicket Lawn SINC, High Lawn SINC and Great Copse Havant SINC. These are listed in Table 3.
- 1.101. SINCs within and immediately adjacent to the Site are listed in Table 3 and non-statutory designated sites for nature conservation, located within 2 km are shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0025 in Appendix B.

**Table 3 - Non-Statutory Designated Sites within and adjacent to the Site**

| Site Name                            | Grid Ref   | Area (ha) | Distance from Site                                                  | Description                                                                                                                                                                                                                                                                 |
|--------------------------------------|------------|-----------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Thicket Bottom (SINC)                | SU71950936 | 7.88 ha   | Within Reservoir Site and 275 m east of the Pipeline Corridor       | Pasture woodland and wooded commons, which are of considerable biological and historical interest (Criteria <sup>12</sup> 1D).<br>Situating within and adjacent to the Site along the southern boundary. Within the Site this SINC includes the Eastern side of The Avenue. |
| Thicket Bottom Woods and Lake (SINC) | SU71900930 | 15.71 ha  | Within Reservoir Site and immediately east of the Pipeline Corridor | Situating within and adjacent to the Site along the southern boundary and designated for supporting ancient semi-natural woodland. Within the Site this SINC includes the western side of The Avenue and Round Wood.                                                        |
| Middle Clearing (SINC)               | SU71250960 | 2.18 ha   | Within Reservoir Site and 170 m north east of the Pipeline Corridor | Ancient semi-natural woodlands (Criteria 1A); and,<br><br>Sites which support one or more notable species (Criteria 6A).                                                                                                                                                    |

<sup>11</sup> <https://designatedsites.naturalengland.org.uk/SiteLNRDetail.aspx?SiteCode=L1008890>

<sup>12</sup> Criteria information throughout Table 3 is copied from:

Hampshire County Council Criteria for selecting Sites of Importance for Nature Conservation in Hampshire (in partnership with English Nature and Hampshire and Isle of Wight Wildlife Trust): <https://documents.hants.gov.uk/biodiversity/SINCCriteria.pdf>

| Site Name                               | Grid Ref   | Area (ha) | Distance from Site                                                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------|------------|-----------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Havant Thicket (SINC)                   | SU71501050 | 96 ha     | Within Reservoir Site and 1 km north of the Pipeline Corridor            | <p>Other woodland where there is a significant element of ancient semi-natural woodland surviving (Criteria 1B);</p> <p>Other semi-natural woodland if;<br/>(ii) they comprise important community types of restricted distribution in the County, such as yew woods and alder swamp woods (Criteria 1Cii);</p> <p>Pasture woodland and wooded commons, which are of considerable biological and historical interest (Criteria 1D);</p> <p>Semi-improved grasslands which retain a significant element of unimproved grassland (Criteria 2B);</p> <p>Areas of heathland which are afforested or have succeeded to woodland if;<br/>(i) they retain significant remnants of heathland vegetation which would enable their recovery (Criteria 3Bi);</p> <p>Fens, flushes, seepages, springs, inundation grasslands etc. that support a flora and fauna characteristic of unimproved and waterlogged (seasonal or permanent) conditions (Criteria 5B); and,</p> <p>Sites which support one or more notable species (Criteria 6A).<br/>Notable species supported by the site include purple emperor silver-washed fritillary.<br/>Protected Species include Bechstein's bat.</p> |
| Havant Thicket South West Corner (SINC) | SU71001050 | 8.51 ha   | Within the Reservoir Site and 1.3 km north west of the Pipeline Corridor | <p>Other woodland where there is a significant element of ancient semi-natural woodland surviving (criteria 1B); and,</p> <p>Areas of heathland which are afforested or have succeeded to woodland if;<br/>(i) they retain significant remnants of heathland vegetation which would enable their recovery (Criteria 3Bi)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| Site Name                   | Grid Ref   | Area (ha) | Distance from Site                                                                                             | Description                                                                                                                                                                                                                                                                                                                      |
|-----------------------------|------------|-----------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bell's Copse (SINC)         | SU70501010 | 33.28 ha  | Within the Reservoir Site and 985 m north west of the Pipeline Corridor                                        | Ancient semi-natural woodlands (criteria 1A);<br><br>Other woodland where there is a significant element of ancient semi-natural woodland surviving (criteria 1B)                                                                                                                                                                |
| Cabbagefield Row (SINC)     | SU70700950 | 2.03 ha   | Within the Reservoir Site and 725 m north west of the Pipeline Corridor                                        | Ancient semi-natural woodlands (Criteria 1A)                                                                                                                                                                                                                                                                                     |
| Idsworth Common (SINC)      | SU71901100 | 15.91 ha  | Within the Reservoir Site and 1.7 km north east of the Pipeline Corridor                                       | Other woodland where there is a significant element of ancient semi-natural woodland surviving (criteria 1B);<br><br>Pasture woodland and wooded commons, which are of considerable biological and historical interest (Criteria 1D; and,<br><br>Sites which support one or more notable species: Bechstein's bat (Criteria 6A). |
| Thicket Lawn (SINC)         | SU71600900 | 10.56 ha  | Within the Pipeline Corridor. Immediately adjacent and south of Reservoir Site, in Staunton Country Park (SCP) | Semi-improved grasslands which retain a significant element of unimproved grassland (Criteria 2B); and,<br><br>Fens, flushes, seepages, springs, inundation grasslands etc. that support a flora and fauna characteristic of unimproved and waterlogged (seasonal or permanent) conditions (Criteria 5B).                        |
| High Lawn (SINC)            | SU71900890 | 11.74 ha  | Within the Pipeline Corridor 320 m south of Reservoir Site, within SCP                                         | Semi-improved grasslands which retain a significant element of unimproved grassland (Criteria 2B); and,<br><br>Fens, flushes, seepages, springs, inundation grasslands etc. that support a flora and fauna characteristic of unimproved and waterlogged (seasonal or permanent) conditions (Criteria 5B).                        |
| Great Copse (SINC)          | SU71800840 | 5.70 ha   | Within the Pipeline Corridor and 505 m south of Reservoir Site                                                 | Ancient semi-natural woodlands (Criteria 1A)                                                                                                                                                                                                                                                                                     |
| Hammonds Lands Copse (SINC) | SU72300940 | 7.63 ha   | Immediately adjacent and south of Reservoir Site, in SCP and 440 m east of the Pipeline Corridor               | Ancient semi-natural woodlands (Criteria 1A)                                                                                                                                                                                                                                                                                     |

| Site Name                        | Grid Ref   | Area (ha) | Distance from Site                                                                                                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------|------------|-----------|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Blendworth Common (North) (SINC) | SU70801100 | 8.37 ha   | Immediately adjacent and north west of Reservoir Site                                                             | Agriculturally unimproved grasslands (Criteria 2A)                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Blendworth Common (South) (SINC) | SU70701070 | 19.18 ha  | Immediately adjacent and north west of Reservoir Site and 1.4 km north west of the Pipeline Corridor              | Agriculturally unimproved grasslands (Criteria 2A)                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Dunsbury Hill Grassland 2 (SINC) | SU70620969 | 3.51 ha   | Immediately adjacent and west of Reservoir Site                                                                   | Semi-improved grasslands which retain a significant element of unimproved grassland (Criteria 2B)                                                                                                                                                                                                                                                                                                                                                                   |
| Meadow by Bell's Copse (SINC)    | SU70400990 | 4.94 ha   | Immediately adjacent and west of Reservoir Site                                                                   | Agriculturally unimproved grasslands (Criteria 2A); and,<br><br>Grasslands which have become impoverished through inappropriate management but which retain sufficient elements of relic unimproved grassland to enable recovery (Criteria 2D)                                                                                                                                                                                                                      |
| The Holt (SINC)                  | SU72001150 | 127 ha    | Immediately adjacent to the Reservoir Site and 1.7 km north east of the Pipeline Corridor                         | Ancient semi-natural woodlands (Criteria 1A);<br><br>Areas of heathland which are afforested or have succeeded to woodland if;<br>(i) they retain significant remnants of heathland vegetation which would enable their recovery (Criteria 3Bi); and,<br><br>Sites which support one or more notable species (Criteria 6A).<br><br>Protected species include: myotis bats, Bechstein's bat and the notable species: wild lettuce. Ancient and semi-natural woodland |
| Dunsbury Hill Wood (SINC)        | SU70500960 | 6.70 ha   | Immediately adjacent and west of Reservoir Site (north east access) and 935 m north west of the Pipeline Corridor | Other semi-natural woodland if;<br>(ii) they comprise important community types of restricted distribution in the County, such as yew woods and alder swamp woods (Criteria 1Ci)                                                                                                                                                                                                                                                                                    |

## Irreplaceable Habitats

- 1.102. There are 33 ancient woodland sites within 2 km of the Site of which 22 are Ancient Semi Natural Woodlands (ASNWs) and 11 are Ancient Re-Planted Woodlands (PAWs). These are detailed in Table 4 and shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0036 in Appendix C.
- 1.103. There are eight ancient woodland sites within the Site, including four ASNWs; The Avenue, Middle Clearing, Round Wood, part of Bell's Copse, part of Cabbagefield Row and three PAWs, including the Forest of Bere (Havant Thicket), part of Bell's Copse and a site located within Staunton Country

Park (SCP) adjacent and south west of the Avenue at the Ordnance Survey Grid Reference (OSGR): SU705092.

- 1.104. Due to some uncertainty of the accuracy of the ancient woodland inventory Portsmouth Water commissioned an independent specialist to survey six plots of woodland in and adjacent to the Site. A copy of the Ancient Woodland Report is provided in Appendix D. The report was submitted to Natural England by Portsmouth Water in February 2020 and Natural England's Response (April 2020) is provided in Appendix E.

**Table 4 - Ancient Woodland within 2 km**

| Site Name                 | Grid Ref   | Area (ha) | Distance from Site                                                                                                                                     | Description |
|---------------------------|------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| The Avenue                | SU71950936 | 14.52 ha  | Within the Reservoir Site                                                                                                                              | ASNW        |
| Middle Clearing           | SU71250960 | 2.18 ha   | Within the Reservoir Site                                                                                                                              | ASNW        |
| Round Wood                | SU71900930 | 1.98 ha   | Within the Reservoir Site                                                                                                                              | ASNW        |
| Staunton Country Park     | SU70540921 | 1.66 ha   | Within the Site; the south western corner of Staunton Country Park, to the south of the reservoir footprint, (part of the ecological enhancement area) | PAWS        |
| Forest of Bere            | SU71501050 | 98.99 ha  | Within the Reservoir Site, (part of the ecological enhancement area)                                                                                   | PAWS        |
| Bell's Copse              | SU70581000 | 20.59 ha  | Within the Reservoir Site, (part of the ecological enhancement area)                                                                                   | ASNW        |
| Bell's Copse              | SU70711031 | 9.33 ha   | Within the Reservoir Site, (part of the ecological enhancement area)                                                                                   | PAWS        |
| Cabbage field Row         | SU70700950 | 2.04 ha   | Within the Reservoir Site                                                                                                                              | ASNW        |
| Hammonds Lands Copse      | SU72300940 | 5.75 ha   | Immediately adjacent and south of Reservoir Site, in SCP                                                                                               | ASNW        |
| The Holt                  | SU72001150 | 126 ha    | Immediately north east of the Reservoir Site                                                                                                           | PAWS        |
| Staunton Country Park     | SU71980924 | 0.9 ha    | 75 m south of the Reservoir Site                                                                                                                       | ASNW        |
| Waterlooville Golf Course | SU70341074 | 0.95 ha   | 171 m west of Bell's Copse and located west of the A3(M)                                                                                               | ASNW        |

| Site Name                          | Grid Ref   | Area (ha) | Distance from Site                                                                | Description |
|------------------------------------|------------|-----------|-----------------------------------------------------------------------------------|-------------|
| Waterlooville Golf Course          | SU70221067 | 0.18 ha   | 200 m west of Bell's Copse and located west of the A3(M)                          | ASNW        |
| Oaklands Woodland (SINC)           | SU73100990 | 1.38 ha   | 400 m east of Reservoir Site                                                      | PAWS        |
| Wakefords Copse                    | SU72400890 | 2.52 ha   | 440 m south of Reservoir Site                                                     | ASNW        |
| Great Copse (SINC)                 | SU71800840 | 4.92 ha   | 505 m south of Reservoir Site                                                     | ASNW        |
| Bushy Lease                        | SU69940848 | 2.87 ha   | 1.13 km south west                                                                | ASNW        |
| Unnamed                            | SU70020830 | 0.13 ha   | 1.15 km south west and 872 m east of the pipeline                                 | ASNW        |
| Littlepark Wood                    | SU69470712 | 3.24 ha   | 1.18 km west of the pipeline                                                      | PAWS        |
| Littlepark Wood                    | SU69580728 | 1.13 ha   | 1.18 km west of the pipeline                                                      | ASNW        |
| The Queens inclosure               | SU69491044 | 5.57 ha   | 1.2 km west of the Reservoir Site                                                 | ASNW        |
| Unnamed                            | SU73360848 | 12.42     | 1.26 km south of the Reservoir Site and 1.33 km east of the Pipeline Corridor     | ASNW        |
| Unnamed                            | SU69930826 | 1.19 ha   | 1.26 ha south west 872 m east of the pipeline                                     | ASNW        |
| Emsworth Common, Blackbush Coppice | SU73720892 | 8.31 ha   | 1.43 km south east of the Reservoir Site and 1.7 km east of the Pipeline Corridor | ASNW        |
| Emsworth Common, Blackbush Coppice | SU7880895  | 47.0 ha   | 1.43 km south east of the Reservoir Site and 1.7 km east of the Pipeline Corridor | PAWS        |
| The Queens inclosure               | SU69201040 | 31.89 ha  | 1.44 km west of the Reservoir Site                                                | PAWS        |
| Unnamed                            | SU69600841 | 5.75 ha   | 1.47 km south west and 1.2 km east of the pipeline                                | ASNW        |
| Cherry Row                         | SU73501145 | 1.83 ha   | 1.55 km north east of the Reservoir Site                                          | ASNW        |
| Unnamed                            | SU69560820 | 0.49 ha   | 1.61 km south west and 826 m west of the pipeline                                 | PAWS        |
| Unnamed                            | SU73811073 | 37.88 ha  | 1.62 km east of the Reservoir Site                                                | PAWS        |

| Site Name                          | Grid Ref   | Area (ha) | Distance from Site                                                                | Description |
|------------------------------------|------------|-----------|-----------------------------------------------------------------------------------|-------------|
| Emsworth Common, Blackbush Coppice | SU74210960 | 2.06 ha   | 1.87 km south east of the Reservoir Site and 1.7 km east of the Pipeline Corridor | ASNW        |
| Emsworth Common, Blackbush Coppice | SU74390914 | 4.8 ha    | 1.95 km south east of the Reservoir Site and 1.7 km east of the Pipeline Corridor | PAWS        |
| Lyels Wood                         | SU74601032 | 21.97 ha  | 1.95 km east of the Reservoir Site                                                | ASNW        |

## Veteran Trees

- 1.105. A search for veteran and notable trees within 50 m of the Site using the Woodland Trusts, ancient tree inventory<sup>13</sup> concluded that a single veteran tree is located within the Reservoir Site along the north eastern edge of Havant Thicket woodland Table at the OSGR: SU7190010814. A notable tree is located 50 m north of the Pipeline Corridor at the junction of Highway Lane and Dunsbury Way at the OSGR: SU7130308186. These are listed in Table 5 and shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0037 in Appendix F.

**Table 5 - Veteran and Notable Trees within 50 m**

| Location OSGR of veteran / notable trees                                | Distance from Site                                                                   | Description of tree                                                          | Importance level |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------|
| SU7190010814<br>Along the north eastern edge of Havant Thicket woodland | Immediately east of the Reservoir Site (ecological enhancement area) boundary        | Common yew, multi stem, standing, alive, girth: 3.96 m at a height of 0.20 m | Notable tree     |
| SU7130308186                                                            | 50 m north of the Pipeline Corridor at the junction of Highway Lane and Dunsbury Way | Apple, pollard lapsed, standing alive, girth: 1.53 m at a height of 0.50 m   | Veteran          |

## Priority Habitats

- 1.106. There are five priority habitat types recorded within 1 km of the Reservoir Site. These are detailed in Table 6. Three of these priority habitats are within the Reservoir Site including wood-pasture and parkland, within the Avenue Woodland, OSGR: SU717096, lowland dry acid grassland located in the south west corner of Havant Thicket Woodland at the OSGR: SU709104 and seven parcels of deciduous woodland, detailed in Table 6. These are shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0023 in Appendix G.

**Table 6 - Priority Habitat within 1 km of the Reservoir Site**

| Priority Habitat           | Total Number of Priority Habitat Areas within 1 km of the Reservoir Site | Approximate Nearest Priority Habitat to the Reservoir Site and Grid Ref Location                                                   |
|----------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Lowland Dry Acid Grassland | 3                                                                        | One area located within the wider reservoir Site, within the South West Corner of Havant Thicket Woodland at the OSGR: SU70951042. |

<sup>13</sup> <https://ati.woodlandtrust.org.uk/tree-search/?v=1693512&ml=map&z=16&nwLat=50.87826078897203&nwLng=-0.9879456333108871&seLat=50.873995760963126&seLng=-0.9712730220743149>

|                                      |     |                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                      |     | One area located within the wider reservoir site, in the northern extent of Bells Copse at the OSGR: SU708104.<br>Large Area located immediately west of the northern access road on Blendworth common at the OSGR: SU708105.                                                                                                                                            |
| Deciduous woodland                   | 266 | Seven areas of deciduous woodland are located within the Reservoir Site: The Avenue Woodland, OSGR: SU71770962, Middle Clearing Woodland, OSGR: SU71230961, Round Wood, OSGR: SU71460933, Havant Thicket woodland (made up of large separate woodland compartments), OSGR: SU71641095 Bell's Copse, OSGR: SU70630991 SCP, OSGR: SU71830939 and Cabbagefield Row SU708095 |
| Wood-pasture and Parkland            | 4   | Two areas located within the Reservoir Site. The Avenue woodland and deciduous woodland within SCP. Polygon ID: HTS_4495                                                                                                                                                                                                                                                 |
| Coastal and Floodplain Grazing Marsh | 2   | One area located adjacent to the northern access road, OSGR: SU715115<br>One area located approximately 40m South of the Reservoir Site on the banks of the Riders Stream at OSGR: SU71420902;                                                                                                                                                                           |
| Lowland Meadow                       | 1   | One area located approximately 134 m south of the Reservoir Site within Staunton Country Park at the OSGR: SU72050926                                                                                                                                                                                                                                                    |

- 1.107. The desk study identified three priority habitats within the pipeline corridor: wood-pasture and parkland (associated with Staunton Country Park), deciduous woodland (associated with Staunton Country Park and Great Copse) and coastal and floodplain grazing marsh (associated with the Hermitage Stream). Lowland meadow and mudflat habitats are also recorded within 1 km of the pipeline corridor. These are detailed in Table 7 along with other nearest priority habitats to the Pipeline Corridor and also shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0023 in Appendix G.

**Table 7 - Priority Habitat within 1 km of the Pipeline Corridor**

| Priority Habitat                     | Total Number of Priority Habitat Areas within 1 km of the Reservoir Site | Approximate Nearest Priority Habitat to the Pipeline Corridor and Grid Ref Location                                                                                                                              |
|--------------------------------------|--------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Coastal and Floodplain Grazing Marsh | 37                                                                       | One area located within the Pipeline Corridor between OSGRs: SU710072 (northerly point) and SU710068 (southerly point).                                                                                          |
| Wood-pasture and Parkland            | 1                                                                        | One area located within the Pipeline Corridor where it passes through SCP at the OSGR: SU718088                                                                                                                  |
| Deciduous woodland                   | 92                                                                       | One area located within the Pipeline Corridor where it passes through the northern extent of Great Copse at the OSGR: SU718086.                                                                                  |
| Lowland meadow                       | 1                                                                        | The nearest area to the pipeline corridor is 580 m east, located within SCP.                                                                                                                                     |
| Mudflats                             | 5                                                                        | The nearest area to the pipeline corridor is 400 m south and downstream (Hermitage Stream) of the Bedhampton and Havant Springs Pumping Site and most southerly point of the Pipeline Corridor at OSGR: SU703054 |

- 1.108. There are 36 waterbodies within 500 m of the Reservoir Site. These are detailed in Table 8. The nearest waterbody is the Upper Lake, located within the Avenue woodland on the Reservoir Site. Of these 36 waterbodies, there are 17 located in Havant Thicket woodland and two located within Bell's Copse woodland. These are shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0044 in Appendix H.

**Table 8 - Waterbodies within 500 m of the Reservoir Site**

| <b>Waterbody OSGR</b> | <b>Approximate distance and location to the Pipeline Corridor</b>                                              | <b>Description</b>                                                 |
|-----------------------|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| SU 71428<br>10021     | Upper Lake is located within the reservoir site and located within The Avenue Woodland                         | Large pond (c.7,000 m <sup>2</sup> )                               |
| SU 72239<br>10289     | Within the Site (ecological enhancement area), located south east area of Havant Thicket Woodland              | Small pond (c.130 m <sup>2</sup> ) within a group of ponds         |
| SU 72245<br>10275     | Within the Site (ecological enhancement area), located south east area of Havant Thicket Woodland              | Small pond (c.20 m <sup>2</sup> ) within a group of ponds          |
| SU 72230<br>10309     | Within the Site (ecological enhancement area), located south east area of Havant Thicket Woodland              | Medium sized pond (c.350 m <sup>2</sup> ), within a group of ponds |
| SU 72200<br>10286     | Within the Site (ecological enhancement area), located south east area of Havant Thicket Woodland              | Small pond (c.85 m <sup>2</sup> ), within a group of ponds         |
| SU 72257<br>10299     | Within the Site (ecological enhancement area), located south east area of Havant Thicket Woodland              | Small pond (c.85 m <sup>2</sup> ), within a group of ponds         |
| SU 72128<br>10433     | Within the Site (ecological enhancement area), located south east area of Havant Thicket Woodland              | Medium pond (c.580 m <sup>2</sup> )                                |
| SU 72110<br>10460     | Within the Site (ecological enhancement area), located south east area of Havant Thicket Woodland              | Small pond (c.190 m <sup>2</sup> )                                 |
| SU 72130<br>10473     | Within the Site (ecological enhancement area), located south east area of Havant Thicket Woodland              | Medium pond (c.280 m <sup>2</sup> )                                |
| SU 72106<br>10483     | Within the Site (ecological enhancement area), located south east area of Havant Thicket Woodland              | small pond (c.145 m <sup>2</sup> )                                 |
| SU 72079<br>10531     | Within the Site (ecological enhancement area), located south east area (Long Wood) of Havant Thicket Woodland  | small pond (c.150 m <sup>2</sup> )                                 |
| SU 72076<br>10569     | Within the Site (ecological enhancement area), located south east area (Long Wood) of Havant Thicket Woodland  | small pond (c.150 m <sup>2</sup> )                                 |
| SU 72051<br>110575    | Within the Site (ecological enhancement area), located south east area (Long Wood) of Havant Thicket Woodland  | Small pond (c.200 m <sup>2</sup> )                                 |
| SU 72052<br>10543     | Within the Site, (ecological enhancement area), located south east area (Long Wood) of Havant Thicket Woodland | Medium pond (c.300 m <sup>2</sup> )                                |

| Waterbody OSGR | Approximate distance and location to the Pipeline Corridor                                                      | Description                                                                             |
|----------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| SU 72034 10532 | Within the Site, (ecological enhancement area), located south east area (Long Wood) of Havant Thicket Woodland  | Medium pond (c.250 m <sup>2</sup> )                                                     |
| SU 72045 10513 | Within the Site (ecological enhancement area), located south east area (Long Wood) of Havant Thicket Woodland   | Medium pond (c.250 m <sup>2</sup> )                                                     |
| SU 71505 10675 | Within the Site (ecological enhancement area), located along central watercourse running through Havant Thicket | Medium pond (c.250 m <sup>2</sup> )                                                     |
| SU 71451 10413 | Within the Site (ecological enhancement area), located in the centre of Havant Thicket                          | Small pond (c.185 m <sup>2</sup> )                                                      |
| SU 70342 09789 | Within the Site (ecological enhancement area), located in Bell's Copse, west.                                   | Small pond (c.60 m <sup>2</sup> )                                                       |
| SU 70838 10314 | Within the Site (ecological enhancement area), located in Bell's Copse                                          | Small pond (15 m <sup>2</sup> )                                                         |
| SU 72465 09546 | Immediately East of the South east corner of the Site (Gipsies Plain)                                           | Small pond (c.150 m <sup>2</sup> )                                                      |
| SU 72400 09553 | 57 m south east of the Site                                                                                     | Small pond (c.230 m <sup>2</sup> ).<br>Within Hammonds Lands Copse, located in SCP      |
| SU 72430 09545 | 83 m south east of Site                                                                                         | Small pond (c.140 m <sup>2</sup> )                                                      |
| SU 72420 09522 | 85 m south east of the Site                                                                                     | Small pond (c.30 m <sup>2</sup> )                                                       |
| SU 72337 09466 | 88 m south east of Site boundary                                                                                | Medium pond (670 m <sup>2</sup> )                                                       |
| SU 72444 09542 | 105 m south east of Site boundary                                                                               | Small pond (c.140 m <sup>2</sup> )                                                      |
| SU 72459 09501 | 129 m south east of Site boundary                                                                               | Small pond (c.150 m <sup>2</sup> )                                                      |
| SU 72341 09421 | 128 m south east of Site boundary                                                                               | Small pond (c.100 m <sup>2</sup> )                                                      |
| SU 72442 09526 | 136 m south east of Site boundary                                                                               | Small pond (c.75 m <sup>2</sup> )                                                       |
| SU 72597 09536 | 222 m south east of the Site                                                                                    | South of Gipsies Plain within SCP<br>Relatively large waterbody surrounded by woodland. |
| SU 71918 09122 | 224 m south of the Site                                                                                         | Staunton Country Park lake. Large fishing lake (c.15,000 m <sup>2</sup> )               |
| SU 72448 09364 | 233 m south east of the Site                                                                                    | South of Hammonds Lands Copse, located in Staunton Country Park                         |
| SU 71078 11349 | 250 m north, located on Blendworth Common                                                                       | Small pond                                                                              |

| Waterbody OSGR | Approximate distance and location to the Pipeline Corridor | Description                           |
|----------------|------------------------------------------------------------|---------------------------------------|
| SU 71151 11483 | 320 m north, located on Blendworth Common                  | Located along a drainage ditch        |
| SU 72536 09279 | 352 m south east of Site boundary                          | Very small pond (10 m <sup>2</sup> ), |
| SU 7254 0932   | 376 m south east of Site boundary                          | Garden pond                           |

- 1.109. There are six waterbodies located within 500 m of the Pipeline Corridor. These are detailed in Table 9. However, all but one of these waterbodies are 250 m or more from the Pipeline Corridor. The waterbodies are also, separated by significant barriers to great crested newt movements, such as large expanses of housing and roads. The single waterbody located within 250 m comprises an open-air swimming pool, that appears to be used from study of satellite imagery<sup>14</sup> and is considered to be unsuitable for great crested newt utilisation. These are shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0044 in Appendix H.

**Table 9 - Waterbodies within 500 m of the Pipeline Corridor**

| Pond OSGR      | Approximate distance and location to the Pipeline Corridor | Description                                                                                                      |
|----------------|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| SU 71341 07257 | 140 m, east                                                | Outdoor swimming pool associated with Trosnants Federation of Schools. Appears to be used from satellite imagery |
| SU 70578 07466 | 320 m, west                                                | Two small ponds in the grounds of Bancroft Primary School                                                        |
| SU 70245 06338 | 320 m, south-west                                          | Large pond linked to a system of running watercourses                                                            |
| SU 71828 09153 | 330 m, east                                                | Staunton Country Park Lake                                                                                       |
| SU 70925 06128 | 430 m, south-east                                          | Pond within close proximity to industrial buildings and roundabout along Brockhampton Road                       |
| SU 71134 08323 | 480 m, west                                                | A small pond in the grounds of Riders Infant School                                                              |

- 1.110. These waterbodies are consistent with those identified by ECOSA in the great crested newt survey report in Appendix A9.11.

## Protected, Priority and Notable Species

### Bats within 3 km of the Site

- 1.111. Many of the bat records obtained in the desk study are from surveys undertaken for this Scheme that have been provided to the local record centres. HBIC provided records of 13 species of bat within 3 km of the Reservoir Site of which 12 of these species are recorded within the Reservoir Site. These are detailed in Table 10 and shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0038 in Appendix I.

<sup>14</sup> <http://openspace.nearby.org.uk/wheresthepath.htm>

**Table 10 - HBIC Bat Records within 3 km of the Reservoir Site**

| Common Name             | Total No of Records | Approximate Closest Record to Reservoir Site | Grid Ref |
|-------------------------|---------------------|----------------------------------------------|----------|
| Bechstein's bat         | 23                  | Within the Site                              | SU715093 |
| Brandt's bat            | 7                   | Within the Site                              | SU707096 |
| Barbastelle             | 33                  | Within the Site                              | SU714114 |
| Brown long-eared bat    | 105                 | Within the Site                              | SU714099 |
| Common pipistrelle      | 31                  | Within the Site                              | SU715097 |
| Daubenton's bat         | 6                   | Within the Site                              | SU715092 |
| Noctule                 | 180                 | Within the Site                              | SU718094 |
| Nathusius's pipistrelle | 32                  | Within the Site                              | SU715097 |
| Natterer's bat          | 63                  | Within the Site                              | SU718094 |
| Serotine                | 160                 | Within the Site                              | SU715097 |
| Soprano pipistrelle     | 278                 | Within the Site                              | SU715097 |
| Whiskered bat           | 34                  | Within the Site                              | SU723095 |
| Alcathoe bat            | 1                   | 1.8 km south east                            | SU733081 |

- 1.112. HBIC provided records of the same 13 species of bat within 3 km of the Pipeline Corridor with common pipistrelle, soprano pipistrelle and Nathusius's pipistrelle recorded within the Pipeline Corridor. These records are detailed in Table 11 and shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0039 in Appendix I.

**Table 11 - HBIC Bat Records within 3 km of the Pipeline Corridor**

| Common Name             | No of Records | Approximate Closest Record to the Pipeline Corridor                    | Grid Ref |
|-------------------------|---------------|------------------------------------------------------------------------|----------|
| Common pipistrelle      | 728           | Within the Pipeline Corridor on the Hermitage Stream                   | SU708077 |
| Nathusius's pipistrelle | 48            | Within the Pipeline Corridor at High Lawn Way                          | SU717083 |
| Soprano pipistrelle     | 465           | Within the Pipeline Corridor                                           | SU710073 |
| Noctule                 | 196           | Approximately 60 m east                                                | SU711073 |
| Serotine                | 192           | Approximately 110m east                                                | SU713073 |
| Daubenton's bat         | 12            | Approximately 240 m east within Staunton Country Park                  | SU715092 |
| Bechstein's bat         | 81            | Approximately 260 m north east (within the Reservoir Site, Round Wood) | SU715093 |
| Natterer's bat          | 52            | Approximately 520m north east (within the Reservoir Site)              | SU718094 |
| Whiskered bat           | 260           | Approximately 520m north east (within the Reservoir Site)              | SU718094 |
| Barbastelle             | 35            | Approximately 650m north (within the Reservoir Site)                   | SU715097 |

|                      |    |                                                       |          |
|----------------------|----|-------------------------------------------------------|----------|
| Brown long-eared bat | 42 | Approximately 655 m north (within the Reservoir Site) | SU715097 |
| Alcathoe bat         | 2  | 1.4 km south east west                                | SU733081 |
| Brandt's bat         | 5  | Approximately 1.4 m south west                        | SU733081 |

- 1.113. SxBRC provided 48 records of bat species within 3 km of the (Reservoir Site,) including seven species of bat. These are described in Table 12 and shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0038 in Appendix I.

**Table 12 - SxBRC Bat Records within 3 km of the Reservoir Site**

| Common Name          | No of Records | Approximate Closest Record to Reservoir Site | Grid Ref |
|----------------------|---------------|----------------------------------------------|----------|
| Brown long-eared bat | 3             | Approximately 1.8 km east                    | SU741109 |
| Bechstein's bat      | 10            | Approximately 1.8 km north east              | SU741109 |
| Whiskered bat        | 4             | Approximately 1.8 km north east              | SU741109 |
| Serotine             | 2             | Approximately 2.2 km east                    | SU753092 |
| Noctule              | 1             | Approximately 2.59 km south east             | SU747085 |
| Common pipistrelle   | 5             | Approximately 3 km south east                | SU753091 |
| Soprano pipstrelle   | 6             | Approximately 3 km south east                | SU753091 |

#### Bat Roosts within 5 km of the Site

- 1.114. SxBRC provided records of 14 bat roosts within 5 km of the Site (Reservoir Site and Pipeline Corridor). These include bat roost records for Bechstein's bat, brown long-eared, common pipistrelle, Daubenton's bat, Natterer's bat, noctule, serotine and soprano pipistrelle. The nearest bat roost to the Reservoir Site is a Bechstein's bat roost located in Lyels Wood, approximately 2.2 km south east at the OSGR: SU748103. The nearest bat roost to the Pipeline Corridor is located approximately 2.9 km south east of the Pipeline Corridor at the OSGR: SU748079. These records are described in Table 13 and presented on Figures HTR-ATK-ZZ-ZZ-GS-Z-0040 and HTR-ATK-ZZ-ZZ-GS-Z-0041 in Appendix J.

**Table 13 - SxBRC Records of Bat Roosts within 5 km of the Site**

| Common Name     | Approximate Distance and location of Roost Record from the Reservoir Site and Pipeline Corridor                                 | No of Records | Roost Type  | Grid Ref |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------|---------------|-------------|----------|
| Bechstein's bat | 2.2 km east of the Reservoir Site at Lyels Wood and 3.4 km north east of the Pipeline corridor.                                 | 1             | Unspecified | SU748103 |
| Bechstein's bat | 3.0 km south east of the Reservoir Site and 3.17 km south east of the Pipeline Corridor. Unspecified roost site Hollybank Woods | 1             | Unspecified | SU751083 |
| Bechstein's bat | 3.0 km south east of the Reservoir Site and 2.9 km south east of the Pipeline Corridor. Roost site at Westbourne                | 1             | Unspecified | SU748079 |
| Bechstein's bat | 3.1 km south east of the Reservoir Site, in fields south of Southleigh                                                          | 1             | Unspecified | SU751082 |

| Common Name          | Approximate Distance and location of Roost Record from the Reservoir Site and Pipeline Corridor                        | No of Records | Roost Type                        | Grid Ref   |
|----------------------|------------------------------------------------------------------------------------------------------------------------|---------------|-----------------------------------|------------|
|                      | Forest and 3.2 km south east of the Pipeline Corridor                                                                  |               |                                   |            |
| Bechstein's bat      | 3.1 km south east, in Southleigh Forest and 3.2 km south east of the Pipeline Corridor                                 | 1             | Unspecified                       | SU751083   |
| Brown long-eared bat | 3.35 km east of the Reservoir Site and 4.3 km north east of the Pipeline Corridor (at the Garden Cottage)              | 1             | Maternity                         | SU75971014 |
| Serotine             | 3.35 km east of the Reservoir Site and 4.3 km north east of the Pipeline Corridor (at the Garden Cottage)              | 1             | Maternity roost and feeding roost | SU75971014 |
| Bechstein's bat      | 3.6 km east of the Reservoir Site and 4.6 km east of the Pipeline Corridor. Unspecified Roost site at Lyels Wood       | 1             | Unspecified                       | SU762103   |
| Soprano pipistrelle  | 3.6 km east of the Reservoir Site and 4.6 km north east of the Pipeline Corridor. Unspecified Roost Site at Lyels Wood | 1             | Maternity                         | SU762103   |
| Common pipistrelle   | 3.93 km south east of the Reservoir Site and 3.75 km south of the Pipeline Corridor                                    | 1             | Unspecified                       | SU754072   |
| Daubenton's bat      | 3.93 km south east of the Reservoir Site and 3.75 km south of the Pipeline Corridor                                    | 1             | Unspecified                       | SU754072   |
| Natterer's bat       | 3.93 km south east of the Reservoir Site and 3.75 km south of the Pipeline Corridor                                    | 1             | Unspecified                       | SU754072   |
| Noctule              | 3.93 km south east of the Reservoir Site and 3.75 km south of the Pipeline Corridor                                    | 1             | Unspecified                       | SU754072   |
| Soprano pipistrelle  | 3.93 km south east of the Reservoir Site and 3.7 km south east of the Pipeline Corridor.                               | 1             | Unspecified                       | SU754072   |

- 1.115. HBIC provided 77 records of roost sites within 5 km of the Reservoir Site and of which there are 18 records of maternity roosts, of which there are five Bechstein's bat maternity roosts and one Serotine maternity roost. The nearest maternity roost to the Reservoir Site is a Bechstein's bat roost located immediately east and on the edge of The Holt at the OSGR: SU717113. Fifty-nine of the records are non-maternity roost sites, including Bechstein's bat, common pipistrelle, serotine, soprano pipistrelle and long-eared bat. Two Bechstein's bat roost were recorded within the Reservoir Site at the OSGRs: SU717094 and SU715093 and a soprano pipistrelle bat roost was recorded within the Reservoir Site at the OSGR: SU699110. These are described in Table 14 and presented on Figure HTR-ATK-ZZ-ZZ-GS-Z-0040 in Appendix J.

**Table 14 - HBIC Records of Bat Roosts within 5 km of the Reservoir Site**

| Common Name         | Approximate Distance and location of Maternity Roost Record from the Reservoir Site | No of Records | Roost type        | Grid Ref |
|---------------------|-------------------------------------------------------------------------------------|---------------|-------------------|----------|
| Bechstein's bat     | Within the Site                                                                     | 1             | Unspecified Roost | SU717094 |
| Bechstein's bat     | Within the Site                                                                     | 1             | Unspecified Roost | SU715093 |
| Soprano pipistrelle | Within the Site                                                                     | 1             | Unspecified Roost | SU715097 |
| Bechstein's bat     | Immediately south in Staunton Country Park                                          | 4             | Unspecified Roost | SU717092 |
| Bechstein's bat     | Immediately south in Staunton Country Park                                          | 4             | Unspecified Roost | SU718092 |
| Bechstein's bat     | Immediately south in Staunton Country Park                                          | 4             | Unspecified Roost | SU718093 |
| Bechstein's bat     | Immediately east within and on the edge of The Holt woodland                        | 1             | Maternity         | SU717113 |
| Bechstein's bat     | Immediately south, in Staunton Country Park                                         | 1             | Unspecified Roost | SU721093 |
| Bechstein's bat     | 150 m east within The Holt woodland                                                 | 1             | Maternity         | SU717115 |
| Bechstein's bat     | 260 m north on the edge of The Holt woodland                                        | 1             | Maternity         | SU714117 |
| Common pipistrelle  | 555 m east in Rowlands Castle                                                       | 2             | Unspecified Roost | SU730102 |
| Bechstein's bat     | 720 m east within The Holt                                                          | 2             | Unspecified Roost | SU723116 |
| Common pipistrelle  | 845 m south                                                                         | 1             | Unspecified Roost | SU724087 |
| Bechstein's bat     | 985 m north                                                                         | 1             | Maternity         | SU706120 |
| Bechstein's bat     | 1 km north                                                                          | 1             | Maternity         | SU706121 |
| Common pipistrelle  | 1 km north west                                                                     | 3             | Unspecified Roost | SU699110 |
| Soprano pipistrelle | 1 km west                                                                           | 1             | Unspecified Roost | SU699110 |
| Pipistrelle         | 1.0 km west, (west of the A3 (M))                                                   | 3             | Unspecified Roost | SU699110 |
| Common pipistrelle  | 1.2 km north                                                                        | 1             | Unspecified Roost | SU709125 |
| Common pipistrelle  | 1.3 km west                                                                         | 2             | Unspecified Roost | SU696088 |
| Long-eared bat      | 1.3 km east in Rowlands Castle                                                      | 1             | Unspecified Roost | SU735108 |
| Serotine            | 1.6 km south                                                                        | 13            | Maternity         | SU713073 |

| Common Name         | Approximate Distance and location of Maternity Roost Record from the Reservoir Site | No of Records | Roost type        | Grid Ref |
|---------------------|-------------------------------------------------------------------------------------|---------------|-------------------|----------|
| Pipistrelle         | 1.4 km west, (west of the A3 (M))                                                   | 1             | Unspecified Roost | SU695109 |
| Serotine            | 1.6 km south, (west of the A3 (M))                                                  | 3             | Unspecified Roost | SU713073 |
| Bechstein's bat     | 1.6 km south east within Southleigh Forest                                          | 2             | Unspecified Roost | SU737088 |
| Pipistrelle         | 1.7 km north west, (west of the A3 (M))                                             | 1             | Unspecified Roost | SU692114 |
| Long-eared bat      | 1.9 km north                                                                        | 1             | Unspecified Roost | SU708132 |
| Pipistrelle         | 2.4 km north west, (west of the A3 (M))                                             | 2             | Unspecified Roost | SU687120 |
| Brown long-eared    | 2.7 km north west (west of the A3 (M))                                              | 1             | Unspecified Roost | SU689127 |
| Serotine            | 2.8 km north west, (west of the A3 (M))                                             | 1             | Unspecified Roost | SU692133 |
| Common pipistrelle  | 2.9 km south                                                                        | 1             | Unspecified Roost | SU707060 |
| Soprano pipistrelle | 2.9 km south                                                                        | 1             | Unspecified Roost | SU707060 |
| Common pipistrelle  | 3 km west                                                                           | 1             | Unspecified Roost | SU678089 |
| Soprano pipistrelle | 3.1 km                                                                              | 1             | Unspecified Roost | SU726060 |
| Common pipistrelle  | 3.8 km west                                                                         | 2             | Unspecified Roost | SU668118 |
| Brown long-eared    | 4.1 km west                                                                         | 2             | Unspecified Roost | SU662095 |
| Brown long-eared    | 4.5 km west                                                                         | 3             | Unspecified Roost | SU659110 |
| Common pipistrelle  | 4.5 km west                                                                         | 1             | Unspecified Roost | SU659110 |
| Soprano pipistrelle | 4.5 km west                                                                         | 1             | Unspecified Roost | SU659110 |
| Brown long-eared    | 4.8 km west                                                                         | 2             | Unspecified Roost | SU656110 |

HBIC provided 57 records of bat roosts within 5 km of the Pipeline Corridor, of these records 19 are maternity roosts. The nearest maternity roost to the Pipeline Corridor is located approximately 120 m east at the OSGR: SU713073. The nearest non-maternity roost to the Pipeline Corridor is located approximately 280 m north within the Reservoir Site. These are detailed in

1.116. Table 15 and presented on Figure HTR-ATK-ZZ-ZZ-GS-Z-0041 in Appendix J.

**Table 15 - HBIC Records of Bat Roosts within 5 km of the Pipeline Corridor**

| Common Name         | Approximate Distance and location of Roost Record from the Pipeline Corridor                          | No of Records | Roost type        | Grid Ref |
|---------------------|-------------------------------------------------------------------------------------------------------|---------------|-------------------|----------|
| Serotine            | 120 m east of the Pipeline Corridor                                                                   | 13            | Maternity         | SU713073 |
| Bechstein's bat     | 280 m north of the Pipeline Corridor (within the Reservoir Site)                                      | 1             | Unspecified Roost | SU715093 |
| Bechstein's bat     | 330 m east of the Pipeline Corridor within Staunton Country Park                                      | 4             | Unspecified Roost | SU717092 |
| Bechstein's bat     | 430 m east of the Pipeline Corridor within Staunton Country Park                                      | 4             | Unspecified Roost | SU718092 |
| Bechstein's bat     | 460 m east of the Pipeline Corridor, within Staunton Country Park                                     | 2             | Unspecified Roost | SU718093 |
| Bechstein's bat     | 475 m north east of the Pipeline Corridor (within the Reservoir Site)                                 | 1             | Unspecified Roost | SU717094 |
| Common pipistrelle  | 530 m east of the Pipeline Corridor                                                                   | 1             | Unspecified Roost | SU724087 |
| Soprano pipistrelle | 650 m north east of the Pipeline Corridor (within the Reservoir Site)                                 | 1             | Unspecified Roost | SU715097 |
| Bechstein's bat     | 680 m north east of the Pipeline Corridor within The Holt                                             | 2             | Unspecified Roost | SU723116 |
| Pipistrelle sp.     | 715 m south east of Pipeline Corridor                                                                 | 1             | Maternity         | SU718067 |
| Bechstein's bat     | 740 m east of the Pipeline Corridor, within Staunton Country Park                                     | 1             | Unspecified Roost | SU721093 |
| Bechstein's bat     | 1.5 km south east of the Pipeline Corridor                                                            | 2             | Unspecified Roost | SU737088 |
| Common pipistrelle  | 1.7 km west of the Pipeline Corridor                                                                  | 2             | Unspecified Roost | SU696088 |
| Soprano pipistrelle | 1.7 km south east of the Pipeline Corridor                                                            | 1             | Unspecified Roost | SU726060 |
| Common pipistrelle  | 1.9 km north east of the Pipeline Corridor                                                            | 2             | Unspecified Roost | SU730102 |
| Common pipistrelle  | 1.9 km south west of Pipeline Corridor where it enters the Bedhampton and Havant Sprints Pumping Site | 2             | Maternity         | SU684058 |
| Bechstein's bat     | 2.2 km north of Pipeline Corridor where it exits the Reservoir Site.                                  | 1             | Maternity         | SU717113 |
| Common pipistrelle  | 2.4 km north west of the Pipeline Corridor, (west of the A3 (M))                                      | 3             | Unspecified Roost | SU699110 |
| Soprano pipistrelle | 2.4 km north west of the Pipeline Corridor, (west of the A3 (M))                                      | 1             | Unspecified Roost | SU699110 |
| Pipistrelle sp.     | 2.4 km north west of the Pipeline Corridor, (west of the A3 (M))                                      | 3             | Unspecified Roost | SU699110 |
| Bechstein's bat     | 2.4 km north of Pipeline Corridor where it exits the Reservoir Site.                                  | 1             | Maternity         | SU717115 |

| Common Name     | Approximate Distance and location of Roost Record from the Pipeline Corridor | No of Records | Roost type        | Grid Ref |
|-----------------|------------------------------------------------------------------------------|---------------|-------------------|----------|
| Bechstein's bat | 2.6 km north of Pipeline Corridor where it exits the Reservoir Site.         | 1             | Maternity         | SU714117 |
| Pipistrelle sp. | 2.6 km north west of the Pipeline Corridor, (west of the A3 (M))             | 1             | Unspecified Roost | SU695109 |
| Long-eared bat  | 2.7 km north east of the Pipeline Corridor                                   | 1             | Unspecified Roost | SU735108 |

### Bechstein's Bat and Barbastelle within 10 km of the Site

#### Bechstein's Bat

- 1.117. HBIC provided 113 records of Bechstein's bat within 10 km of the Reservoir Site and the Pipeline Corridor, of these records 23 are within the Reservoir Site of which two were roost sites. The nearest Bechstein's bat roost records to the Pipeline Corridor are located approximately 280 m north east of the Pipeline Corridor.
- 1.118. SxBRC provided 17 records of Bechstein's bat within 10 km of the Site (Reservoir Site and Pipeline Corridor). The nearest record is located approximately 1.94 km east within the Rowlands Castle area.
- 1.119. SxBRC provided four records of a Bechstein's bat unspecified roosts, within Hollywood, located approximately 3 km south east of the Reservoir Site and approximately 4 km south east of the Pipeline Corridor, and one record of a Bechstein's bat unspecified roost within Lyels Wood, located approximately 2.34 km east of the Reservoir Site and approximately 3.3 km east of the Pipeline Corridor.
- 1.120. The records are shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0042 in Appendix K.

#### Barbastelle

- 1.121. HBIC provided 46 records of barbastelle within 10 km of the Reservoir Site including five records within the Reservoir Site. No records of roost sites within 10 km were provided.
- 1.122. HBIC provided 44 records of barbastelle within 10 km of the Pipeline Corridor, the nearest record is approximately 650 m north of the Pipeline Corridor and within the Reservoir Site. No records of roost sites within 10 km were provided.
- 1.123. SxBRC provided 34 records of barbastelle within 10 km of the Site (Reservoir Site and Pipeline Corridor). The nearest record is located at Stanstead Arboretum, located approximately 3.5 km east of the Reservoir Site and approximately 4.5 km east of the Pipeline Corridor.
- 1.124. SxBRC provided one record of an unspecified barbastelle roost within 10 km of the Site (Reservoir Site and Pipeline Corridor), within a barn located approximately 8.8 km north east of the Reservoir Site and approximately 10 km north of the Pipeline Corridor.
- 1.125. The records are shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0042 in Appendix K.

#### Bat Licences within 2 km of the Site

- 1.126. The desk study search<sup>15</sup> identified the following five records of EPSMLs for bats within 2 km of the Site:
- Licence No: EPSM2013-5591, located approximately 1.9 km west of the Reservoir Site at OSGR:SU685096. The bat species on the licence include common pipistrelle and brown long-eared bat. The licence commenced in March 2013 and ended in September 2016;
  - Licence No: EPSM2009-1129, located approximately 1.8 km north west of the Reservoir Site at OSGR:SU69491201. The bat species on the licence include common pipistrelle, brown long-eared bat and serotine. The licence commenced in September 2009 and ended in December 2012;

<sup>15</sup> Desk study search using the Government site: <https://magic.defra.gov.uk/MagicMap.aspx>

- Licence No: EPSM2013-6454, located approximately 1.7 km north of the Reservoir Site at OSGR: SU70491290. The bat species on the licence include common pipistrelle. The licence commenced in October 2013 and ended in August 2016;
- Licence No: EPSM2012-4836, located approximately 1.9 km north of the Reservoir Site at OSGR: SU70701322. The bat species on the licence include common pipistrelle. The licence commenced in September 2012 and ended in September 2015; and,
- Licence No: 2014-1826-EPS-MIT, located approximately 500 m east of the Pipeline Corridor at OSGR: SU70790632. The bat species on the licence include common pipistrelle. The licence commenced in August 2014 and ended in November 2015.

1.127. These are shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0043 in Appendix L.

#### Hazel Dormouse

1.128. HBIC provided six records of hazel dormouse within 2 km of the Reservoir Site and five records of hazel dormouse within 2 km of the Pipeline Corridor. The nearest record to both sites is of a recorded nest Site at OSGR: SU699090, located around the Dunsbury Park development, approximately 1 km west of the Reservoir Site and 1.8 km west of the Pipeline Corridor. SxBRC provided no records of hazel dormouse within 2 km of the Site. These are shown on Figure xx provided in Appendix M.

1.129. The desk study search<sup>16</sup> identified the following three records of EPSMLs for hazel dormouse within 2 km of the Site. These are shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0015 provided in Appendix M:

- Licence no: 2014-456-EPS-MIT, located approximately 1 km west of the Reservoir Site and 1.5 km west of the Pipeline Corridor at OSGR: SU69890913. The licence commenced in May 2014 and ends in October 2020;
- Licence no: 2016-21182-EPS-MIT, located approximately 1 km west of the Reservoir Site and 1.5 km west of the Pipeline Corridor at OSGR: SU69900901. The licence commenced in March 2016 and ended in January 2019; and,
- Licence no: 2014-3156-EPS-MIT, located 1.7 km south west of the Reservoir Site and 1.3 km west of the Pipeline Corridor at OSGR: SU69700784. The licence commenced in September 2014 and ended in December 2012.

#### Otter

1.130. HBIC and SxBRC provided no records of otter within 2 km of the Reservoir Site or Pipeline Corridor.

#### Water Vole

1.131. HBIC and SxBRC provided no records of water vole within 2 km of the Reservoir Site.

1.132. HBIC provided 62 records of water vole all predominantly around the Lavant Stream between Solent Retail Park at OSGR: SU715060 and Langstone Harbour on the south coastline, OSGR: SU715048. The nearest record to the Pipeline Corridor is approximately 740 m east. These are shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0016 provided in Appendix N.

1.133. SxBRC provided no records of water vole within 2 km of the Site.

#### Badger

1.134. HBIC provided two records of badger within 2 km of the Reservoir Site. The nearest record is located approximately 670 m north and within the Forestry England Site, The Holt SINC at OSGR: SU714121.

1.135. HBIC provided one record of badger within 2 km of the Pipeline Corridor, located approximately 1.9 km south west at the OSGR: SU6807, on land south of South Downs College and west of the A3 (M). These are shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0017 provided in Appendix O.

1.136. SxBRC provided no records of badger within 2 km of the Site.

#### Birds

1.137. HBIC provided 3,005 records of priority and notable bird species within 1 km of the Reservoir Site, including 71 species of birds.

<sup>16</sup> Desk study search using the Government site: <https://magic.defra.gov.uk/MagicMap.aspx>

- 1.138. HBIC provided records of 19 bird species listed on Annex 1 of the Birds Directive<sup>17</sup>, within 1 km of the Reservoir Site including: black kite, ferruginous duck, glossy ibis, hen harrier, honey buzzard, kingfisher, little egret, marsh harrier, Mediterranean gull, merlin, Montagu's harrier, nightjar, osprey, peregrine, red kite, sandwich tern, short-eared owl, stone-curlew, Dartford warbler and white stork. Eight of these bird species were recorded within the Reservoir Site, including: short-eared owl, little egret, Mediterranean gull, nightjar, peregrine, red kite, Dartford warbler and kingfisher. These are listed in Table 16 and shown Figure HTR-ATK-ZZ-ZZ-GS-Z-0045 provided in Appendix P.
- 1.139. HBIC provided records of 25 bird species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), within 1 km of the Reservoir Site, including: barn owl, black redstart, black-tailed godwit, brambling, Cetti's warbler, common crossbill, fieldfare, firecrest, goshawk, green sandpiper, hen harrier, hobby, honey buzzard, kingfisher, little ringed plover, marsh harrier, Mediterranean gull, Montagu's harrier, osprey, peregrine, red kite, redwing, serin, stone-curlew and whimbrel. Ten of these bird species were recorded within the Site, including: barn owl, common crossbill, whimbrel, red kite, redwing, fieldfare, firecrest, green sandpiper, kingfisher and Mediterranean gull.
- 1.140. HBIC provided records of 16 bird species that are species of principle importance<sup>18</sup>, within 1 km of the Reservoir Site including cuckoo, grey partridge, hawfinch, house sparrow, lapwing, lesser redpoll, nightjar, reed bunting, ring ouzel, skylark, flycatcher, stone curlew, tree pipit, turtle dove, wood warbler and yellowhammer. Ten of these bird species were recorded within the Reservoir Site including: skylark, spotted flycatcher, yellowhammer, lapwing, lesser redpoll, Mediterranean gull, nightjar, reed bunting, ring ouzel and cuckoo.
- 1.141. HBIC provided records of 31 birds of conservation concern, red list<sup>19</sup> within 1 km of the Reservoir Site including black redstart, black-tailed godwit, cuckoo, fieldfare, grasshopper warbler, grey partridge, grey wagtail, hawfinch, hen harrier, herring gull, house sparrow, lapwing, lesser black-backed gull, lesser redpoll, lesser spotted woodpecker, linnet, marsh tit, mistle thrush, nightingale, redwing, ring ouzel, skylark, song thrush, spotted flycatcher, starling, tree pipit, turtle dove, whimbrel, woodcock, yellow wagtail and yellowhammer.
- 1.142. HBIC provided records of 16 bird species that are County Rare (CR) in Hampshire, within 1 km of the Reservoir Site including: bearded tit, black redstart, black-headed gull, goshawk, grass-hopper warbler, great black-backed gull, herring gull, honey buzzard, lesser black-backed gull, little egret, marsh harrier, Mediterranean gull, red kite, sandwich tern, whinchat and yellow wagtail.
- 1.143. HBIC provided records of 10 bird species that are County Scarce (CS) in Hampshire, within 1 km of the Reservoir Site including: Cetti's warbler, common crossbill, firecrest, grey heron, little ringed plover, nightingale, snipe, stone-curlew, water rail and wheatear.
- 1.144. HBIC provided records of six bird species that are County of Other Interest (CI) species, within 1 km of the Reservoir Site, including: black-tailed godwit, hawfinch, hobby, nightjar, siskin and wood warbler. This category is an umbrella group to cover those species defined as notable on criteria other than rarity/scarcity. The full criteria is included in Appendix D.
- 1.145. Priority and notable bird species discussed above, that have been recorded within the Reservoir Site are presented in Table 16.
- 1.146. SxBRC provided records of nine species of birds within 1 km of the Reservoir Site, however no bird species were recorded within 1 km of the Pipeline Corridor. Three of these species (Mediterranean gull, red kite and little egret) are listed on Annex 1 of the Birds Directive<sup>20</sup>. Seven of these species

<sup>17</sup> Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32009L0147>

<sup>18</sup> Species of principal importance for the conservation of biodiversity are identified by the Secretary of State for England, in consultation with Natural England, are referred to in S.41 of the NERC Act for England. The list, known as the 'England Biodiversity List', of habitats and species can be found on the Natural England web site.

<sup>19</sup> Every five years the leading governmental and non-governmental conservation organisations in the UK, chaired by the RSPB, review the population status of the birds that are regularly found here to keep track of changes in abundance and range. In 2002 a total of 247 species were assessed, and each was placed onto one of three lists - red, amber or green - based on a set of quantitative criteria. See <http://www.bto.org/psob/index.htm> for more information. Red list – Comprises 40 species that are Globally Threatened according to IUCN criteria; those whose population or range has declined rapidly in recent years; and those that have declined historically and not shown a substantial recent recovery.

<sup>20</sup> Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32009L0147>

are listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended)<sup>21</sup>, these are common crossbill, fieldfare, firecrest, green sandpiper, Mediterranean gull, red kite and redwing.

**Table 16 - HBIC Bird Species Records within 1 km of the Reservoir Site**

| Common Name         | Conservation Status                     | No of Records within 1 km | Records within the Reservoir Site and general location               | Grid Ref |
|---------------------|-----------------------------------------|---------------------------|----------------------------------------------------------------------|----------|
| Short-eared owl     | Annex 1                                 | 8                         | Within the Site (ecological enhancement area), within Havant Thicket | SU720100 |
| Siskin              | County- CI                              | 28                        | Within the Site (ecological enhancement area), within Havant Thicket | SU7010   |
| Skylark             | NERC- S41;<br>BOCC -Red                 | 42                        | Within the Site open grassland                                       | SU720096 |
| Song thrush         | BOCC -Red                               | 116                       | Within the Site (ecological enhancement area), within Havant Thicket | SU7109   |
| Spotted fly catcher | NERC- S41;<br>BOCC -Red                 | 20                        | Within the Site (ecological enhancement area), within Havant Thicket | SU7109   |
| Wheatear            | County -CS                              | 20                        | Within the Site (ecological enhancement area), within Havant Thicket | SU7109   |
| Whimbrel            | WACA Sch 1;<br>BOCC -Red                | 16                        | Within the Site (ecological enhancement area), within Havant Thicket | SU7110   |
| Whinchat            | BOCC -Red                               | 36                        | Within the Site (ecological enhancement area), within Havant Thicket | SU7109   |
| Wood warbler        | WACA Sch 1;<br>BOCC -Red;<br>County -CI | 2                         | Within the Site (ecological enhancement area), within Havant Thicket | SU7110   |
| Woodcock            | BOCC -Red                               | 22                        | Within the Site (ecological enhancement area), within Havant Thicket | SU7110   |
| Yellow wagtail      | BOCC -Red                               | 15                        | Within the Site (ecological enhancement area), within Havant Thicket | SU7110   |
| Yellowhammer        | NERC- S41;<br>BOCC -Red                 | 62                        | Within the Site (ecological enhancement area), within Havant Thicket | SU7110   |
| Lapwing             | NERC- S41;<br>BOCC -Red                 | 16                        | Within the Site (ecological enhancement area), within Havant Thicket | SU7110   |
| Lesser redpoll      | NERC- S41;<br>BOCC -Red                 | 18                        | Within the Site (ecological enhancement area), within Havant Thicket | SU7110   |

| Common Name               | Conservation Status              | No of Records within 1 km | Records within the Reservoir Site and general location               | Grid Ref |
|---------------------------|----------------------------------|---------------------------|----------------------------------------------------------------------|----------|
| Lesser spotted woodpecker | BOCC -Red                        | 2                         | Within the Site (ecological enhancement area), within Havant Thicket | SU7210   |
| Linnet                    | BOCC -Red                        | 28                        | Within the Site (ecological enhancement area), within Havant Thicket | SU7107   |
| Little egret              | Annex 1; County -CR              | 20                        | Within the Site (ecological enhancement area), within Havant Thicket | SU712091 |
| Marsh tit                 | BOCC -Red                        | 65                        | Within the Site, The Avenue                                          | SU716097 |
| Mediterranean gull        | Annex 1; NERC- S41; County - CR  | 176                       | Within the Site, within open grassland habitat                       | SU7109   |
| Mistle thrush             | BOCC -Red                        | 28                        | Within the Site (ecological enhancement area), within Havant Thicket | SU7110   |
| Nightjar                  | Annex 1; NERC- S41;              | 70                        | Within the Site (ecological enhancement area), within Havant Thicket | SU7110   |
| Red kite                  | Annex 1; WACA Sch 1; County - CR | 138                       | Within the Site (ecological enhancement area), within Havant Thicket | SU7110   |
| Redstart                  | County - CI                      | 18                        | Within the Site(ecological enhancement area), within Havant Thicket  | SU7110   |
| Redwing                   | WACA Sch 1; BOCC -Red            | 30                        | Within the Site(ecological enhancement area), within Havant Thicket  | SU7110   |
| Reed bunting              | NERC- S41;                       | 4                         | Within the Site (ecological enhancement area), within Havant Thicket | SU7111   |
| Ring ouzel                | NERC- S41; BOCC -Red             | 8                         | Within the Site (ecological enhancement area), within Havant Thicket | SU7110   |
| Dartford warbler          | Annex 1; WACA Sch 1; County - CI | 1                         | Within the Site (ecological enhancement area), within Havant Thicket | SU7110   |
| Fieldfare                 | WACA Sch 1; BOCC -Red            | 12                        | Within the Site (ecological enhancement area), within Havant Thicket | SU7110   |
| Firecrest                 | WACA Sch 1 County - CI           | 98                        | Within the Site (ecological enhancement area),within Havant Thicket  | SU7209   |
| Grey heron                | County - CS                      | 14                        | Within the Site, within open grassland                               | SU7109   |

| Common Name       | Conservation Status   | No of Records within 1 km | Records within the Reservoir Site and general location               | Grid Ref |
|-------------------|-----------------------|---------------------------|----------------------------------------------------------------------|----------|
| Green sandpiper   | WACA Sch 1            | 306                       | Within the Site (ecological enhancement area), within Havant Thicket | SU711073 |
| Herring gull      | BOCC -Red County - CR | 50                        | Within the Site, within open grassland                               | SU7210   |
| Kingfisher        | Annex 1; WACA Sch 1   | 56                        | Within the Site (ecological enhancement area), within Havant Thicket | SU7110   |
| Black-headed gull | County - CR           | 14                        | Within the Site, within open grassland                               | SU7210   |
| Cuckoo            | NERC- S41; BOCC -Red  | 18                        | Within the Site (ecological enhancement area), within Havant Thicket | SU7110   |

- 1.147. HBIC provided 7,138 records of notable bird species within 1 km of the Pipeline Corridor, including 120 species of birds. These are listed in Table 17 and shown Figure HTR-ATK-ZZ-ZZ-GS-Z-0050 in Appendix P.
- 1.148. HBIC provided records of 30 bird species listed on Annex 1 of the Birds Directive<sup>22</sup>, within 1 km of the Pipeline Corridor including: avocet, barnacle goose, bar-tailed godwit, black kite, black tern, black-throated diver, common tern, ferruginous duck, glossy ibis, golden plover, hen harrier, kingfisher, little egret, little tern, Mediterranean gull, merlin, Montagu's harrier, nightjar, osprey, peregrine, red kite, red-throated diver, ruddy shelduck, ruff, sandwich tern, short-eared owl, Slavonian grebe, spoonbill, stone-curlew and tawny pipit. Kingfisher is the nearest recorded species to the Pipeline Corridor, located immediately east, on the Hermitage Stream at OSGR: SU7007.
- 1.149. HBIC provided three records of bird species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), within 1 km of the Pipeline Corridor including, peregrine, kingfisher and Cetti's warbler. Kingfisher is the nearest recorded of these species to the Pipeline Corridor, located immediately east, on the Hermitage Stream at OSGR: SU7007.
- 1.150. HBIC provided records of 44 bird species that are species of principle importance<sup>23</sup>, within 1 km of the Pipeline Corridor including avocet, barn owl, bearded tit, black redstart, black tern, black-necked grebe, black-tailed godwit, cetti's warbler, common crossbill, common scoter, fieldfare, firecrest, garganey, goshawk, great northern diver, green sandpiper, greenshank, hen harrier, hobby, honey buzzard, kingfisher, lapland bunting, little gull, little ringed plover, little tern, long-tailed duck, marsh harrier, Mediterranean gull, merlin, Montagu's harrier, osprey, peregrine, red kite, redwing, ruff, scaup, slavonian grebe, spoonbill, stone-curlew, velvet scoter, whimbrel, wood sandpiper, woodlark and wryneck. The nearest recorded of these species to the Pipeline Corridor are spotted flycatcher located immediately east within SCP at the OSGR: SU7108 and yellowhammer, located immediately south east within Leigh Park at the OSGR: SU7008.
- 1.151. HBIC provided records of 26 bird species that are County Rare (CR) in Hampshire, within 1 km of the Pipeline Corridor including: avocet, bearded tit, black redstart, black-headed gull, common tern, goosander, goshawk, grasshopper warbler, great black-backed gull, herring gull, honey buzzard, lesser black-backed gull, little egret, little tern, long-eared owl, marsh harrier, Mediterranean gull, Montagu's harrier, peregrine, pied flycatcher, red kite, rock pipit, sandwich tern, shoveler, whinchat and yellow wagtail. Yellow wagtail is the nearest recorded of these species, immediately east of the Pipeline Corridor, on the Hermitage Stream Bedhampton at the OSGR: SU7007.

<sup>22</sup> Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32009L0147>

<sup>23</sup> Species of principal importance for the conservation of biodiversity are identified by the Secretary of State for England, in consultation with Natural England, are referred to in S.41 of the NERC Act for England. The list, known as the 'England Biodiversity List', of habitats and species can be found on the Natural England web site.

- 1.152. HBIC provided records of 14 bird species that are County Scarce (CS) in Hampshire, within 1 km of the Pipeline Corridor including: Cetti's warbler, common crossbill, firecrest, grey heron, little ringed plover, nightingale, oystercatcher, pochard, sand martin, snipe, stone-curlew, water pipit, water rail and wheatear. Water rail and oystercatcher are the nearest recorded of these species, immediately east of the Pipeline Corridor on the Hermitage Stream at the OSGR: SU7007.
- 1.153. HBIC provided records of 10 bird species that are County of Other Interest (CI) species, within 1 km of the Pipeline Corridor, including: black-tailed godwit, great crested grebe, grey plover, hobby, nightjar, redstart, shelduck, siskin, wood warbler and woodlark. Siskin is the closest recorded species to the Pipeline Corridor, located immediately south east within Leigh Park at the OSGR: SU7107. The full criteria are included in Appendix D.

**Table 17 - HBIC Bird Species Records within 1 km of the Pipeline Corridor**

| Common Name         | Conservation Status        | No of Records within 1 km | Approximate Closest Record to Pipeline Corridor and general location | Grid Ref |
|---------------------|----------------------------|---------------------------|----------------------------------------------------------------------|----------|
| Siskin              | County -CI                 | 37                        | Immediately south east of the Site, Leigh Park area                  | SU7107   |
| Spotted fly catcher | NERC- S41;<br>BOCC -Red    | 16                        | Immediately east of the Site, within SCP                             | SU7108   |
| Water rail          | County - CS                | 77                        | Immediately east of the Site, on the Hermitage Stream Bedhampton     | SU7007   |
| Yellow wagtail      | BOCC -Red<br>County - CR   | 70                        | Immediately east of the Site, on the Hermitage Stream Bedhampton     | SU7007   |
| Yellowhammer        | NERC- S41;<br>BOCC -Red    | 22                        | Immediately south east of the Site, Leigh Park area                  | SU7008   |
| Oystercatcher       | County - CS                | 98                        | Immediately west of the site within Bedhampton Water Works           | SU7006   |
| Kingfisher          | Annex 1;<br>WACA Sch 1     | 206                       | Immediately east of the Site, on the Hermitage Stream                | SU7007   |
| Grey heron          | County - CS                | 195                       | 215 m south west within the Bedhampton Mill Pond                     | SU7006   |
| Cetti's warbler     | WACA Sch 1;<br>County - CS | 183                       | 215 m south west within the Bedhampton Mill Pond                     | SU704063 |

## Common Reptiles

### Adder

- 1.154. HBIC provided 35 records of adder within 2 km of the Reservoir Site. The nearest record of adder is located within the Reservoir Site along the northern boundary of Havant Thicket woodland within open mire vegetation at OSGR: SU711110. This is also the only record of adder within 2 km of the Pipeline Corridor.

### Slow Worm

- 1.155. HBIC provided 50 records of slow worm within 2 km of the Reservoir Site. The nearest record is located approximately 512 m east, within the Former Brickworks, The Drift, Rowlands Castle, OSGR: SU730102.
- 1.156. HBIC provided 10 records of slow worm within 2 km of the Pipeline Corridor. The nearest record is located within a garden on High Lawn Road and immediately adjacent to the Pipeline Corridor at OSGR SU719089.

### Common Lizard

- 1.157. HBIC provided 12 records of common lizard within 2 km of the Reservoir Site. The nearest record to the Reservoir Site is approximately 350 m south and located within Staunton Country Park, OSGR: SU719089. This is also the only record of common lizard within 2 km of the Pipeline Corridor, located approximately 200 m east of the Pipeline Corridor.

### Grass Snake

- 1.158. HBIC provided 16 records of grass snake within 2 km of the Reservoir Site. The nearest record is located approximately 300 m south of the Reservoir Site within Staunton Country Park (SCP) at OSGR: SU720091. HBIC also provided six records of grass snake within 2 km of the Pipeline Corridor. The SCP record is also the nearest record to the Pipeline Corridor and is located approximately 148 m east.
- 1.159. The records of adder, slow worm, common lizard and grass snake described above are shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0018 provided in Appendix Q.
- 1.160. SxBRC provided no records of common reptiles within 2 km of the Site.

### Great Crested Newt

- 1.161. HBIC provided three records of great crested newt within 2 km of the Reservoir Site and two records of great crested newt within 2 km of the Pipeline Corridor. A record located within Rowlands Castle at the OSGR: SU730102 is the nearest record to the Reservoir Site and located approximately 535 m east of the Reservoir Site. This is also the nearest record of great crested newt to the Pipeline Corridor and is located approximately 1.9 km east of the Pipeline Corridor. SxBRC provided no records of great crested newt within 2 km of the Site. These records are shown Figure HTR-ATK-ZZ-ZZ-GS-Z-0019 provided in Appendix R.
- 1.162. The desk study search<sup>24</sup> identified the following two records of EPSMLs for great crested newt within 2 km of the Site:
- Licence No: EPSM2009-795, located approximately 345 m north of the Reservoir Site, at OSGR: SU70971142. The licence commenced in June 2012 and ended in October 2018; and,
  - Licence No: 2014-3400-EPS-AD2, located approximately 555 m east of the Reservoir Site, at the OSGR:SU72981021. The licence commenced in August 2015 and ends in July 2025.

### Terrestrial Invertebrates

- 1.163. HBIC provided 2,134 records of terrestrial invertebrate species within 1 km of the Reservoir Site. These are described in Appendix S and shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0046 provided in Appendix S.

<sup>24</sup> Desk study search using the Government site: <https://magic.defra.gov.uk/MagicMap.aspx>

- 1.164. HBIC provided two records of a moth species, Jersey tiger, listed on Annex 2 (non-priority) species of the Habitats Directive 1992 (as amended)<sup>25</sup>. This species was recorded immediately south of the Reservoir Site and immediately west of the Pipeline Corridor at OSGR: SU713089.
  - 1.165. HBIC provided records of 30 moth species that are species of principle importance, within 1 km of the Reservoir Site, including: beaded chestnut, blood-vein, brown-spot pinion, buff ermine, cinnabar, crescent, dark-barred, twin-spot carpet, dot moth, dusky thorn, dusky brocade, ear moth, feathered gothic, garden tiger, green-brindled crescent, grey dagger, hedge rustic, knot grass, lackey, minor shoulder-knot, mottled rustic, oak hook-tip, rosy minor, rosy rustic, rustic, willow, September thorn, shaded broad-bar, shoulder-striped wainscot, small square-spot and white ermine.
  - 1.166. HBIC provided records of five moth species that are species of principle importance, within 1 km of the Reservoir Site, including: dingy skipper, grizzled skipper, small blue, small heath and white admiral.
  - 1.167. There are two moth species including yellow pearl and Kent bent-wing and three butterfly species including dingy skipper, grizzled skipper and white admiral that are listed as vulnerable on the IUCN Red List species (2001)<sup>26</sup>.
  - 1.168. Ten moth species have been recorded within the Reservoir Site, within Havant Thicket woodland, including:
    - grey dagger, a species of principle importance, barred Umber, Critically Scarce (CS) in Hampshire; and,
    - birch lift, clouded slender, clover slender, common spruce bell, silver-barred bell, spruce argent, virgin pigmy and willow midget that are all Critically Rare (CR) in Hampshire.
  - 1.169. Five butterfly species have been recorded within the Reservoir Site, within Havant Thicket woodland and Bell's Copse woodland. including:
    - small heath and white admiral that are species of principle importance<sup>27</sup>;
    - dark green fritillary and purple emperor that are Critically Scarce (CS) in Hampshire; and,
    - silver-washed fritillary, a County of Other Interest (CI) species in Hampshire<sup>28</sup>.
  - 1.170. HBIC provided two records of a large black slug, located within the Reservoir Site, within Havant Thicket woodland, that is listed as data deficient on the IUCN Red List species (2001)<sup>29</sup>. The IUCN defines data deficient species as ones where '*there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status*' (IUCN, 2001).
  - 1.171. HBIC provided 713 records of terrestrial invertebrate species within 1 km of the Pipeline Corridor. None of the records provided are within the Pipeline Corridor. The nearest records to the Pipeline Corridor are described in Appendix S and shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0053 provided in Appendix S.
- Priority and Notable Plants**
- 1.172. HBIC provided 174 records of flowering plants within 1 km of the Site (the Reservoir Site and the Pipeline Corridor). These are shown on Figures HTR-ATK-ZZ-ZZ-GS-Z-0047 and HTR-ATK-ZZ-ZZ-GS-Z-0049 provided in Appendix T.
  - 1.173. One priority and three notable plant species are recorded within the Site in Havant Thicket, Bell's Copse woodlands, including:

<sup>25</sup> EC Directive on the conservation of natural habitats and of wild fauna and flora (92/42/EEC). Annex II - Non-priority - Endangered animal and plant species that are of Community interest (i.e. endangered, vulnerable, rare or endemic in the European Community) requiring the designation of special areas of conservation.

<sup>26</sup> IUCN, 2001. The IUCN Red List Categories and Criteria, species at high risk of global extinction. Vulnerable (VU) - Taxa believed likely to move into the Endangered category in the near future if the causal factors continue operating. [IUCN-RL-2001-001, 2nd ed.](#)

<sup>27</sup> Species of principal importance for the conservation of biodiversity are identified by the Secretary of State for England, in consultation with Natural England, are referred to in S.41 of the NERC Act for England. The list, known as the 'England Biodiversity List', of habitats and species can be found on the Natural England web site.

<sup>28</sup> This category is an umbrella group to cover those species defined as notable on criteria other than rarity/scarcity. The full criteria is included in Appendix D.

<sup>29</sup> IUCN, 2012. The IUCN Red List Categories and Criteria, species at high risk of global extinction. Vulnerable (VU) - Taxa believed likely to move into the Endangered category in the near future if the causal factors continue operating. [IUCN-RL-2001-001, 2nd ed.](#)

- butcher's broom, listed on Annex 5 of the Habitats Directive 1992 (as amended);
- chaffweed, listed as endangered on the IUCN Red List species (2001);
- rush hybrid sp. (*Juncus effusus* x *conglomeratus* = *J. x kern-reichgeltii*), Critically Rare (CR) in Hampshire; and,
- lesser spearwort, listed as vulnerable on the IUCN Red List species (2001).

1.174. Three notable plant species are located immediately adjacent to the Bedhampton and Havant Springs Pumping Site and include:

- strawberry clover, listed as vulnerable on the IUCN Red List species (2001);
- wild celery, Critically Scarce (CS) in Hampshire; and,
- divided sedge, recorded '*in and around the brackish ditches and depressions*' and a species of principle importance, a nationally scarce species and listed as vulnerable on the IUCN Red List species (2001).

1.175. SxBRC provided no records of protected or notable plants within 1 km of the Site.

#### Invasive Non-Native Plant Species and Animal Species

1.176. HBIC provided 48 records of invasive non-native plant species within 1 km of the reservoir site including Spanish bluebell, butterfly bush, cherry laurel, Corsican pine, cotoneaster sp., holm oak, garden privet, Mexican fleabane, montbretia, New Zealand pigmyweed, parrot's feather, Portugal laurel, red oak, rhododendron, turkey oak, Wilson's honeysuckle and yellow archangel. The following species were recorded within the reservoir site:

- Cherry laurel, within Bell's Copse at the OSGR: SU706100;
- Corsican pine, within Havant Thicket at the OSGR: SU714109;
- Holm oak within Havant Thicket at the OSGR: SU7110;
- Montbretia within Havant Thicket at the OSGR: SU715105;
- Rhododendron within Havant Thicket at the OSGR: SU7210; and,
- Turkey oak within Bell's Copse at the OSGR: SU707100 and within Havant Thicket at the OSGR: SU715105;

1.177. HBIC provided 32 records of invasive non-native plant species within 1 km of the pipeline corridor including bay, butterfly bush, buttonweed, Canadian goldenrod, cherry laurel, Corsican pine, cotoneaster sp., holm oak, false Virginia creeper, giant butterbur, Himalayan balsam, Japanese knotweed, Japanese rose, kerria japonica, red oak, rhododendron, turkey oak and Virginia-creeper.

1.178. The nearest INNPS species recorded to the pipeline corridor are butterfly bush, Corsican pine, false-virginia creeper, Himalayan balsam and Japanese knotweed, all recorded immediately south of the pipeline corridor within Bedhampton Water Treatment Works at the OSGR: SU704063/ SU707065

1.179. HBIC provided 18 records of non-native animal species within 1km of the reservoir site including, Egyptian Goose, fallow deer, grey squirrel, horse chestnut leaf minor, light brown apple moth, Mandarin duck and muntjac. The following species were recorded within the reservoir site:

- Egyptian goose and Mandarin duck were recorded within reservoir site (Havant Thicket) at the OSGR: SU714100;
- grey squirrel was recorded within the Avenue at the OSGR: SU719093; and,
- Horse Chestnut leaf miner was recorded in within the reservoir site (Havant Thicket) at the OSGR: SU720107.

1.180. HBIC provided 11 records of non-native animal species within 1km of the pipeline corridor including Canada goose, Egyptian goose, grey squirrel, horse chestnut leaf miner, Mandarin duck and ruddy shelduck. None of these species were recorded within the pipeline corridor and the nearest record of a non-native animal species to the pipeline corridor is grey squirrel within West Leigh at the OSGR: SU722087, approximately 350 m east of the pipeline corridor.

SxBRC provided no records of INNPS or non-native animal species within 1 km of the reservoir Site and pipeline corridor.

### Other Priority Species

- 1.181. The following records are shown on Figure HTR-ATK-ZZ-ZZ-GS-Z-0045 in Appendix U.
- 1.182. HBIC provided three records of common toad within 1 km of the Site, one record is within Reservoir Site, Havant Thicket at OSGR: SU7109.
- 1.183. HBIC provided one record of common seal located approximately 1.5 km downstream (via the Hermitage Stream) of Pipeline Corridor within Langstone Harbour, at OSGR: SU70960475. Common seal is protected in Britain under the Conservation of Seals Act 1970 and classified as a species of principle importance<sup>30</sup>.
- 1.184. HBIC provided one record of yellow-necked mouse, located approximately 1.9 km south east of the Pipeline Corridor, at OSGR: SU70960475. The species is considered to be scarce in Hampshire.
- 1.185. HBIC provided 53 records of European hedgehog, a species of principle importance, within 2 km of the Site. The nearest record to the Reservoir Site is approximately 30 m east on the B2148 Manor Lodge Road. The nearest record to the Pipeline Corridor is approximately 460 m west of along the boundary of Great Copse Ancient Woodland.

### Legal Protection and Conservation Status

- 1.186. Details on the legal protection and conservation status of species and habitats can be found in Appendix V.
- 1.187. HBICs information on legal status and notable species is provided in Appendix W.

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<sup>30</sup> Habitats and species of principal importance for the conservation of biodiversity are identified by the Secretary of State for England, in consultation with Natural England, are referred to in S.41 of the NERC Act for England.