DATED 15th October 2021

(1) THE COUNCIL OF THE BOROUGH OF HAVANT

(2) EAST HAMPSHIRE DISTRICT COUNCIL

(3) PORTSMOUTH WATER LIMITED

(4) SECRETARY OF STATE FOR ENVIRONMENT FOOD AND RURAL AFFAIRS

and

(5) HAMPSHIRE COUNTY COUNCIL

AGREEMENT BY DEED

Under Section 106 Town and Country Planning Act 1990

relating to land at Havant Thicket, Havant

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THIS DEED is made the 15th day of October 2021

BY:

1. **THE COUNCIL OF THE BOROUGH OF HAVANT** of Public Service Plaza Civic Centre Road Havant PO9 2AX **(the "Borough Council" or "HBC")**;

2. **EAST HAMPSHIRE DISTRICT COUNCIL** of Penns Place, Petersfield, Hampshire GU31 4EX **(the "District Council" or "EHDC")**;

3. **PORTSMOUTH WATER LIMITED** a company registered in England and Wales with company registration number 02536455 and whose registered office is PO BOX No 8, West Street, Havant, Hampshire, PO9 1LG **(the "First Owner")**;

4. **SECRETARY OF STATE FOR ENVIRONMENT FOOD AND RURAL AFFAIRS** care of Forestry Commission, 620 Bristol Business Park, Coldharbour Lane, Bristol, BS16 1EJ **(the "Second Owner")**; and

5. **HAMPSHIRE COUNTY COUNCIL** of The Castle Winchester SO23 8UJ **(the "County Council and the Third Owner")**;

together the "Parties"

BACKGROUND

(A) For the purposes of the Act, the Borough Council, the District Council, and the County Council are the local planning authorities for the area within which the Reservoir Land is situated and the Borough Council and the County Council are the local planning authorities for the area within which the Pipeline Land is situated by whom the planning obligations and the covenants in this Agreement are enforceable.

(B) The First Owner is the freehold owner of that part of the Reservoir Land registered under title number SH51309 and known as Manor Lodge Road Land.

(C) The Secretary of State for Environment Food and Rural Affairs ("**DEFRA**") is accountable to Parliament for forestry policy and for the activities of the Forestry Commission ("the **FC**"). The FC is established by statute (initially in the Forestry Act 1919 and as consolidated in the Forestry Act 1967, s.1-3) to manage land placed at its disposal by the relevant minister. The FC is classified as a non-ministerial department. It also has a Royal Charter, dated 25 March 1920. The Forestry Commissioners are appointed by Royal Warrant and may regulate their own procedure under the provisions in the Forestry Act 1967. Under section 2(3) of the Forestry Act 1967, the Forestry Commissioners have delegated their functions to Forestry England ("**FE**") as an executive agency of government and a Crown body. For the purposes of this Agreement any reference to Forestry England is to include DEFRA, the FC and FE. Portsmouth Water acknowledges that the Crown is indivisible and that any of the provisions of this Agreement can be enforced by either DEFRA, the FC or FE.

(D) The Second Owner is the freehold owner of that part of the Reservoir Land registered under title number SH20591 and known as Havant Thicket.

(E) The Third Owner is the freehold owner of that part of the Reservoir Land and Pipeline Land registered under title number SH13990 known as Staunton Country Park and is the highways authority for the area in which the Reservoir Land and Pipeline Land is situated.

(F) The First Owner has submitted the Reservoir Applications to the District Council and the Borough Council for permission to develop the Reservoir Land in accordance with the Reservoir Planning Permissions and has submitted the Pipeline Application to the Borough Council for permission to develop the Pipeline Land in accordance with Pipeline Planning Permission.

(G) The obligations contained in this Agreement are planning obligations for the purposes of section 106 of the Act.

(H) The Parties to this Agreement are satisfied the planning obligations secured by this Agreement are necessary to make the Development acceptable in planning terms, are directly related to the Development, and are fairly and reasonably related in scale and kind to the Development.

(I) The Borough Council and the District Council consider that the Development ought only to be permitted subject to the terms hereof and determined to grant the Reservoir Planning Permission and the Pipeline Planning Permission at their respective planning committees on 3rd and 9th June 2021 being made subject to the Owners entering into this Agreement which makes provision for regulating the Development and securing the matters referred to in this Agreement.

(J) The Parties have agreed to enter into this Agreement with the intention that the obligations contained in this Agreement may be enforced by the Councils against the Owners and their successors in title.

NOW THIS DEED WITNESSETH:

1 DEFINITIONS

From the date of this Agreement unless the context otherwise requires, the following definitions apply:

"Act"	means the Town and Country Planning Act 1990 (as amended) together with all other statutory powers and acts pursuant to which the parties hereto shall be empowered to enter into this Agreement.
"Agreement"	means this deed of agreement.
"Approved Detailed Biodiversity Mitigation and Compensation Strategy"	means the Detailed Biodiversity Mitigation and Compensation Strategy approved of in writing by the Councils.
"Borough Council Monitoring Fee"	means £739 (seven hundred and thirty-nine pounds) per financial head of term and 5% (five percent) of cost per financial head of term capped at £10,670 (ten thousand six hundred and seventy pounds) incurred or to be incurred by the Borough Council in the provision of a suitably qualified and experienced person whose function is to monitor, coordinate and enforce the obligations contained within this Agreement.

"Bridleway Completion Certificate"	means the certificate issued by the County Council on completion of the construction of the Diverted Bridleway to the full satisfaction of the County Council
"Bridleway Havant 120"	the existing bridleway running from Rowlands Castle Bridleway 29 in the east to Park Lane in the west, linking Rowlands Castle with Cowplain as shown on the Plan 1.
"Bridleway Havant 121"	the existing bridleway linking Swanmore Road to the junction with Bridleway Havant 120 as shown on Plan 1.
"Bridleway Havant 123"	the existing bridleway at Park Lane linking the western boundary of the Reservoir Land at Bridleway Havant 120 as shown on Plan 1.
"Bridleway Rowlands Castle 29"	the existing bridleway running from Manor Lodge Road in the east to the existing Bridleway Havant 120 as shown on Plan 1.
"Capital Grant Scheme"	means the scheme referred to and set out in outline in the Implementation Plan for which the costs shall be capped at £1,200,000 (one million and two hundred thousand pounds) being a maximum fund of £40,000 (forty thousand pounds) per annum available for 30 (thirty) years to be managed by the First Owner and made available for use by eligible applicants as contribution to local policies and targets for biodiversity.
"Capital Grant Scheme Details"	means details of the Capital Grant Scheme including • the criteria for approving and prioritising applications and projects; • provision for any unspent funds in any given year to be rolled over to the next year or be paid to the Councils for the same purpose as the Capital Grant Scheme in consultation with the Councils; and • the monitoring and reporting of the Capital Grant Scheme approved applications to confirm approved projects are delivered.

"Commencement of the Pipeline Development"	means the date on which any material operation (as defined in Section 56(4) of the Act) forming part of the Pipeline Development pursuant to the Pipeline Planning Permission is begun other than (for the purposes of this Agreement and for no other purpose) operations consisting of: tree clearance, site clearance, demolition work, archaeological investigations, investigations for the purpose of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, diversion and laying of services, and "**Commence**" and "**Commencement**" and similar expressions shall be construed accordingly.
"Commencement of the Reservoir Development"	means the date on which any material operation (as defined in Section 56(4) of the Act) forming part of the Reservoir Development pursuant to the Reservoir Planning Permissions is begun other than (for the purposes of this Agreement and for no other purpose) operations consisting of: tree clearance, site clearance, demolition work, archaeological investigations, investigations for the purpose of assessing ground conditions, remedial work in respect of any contamination or other adverse ground conditions, diversion and laying of services, and "**Commence**" and **Commencement**" and similar expressions shall be construed accordingly.
"Completion Certificate Standard"	means in the case of the Southern Site Access Works and the Northern Site Access Works completion to the full satisfaction of the County Council as evidenced by the issue of a certificate of completion by the County Council pursuant to a related Highway Agreement(s).
"Contributions"	means together the Cycleway and Pedestrian Contribution, the Diverted Bridleway Contribution, the Highway Access Improvements Contributions, the Public Rights of Way Contribution, and the TRO Contribution and a reference to a '**Contribution**' shall be to any of them.
"Councils"	means HBC and EHDC together.
"County Council Monitoring Fee"	means a sum of £3,500 (three thousand five hundred pounds).
"Cycleway and Pedestrian Contribution"	means £212,508 (two hundred and twelve thousand five hundred and eight pounds) as a contribution of 50% (fifty percent) of the costs of improving cycle and pedestrian routes in Staunton Country Park connecting to the Reservoir Land as shown on Plan 1.
"Detailed Biodiversity Mitigation and Compensation Strategy"	means the detailed biodiversity mitigation and compensation strategy to mitigate against the biodiversity impacts of the Reservoir Development. The strategy shall

include details of the proposals set out in the Outline Biodiversity Mitigation and Compensation Strategy including the creation of permanent forest meadows and permanent clearings along the water courses and some ponds in Havant Thicket and shall also include responsibilities and timing of actions to deliver the measures.

"Development" means the development of either the Reservoir Land pursuant to the Reservoir Planning Permissions or the Pipeline Land pursuant to the Pipeline Planning Permission (as appropriate).

"Development Control Preparation Fee" means the sum of £2,740 (two thousand seven hundred and forty pounds).

"Development Vehicle" means any HGV/ LGV and plant to be used for the implementation of the Development.

"Diverted Bridleways" means the diverted Bridleway Havant 121 Bridleway Havant 120 and Bridleway Rowlands Castle 29 as shown on Plan 1.

"Diverted Bridleway Contribution" means £349,400 (three hundred and forty nine thousand four hundred pounds) for maintenance of the diverted Bridleway Havant 120 and Bridleway Rowlands Castle 29 as shown on Plan 1.

"EHDC" means the Party of the second part hereto.

"EHDC Monitoring Fee" means £739 (seven hundred and thirty nine pounds) per financial head of term and 5% (five percent) of cost per financial head of term capped at £10,670 (ten thousand six hundred and seventy pounds) incurred or to be incurred by the District Council in the provision of a suitably qualified and experienced person whose function is to monitor, coordinate and enforce the obligations contained within this Agreement.

"Embankment" means the earth embankment adjacent to Staunton Country Park built out in accordance with the Reservoir Development but for the avoidance of doubt does not include any Trial Embankment.

"Employment and Skills Plan"	means the employment and training opportunities strategy for East Hampshire and Havant residents prior to Occupation of the Reservoir Development including steps that will be taken by the First Owner to deliver local employment opportunities in terms of jobs, apprenticeships and training opportunities) in the Reservoir Development. The plan will clearly outline how the First Owner will deliver the plan in cooperation with HBC and EHDC and other relevant parties including but not limited to JobCentre Plus, Solent Apprenticeship Hub, Havant & Southdown College Youth Hub and/or other agencies nominated by HBC or EHDC operating within the respective Councils' administrative areas.
"Expert"	means an independent and suitable person holding appropriate professional qualifications and of at least 10 (ten) years' post qualification experience in the area of expertise relevant to the dispute and appointed in accordance with the provisions of clause 11 to determine a dispute.
"Framework LEMP"	means the landscape and ecological management plan in accordance with the provisions set out in paragraph 1.4 of Schedule 1.
"Havant Thicket"	means the freehold land known as 'Havant Thicket' Havant and registered at the Land Registry with title number SH20591 as shown indicatively shaded green on Plan 3.
"HBC"	means the Party of the first part hereto.
"Highway Access Improvements Contributions"	means the sum of £238,000 (two hundred and thirty-eight thousand pounds) to provide agreed sustainable access improvements on the B2149 as follows: a) Access 1 – Castle Road (Drawing HTR-ATK-XX-ZZ-DR-D-0001 at Appendix 4); b) Access 2 – Mallard Road (Drawing HTR-ATK-XX-ZZ-DR-D-0002 at Appendix 4); and c) Access 3 – Incorporation of crossing facility within the strategic scheme at Whicher's Gate, or a suitable alternative crossing if the strategic scheme at Whicher's Gate does not progress.
"Highways Agreement(s)"	means an agreement or agreements made under section 278 and/or section 38 of the Highways Act 1980 to secure the Northern Site Access Works and the Southern Site Access Works

"Implementation Plan"	means the document titled 'Implementation Plan for Offsite Biodiversity Mitigation and Compensation' dated 1st April 2021, produced by Atkins and submitted with the Reservoir Applications and which is appended hereto at Appendix 3.
"Index"	means either: (a) CPIH; or (b) as specified in accordance with clause 15 and where no index is specified CPIH shall apply.
"Index Linked"	means increased in accordance with the following formula: Amount payable = the payment specified in this Agreement x (A/B) where: A = the last figure published for the Index that applied immediately preceding the date that payment was due B = the last figure published for the Index that applied immediately prior to the date of this Agreement.
"Initiate Development"	means the carrying out of a material operation (as defined in Section 56(4) of the Act) forming part of the Development and any activity which for the avoidance of doubt shall include (but not be limited to) tree clearance, site clearance activities and setup of a site compound and "**Initiation of Development**" shall be construed accordingly.
"Interest"	means interest at 4% (four percent) above the base lending rate of the Barclays Bank PLC from time to time.
"Land"	means together the Reservoir Land and the Pipeline Land and as shown indicatively edged red on Plan 2.
"Manor Lodge Road Land"	means the freehold land being land on the west side of Manor Lodge Road, Rowlands Castle and registered at the Land Registry with title number SH51309 and shown coloured blue and marked SH51309 on Plan 3.
"Northern Site Access Works"	means the northern site access works which comprise of a right turn lane and bell mouth junction on the B2149 to include the reprofiling of the B2149 at the Reservoir Development as shown indicatively on drawing HTR-ATK-AR-RE-DR-D-0010 Rev C01 Access Routes Vehicle Access Junction North (B2149) at Appendix 4.
"Occupation"	means the occupation and/or operation and/or use for the purposes permitted by the Reservoir Planning Permissions and/or the Pipeline Planning Permission but not including occupation by personnel engaged in

	construction and commissioning. and "**Occupy**", "**Occupying**", "**Occupied**", "**Occupier**" and "**Occupation date**" and cognate expressions shall be construed accordingly.
"Offsite Biodiversity Mitigation and Compensation"	means any biodiversity mitigation measures as set in the Outline Biodiversity Mitigation and Compensation Strategy which are to be located outside of the Reservoir Development.
"Outline Biodiversity Mitigation and Compensation Strategy"	means the 'Outline Biodiversity Mitigation and Compensation Strategy' prepared by ECOSA and dated 15 March 2021 detailing the ecological mitigation and compensation that will be required to mitigate against the Reservoir Development which is appended at Appendix 2.
"Owners"	means the First Owner and the Second Owner and the Third Owner together.
"Party"	means any of the Borough Council, the District Council, First Owner, Second Owner, and the County Council.
"Pipeline Application"	means the application submitted to HBC with application reference APP/20/00991 for the Pipeline Development on the Pipeline Land.
"Pipeline Development"	means the construction of an underground bi-directional pipeline to transfer water from Bedhampton Springs to fill the reservoir (that is to be constructed as part of the Reservoir Development) in winter and draw if off to treat and supply when needed in the summer together with other associated works on the Pipeline Land and in accordance with the Pipeline Planning Permission.
"Pipeline Land"	means the land shown edged red on Plan 4.
"Pipeline Planning Permission"	means the outline planning permission to be granted by HBC pursuant to the Pipeline Application.
"Plan 1"	means the plan at Appendix 1 titled 'S106 Obligations – Public Rights of Way and Sustainable Access' with drawing number HTR - ATK - RZ - RE - GS - Z – 0017.
"Plan 2"	means the plan at Appendix 1 titled 'Land Owner Information' with drawing number HTR - ATK - RZ - ZZ - GS - Z – 0006.
"Plan 3"	means the plan at Appendix 1 titled 'Reservoir Land Owner Information' with drawing number HTR - ATK - RZ - ZZ - GS - Z – 0005.

"Plan 4"	means the plan at Appendix 1 titled 'Pipeline Land Owner Information' with drawing number HTR - ATK - PZ - BR - GS - Z – 0007
"Plan 5"	means the plan at Appendix 1 titled 'Reservoir Outline Masterplan' with drawing number HTR - ATK - ZZ - ZZ - DR - L – 0001 .
"Plan 6"	means the plan at Appendix 1 titled 'Indicative Watercourse Improvements'.
"Pre-Commencement Construction Traffic Management Plan"	means a construction traffic management plan detailing the requirements of and provision for access, turning, wheel washing, pedestrian and public safety, vehicle routing and any other such necessary information and requirement to ensure safe access to the Reservoir Land and the Pipeline Land respectively for the purposes of construction traffic and Development Vehicles in relation to any works being undertaken from Initiation of the Development .
"Permissive Path(s)"	means the proposed permissive paths identified on Plan 5 and shown for indicative purposes only with an orange dashed line and marked 'Permissive Path – Pedestrian Use (Proposed)'.
"Public Rights of Way Contribution"	means the sum of £177,702.00 (one hundred and seventy seven thousand seven hundred and two pounds) as a contribution towards 50% of the cost for the upgrade and maintenance of Bridleway 120 and Bridleway 123, linking the western boundary of the Reservoir Land to Waterlooville, and Bridleway 121 (from Swanmore Road to junction with Bridleway 120) as shown on Plan 1.
"Recreational Facilities"	means those parts of the Reservoir Development which are intended to be provided for the benefit of the public as recreational facilities and to enhance public amenity and which shall without prejudice to the generality thereof include a visitor centre and car parking, wetland area, viewing points, children's playground, picnic areas, communal parking areas, landscaped areas, any unadopted footpath and, cycleway or other means of access as indicatively shown on Plan 5.
"Reserved Matters Application"	means the application or applications submitted by the First Owner or on behalf of the First Owner for reserved matters approval with respect to details that have been reserved by the Reservoir Planning Permissions and Pipeline Planning Permission as matters for further approval by HBC and EHDC (as appropriate).

"Reserved Matters Application (Embankment)"	means the Reserved Matters Application for the Embankment.
"Reserved Matters Approval"	means the approval or approvals given by EHDC or HBC (as appropriate) for a Reserved Matters Application.
"Reserved Matters Approval (Embankment)"	means the Reserved Matters Approval pursuant to the Reserved Matters Application (Embankment).
"Reservoir Applications"	means: (a) the application submitted to HBC with reference APP/20/00990; and (b) the application submitted to EHDC with reference 51680/001 for the Reservoir Development.
"Reservoir Development"	means the construction of a reservoir for raw water storage, with control house, visitor centre and car park, recreational facilities for public amenity and a wetland along the northern shore of the reservoir and other associated works on the Reservoir Land in accordance with the Reservoir Planning Permissions.
"Reservoir Land"	means the land shown edged red on Plan 3 comprised in the Manor Lodge Road Land, Havant Thicket and Staunton Country Park.
"Reservoir Planning Permissions"	means the hybrid planning permissions for the Reservoir Development granted by HBC and EHDC respectively pursuant to the Reservoir Applications.
"Staunton Country Park"	means part of the freehold land being land at Staunton Country Park registered at the Land Registry with title number SH13990 and shown indicatively coloured brown and marked SH13990 on Plan 3.
"Site Management Plan"	means the site management plan submitted to, and approved by the Councils. The site management plan shall confirm roles and responsibilities for the management and maintenance of the Reservoir Land, and how this links and integrates with Staunton Country Park and Havant Thicket . For the avoidance of doubt the Recreational Facilities and the ecological compensation and mitigation as set out in the Approved Detailed Mitigation and Compensation Strategy shall be managed and maintained in accordance with the approved site management plan. The site management plan shall identify how anti-social behaviour will be managed. The site management plan will be required for as long as the Reservoir Development remains open and operational.

"Southern Site Access Works"	means the southern site access works which comprise the new Swanmore Road bell mouth access and associated footway/cycleway works to the Reservoir Development as shown on drawing HTR-ATK-AR-RE-DR-D-0006 Rev C04 - Access Routes Vehicle Access Junction South (Swanmore Road) attached at Appendix 4.
"Southleigh Forest"	means the area of land coloured blue and marked 'Southleigh Forest' and shown on Plan 2.
"Temporary Bridleway"	means the temporary path for use by members of the public on foot, bicycle and on horseback or when leading horses shown coloured for indicative purposes only coloured dark blue and marked 'Temporary Diversion of Bridleway Havant: 120/Rowlands Castle 29' on Plan 1.
"Temporary Bridleway Construction Details"	means the construction details including the materials, surfacing, width and route of the Temporary Bridleway to be submitted to and approved of by the Second Owner
"Travel Plan"	means a travel plan to be prepared for the Development in accordance with the County Council's Travel Plan Guidance.
"Travel Plan Approval Fee"	means the sum of £1,500 (one thousand five hundred pounds) towards the costs incurred or to be incurred by the County Council in approving the Travel Plan.
"Travel Plan Bond	means an on demand bond on terms and from a surety approved by the County Council to be provided to guarantee the performance of the Travel Plan and shall be calculated at 110% (one hundred and ten percent) of the cost of the measures identified within the approved Travel Plan.
"Travel Plan Co-Ordinator"	means an individual or company appointed by the Owners to deliver the measures set out in the Travel Plan in accordance with the role profile set out in the approved Travel Plan.
"Travel Plan Monitoring Fee"	means the sum of £3,000 (three thousand pounds) payable towards the costs to be incurred by the County Council in monitoring the Travel Plan on a per annum basis.
"Travel Plan Monitoring Period"	means the period commencing from the date of the Commencement of the Reservoir Development for a period of 8 (eight) years or until the Occupation of the Reservoir Development whichever is the later.

"Trial Embankment"	means the earth embankment adjacent to Staunton Country Park to be built out in accordance with the Reservoir Planning Permissions but at a reduced size to test effectiveness of the structure, ground conditions and construction methodology before finalising the design and construction of the Embankment.
"TRO"	means a traffic regulation order pursuant to the Highway Act 1980 and required to be made by the County Council as a direct consequence of either or both the Reservoir Development and the Pipeline Development.
"TRO Contribution"	means the sum of £24,000 (twenty-four thousand pounds) towards the costs of consulting upon and implementing a TRO for parking restrictions on Swanmore Road and additional roads in the vicinity of the Reservoir Development, to be applied as follows: • £6,000 (six thousand pounds) towards the cost of installing waiting restrictions at Swanmore Road prior to completion of the southern access for the Reservoir Development; and • £18,000 (eighteen thousand pounds) towards the cost of mitigating the impact of overspill parking from the Reservoir Development.
"Watercourse Improvements"	means a mixture of on-site and off-site improvements over an area of 5.5km (five and half kilometres) (or such other area as is agreed with the Environment Agency) which aim to create, or improve, riverine habitat through a range of different techniques as shown for indicative purposes on Plan 6.
"Working Day"	a day other than a Saturday, Sunday or public holiday in England.

2 INTERPRETATION

2.1 The clause headings in this Agreement are for reference only and do not affect its construction or interpretation.

2.2 References to clauses paragraphs schedules plans and Appendices are to clauses paragraphs schedules plans Appendices included in or attached to this Agreement and any reference to this Agreement includes any schedules plans Appendix or annexures or other attachment to this Agreement, unless stated otherwise.

2.3 A reference to a paragraph is to the paragraph of the Schedule in which the reference is made, unless stated otherwise.

2.4 Words importing one gender include any other genders and words importing the singular include the plural and vice versa.

2.5 A reference to a person includes a reference to a firm, company, authority, board, department or other body and vice versa.

2.6 Unless this Agreement states otherwise, any reference to any legislation (whether specifically named or not) includes any modification, extension, amendment or re-enactment of that legislation for the time being in force and all instruments, orders, notices, regulations, directions, byelaws, permissions and plans for the time being made, issued or given under that legislation or deriving validity from it.

2.7 References to the Land include any part of it.

2.8 References to any Party to this Agreement include the successors in title of that Party and any references to the Councils and County Council include any successor local planning authority exercising planning powers under the Act.

2.9 References to "including" mean "including, without limitation".

2.10 Any covenant by the First Owner, the Second Owner and the Third Owner not to do any act or thing includes a covenant not to permit or allow the doing of that act or thing.

2.11 If any provision is held to be illegal, invalid or unenforceable, the legality, validity and enforceability of the remainder of the Agreement shall be unaffected.

3 STATUTORY PROVISIONS

3.1 This Agreement is made by deed pursuant to section 106 of the Act, section 111 of the Local Government Act 1972. section 33 of the Local Government (Miscellaneous Provisions) Act 1982, and section 1 of the Localism Act 2011.

3.2 To the extent that they fall within the terms of section 106 of the Act, the obligations contained in this Agreement are planning obligations for the purposes of those sections of the Act and are enforceable by EHDC and HBC and the County Council in respect of the Reservoir Land and EHDC, HBC and the County Council in respect of the Pipeline Land.

3.3 To the extent that any of the obligations contained in this Agreement are not planning obligations within the meaning of the Act, they are entered into pursuant to the powers contained in section 111 of the Local Government Act 1972, section 33 of the Local Government (Miscellaneous Provisions) Act 1982, section 1 of the Localism Act 2011 and all other enabling powers.

3.4 Nothing in this Agreement restricts or is intended to restrict the proper exercise at any time by the Councils or County Council of any of their statutory powers, functions or discretions in relation to the Reservoir Land, Pipeline Land or otherwise.

3.5 Nothing in this Agreement restricts or is intended to restrict the proper exercise at any time by the Second Owner and more particularly FE and FC of any of their statutory powers functions or discretions in relation to Havant Thicket or otherwise.

4 COMMENCEMENT OF AGREEMENT

This Agreement shall have effect from the date hereof.

5 OWNERS' COVENANTS

5.1 The First Owner, the Second Owner, and the Third Owner covenant with the Councils to comply, observe and perform the obligations as set out in Schedule 1 as planning obligations for the purposes of the Act.

5.2 The First Owner and the Second Owner covenant with the County Council (as local planning authority) to comply, observe and perform the obligations as set out in Schedule 1.

5.3 The First Owner covenants with the County Council (as local planning authority and highway authority) to comply and observe and perform the obligations as set out in Schedule 2.

5.4 The Second Owner covenants with the County Council (as local planning authority and highway authority) to comply and observe and perform the obligations as set out in paragraph 5 of Schedule 2.

6 ENFORCEMENT

6.1 In respect of a liability due to a breach of the obligations set out in the Outline Biodiversity Mitigation and Compensation Strategy and the Approved Detailed Biodiversity and Compensation Strategy obligations, the Second Owner's liability shall be limited only to those obligations required and located on Havant Thicket and the Third Owner's liability shall be limited only to those obligations required and located on Staunton Country Park.

6.2 In respect of a liability due to a breach of the obligations relating to the Recreational Facilities the Second Owner and the Third Owner shall only be liable in the event that the Second Owner and the Third Owner (respectively) notify the Councils in accordance with paragraph 4.3 of Schedule 1 that the Second Owner and/or the Third Owner (as appropriate) shall be managing and maintaining those elements of the Recreational Facilities with the First Owner.

6.3 In respect of a liability arising from a breach of the obligations of the Site Management Plan the Second Owner's liability shall be limited only to those obligations and requirements on Havant Thicket specifically stated as being carried out by the Second Owner in the agreed Site Management Plan.

7 REGISTRATION

This Agreement shall be registered by the Councils as a local land charge.

8 RELEASE

8.1 No Party shall be liable for any breach of a covenant, restriction or obligation or other provision contained in or required pursuant to this Agreement which takes effect as a planning obligation after parting with all of its interest in the Land or that part of the Land in relation to which such breach occurs except in respect of any breach subsisting prior to parting with such interest.

8.2 No Party shall be liable for any breach of a covenant, restriction or obligation or other provision contained in or required pursuant to this Agreement which takes effect as a planning obligation to the extent that such breach of planning obligation relates to a part of the Land in which that Party has no interest.

8.3 No planning obligation contained in this Agreement shall be binding as a planning obligation on any Land in which a Party has no proprietary interest in the Land and has rights only by virtue of their statutory functions as a statutory undertaker.

8.4 For the avoidance of doubt clauses 8.1 – 8.3 do not release, limit or exclude liability on the part of the First Owner for breach of any contractual obligations created by this Agreement.

8.5 The First Owner shall not enter into any contract, arrangement or agreement with any other water or sewerage undertaker ("the **Water Undertaker**") for the implementation and delivery in full or in part of the Pipeline Permission unless and until the Water Undertaker has entered into a deed of covenant with the County Council containing the same terms and covenants in favour and enforceable by the County Council as specified at Schedule 2 paragraphs 2.5 – 2.8 (Southern Site Access Works) 3.1 – 3.10 (Travel Plan) and 4.1 – 4.5 (Pre-Commencement Construction Traffic Management Plan).

9 NOTICES

9.1 The Owners agree to give the Councils and County Council (as local planning authority) written notice within 10 (ten) Working Days of any change in ownership of any of their respective interests in the Land occurring before all the obligations under this Agreement have been discharged and such notice shall give details of the transferee's full name and

9.1.1 registered office where the transferee owner is a company

9.1.2 usual address where the transferee is not a company

together with details of the area of the Land or unit of occupation transferred by reference to a plan.

9.2 Any notice, demand or any other communication to be given under or in connection with this Agreement shall be in writing and will be effective only if delivered by hand or sent by recorded delivery to the Party due to receive the notice, demand or communication.

9.3 Any notice, demand or any other communication served shall be sent to the address of the relevant Party set out at the beginning of this Agreement or to such other address as one Party may notify in writing to the others at any time as its address for service and in the case of service upon the Councils or County Council it shall be marked for the attention of the Head of Legal.

9.4 Unless the time of actual receipt is proved, a notice, demand or communication sent by the following means shall be treated as having been served:

9.4.1 if delivered by hand, at the time of delivery; or

9.4.2 if sent by recorded delivery, at the time delivery was signed for.

9.5 If a notice, demand or any other communication is served after 4.00pm on a Working Day, or on a day that is not a Working Day, it shall be treated as having been served on the next Working Day.

9.6 For the avoidance of doubt, where proceedings have been issued in the Courts of England and Wales, the provisions of the Civil Procedure Rules must be complied with in respect of the service of documents in connections with those proceedings.

10 COSTS OF THIS AGREEMENT

10.1 Upon completion of this Agreement the First Owner shall pay to the Councils their reasonable and proper legal costs incurred in connection with the preparation, negotiation and completion of this Agreement.

10.2 Upon completion of this Agreement the First Owner shall pay to the County Council their reasonable and proper legal costs incurred in connection with the preparation, negotiation and completion of this Agreement, the Development Control Preparation Fee, and the County Council Monitoring Fee

11 DETERMINATION OF DISPUTES

11.1 Subject to clause 11.6, if any dispute arises relating to or arising out of the terms of this Agreement, either Party may give to the other not less than 10 (ten) Working Days' written notice requiring the dispute to be determined under this clause 11. The notice shall propose an appropriate Expert and specify the nature and substance of the dispute and the relief sought in relation to the dispute.

11.2 Any dispute over the appointment of the Expert appropriate to resolve the dispute may be referred at the request of either Party to the President or next most senior available officer of the Law Society of England and Wales who will have the power, with the right to take such further advice as he may require, to determine the appropriate Expert and to arrange his nomination.

11.3 The Expert shall act as an independent expert and:

11.3.1 each Party may make written representations within 10 (ten) Working Days of his appointment and will copy the written representations to the other Party;

11.3.2 each Party shall have a further 10 (ten) Working Days to make written comments on the other's representations and will copy the written comments to the other Party;

11.3.3 the Expert shall be at liberty to call for such written evidence from the parties and to seek such legal or other expert assistance as he or she may reasonably require;

11.3.4 the Expert shall not take oral representations from the parties without giving both parties the opportunity to be present and to give evidence and to cross examine each other;

11.3.5 the Expert shall have regard to all representations and evidence before him when making his decision, which shall be in writing, and shall give reasons for his decision; and

11.3.6 the Expert shall use all reasonable endeavours to publish his decision within 30 (thirty) Working Days of his appointment.

11.4 Responsibility for the costs of referring a dispute to an Expert under this clause 11, including costs connected with the appointment of the Expert and the Expert's own costs, but not the legal and other professional costs of any Party in relation to a dispute, will be decided by the Expert.

11.5 This clause 11 does not apply to disputes touching or concerning the construction or interpretation of this Agreement which will be subject to the jurisdiction of the courts.

11.6 The provisions of this clause 11 shall not affect the ability of the Councils or County Council to apply for and be granted declaratory relief injunction specific performance payment of any sum damages or any other means of enforcing this Agreement and consequential and interim orders and relief.

12 CONTRACTS (RIGHTS OF THIRD PARTIES) ACT 1999

For the purposes of the Contracts (Rights of Third Parties) Act 1999 this Agreement is not made for the benefit of nor shall any of its provisions be enforceable by any person other than the parties to his Agreement and their successors in title.

13 INTEREST

If any sum due under this Agreement shall become due but shall remain unpaid for a period exceeding 28 (twenty eight) Working Days, the First Owner shall pay on demand to the Councils and County Council Interest which will be payable from the date payment is due until the date of payment.

14 VAT

The Parties to this Agreement acknowledge and agree that the sums due under this Agreement are not subject to VAT and no VAT should be charged or recoverable in addition to the amount of the sums specified in this Agreement.

15 INDEXATION

15.1 All Contributions payable pursuant to this Agreement shall be Index Linked.

15.2 Where reference is made to an index and that index ceases to exist or is replaced or rebased then it shall include reference to any index which replaces it or any rebased index (applied in a fair and reasonable manner to the periods before and after rebasing under this Agreement) or in the event the index is not replaced, to an alternative reasonably comparable basis or index as the Council or the County Council (as appropriate) shall advise the First Owner in writing.

15.3 The Highway Access Improvement Contribution, the Public Rights of Way Contribution, the Cycleway and Pedestrian Contribution, and the Public Rights of Way Contribution to be paid to the County Council by the First Owner hereunder are required to be index linked and each relevant payment shall be increased by the percentage by which the Retail Price Index (**"RPI"**) published by the Office for National Statistics (or amendment or replacement thereof) increased from and including the 1st December 2019 to the date that the payment is paid to the County Council.

16 WAIVER

16.1 No failure or delay by the Councils or County Council to exercise any right or remedy provided under this Agreement or by law shall constitute a waiver (whether express or implied) for any breach or default by the Owners in performing or observing any of the covenants, restrictions or obligation contained in this Agreement. No single or partial exercise of such right or remedy shall prevent or restrict the further exercise of that or any other right or remedy.

17 TERMINATION

17.1 The obligations in this Agreement (with the exception of clause 10 and those obligations at Schedule 2 paragraphs 4.1 – 4.5 that are due on Initiation of the Development) shall cease to

have effect if, before the Commencement of the Reservoir Development or the Pipeline Development, the Reservoir Planning Permissions and the Pipeline Planning Permission:

17.1.1 expire;

17.1.2 are revoked; or

17.1.3 are quashed following a successful legal challenge.

18 FUTURE PERMISSIONS

18.1 Subject to clause 18.2, nothing in this Agreement shall prohibit or limit the right to develop any part of the Reservoir Land in accordance with a planning permission (other than the Reservoir Planning Permissions) granted (whether or not on appeal) after the date of this Agreement.

18.2 This Agreement shall apply to any planning permission subsequently granted under section 73 or section 73A of the Act which permits non-compliance with any of the conditions attached to the Reservoir Planning Permissions (a "**Subsequent Permission**") and the Reservoir Planning Permissions shall be construed to include the development as stated in the Subsequent Permission unless otherwise required by the Councils and County Council.

18.3 Subject to clause 18.4, nothing in this Agreement shall prohibit or limit the right to develop any part of the Pipeline Land in accordance with a planning permission (other than the Pipeline Planning Permission) granted (whether or not on appeal) after the date of this Agreement.

18.4 This Agreement shall apply to any planning permission subsequently granted under section 73 or section 73A of the Act which permits non-compliance with any of the conditions attached to the Pipeline Planning Permission (a "**Subsequent Pipeline Permission**") and the Pipeline Planning Permission shall be construed to include the development as stated in the Subsequent Pipeline Permission unless otherwise required by the Councils and County Council.

19 SPEND IN ADVANCE

If prior to the receipt of any of the Contributions payable under the terms of this Agreement the County Council incurs any expenditure in providing facilities or services to which this Agreement authorises the Contributions to be applied then the County Council may immediately following receipt of such Contributions deduct therefrom sums equivalent to such expenditure, and it is hereby agreed and acknowledged that the County Council shall not subsequently be required to repay any Contributions set against such expenditure

20 JURISDICTION

20.1 This Agreement shall be governed by and interpreted in accordance with the laws of England.

20.2 The Courts of England shall have jurisdiction in relation to any disputes between the parties arising out of or related to this Agreement.

21 COUNTERPART

This Agreement may be executed in any number of counterparts each of which shall constitute a duplicate original, but all the counterparts shall together constitute the one Agreement. No counterpart shall be effective until each Party has delivered to the others at least one executed counterpart.

IN WITNESS of which this document has been duly executed as a deed and delivered on the date stated at the beginning of this document.

EXECUTED as a DEED by affixing

THE COMMON SEAL of the COUNCIL OF THE

BOROUGH OF HAVANT

in the presence of:

13237

[redacted] .....

Authorised Signatory

EXECUTED as a **DEED** by affixing

THE COMMON SEAL of

EAST HAMPSHIRE DISTRICT COUNCIL

in the presence of

.....

Authorised Signatory

IN WITNESS of which this document has been duly executed as a deed and delivered on the date stated at the beginning of this document.

EXECUTED as a DEED by affixing

THE COMMON SEAL of the COUNCIL OF THE

BOROUGH OF HAVANT

in the presence of:

.....

Authorised Signatory

EXECUTED as a **DEED** by affixing

THE COMMON SEAL of

EAST HAMPSHIRE DISTRICT COUNCIL

in the presence of

[redacted]

271707

.....

Authorised Signatory

37/8018

EXECUTED as a DEED by affixing the

COMMON SEAL of HAMPSHIRE

COUNTY COUNCIL

in the presence of:-

..... [redacted] .....

Authorised Signatory

Timothy Spender
Assistant Head of
Legal Services

.....

Name (capitals)

.....

Position (capitals)

EXECUTED as a **DEED** by

PORTSMOUTH WATER LIMITED

acting by a Director

in the presence of:

_____

Director

_____

Witness

Witness Name:

Address:

Occupation:

EXECUTED as a DEED by affixing the

COMMON SEAL of HAMPSHIRE

COUNTY COUNCIL

in the presence of:-

.....

Authorised Signatory

.....

Name (capitals)

.....

Position (capitals)

EXECUTED as a **DEED** by

PORTSMOUTH WATER LIMITED

~~acting by a Director~~

~~in the presence of~~:

[redacted]

Director

[redacted]

Company Secretary

~~Witness~~

~~Witness Name~~:

~~Address:~~

Occupation:

EXECUTED as a DEED by affixing the

COMMON SEAL of SECRETARY OF STATE

FOR ENVIRONMENT FOOD AND

RURAL AFFAIRS

in the presence of:-

..... [redacted] .....

Authorised Signatory

SCHEDULE 1
OWNERS' COVENANTS

1 BIODIVERSITY MITIGATION AND COMPENSATION STRATEGY

ONSITE

1.1 Prior to the Commencement of the Reservoir Development, the First Owner shall submit the Detailed Biodiversity Mitigation and Compensation Strategy in writing for the approval of the Councils and the County Council.

1.2 The First Owner shall ensure that the Detailed Biodiversity Mitigation and Compensation Strategy shall include a Framework LEMP

1.3 The First Owner shall ensure that the Framework LEMP shall be updated with each Reserved Matters Application for the Reservoir Planning Permissions.

1.4 The First Owner shall ensure that each Framework LEMP shall be based upon, and be in broad accordance with, the relevant commitments identified in Volume 4 Appendix A2.1 of the Environmental Statement (Outline Environmental Management Plan) (submitted with the Reservoir Planning Applications) and the detailed Framework LEMP set out therein and shall include the following elements:

1.4.1 a description and evaluation of features to be managed.

1.4.2 ecological trends and constraints on the Reservoir Land that might influence management.

1.4.3 the aims and objectives of management.

1.4.4 appropriate management options for achieving aims and objectives, including the details of how and at what intervals the biodiversity of the Land will be measured.

1.4.5 prescriptions for management actions.

1.4.6 preparation of a work schedule (including an annual work plan capable of being rolled forward over a 5 (five)-year period).

1.4.7 details of the body or organisation responsible for implementation of the Framework LEMP, including details of the legal and funding mechanism(s) by which the long-term implementation of the Framework LEMP will be secured by the First Owner with the management body(is) responsible for its delivery.

1.4.8 ongoing monitoring and remedial measures, including how contingencies and/or remedial action will be identified, agreed and implemented if monitoring shows that the Reservoir Development s failing to deliver the biodiversity objectives of the Reservoir Planning Permissions

1.5 The First Owner shall submit the final Framework LEMP to the Councils and the County Council prior to the Occupation of the Reservoir Development and shall operate the Reservoir Development in accordance with the approved details of the final Framework LEMP for the lifetime of the Reservoir Development.

1.6 The Owners shall at the expense of the First Owner comply with the terms of the Outline Biodiversity Mitigation and Compensation Strategy on their respective Land until such time as the Detailed Biodiversity Mitigation and Compensation Strategy is approved.

2 OFFSITE

2.1 The First Owner shall deliver the Offsite Biodiversity Mitigation and Compensation in accordance with the Implementation Plan.

2.2 Not later than the submission of the final Reserved Matters Application (Embankment) for the Reservoir Planning Permissions the First Owner shall submit in writing to the Councils and the County Council for their approval in accordance with the Implementation Plan the following:

2.2.1 a 10 (ten) year woodland management plan detailing the habitat restoration of up to 72 (seventy two) hectares of Southleigh Forest and the timetable for delivery, together with the requirement to provide EHDC and the County Council's ecologist monitoring reports at 5 (five) year intervals;

2.2.2 Capital Grant Scheme Details.

2.3 The First Owner shall Commence the Reservoir Development pursuant to the Reserved Matters Approval (Embankment) in accordance with, and thereafter comply with, the details submitted pursuant to paragraph 2.2 of this Schedule 1 and approved by the Councils and the County Council.

2.4 Prior to the Occupation of the Reservoir Development the First Owner shall submit to the Councils and the County Council for their approval in accordance with the Implementation Plan:

2.4.1 evidence of the First Owner's legal right to deliver 80 (eighty) hectares of new wood pasture and neutral grassland habitat, details of where the new wood pasture and neutral grassland will be located together with a timetable for delivery with reference to the timetable for delivery of the Reservoir Development and details of long-term management and maintenance of the newly created wood pasture and neutral grassland habitat;

2.4.2 evidence of the First Owner's legal right to deliver Watercourse Improvements, details of where the Watercourse Improvements will be located, together with a timetable for delivery of the Watercourse Improvements.

2.5 The First Owner shall from first Occupation of the Reservoir Development and thereafter for the lifetime of the Reservoir Development comply with the details submitted pursuant to paragraph 2.4 of this Schedule 1 and approved by the Councils and the County Council.

2.6 The First Owner shall comply with the terms of the Approved Detailed Biodiversity Mitigation and Compensation Strategy and the Implementation Plan.

3 SITE MANAGEMENT PLAN

3.1 Prior to construction of the Recreational Facilities (save for any wetland construction activities) the First Owner shall submit a Site Management Plan (approved by the Second Owner) to the Councils and County Council for approval

3.2 The Owners shall manage and maintain the Recreational Facilities on their respective areas of Land in accordance with the Site Management Plan PROVIDED THAT the Second Owner shall only be responsible for the Recreational Facilities on Land owned by them, subject to clause 6.2 of this Agreement;

3.3 The Owners shall implement and manage their respective Land in accordance with and as set out in the Approved Detailed Mitigation and Compensation Strategy in accordance with the approved Site Management Plan at the First Owners expense.

4 NOTICES FOR THE PHASES OF THE DEVELOPMENT

4.1 The First Owner shall give to the Councils and County Council not less than ten (10) Working Days' written notice of its intention to Commence the Reservoir Development.

4.2 The First Owner shall give to HBC and the County Councill not less than ten (10) Working Days' written notice of its intention to Commence the Pipeline Development.

4.3 Prior to the opening of the Recreational Facilities to the public, the Second Owner and the Third Owner shall notify the Councils and County Council respectively whether or not it has agreed with the First Owner that it shall manage and maintain any element of the Recreational Facilities and if the Third Owner and/or the Second Owner have agreed to take on managing and maintaining any elements of the Recreational Facilities the Second Owner and the Third Owner (as relevant) shall specify which elements of the Recreational Facilities they are including referring to a plan where necessary.

4.4 The First Owner shall give to the Councils and County Council not less than ten (10) Working Days' written notice of its intention to begin the construction of the Recreational Facilities.

4.5 The First Owner shall give to the Councils and County Council not less than ten (10) Working Days' written notice of an intention to begin the construction of the Embankment.

4.6 The First Owner shall give to the Councils and the County Council not less than ten (10) Working Days' written notice of the anticipated date that the Reservoir Development is to become Occupied and open to the general public.

4.7 The First Owner shall give to the Second Owner, the Councils, and the County Council not less than ten (10) Working Days' written notice of the anticipated date of the completion of construction of the Temporary Bridleway.

4.8 The First Owner shall give to the Second Owner, the Councils, and the County Council not less than ten (10) Working Days' written notice of the anticipated date of the completion of construction of the Diverted Bridleways.

4.9 The First Owner shall give to the Second Owner, the Councils, and the County Council not less than ten (10) Working Days' written notice of the anticipated date of completion of the Southern Site Access Works.

4.10 The First Owner shall give to the Second Owner, the Councils, and the County Council not less than ten (10) Working Days' written notice of the anticipated date of completion of the Northern Site Access Works.

5 MONITORING FEE

5.1 The First Owner covenants not to Commence or permit Commencement of the Reservoir Development and/or the Commencement of the Pipeline Development until the HBC Monitoring Fee has been paid to HBC.

5.2 The First Owner covenants not to Commence or permit Commencement of the Reservoir Development and/or the Commencement of the Pipeline Development until the EHDC Monitoring Fee has been paid to EHDC.

6 SUBMISSION OF DOCUMENTS

6.1 The Owners shall provide when submitting documents or details to the Councils pursuant to the Schedules of this Agreement a reference to the Reservoir Planning Permissions or Pipeline Planning Permission (as appropriate), the date and parties to this Agreement, and the paragraph and Schedule under which approval is sought, together with a statement of the date by which a decision must be given by EHDC and/or HBC.

7 RECREATIONAL FACILITIES

7.1 The First Owner shall ensure that the Recreational Facilities are constructed, laid out and available for use no later than the Occupation of the Reservoir Development.

8 EMPLOYMENT AND SKILLS PLAN

The First Owner working in consultation with the Councils and relevant partners including but not limited to Job centre plus, Solent Apprenticeship Hub, Havant & Southdowns College, Youth Hub, and sub-contractors will deliver outcomes in terms of jobs, apprenticeships and training opportunities through the Employment and Skills Plan to be agreed by the First Owner and the Councils before Commencement of the Pipeline Development and/or the Commencement of the Reservoir Development.

9 PERMISSIVE PATHS

9.1 Not to open the Recreational Facilities to the public until the Permissive Paths serving the Development to be provided on the First Owner's land have been laid out, constructed and made available for use in accordance with the details approved by the Council.

9.2 The First Owner shall ensure that the Permissive Paths on the First Owner's land following construction are available for use by the public at large and to include in any transfer or lease of the Permissive Paths covenants requiring the Permissive Paths to be made and kept available for use by the public in perpetuity.

SCHEDULE 2
FIRST OWNER'S COVENANTS WITH THE COUNTY COUNCIL

The First Owner covenants with the County Council as follows:

1 FINANCIAL CONTRIBUTIONS

1.1 To pay the Highway Access Improvement Contribution in full to the County Council prior to the Commencement of the Reservoir Development

1.2 Not to Commence or permit Commencement of the Reservoir Development until the Highway Access Improvement Contribution has been paid in full to the County Council

1.3 To pay the Cycleway and Pedestrian Contribution in full to the County Council prior to commencement of the construction of the Embankment

1.4 Not to commence or permit commencement of the Embankment until the Cycleway and Pedestrian Contribution has been paid in full to the County Council

1.5 To pay the Public Rights of Way Contribution in full to the County Council on completion of the construction of the Embankment element of the Reservoir Development

1.6 Not to commence the construction of the Recreational Facilities until the Public Rights of Way Contribution has been paid in full to the County Council

1.7 To pay the Diverted Bridleways Contribution in full to the County Council upon the completion of construction of the Diverted Bridleways

1.8 To pay £6,000 (six thousand pounds) of the Traffic Regulation Order Contribution in full to the County Council prior to the earlier of either the completion of the Southern Site Access Works or the date it is required to be paid in any relevant Highway Agreement

1.9 To pay the outstanding sum of £18,000 (eighteen thousand pounds) of the Traffic Regulation Order Contribution to the County Council prior to the Reservoir Development being Occupied and open to the general public

1.10 Not to allow the Reservoir Development to become Occupied and open to the general public until the Traffic Regulation Order Contribution has been paid in full to the County Council

2 HIGHWAY WORKS

2.1 To enter into the Highways Agreement(s) for the Northern Site Access Works prior to the Commencement of the Reservoir Development

2.2 Not to Commence or permit Commencement of the Reservoir Development until the Highways Agreement(s) for the Northern Site Access Works have been entered into

2.3 To complete the Northern Site Access Works to Certificate of Completion Standard prior to the Commencement of the Reservoir Development

2.4 Not to Commence or permit Commencement of the Reservoir Development until the Northern Site Access Works have been completed to Certificate of Completion Standard

2.5 To enter into the Highways Agreement(s) for the Southern Site Access Works prior to the Commencement of the Pipeline Development

2.6 Not to Commence or permit Commencement of the Pipeline Development until the Highways Agreement(s) for the Southern Site Access Works have been entered into

2.7 To complete the Southern Site Access Works to Certificate of Completion Standard prior to the Commencement of Pipeline Development

2.8 Not to Commence or permit Commencement of the Pipeline Development until the Southern Site Access Works have been completed to Certificate of Completion Standard

3 TRAVEL PLAN

3.1 To supply and have approved by the County Council the Travel Plan prior to Commencement of the Reservoir Development.

3.2 Not to Commence or permit Commencement of the Reservoir Development until the submission to and approval by the County Council of the Travel Plan

3.3 To pay the Travel Plan Approval Fee to the County Council prior to the Commencement of the Reservoir Development

3.4 Not to Commence or permit Commencement of the Reservoir Development until the Travel Plan Approval Fee has been paid to the County Council

3.5 To implement and comply with the Travel Plan in accordance with the requirements and timetable of the Travel Plan from the date of the approval of the Travel Plan

3.6 Not to Commence the Reservoir Development until it has implemented any of the requirements of the Travel Plan that are due to be implemented prior to the Commencement of the Reservoir Development

3.7 Not to Commence the Reservoir Development unless and until it has appointed and funded the Travel Plan Co-ordinator for the management and implementation of the responsibilities set out in the Travel Plan and has notified the County Council in writing of such appointment and to thereafter retain a Travel Plan Co-Ordinator for the duration of the Travel Plan Monitoring Period

3.8 Not to Commence the Reservoir Development unless and until it has provided to the County Council the Travel Plan Bond on terms that if in the opinion of the County Council acting reasonably the Owners unreasonably fail at any time within the lifetime of the Development to deliver the agreed measures/targets and/or comply with any/all of the measures/targets contained within the Travel Plan the County Council can demand such sum as may be certified by the County Council to be required up to the amount of the Travel Plan Bond in order to cover either the costs to the County Council to remedy the failure to achieve and implement the agreed measures/targets contained within the Travel Plan or such alternative measures as the County Council shall in its absolute discretion determine will achieve the overall aims of the Travel Plan or such alternatives measures as the County Council shall in its absolute discretion determine will at no greater cost to the Owners achieve the overall aims of the Travel Plan

3.9 Not to Commence or permit Commencement of the Reservoir Development unless and until it has paid the Travel Plan Monitoring Fee in full to the County Council

3.10 To pay a further Travel Plan Monitoring Fee on every anniversary date of the approval of the Travel Plan for the duration of the Travel Plan Monitoring Period

4 PRE-COMMENCEMENT CONSTRUCTION TRAFFIC MANAGEMENT PLAN

4.1 To submit the Pre-Commencement Construction Traffic Management Plan to the County Council for its approval no later than twenty (20) Working Days after the date of this Agreement

4.2 Not to Initiate Development until the Pre-Commencement Construction Traffic Management Plan has been submitted to the County Council and approved in writing by the County Council (such approval not to be unreasonably delayed or withheld)

4.3 Not to permit any Development Vehicle movements to or from the Land for the purpose of the Development or to intensify the use of any existing access/egress points at the Land for the purpose of the Development until the Pre-Commencement Construction Traffic Management Plan has been submitted to the County Council and approved in writing (such approval not to be unreasonably delayed or withheld)

4.4 To ensure that all Development Vehicle movements to or from the Land for the purpose of the Development are in accordance with the measures and requirements of the approved Pre-Commencement Construction Traffic Management Plan

4.5 Not to permit any Development Vehicle movements on the Land unless in accordance with the measures and requirements of the approved Pre-Commencement Construction Traffic Management Plan

5 DIVERTED BRIDLEWAYS

5.1 To complete the construction of the Diverted Bridleways and to obtain the Bridleway Completion Certificate prior to the Reservoir Development becoming Occupied and open to the general public

5.2 From the receipt of the Bridleway Completion Certificate and prior to the Reservoir Development becoming Occupied and open to the general public to make the Diverted Bridleways available for use by the public

5.3 Not to Occupy the Reservoir Development or open the Reservoir Development to the general public until the First Owner has obtained the Bridleway Completion Certificate and the Diverted Bridleways are available for use by the public

5.4 Prior to the construction of the Embankment to submit to the County Council and the Second Owner for their approval the Temporary Bridleway Construction Details

5.5 Not to commence construction of the Embankment until the Temporary Bridleway Construction Details have been submitted to and approved by the Second Owner and the County Council

5.6 Prior to the construction of the Embankment to construct the Temporary Bridleway to the Second Owner's and the County Council's satisfaction and make the Temporary Bridleway available for use by the public

5.7 Not to commence construction of the Embankment until the Temporary Bridleway has been constructed to the Second Owner and the County Council's satisfaction and is available for use by the public

5.8 Not to apply for the temporary closure of Bridleway Havant 120 and Bridleway Rowlands Castle 29 until the Temporary Bridleway has been constructed to the Second Owner and the County Council's satisfaction and is available for use by the public

5.9 To keep the Temporary Bridleway maintained and open to the public until the Diverted Bridleways are constructed and open to the public and the First Owner has received the Bridleway Completion Certificate

6 COMMENCEMENT OF THE RESERVOIR DEVELOPMENT AND THE PIPELINE DEVELOPMENT

6.1 Not to permit the Initiation or Commencement of the Pipeline Development or Initiation or Commencement of the Reservoir Development (as appropriate) until all necessary consents licences permissions and agreements required by the County Council in respect of Initiation or Commencement of the same have been secured or entered into with the County Council and thereafter not to carry out any part of the Pipeline Development or Reservoir Development unless and until all necessary consents in respect of any part have been secured.

7 INDEMNITY

7.1 The First Owner shall from Initiation of Development indemnify and keep indemnified the County Council in respect of all payments liabilities actions claims demands fees charges expense and proceedings including (but not limited to) any costs expenses and penalties incurred by the County Council and liability payments howsoever arising as a consequence of or in connection with the performance or non-performance by the Owners or any third Party of any term of this Agreement or any default or breach by the Owners or any third Party of any of the terms of this Agreement

7.2 In the event that the First Owner proposes to dispose of its interest in the Manor Road Lodge Land the First Owner shall give to the County Council 30 (thirty) Workings Days' notice of such transfer and shall ensure that any sale and purchase documentation includes an indemnity from the proposed purchaser on the terms set out at paragraph 7.1 of this Schedule 2.

SCHEDULE 3
COUNTY COUNCIL COVENANTS

1. The County Council covenants with the First Owner to use the;

   1.1 Cycleway and Pedestrian Contribution for the purpose as set out in this Agreement;

   1.2 the Diverted Bridleway Contribution for the purpose set out in this Agreement;

   1.3 the Public Rights of Way Contribution for the purpose set out in this Agreement;

   1.4 the Highway Access Improvements Contribution for the purpose set out in this Agreement

   1.5 the TRO Contribution for the purpose set out in this Agreement.

2. The County Council covenants with the First Owner that following receipt of a written request to do so from a payer to repay to the payer such amount of the Sustainable Access Contribution and TRO Contribution which remains unspent or is not committed for expenditure in accordance with the provisions of this Agreement and (the contributions shall be deemed to be expended if the County Council has properly entered into a contract for the expenditure of the contributions for the purpose which it is paid and which is reasonably likely to result in the fulfilment of that purpose) on the fifteenth (15th) anniversary of the date of receipt by the Council of the last instalment (where applicable) of such contribution together with interest accrued thereon (if any) at the Bank of England base rate from time to time for the period from the date of payment until the date of written request for refund.

3. The County Council covenants with the First Owner that following receipt of a written request to do so from a payer to repay to the payer up to 50% of the Cycle and Pedestrian Contribution and the Public Rights of Way Contribution that is unspent or that is not committed for expenditure in accordance with the provisions of this Agreement on the fifteenth (15th) anniversary of the date of receipt by the Council of the last instalment (where applicable) of such contribution together with interest accrued thereon (if any) at the Bank of England base rate from time to time for the period from the date of payment until the date of written request for refund.

4. The County Council covenants with the Second Owner to consult and liaise with the Second Owner in respect of the final design of the Castle Road (as in the definition of Highway Access Improvements Contributions) layout.

SCHEDULE 4
COUNCILS' COVENANTS

1. The Councils covenants as follows:

1.1 Within 30 (thirty) Working Days of receipt, or such other period as may be agreed with the Owners, to respond to the Detailed Biodiversity Mitigation and Compensation Strategy and confirm if it is agreed or refused.

1.2 Within 30 (thirty) Working Days of receipt, or such other period as may be agreed with the Owners, to respond to the Site Management Plan and confirm if it is agreed or refused.

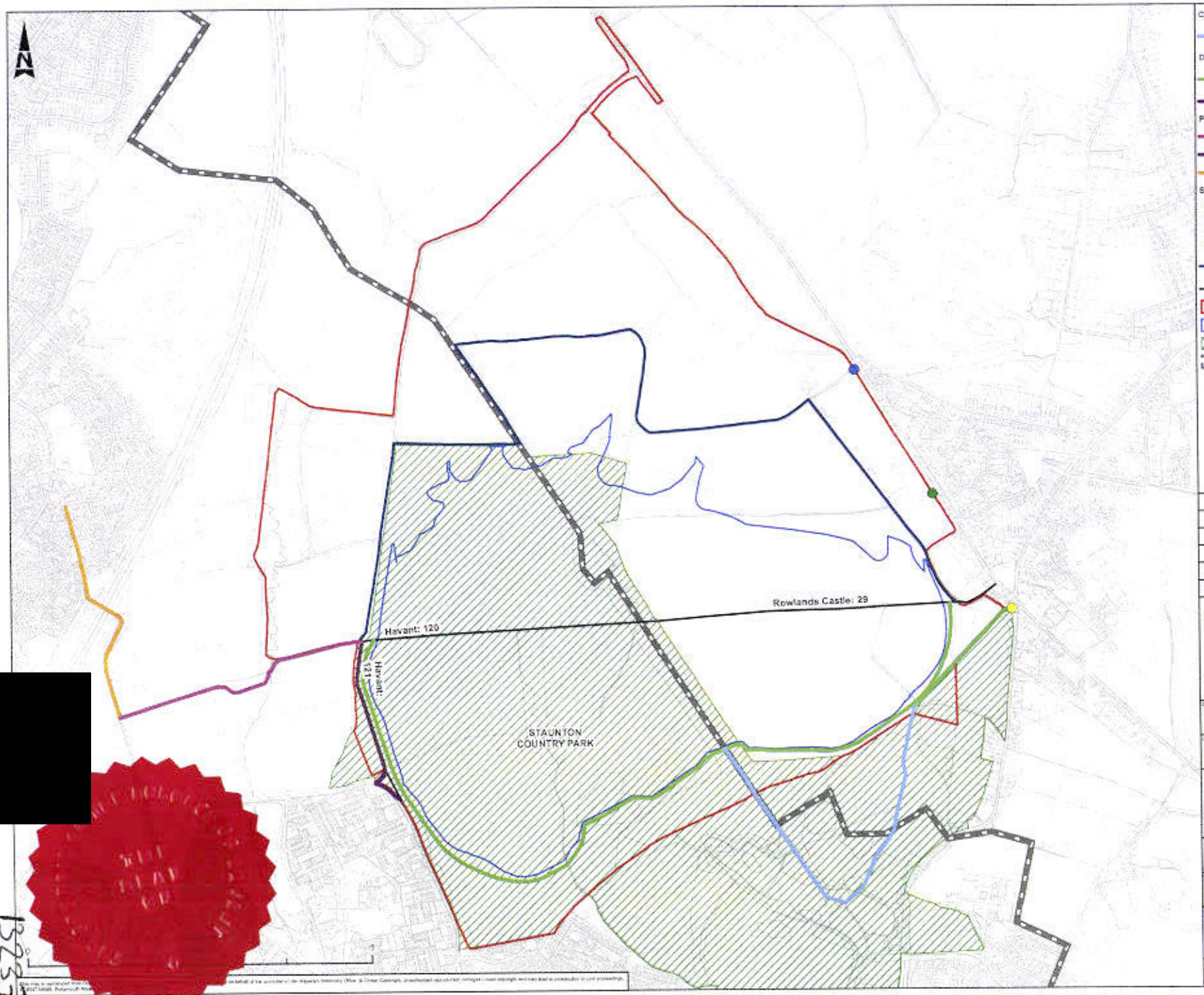
1.3 Within 30 (thirty) Working Days of receipt, or such other period as may be agreed with the Owners, to respond to each Framework LEMP and confirm if it is agreed or refused and for the avoidance of doubt this provision shall apply to each amendment to the Framework LEMP that is submitted by the Owners.

1.4 Within 30 (thirty) Working Days of receipt, or such other period as may be agreed with the First Owner, to respond to the details submitted by the First Owner pursuant to paragraph 2.2 of Schedule 1 and confirm if they are agreed or refused.

1.5 Within 30 (thirty) Working Days of receipt, or such other period as may be agreed with the First Owner, to respond to the details submitted by the First Owner pursuant to paragraph 2.4 of Schedule 1 confirm if they are agreed or refused.

1.6 To use the opportunities presented by the Development, at all stages, whether construction or Occupation to improve local employment and skills opportunities offered by this unique, "once in a lifetime development" for residents of HBC and EHDC.

APPENDIX 1
PLANS



Cycle and Pedestrian Contributions

- Agreed Cycle/Pedestrian Connections in Staunton Country park

Diverted Bridleway Contributions

- Diverted Bridleway Havant: 120/Rowlands Castle: 29
- Diverted Bridleway Havant: 121

Public Rights of Way Contributions

- Bridleway Havant: 120
- Bridleway Havant: 121
- Bridleway Havant: 123

Sustainable Access Contributions

- A1 Access 1 - B2149/Castle Road
- A2 Access 2 - B2149/Mallard Road
- A3 Access 3 - Whichers Gate
- Temporary Diversion of Bridleway Havant: 120/Rowlands Castle 29
- Existing Bridleways to be diverted
- Red Line Boundary
- Reservoir Footprint
- Staunton Country Park
- Local Authority Boundary

Rev	Drn By	Chkd By	Rev By	Appd By	Description	Date
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Drawing Title: S106 OBLIGATIONS - PUBLIC RIGHTS OF WAY AND SUSTAINABLE ACCESS

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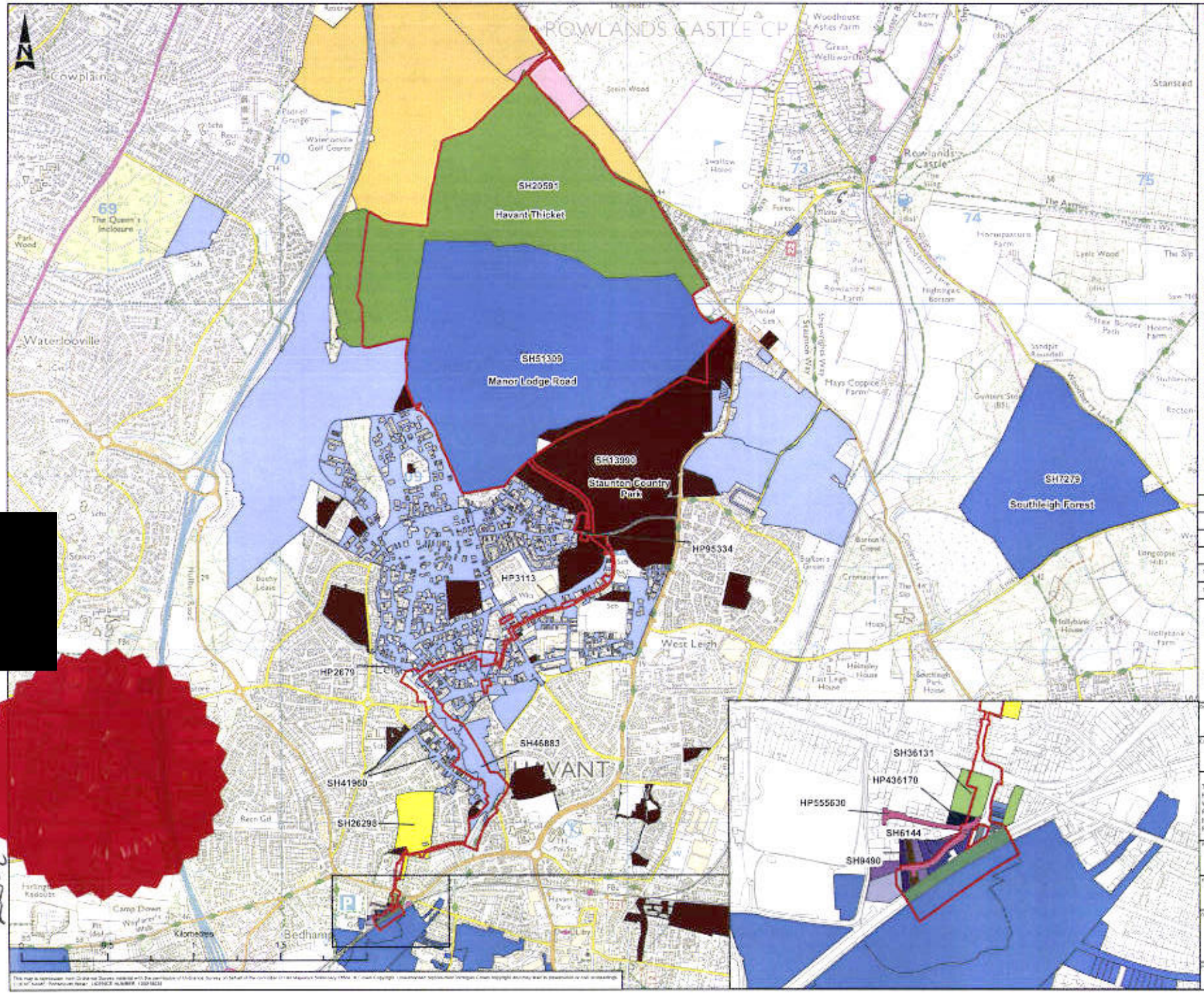

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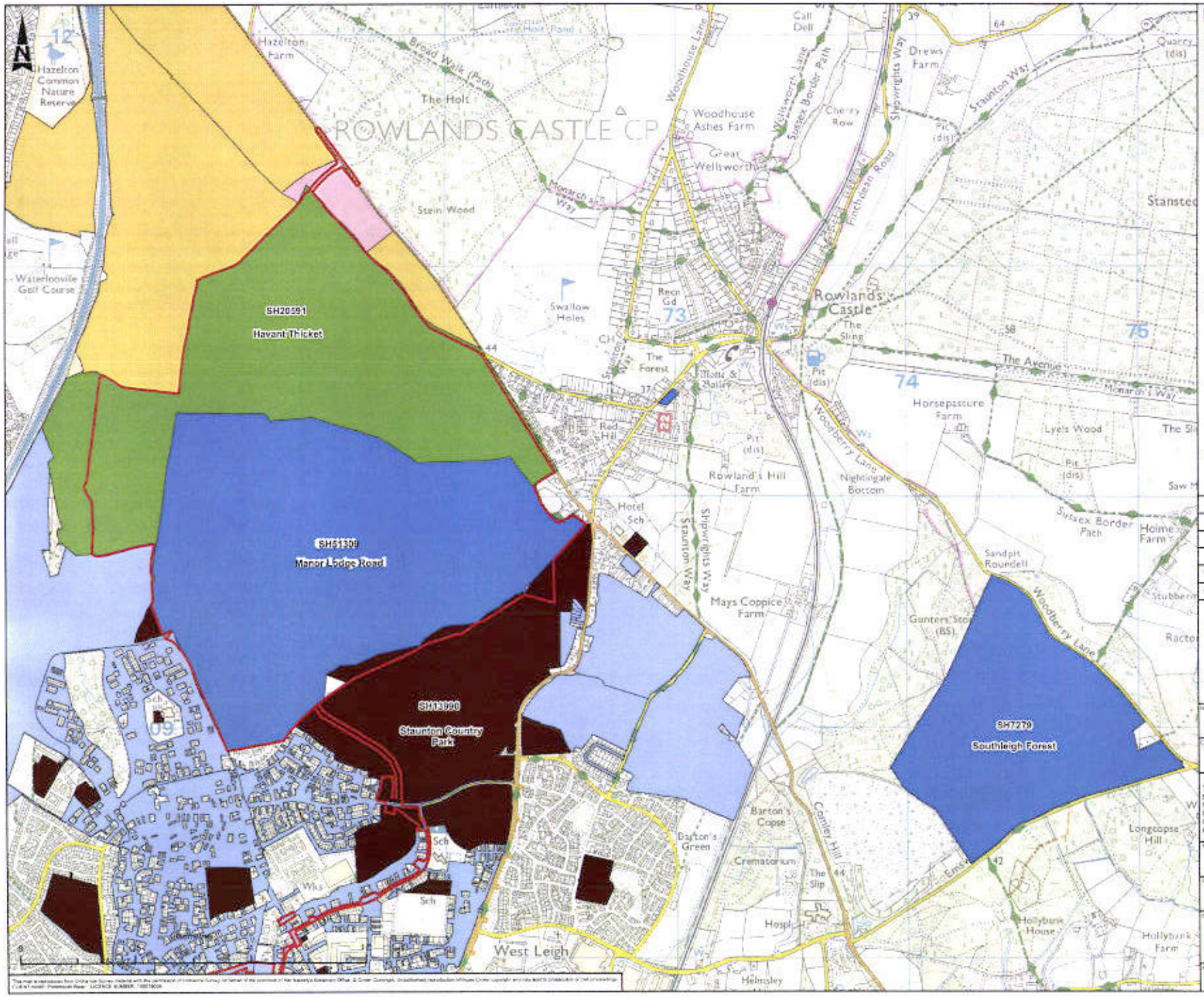

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Project Ref. No.	Sheet	Scale	Sheet Size
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Project Title: HAVANT THICKET RESERVOIR

Drawing Title: RESERVOIR LAND OWNER INFORMATION

Portsmouth Water Drawing Number: P01

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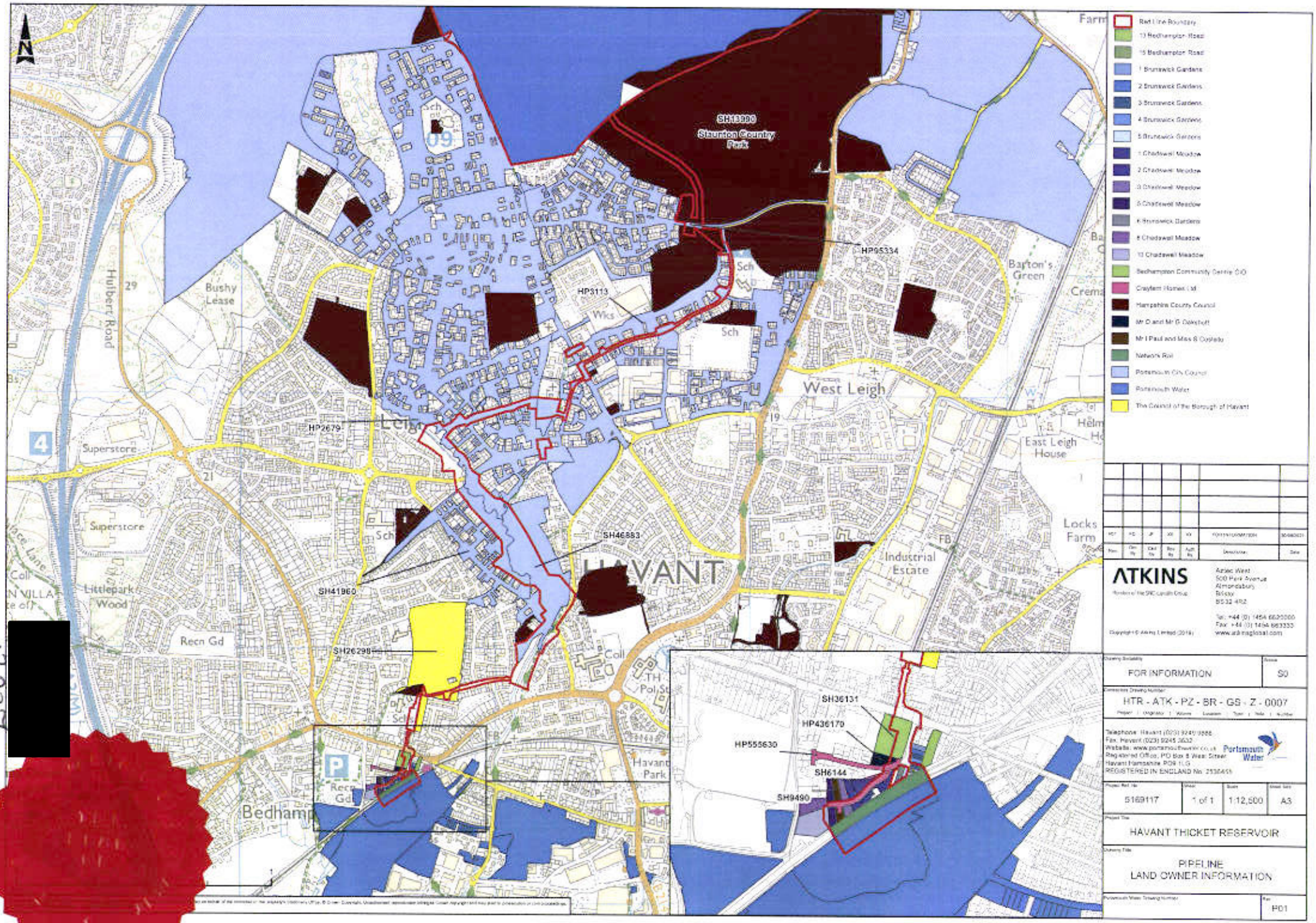

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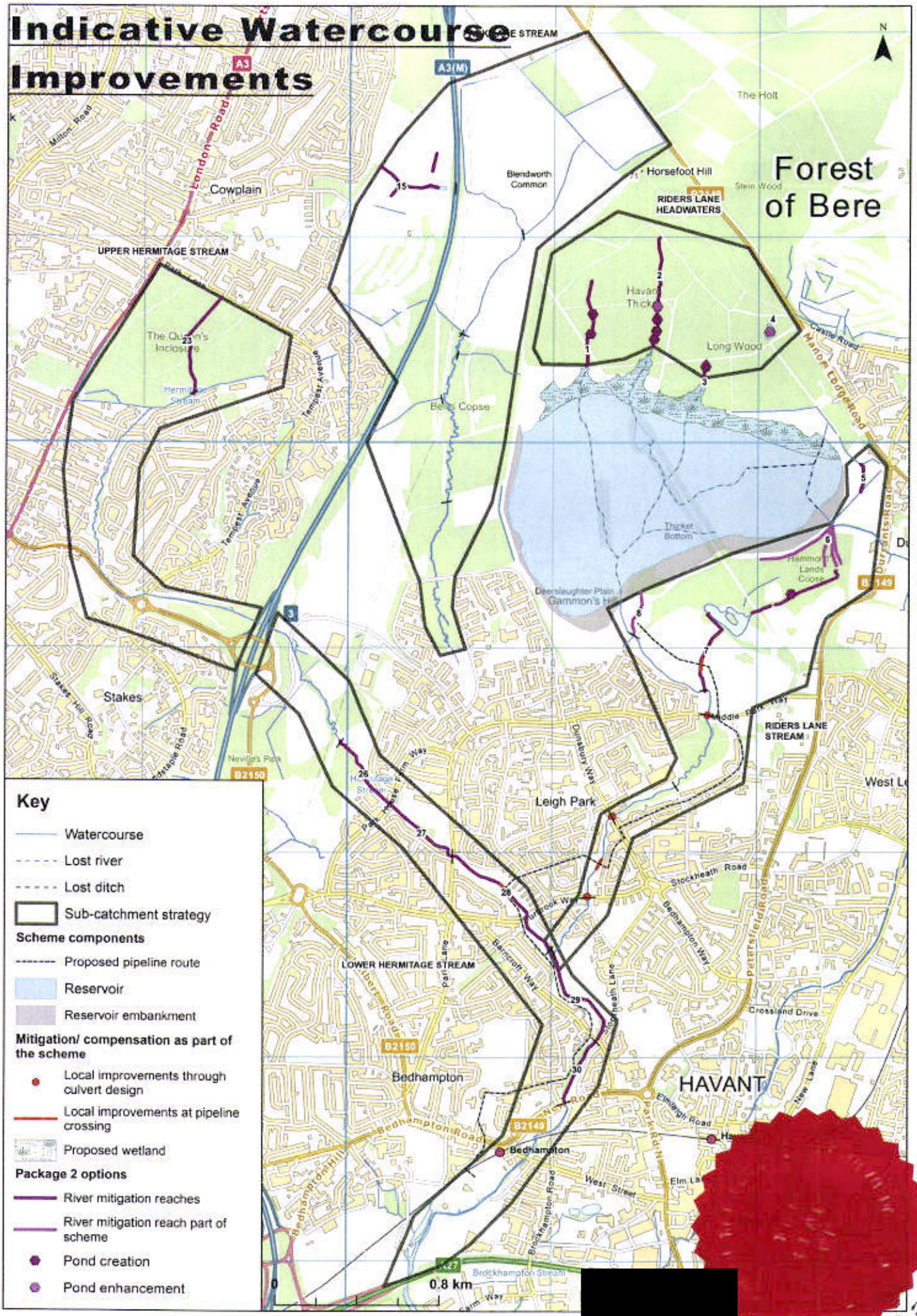
Indicative Watercourse Improvements



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APPENDIX 2
OUTLINE BIODIVERSITY MITIGATION AND COMPENSATION STRATEGY

ECOSA
Ecological Survey & Assessment
A Trinity Consultants Company

HAVANT THICKET RESERVOIR PROJECT

OUTLINE BIODIVERSITY MITIGATION AND COMPENSATION STRATEGY

Portsmouth Water

Final Document

September 2020

Preliminary Ecological Appraisals • Protected Species Surveys and Licensing • NVC • EcIA • HRA • Management Plans
Habitats • Badger • Bats • Hazel Dormouse • Birds • Reptiles • Amphibians • Invertebrates • Riparian and Aquatic Species

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ECOSA Quality Assurance Record

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HAVANT THICKET RESERVOIR PROJECT

OUTLINE BIODIVERSITY MITIGATION AND COMPENSATION STRATEGY

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1.0 INTRODUCTION

1.1 Background

Ecological Survey & Assessment Limited (ECOSA) have been appointed by Portsmouth Water to prepare an outline Biodiversity Mitigation and Compensation Strategy (BMCS) for the Havant Thicket Reservoir Project.

Ecological surveys undertaken between 2005-2009 and 2017-2020 have been used as the basis to support this outline BMCS (**Appendix 1**). The surveys included detailed habitat surveys, along with extensive surveys for bats, otter, water vole, badger, hazel dormouse, breeding birds, wintering birds, reptiles, great crested newt, terrestrial invertebrates and aquatic invertebrates. The results of these surveys were used to prepare ECOSA survey reports to inform an Environmental Statement (ES) Ecology Chapter prepared by Atkins[1] (Atkins, 2020c). The ES Ecology Chapter and this outline BMCS have been prepared to support a planning application for the development of a reservoir at the site.

Within this document where mention is made of 'the site' this refers to the main reservoir site (see **Appendix 1**). Where reference is made to the 'wider site' this relates to the ecological enhancement within Forestry England (FE) Havant Thicket woodland to the north and the connected Bell's Copse to the west of the site and Hampshire County Council's (HCC) Staunton Country Park (SCP) to the south. This area is depicted by the 'site boundary' area on **Appendix 1**. Where reference is made to the Hermitage Stream this relates to the Hermitage Stream Waterbody, which comprises the stream corridor to the south of the site.

Appendix 1 includes details of the key features within the site and surrounding area, including the location of woodland blocks referenced throughout this document.

Off-site mitigation areas are also discussed within this document comprising Southleigh Forest which lies to the east of the site and options for mitigation land being developed by Hampshire and Isle of Wight Wildlife Trust (HIWWT).

The surveys undertaken to date have identified the likely absence of otter and water vole from the site and therefore these species are not considered further in this strategy.

This strategy has been prepared using data and wording from reports prepared by ECOSA for Portsmouth Water, and an Atkins Technical Note outlining the ecological mitigation and compensation strategy (Atkins, 2020). Extensive consultation with Natural England, the Environment Agency, Forestry England and the Local Planning

[1] The Atkins ES Chapter includes the ECOSA ecological survey reports as appendices.

Authority ecologist have also been undertaken between 2018 and 2020 to design appropriate mitigation and compensation.

1.2 The Site

The site is located on the northern edge of Havant in Hampshire, centred on National Grid Reference (NGR) SU 715 097 (**Appendix 1**).

The site is situated within a mixed urban and suburban setting with dense residential development to the south and south-west (Leigh Park and Warren Park). The A3(M) road runs parallel (north/south) to the site approximately 500 metres to its west. To the north, woodland (Havant Thicket) and pasture extend northwards with a mix of arable, pasture and woodland located to the north-east. To the east of the site lies a low-density residential area known as Rowland's Castle, beyond which lie Stansted Park Estate and Southleigh Forest located just within the Sussex county boundary.

The site covers an area of approximately 164 hectares, with a reservoir footprint area of approximately 106 hectares. The land within the site comprises predominantly open pasture, small woodland blocks, hedgerows, and ditches and includes a central spur of woodland referred to as The Avenue. The habitat baseline for the site is presented in **Map 2**.

Forestry England (FE) own Havant Thicket, located to the north of the reservoir, this area consists of approximately 99 hectares of predominately pine woodland. The habitat baseline for Havant Thicket woodland is presented in **Map 3**. The majority of the wider site is located within the FE land associated with Havant Thicket woodland. Part of Staunton Country Park (SCP) is located to the south of the site, comprising parkland and woodland covering approximately 63 hectares.

1.3 Aims and Scope of Report

This document provides a framework for the biodiversity mitigation and compensation strategy for the site to support the reservoir planning application. It is envisaged that a more detailed costed management plan will be devised as part of the post-planning work, to be secured through an S106 agreement and planning condition.

It should be noted that a separate Biodiversity Metric calculation is being prepared for the site by Atkins and Portsmouth Water (Atkins, 2020d) to outline the Biodiversity Net Gain delivered by the proposals (Natural England, 2019), and included in this report at **Appendix 5**. The Biodiversity Net Gain assessment has been included within this document as a result, details of Biodiversity Net Gain have not been included within the report text, although objectives for habitat management at the site have considered the DEFRA biodiversity metric requirements.

1.4 Site Proposals

Portsmouth Water plan to construct a winter storage reservoir, Havant Thicket Reservoir, for public water supply in the centre of the site. The extent of the development is proposed to be approximately 1.6 kilometres from east to west and 800 metres from north to south with a storage capacity of approximately 8,700 million litres.

The approximate time frames of the pre-construction, construction and operational phases covered by this plan are shown in **Table 1**. A separate long-term management strategy will be developed separately to deliver the on-going site management works.

Table 1: Development timescales

Phase	Timescale	Years
Pre-construction	3 year	-3 to 0
Construction and filling	8 years	1-9
Post-construction	5 years	10-14

2.0 MITIGATION AND COMPENSATION PLAN OBJECTIVES

2.1 Introduction

This section provides an overview of the objectives of the outline BMCS for the site.

2.2 Overview of Mitigation and Compensation Plan Objectives

Ecological impacts associated with the reservoir will be mitigated and compensated for through a variety of habitat enhancements and creation, on-site, within the wider site and off-site through:

- Creation of up to 80 hectares of new wood pasture through a partnership with HIWWT;
- Up to 52 hectares of habitat creation / restoration within the site / wider site, inclusive of work in Havant Thicket woodland;
- Up to 75 hectares of habitat restoration within Southleigh Forest; and
- A Capital Grants Scheme to provide funding to study and enhance biodiversity locally.

Key impacts are related to the loss of woodland, including ancient woodland, and associated impacts on hazel dormice and roosting, foraging and commuting bat species, especially Bechstein's bat.

The outline BMCS for the project is based on the following core elements:

- Create an environmentally led design based on the mitigation hierarchy approach of avoid, minimise, or compensate. As far as practical, compensation will be provided within the site and wider site for the key impacts;
- Ensure appropriate mitigation and compensation is implemented for protected and notable species. European Protected Species licences will be obtained where required;
- Create a mosaic of new and high-quality habitats on the site, including a new open waterbody with a retained wetland offering variable water depths, a variety of vegetation types and islands for added habitat complexity and to act as for roosting and nesting sites for birds;
- Enhance land and environment management for biodiversity on the wider site through collaboration with Forestry England and Hampshire County Council and including a long-term site management plan;
- Restoration and creation of off-site high biodiversity value habitats through partnership with HIWWT and ecological restoration of Southleigh Forest;
- Work with the Environment Agency to identify and deliver a reasonable level of habitat mitigation required to offset the impacts of the development on the

waterbody (Expected to be delivered through a catchment partnership approach); and

- Support others to enhance and study existing habitats offsite through provision of a Capital Grants Scheme.

2.3 Structure of the Mitigation and Compensation Plan

The habitat mitigation and compensation prescriptions for the site are provided within Section 3.0, with species specific mitigation and compensation measures detailed in Section 4.0.

The main habitat types which are the focus of this plan are woodland and scattered broadleaved trees, hedgerows, semi-improved grassland, wetland, small headwater watercourses and standing water. Each of these habitat types are detailed individually within Section 3.0.

Biodiversity Net Gain has been dealt with as a separate report prepared by Atkins (see **Appendix 5**). As a result, the outline BMCS does not provide a detailed breakdown of habitat loss and gains as this is provided as part of the Biodiversity Net Gain Assessment. The outline BMCS does include an assessment of the losses and gains in relation to habitats suitable for particular species and species group. This is dealt with generally in the text and in more detail in **Appendix 4.**

3.0 HABITAT-SPECIFIC MITIGATION AND COMPENSATION

3.1 Introduction

This section provides an overview of the habitat-specific mitigation and compensation. It also provides and overview of the habitat management works proposed in Havant Thicket woodland. Locations of on-site pre-development habitat areas are shown in **Map 2** and those in Havant Thicket woodland are shown in **Map 3**.

3.2 Woodland

The site contains seven woodland blocks that are currently included on the Ancient Woodland Inventory (AWI) as Ancient Woodland, all of which are designated as Sites of Importance for Nature Conservation (SINCs).

- The Avenue is semi-natural ancient woodland (6.68 hectares of which 6.16 hectares are to be lost). 18 veteran trees are located within The Avenue, of which 17 will be lost and one will be retained.
- Corsican Pine Plantation is a Plantation on an Ancient Woodland Site (PAWS) (3.31 of which 2.21 hectares to be lost and 1.1 hectares to be modified).
- Middle Clearing is an oak plantation (entire wood of 2.17 hectares to be lost).
- Round Wood is oak plantation (1.99 hectares of which 1.39 hectares to be lost).
- Cabbagefield Row (1.17 hectares retained), semi-natural ancient woodland.
- Staunton Country Park, Portsmouth Water owned, semi-natural ancient woodland (5.44 hectares retained) and
- A small woodland area along streams in Havant Thicket woodland to be lost (0.652 hectares).

In addition, 1.12 hectares of willow tree lines along watercourses will be lost as part of the proposals.

3.2.1 Mitigation

As far as is possible boundary woodland will be protected through incorporation of a 15 metre buffer between construction activities and the woodland edge. Habitat within the site which are not affected by construction will be protected in line with BS 5837:2012 *Trees in Relation to Design, Demolition and Construction – recommendations* (British Standards Institution, 2012).

3.2.2 Compensation

Large-scale habitat restoration will be undertaken within Havant Thicket woodland, Bell's Copse and on Portsmouth Water owned land in SCP. The total wider-site enhancement / creation area is approximately 57 hectares of woodland through

creation of a mosaic of habitats. Creation of mosaic woodland habitats within the site has been undertaken as advanced works within the south-west and north-east corners of the site (**Map 4**). These areas are:

- Phase 1: Gipsies Plain (north-east corner) - 0.76 hectares lowland mixed deciduous woodland and 0.74 hectares wood pasture / parkland
- Phase 2: Deerslaughter Plain (south west corner) - 1.38 hectares lowland mixed deciduous woodland and 1.1 hectares wood pasture / parkland

In addition, there will be small areas of additional on-site woodland creation totalling 0.30 hectares (see **Map 4**).

A number of retained woodland areas within the site will be enhanced. The management of these areas will comprise a mixture of coppicing, glade creation and other techniques to increase habitat diversity. The five areas associated with this work comprise:

- Cabbagefield Row – 1.17 hectares
- Retained area of Round Wood – 0.58 hectares
- Woodland at the base of The Avenue 5.44 hectares
- Swanmore Road shelterbelt – 0.66 hectares

The Corsican Pine Plantation will be felled and replanted with alder and willow to create wet woodland where the landform allows (1.66 hectares).

Compensation for loss of veteran trees from The Avenue will include veteranisation of retained trees through measures such as artificial creation of woodpecker holes, creating broken branches on trees, artificially damaging trunks and creating areas for rot to begin through chainsawing into trunk (Woodland Trust, 2014). Other measures such as moving deadwood and ring barking non-native trees, such as Turkey oak, to create standing dead wood will also be undertaken.

Three areas of woodland creation and enhancement works will be developed in Havant Thicket woodland comprising broadleaved woodland creation, management of hazel coppice and diversification of birch dominated area. Further details of these works are presented below and areas shown in **Map 5**.

4.07 hectares of broadleaved woodland planting will be delivered through clearance of pine plantation in Havant Thicket woodland. Broadleaved species planting will include pedunculate oak, yew, holly, honeysuckle, birch and hazel. On **Map 5** these areas are referenced as 'Conifer Clearfell Areas', FE Compartment 6508B and 6507D.

3.87 hectares of Bell's Copse will be managed through a coppice rotation to diversify the age structure of hazel within this area. On **Map 5** this area is referenced as 'Bell's Copse Woodland Management Area', FE Compartment 6501B.

Within Havant Thicket woodland creation of racks through birch dominated woodland to either encourage existing broadleaved trees or plant new broadleaved woodland to diversify woodland. Including clearing halos around young trees such oak, hazel and hornbeam to speed up the development of broadleaved woodland. The area covered by the management of birch dominated areas is 28.7 hectares. On **Map 5** these areas are referenced as 'Birch Dominated Compensation Areas'.

An area of powerline wayleave in Bell's Copse will also be brought into positive ecological management comprising regular mowing and rotational scrub management introduced to create a mosaic of habitats and more graded edge to the woodland. This will compensate for the loss of willow tree lines within the site. This area covers 3.41 hectares and is not included in the woodland creation / enhancement area calculation referenced above. On **Map 5** this area is referenced as 'Grassland/Scrub Mosaic Management Area', FE Compartment 6501A.

A partnership with HIWWT will be developed to deliver 80 hectares of wood pasture, the location of this area is currently still in discussion, and will be subject to land availability. The project will be delivered as one large unit of land of possible, but if that is not, smaller parcels of land will be acquired, ideally next to existing parcels of woodland.

Southleigh Forest, which is part of Portsmouth Water's landholding is a ~75 hectare pine plantation will be brought into positive ecological management. A detailed management plan will be prepared for the woodland to include the gradual felling of pine woodland and replacement with lowland mixed deciduous woodland and wood pasture.

3.3 Scattered Broadleaved Trees

A total of 29 broadleaved trees, dominated by pedunculate oak, are scattered across the on-site grassland. There are also a number of willow species treelines associated with the on-site ephemeral streams. All the 29 scattered broadleaved trees and the majority of the willow tree lines will be lost under the footprint of the reservoir.

3.3.1 Mitigation

Willow scrub will be retained along the north-eastern boundary of the site and Havant Thicket woodland. As these are not affected by construction, they will be protected in line with BS 5837:2012 *Trees in Relation to Design, Demolition and Construction – recommendations* (British Standards Institution, 2012).

3.3.2 Compensation

As an enhancement measure, a total of 142 standard broadleaved trees have been planted within the combined Gipsies and Deerslaughter plain (Phase 1 and Phase 2 areas, see Paragraph 4.2.2 for details).

3.4 Hedgerows

Hedgerows are present along the boundary of Gipsies Plain on the eastern edge of the site.

3.4.1 Mitigation

The hedgerow habitat will be protected in line with BS 5837:2012 *Trees in Relation to Design, Demolition and Construction – recommendations* (British Standards Institution, 2012). No compensation is required as no hedgerows will be lost.

3.4.2 Enhancement

The current hedgerows on site were strengthened and enhanced in 2018 through the planting of native species to increase biodiversity at the site. This area is located with the Phase 1 planting area and is shown in detail within **Map 10**.

3.5 Semi-Improved Grassland

The site comprises a mosaic of semi-improved grassland including dry neutral to acid grassland (50.55 hectares), damp to wet grassland and rush pastures (86.25 hectares) and species-poor rush pasture (5.15 hectares). The majority of these areas will be lost as a result of the development of the reservoir (139 hectares in total).

3.5.1 Mitigation

Grassland habitat present within the on-site Phase 1 and Phase 2 advance planting areas will fall under the tree protection requirements as per Paragraph 3.2.1.

3.5.2 Compensation

The total site, wider site and off-site enhancement / creation and off-site semi-improved grassland compensation is 52.88 hectares. The focus of semi-improved grassland areas will be to increase species diversity and introduce a grazing regime to deliver long-term stability in grassland quality. Neutral grassland will be created or enhanced in the following locations:

- On-site: Phase 1 and Phase 2 advance planting areas (1.63 hectares) - enhanced
- On-site: Outer reservoir embankment (15.83 hectares) - created
- On-site: Around reservoir (15.42 hectares) – created / enhanced
- Off-site: Partnership with HIWWT (20 hectares) – enhanced / created

Parcels of acid grassland will also be developed through the habitat management works in Havant Thicket woodland, as per Paragraph 3.2.2.

3.6 Wetland

The site includes 1.21 hectares of the Habitat of Principal Importance Purple Moor Grass and Rush Pasture which will be lost under the footprint of the reservoir. The existing soils and hydrological status of Havant Thicket woodland is conducive to the compensation for the loss of Purple Moor Grass and Rush Pasture. Previous forestry clearance has resulted in the development of heath and mire communities that conform to Purple Moor Grass and Rush Pasture.

3.6.1 Compensation

It is proposed that heather (or other natural material) dams are placed at appropriate locations agreed with Forestry England along stream corridors within Havant Thicket woodland to create areas of localised flooding as flow is inhibited and held back behind the dam. This will re-wet localised areas as part of habitat restoration works for Purple Moor Grass and Rush Pasture habitat in Havant Thicket woodland. These areas will be within the 'Stream Corridor Enhancement Area' shown in **Map 5**.

Species poor marshy grassland and neutral grassland habitat will be enhanced to Purple Moor Grass and Rush Pasture through the drainage design proposed in the south-west corner of the site. This area is labelled as 'Retained Species Poor Rush Pasture to be Enhanced to Priority Habitat: Purple Moor Grass Rush Pasture' on **Map 4** and covers an area of 1.28 hectares.

Within Havant Thicket woodland 2.22 hectares of Forest Meadow will be created through clearance of young birch trees which have regenerated in previous clear fell / heathland areas to create permanent open space. Sward will be left to develop naturally into a Purple Moor Grass and Rush Pasture and scrub mosaic suitable for a variety of notable plant species. On **Map 5** these areas are referenced as 'Forest Meadow Creation', FE Compartment 6508A and 6502A.

3.6.2 Enhancement

A further 10.2 hectares of wetland with semi-natural freshwater habitat associated with the northern edge of the reservoir will be created. Within this area 3.4 hectares of reedbed will be created along the northern edge of the reservoir. The areas with created reedbed and wetland vegetation are marked as 'Wetland Area with Retained Wet Woodland Fringes' shown on **Map 4**.

An area of Shoreline Ephemeral Shallows vegetation will be left to develop naturally on the north-east corner of the reservoir (see **Map 4**). This habitat covers an area of 1.68 hectares.

3.7 Watercourses

There are three ephemeral watercourses that start within the Havant Thicket woodland and drain south across the site. Where not shaded by trees, these features support marshy vegetation. Furthermore, aquatic invertebrate surveys have identified a number of notable species within the on-site watercourses. The loss of the approximately 3.7 kilometres of these watercourses creates a possible deterioration at a waterbody scale of the ecological status or potential of the Hermitage Stream Water Framework Directive (WFD) waterbody. Future revisions of the outline BMCS will provide the required detail for the Water Framework Directive Article 4.7 derogation which is being sought and discussed with the Environment Agency and Local Planning Authority.

3.7.1 Mitigation

Notable plants recorded in the on-site watercourses and ditches will be translocated into suitable wider-site habitats within Havant Thicket, Bell's Copse and SCP. The translocation will involve only a small number of individuals rather than entire populations, species subject to translocation will comprise ragged-robin, marsh pennywort and marsh St. John's wort.

3.7.2 Compensation

An overall package of compensation and enhancement works to develop the appropriate level of compensation for impacts on watercourses is being designed by Portsmouth Water in consultation with the Environment Agency. Further details are provided in Paragraph 4.9.3.

Existing watercourses within Havant Thicket will enter positive ecological management through the removal of trees from sections to allow light to reach the watercourse and increase species diversity. There will be a graded scrub and woodland edge to these habitats. The area covered by these works covers 1.12 hectares.

A section of watercourse will also be created on the southern edge of the embankment. this area is referenced as 'Created Stream' on **Map 4** (250 metres in length) The design of this stream will be subject to a separate detailed design plan. Overarching aims for the watercourse will be to provide a natural stream corridor with gently sloping vegetated banks.

3.8 Standing Water

The Upper Lake, approximately 0.65 hectares in size, is present at the northern end of The Avenue. A second pond in Havant Thicket woodland, approximately 0.016 hectares in size, is located within the high-water level boundary of the proposed wetland.

3.8.1 *Mitigation*

Where practical, notable plants recorded in the on-site standing water will be translocated into suitable wider-site habitats within Havant Thicket, Bell's Copse and SCP. The translocation will involve only a small number of individuals rather than entire populations, species subject to translocation will comprise marsh St. John's wort and creeping forget-me-not.

3.8.2 *Compensation and Enhancement*

Pond 16 is below the high water mark in Havant Thicket woodland and will be enhanced as part of the proposed wetland (see **Appendix 1**). This may include the removal of vegetation surrounding the pond to allow light to enter and increase riparian vegetation. The area covered by this pond covers 0.02 hectares.

Further ponds within Havant Thicket woodland will be enhanced through removal of conifers around these features to allow light to enter areas and increase riparian vegetation (1.57 hectares). This will provide compensation for loss of notable plants in Upper Lake (The Avenue) as these ponds are suitable receptor sites for marsh St. John's wort and creeping forget-me-not, which are the species to be translocated. Pond enhancement works will be undertaken in advance of translocation of plants from Upper Lake.

Two ponds have been created in the Gipsies Plain ecological corridor totalling 0.004 hectares.

The creation of Havant Thicket Reservoir will create 106 hectares of open water. The northern edge of the reservoir will be managed for nature conservation (see Paragraph 3.6.2 for further details).

4.0 SPECIES-SPECIFIC MITIGATION AND COMPENSATION

4.1 Introduction

This section provides an overview of the species-specific baseline, mitigation and compensation measures. The areas of habitat lost includes permanent loss beneath the footprint of the reservoir, and temporary loss of habitats outside the reservoir footprint during the construction phase.

It should be noted that the mitigation and compensation measures for European Protected Species (bats, hazel dormouse and great crested newt) may be varied through Natural England European Protected Species Mitigation (EPSM) licence process. Where this occurs the BMCS will be updated accordingly.

As an overarching requirement for the mitigation and compensation an Ecological Clerk of Works (ECoW) will be employed to oversee the protected species works.

An overview of the suitable habitat loss within the site and compensatory habitat works is presented in **Appendix 4**.

4.2 Bats

4.2.1 Baseline and Habitat Loss

Between 2008 and 2018 a total of at least thirteen species have been recorded including rarer species such as barbastelle and Bechstein's bat.

The site contains four small woodland areas with suitability to support roosting bats, Middle Clearing, Round Wood, The Corsican Pine Plantation and The Avenue. Additional habitat with suitability for bats is present within SCP to the south of the site and Havant Thicket Woodland to the north of the site.

Between 2008-2018 the following bat roosts were recorded within the site; four Bechstein's bat day roosts, one Bechstein's bat night roost, one Natterer's bat day roost, two maternity roosts and six day/night roosts of brown long-eared bat. The brown long-eared bat maternity roosts were not recorded concurrently and are considered to be same roost.

Given the woodland present, a small number of other lower status roosts of these species and of common pipistrelle, soprano pipistrelle and *Myotis* bat species may be present on site. These may include day / night roosts and hibernation roosts.

Further roosts were recorded off-site including a maternity roost of Bechstein's bat in SCP which was recorded in 2008. Additional surveys undertaken by ECOSA and other ecological consultants in SCP in 2009, 2016 and 2018 have not recorded this or any

other Bechstein's bat maternity roosts in this location. Other notable bat roosts in the local landscape included common pipistrelle and whiskered bat maternity roosts in nearby buildings, and brown long-eared bat and Natterer's bat maternity roosts in trees within SCP.

Habitats lost with suitability for bats comprise:

- 6.16 hectares of lowland mixed deciduous woodland
- 3.57 hectares of broadleaved woodland
- 3.31 hectares of pine plantation
- 1.27 hectares of willow / blackthorn scrub
- 138.78 hectares of grassland;
- 0.65 of secondary woodland associated with high water mark;
- 0.65 hectares of pond

Overall, there will be an approximate loss of 156 hectares of bat foraging habitat and approximately 13 hectares[2] of roosting habitat.

4.2.2 *Mitigation*

Wherever possible boundary woodland will be protected through incorporation of a 15 metre buffer between construction activities and the woodland edge. Habitat within the site which are not affected by construction will be protected in line with BS 5837:2012 *Trees in Relation to Design, Demolition and Construction – recommendations* (British Standards Institution, 2012).

Works will be undertaken in accordance with a Natural England European Protected Species Licence (EPSM). It is proposed that the bat licence will cover the destruction of roost sites, disturbance and capture of a maximum of 50 brown long-eared bat, 20 Bechstein's bat, 10 Natterer's bat, 10 other *Myotis* bat species[3], 20 common pipistrelle and 10 soprano pipistrelle. In addition, five individuals of other *Vespertilionidae* bat species[4], comprising either barbastelle or noctule are included.

Woodland clearance works of trees with bat roost suitability, will be timed to occur when bats are less susceptible to disturbance or breeding, and will also consider the mitigation requirements of other protected species, especially hazel dormouse and breeding birds. This will result in works to trees with bat roost suitability being undertaken in March and / or September-October.

[2] It should be noted that a small proportion of the woodland habitat to be lost is not suitable for roosting bats, particularly the willow tree lines within the site and the birch scrub associated with the reservoir high water mark in Havant Thicket.
[3] There are seven species of *Myotis* bats in Britain. Myotis bats are very difficult to identify specifically, this can generally only be done by examination of physical features and Phylogenetic Analysis Identification of bat droppings. Many of these bats are common and will utilise buildings for roosting often occupying small and inaccessible voids.
[4] All UK bat species apart from lesser horseshoe and greater horseshoe.

All medium and high suitability trees with potential bat roosting features will be inspected by a bat licenced ecologist and then sectionally felled. The location of medium and high suitability trees has been identified in the recently completed Ground Level Tree Assessment (ECS, 2020). ~30 roost feature will be moved to an off-site tree and strapped to a limb to retain suitable roosting resources within the local landscape. If bats are present within the feature when felling occurs (or conclusive evidence could not be confirmed), these limbs should be carefully removed and lowered to the ground and left overnight leaving the roost feature facing upwards, to allow any bats present to leave of their own accord, before the limb is strapped to an off-site tree.

In an attempt to encourage a stable maternity colony of Bechstein's bat to roost close to but not within the site a small number of bat boxes (three Schwegler 1FW and eight Schwegler 2FNs) known to be suitable for this species[5] were erected in May 2018 within woodland which will be retained to the north and south of the site.

During the construction phases of the development, the retained woody vegetation on-site and along the boundaries of the site will be protected by Heras fencing (or similar). There will be no access to these areas by machinery or site contractors and these areas will not be used for storage. There will be no construction access to these areas for the duration of the development works. Where possible suitable bat roost features will be identified within retained trees located close to construction works, where these are identified a larger buffer to construction will be considered.

It is not expected that lighting would operate overnight, but it may do on occasion. Lighting will comprise hooded luminaires directed away from vegetation and or low level bollard lighting particularly the boundary hedgerows and treelines. Ideally the bulbs will be LED and at the warmer end of the spectrum (e.g. avoiding blue or white light). LED lights emit much lower levels of UV and therefore have a lower impact on bats. The new lighting will be task related, associated with the visitor centre and associated car park. The lux level will be as low as possible to allow the task to be carried out safely and effectively. Guidance on task related lighting levels and mitigation options as described within the Bats and Artificial Lighting in the UK report will be followed (Institution of Lighting Professionals, Bat Conservation Trust, 2018).

4.2.3 Compensation

In order to provide compensation for the loss of the commuting corridor provided by The Avenue a 50 metre wide by 300 metre long native woodland linkage with associated ponds has been planted between Havant Thicket and SCP in the east of the site (see **Map 7**). This includes planting three metre high standards as well as smaller shrub understorey species to ensure the new woodland is functional as a

[5] Both boxes used by Bechstein's bat in Dorset (J. Stobart per comms).

commuting corridor immediately, as it will effectively resemble a 50 metre wide hedge /scrub belt in the early years. The defunct hedgerows in this area will also be bolstered with native species planting to further improve habitat connectivity in the east of the site.

The creation of on-site mosaic of habitats, 10.2 hectares wetland, 36.71 hectares grassland, 3.77 hectares woodland/parkland planting, 106 hectares open water will provide foraging habitats for bats and enhancement of 0.37 hectares of willow scrub.

On the west side of the site the existing woodland fringe will be widened and native species blocks of woodland will be planted within the grassland to provide a suitable mosaic of habitats for commuting and foraging, in an area where there is currently very little bat activity. The new woodland in the south-west of the site was planted in early 2020.

Top provide interim roosting opportunities, in advance of clearance works wooden bat boxes with suitability for a variety of species will be erected within three kilometres of the site in SCP, Havant Thicket and / or Southleigh Forest. A single box will be provided for each moderate or high roost suitability tree removed. The boxes will be erected in locations where sufficient foraging habitat is present in the vicinity of the boxes.

Due to their age structure Havant Thicket woodland has fewer natural roost features suitable for maternity roosts, but some value for foraging. Providing bat boxes will significantly increase the carrying capacity for roosting bats of these woodland areas within the range of the Bechstein's bat and brown long-eared bat maternity colonies recorded on or in the vicinity of the site.

A programme of woodland management in Havant Thicket will improve the foraging value of this area north of the site. Those compensation measures which will benefit bats are provided in **Table 2** and shown on **Map 7**. The works will restore broad leaved woodland, provide an extensive network of ecological corridors through the woodland (including along stream edges), and create a more diverse mosaic of habitats, all of which will be beneficial for bats creating a more diverse and enhanced foraging habitat.

Table 2: Compensation works in Havant Thicket woodland with benefits for bats

Management Area	Description	Area (ha)	Availability	Species Compensation
Forest Meadow	Clearance of young birch trees which have regenerated in previous clear fell areas to create permanent open space	2.22	Short, medium and long-term suitability for foraging bats, especially edge feeding species	Bechstein's bat, Natterer's bat and other commoner species
Clear-fell Areas	Felling and clearance of pine plantations, subsequent planting of native broadleaved trees	4.07	Short, medium and long-term suitability for a variety of bats	Short term suitability for species with a preference for open habitat such as noctule and serotine, long term suitability for woodland species including Bechstein's bat and brown long-eared bat
Woodland stream enhancement	Opening up of stream corridors, with graded edge	1.12	Short, medium and long-term suitability for a variety of bat species	Bechstein's bat, Natterer's bat and other commoner species
Priority Ecological Corridors along existing rides	Create graded edges to existing ride network, providing enhanced reptile habitat	9.62	Short, medium and long-term suitability for a variety of bat species	Bechstein's bat, Natterer's bat and other commoner species
Pond Enhancements	Conifers around Forestry England ponds removed allow light to enter area.	1.57	Short, medium and long-term suitability for a variety of bat species	Bechstein's bat, Natterer's bat and other commoner species
Management of birch dominated areas	Creation of racks through birch dominated woodland to either encourage existing broadleaved tree or plant new broadleaved woodland (leaving some unplanted clearings)	28.7	Short term suitability for foraging bats associated with edge habitat, Medium to long-term suitability for woodland bats.	Brown long-eared bat, Bechstein's bat, Natterer's bat and various other species
Bells Copse Woodland Management	This oak-hazel woodland will be managed on a long-term hazel coppice rotation	3.87	Medium and long-term habitat improvement	Brown long-eared bat, Bechstein's bat, Natterer's bat and various other species
Grassland / Scrub Mosaic Management Area	Rotational management o f grassland and scrub along wayleave	3.41	Short, medium and long-term habitat improvement	Brown long-eared bat, Bechstein's bat, Natterer's bat and various other species

The management of extremely dense birch dominated areas within Havant Thicket will make these formerly inaccessible areas accessible for foraging bats. The birch removal will provide 28.7 hectares of newly accessible habitat for woodland bats, particularly brown long-eared bat and Bechstein's bat, partially compensating for the on-site woodland loss.

It is unlikely that the proposed compensation within the site will entirely off-set the loss of foraging habitat for bats, therefore off-site compensation will be delivered as part of a series of works comprising three main elements:

Habitat enhancements within the wider-site, in Havant Thicket woodland and Bell's Copse will compensate for loss of habitats (51.97ha, see **Table 2**).

Further enhancement beyond the required compensation works will be provided through the restoration of Southleigh Forest, a 75-hectare area mixed woodland, with conifer and oak plantation. The management work in this woodland will provide a short-term benefit to foraging bats by opening up this woodland, creating edge habitat and diversifying the niches available to bats. Bat boxes will also be erected in Southleigh Forest to increase the initial carrying capacity roosting bats. In the long-term the reversion of Southleigh Forest to lowland mixed deciduous woodland and wood pasture will create high quality foraging and roosting opportunities for bats. It should be noted that Southleigh Forest lies within the core range of the Hampshire / Sussex border population of Bechstein's bat (see **Appendix 1**).

The wood pasture creation associated with the partnership with HIWWT will also aim to deliver high quality foraging and roosting habitats for bats. It is currently unclear whether this will benefit the bat populations within the site.

Overall, there will be a 116 hectare increase in bat foraging habitat and long-term increase in 171 hectares increase in high quality roosting habitat (see **Appendix 4** for further details).

4.3 Badger

4.3.1 Baseline and Habitat Loss

Survey work conducted in 2018 and 2020 indicated no active badger setts within the site and a low level of foraging / commuting activity. These results are consistent with the survey works carried out previously by ECOSA between 2005-2009.

Habitat loss comprise foraging resources associated with the on-site grassland and woodland. Although given the limited evidence of the species recorded within the site it is likely that only a small number of individuals will be impacted. Woodland within the site with suitability for sett construction will also be lost, albeit much of the area is low-lying and likely to be too wet for sett formation.

4.3.2 Mitigation

In advance of reservoir construction and enhancement works in Havant Thicket woodland, a detailed badger survey of these areas will be undertaken to update this assessment.

Steep sided excavations will be covered overnight or a battered edge ramp inserted to allow any badgers which are trapped to escape of their own accord.

To mitigate for the potential impacts of additional night-time traffic a gate will be installed at the access point, this will prevent regular vehicle access at night.

The status of badger within the construction zone and within 20 metres should be monitored in advance of works beginning to provide an accurate assessment of the status of the species. Should setts become established in the construction zone then methods to avoid, mitigate and / or compensate for the impacts will be devised.

4.3.3 Compensation

Habitat enhancement within Havant Thicket woodland will provide suitable and improved habitat for badger. Forest meadows and management of dense birch thickets will diversify these habitats, increasing the habitat available in this area for foraging badger.

As part of the development of the reservoir, habitat around the perimeter of the site will be managed as grassland with suitability for foraging badger, this will include management regimes to provide varied grassland sward heights. This will also include a large expanse of meadow grassland on the downslope of the reservoir embankment. A 50 metre wide woodland corridor on Gipsies Plain, and new mosaic of woodland planting in the south-west planted in 2018 and 2020 will provide compensatory woodland habitat for foraging badgers. There will also be a scrub and grassland interface along the northern edge of the reservoir which will provide habitat for badger.

4.4 Hazel Dormouse

4.4.1 Baseline and Habitat Loss

Surveys undertaken on site by ECOSA between 2005 and 2009 established that hazel dormouse were present in suitable on-site woodland.

The species is considered to be present throughout Havant Thicket woodland, although much of this area comprises dense birch or coniferous woodland with limited suitability for hazel dormouse.

14.95 hectares of suitable dormouse habitat will be lost as a result of the proposals comprising:

- The Avenue - 6.16 hectares
- Middle Clearing - 2.17 hectares
- Round Wood - 1.39 hectares
- The Corsican Pine Plantation 3.31 hectares

- 1.27 hectares of willow treelines
- 0.65 hectares of birch scrub associated with the high water mark in Havant Thicket woodland

4.4.2 Mitigation

Given the presence of hazel dormouse on the site, it will be necessary to obtain an EPSM licence in respect of the species in order to ensure that animals are not harmed or present during the construction phase. The EPSM application will utilise the results of the hazel dormouse surveys and a detailed mitigation strategy will be devised.

During the construction phases of the development, the retained woody vegetation on-site and along the boundaries of the site with suitability for hazel dormouse will be protected by Heras fencing (or similar). There will be no access to these areas by machinery or site contractors and these areas will not be used for storage. There will be no construction access to these areas for the duration of the development works.

Due to the configuration of the woodland habitat, it is not desirable to simply displace hazel dormouse into surrounding habitat, particularly within the Avenue. The distances involved are relatively long, and the surrounding habitat is presumed to support hazel dormouse at carrying capacity. As a result, a pre-clearance trapping and local translocation exercise is proposed. This will involve setting up holding pens for dormouse at three locations; Cabbagefield Row, Bells Copse and within retained woodland at the southern end of The Avenue. Hazel dormouse will then be trapped and translocated from The Avenue, Middle Clearing and Round Wood. Trapping will involve the erection of a high density of dormouse boxes in the woodlands followed by daily checks. Trapped hazel dormouse will be placed into holding pens which will comprise fenced areas with food and foraging areas provided. The holding pens will be located in Bell's Copse, Cabbagefield Row and woodland to the south of The Avenue. On completion of the on-site vegetation clearance the dormouse will be released. The translocation work will

Habitat will be cleared using single-stage or two-stage clearance with translocation continuing during the clearance. Active season single-stage clearance will involve incremental clearance of woodland during the period from April-May and / or September-October. The direction of clearance works is shown in **Map 8**. Where it has not been possible to complete clearance works during the active season the remaining areas will be cleared using a two-stage clearance method whereby vegetation is cut using hand tools to 15-30 centimetres about ground level during the period from December to February. When hazel dormouse emerge from hibernation in April they will disperse into nearby habitat. As the reservoir will be flooded the root balls and stumps are unlikely to need to be removed (i.e. the second stage of the clearance will

not need to occur). Only areas within 100 metres of suitable retained habitat will be subject to a two-stage clearance process to ensure that hazel dormouse emerging from hibernation are able to locate nearby suitable habitat.

Pre-construction works have been implemented on Gipsies Plain which include planting of a 50 metre wide woodland strip, bolstering of hedgerows and scrub planting with suitability for hazel dormouse (see **Map 9** and **Map 10**). This work will mitigate for the loss of connectivity between SCP and Havant Thicket woodland.

Post-construction the potential impact of informal human access on hazel dormouse in Havant Thicket woodland will be managed through a robust recreation strategy which considers biodiversity. It is likely that this work will include the installation of marked trails and the introduction of a ranger service.

4.4.3 Compensation

The 50 metre wide broadleaved woodland planting on Gipsies Plain and associated hedgerow bolstering will create additional suitable hazel dormouse habitat in advance of woodland clearance works taking place. A total of 0.63 hectares of broadleaved woodland with scrub understorey was planted on Gipsies Plain in 2018. A further 300 metres of existing defunct hedgerow has been bolstered with planting to make it suitable for hazel dormouse and then managed appropriately. 25 dormouse boxes will also be installed within the woodland strip to provide an initial increase in sites suitable for nesting. Depending on the project timescales, and the associated maturity of planted woodland, some of these boxes may need to be erected on posts rather than on trees.

Within Havant Thicket woodland additional habitat capacity for hazel dormouse will be created, some of which will be available for colonisation in advance of clearance works taking place (see **Table 3**, **Map 9** and **Map 10**). As an additional compensation measure approximately 300 hazel dormouse boxes will be installed within woodland to the north, east and south of the site. Nest boxes can increase density of hazel dormouse as suitable nesting sites can often be a limiting factor to population growth (Bright, et al., 2006).

The compensation works on-site and in Havant Thicket woodland have been designed to cover a significantly larger area than the suitable hazel dormouse habitat within the site to off-set the loss of moderate quality habitat within The Avenue.

Table 3: Habitat management work in Havant Thicket woodland to benefit hazel dormouse

Management Area	Description	Benefit	Area	Availability	Initial Carrying Capacity
Management of birch dominated areas	Creation of 'racks' through birch dominated woodland to either encourage existing broadleaved tree growth or plant new broadleaved woodland	In the short-term improved ground vegetation and development of scrub where more light reaches the woodland floor will be of benefit to hazel dormouse. The increase in woodland species diversity (including planting hazel) will benefit hazel dormouse in the medium to longer term.	28.7	Short term (within ~2-3 years), medium and long term	High
Priority Ecological Corridors along existing rides	Graded edges to existing ride network	Graded edge with bramble and more mixed vegetation will provide improved foraging for hazel dormouse in the short term. Appropriate rotational management will ensure benefits to the species in the medium and longer term.	9.62	Short, medium and long-term	Low
Bells Copse Management	Coppice rotation to diversify hazel age structure	The introduction of a hazel coppice rotation in the medium to long-term will be of significant benefit to hazel dormouse, ensuring optimum hazelnut production.	3.87	Long-term	Low
Clear-fell Area	Felling and clearance of pine plantations, subsequent	Increase the tree species diversity which will benefit hazel dormouse in the	4.07	Medium to long-term	Negligible

Management Area	Description	Benefit	Area	Availability	Initial Carrying Capacity
	planting of native broadleaved trees	medium to longer term.			

In addition, rotational hazel coppicing will be introduced, within woodland to the south of The Avenue which is owned by Portsmouth Water. In the medium to long-term this will enhance this habitat for hazel dormouse.

In the long-term the works within Southleigh Forest will provide enhanced habitat for hazel dormouse, although it is not currently known whether the species is present in this woodland.

Overall, within the species known range there will be a 59 hectare increase in habitat suitable for hazel dormouse (see **Appendix 4** for further details).

4.5 Birds

4.5.1 Baseline and Habitat Loss

A variety of breeding and wintering birds typical of grassland and woodland habitats are present at the site. There is a relatively dense population of skylark at the site which has remained constant between surveys in 2008 and 2018. Meadow pipit is a notable species, four pairs were recorded breeding on site. Significant populations of notable wintering bird species were not recorded. The key breeding species are skylark and meadow pipit. Havant Thicket supports small populations of nightjar.

Habitats lost with suitability for breeding and wintering bird comprise:

- Loss of 138.7 hectares grassland used by ground nesting birds such as skylark.
- Loss of 13.68 hectares woodland used by woodland species.
- Loss of 1.27 hectares willow / blackthorn scrub used by woodland species.

4.5.2 Mitigation

Where possible, removal or alteration to woodland, scrub and hedgerows will be undertaken outside of the main bird nesting season which extends from March to August, inclusive. Clearance of grassland during the winter is unlikely to be a suitable option given the requirement to translocate reptiles during their active season (March-October). However, where possible reptile destructive search works will be timed to be undertaken during the autumn, late-August-October to avoid the bird nesting season.

If this is not possible, and works are required during March to late August, then areas subject to clearance will be thoroughly checked for ground nesting birds. If nesting birds are discovered then a suitable buffer zone will be left around the nests and the nest site monitored by an ecologist until young are confirmed to have fledged.

In advance of construction works a woodland link has been planted on Gipsies Plain. This will provide a commuting corridor for birds moving between SCP and Havant Thicket woodland.

Retained woodland on the periphery of the site with potential for breeding birds, will be protected from accidental incursions using protective fencing.

It is possible that the construction site may attract little ringed plover, a species which utilises ephemeral wetland habitat. The Ecological Clerk of Works (ECoW) will consider this species during the period from March to July, when the species is present and breeding in the UK. If little ringed plover breeding is suspected or confirmed a 50 metre exclusion zone will be provided to prevent additional disturbance or harm to this Schedule 1 species.

Post construction measures will be implemented to control and manage dog access. This will include the inclusion of dog walking routes away from sensitive areas and no dog access to sensitive area (e.g. the new wetland).

4.5.3 Compensation

Compensation for loss of on-site habitats will comprise two main elements; enhancement and development of a mosaic of habitats within the ecological enhancement area and compensatory habitats developed within the site.

Habitat restoration works proposed at Havant Thicket will provide suitable habitat for a range of scarce and notable species. Details of the works that are particularly relevant to birds are presented in **Table 4**.

Table 4: Compensation works for birds in Havant Thicket woodland

Management Area	Description	Area (Ha)	Suitability
Forest Meadows	Clearance of young birch trees which have regenerated in previous clear fell areas to create permanent open space.	2.22	Long term suitability for breeding nightjar and other species such as bullfinch, linnet, stonechat and whitethroat.
Clear-fell Area	Felling and clearance of pine plantations, subsequent planting of native broadleaved trees.	4.07	Short-term suitability for breeding nightjar. Medium and long-term suitability for breeding and wintering woodland species including marsh tit, stock dove, mistle thrush, tawny owl, song thrush and bullfinch.
Woodland stream enhancement	Opening up of stream corridors, with graded edge.	1.12	Suitable habitat for a range of species including foraging woodcock
Priority Ecological Corridors along existing rides	Creating graded edges to existing ride network, providing enhanced habitat	9.62	Increased foraging and nesting habitat for a variety of woodland and scrub species
Pond Enhancements	Conifers around Forestry England ponds removed to allow light to enter area and increase riparian vegetation.	1.57	Compensation for loss of Upper Lake (The Avenue).
Management of birch dominated areas	Creation of racks through birch dominated woodland to either encourage existing broadleaved tree or plant new broadleaved woodland to diversify woodland.	28.7	Medium and long-term suitability for a range of woodland species, including many species currently present within on-site habitats.

The new on-site mosaic of habitats on the site (create 10.2 hectares of wetland, 36.71 hectares of grassland, 3.77 hectares of woodland/parkland planting, 106 hectares of open water, enhanced 0.37 hectares willow scrub) will benefit a variety of species including wetland birds and help retain nightjar nesting opportunities.

As part of the development of the reservoir grassland habitat around the perimeter of the site will be specifically created for skylark and meadow pipit, this will include management regimes to provide varied grassland sward heights. The compensation for ground nesting birds within the site is considered to off-set the loss of breeding meadow pipit territories affected as a result of the construction of the reservoir. It is unlikely that the compensation grassland within the site will entirely off-set the loss of skylark territories, therefore off-site compensation will be included in the proposals as part of a Portsmouth Water Capital Grants Scheme of biodiversity enhancements in the local area.

There will also be a scrub and grassland interface along the northern edge of the reservoir which will provide habitat for notable species affected by the development including linnet, bullfinch, song thrush, kestrel and dunnock. The creation of compensation habitats on-site and in Havant Thicket is considered to off-set the loss of breeding territories as a result of the reservoir construction, especially considering the limited number of territories of these species recorded in areas affected by construction (see **Table 4**).

To compensate for the loss of tree cavities as a result of woodland removal nest boxes with a variety of cavity sizes and forms will be erected in Havant Thicket woodland and SCP. Owl and kestrel type boxes would be included, as well as more typical cavity and open fronted boxes.

The proposed broadleaved woodland creation works within Southleigh Forest and the HIWWT wood pasture creation will provide long-term benefits for the local populations of birds, particularly nightjar.

Overall, there will be a 222 hectare increase in high quality habitat for a range of breeding bird species (see **Appendix 4** for further details).

4.6 Reptiles

4.6.1 Baseline and Habitat Loss

Surveys undertaken on site indicated that an exceptional population of slow-worm, a good population of common lizard and a low population of adder and grass snake are present. Previous surveys in 2005-2008 identified an exceptional population of all four common species of reptile on site. Given that the habitat remains broadly similar, and fewer refugia were deployed in 2018 it is unlikely that this assessment will have changed in the intervening period. There was a clear preference for reptiles to be found in 'edge' habitats within the site, especially the south-facing northern boundary.

Habitats lost with suitability for reptiles comprise:

- 139 hectares grassland
- 1.27 hectares willow / blackthorn scrub
- 0.65 hectares associated with Upper Lake

4.6.2 Mitigation

Given the presence of reptiles on the site, it will be necessary to ensure that these animals are not harmed and that animals are not present within the development area during construction works. Prior to works commencing on site the grassland habitat will be grazed more heavily to reduce the height of the sward and make it less suitable for reptiles. Compartmentalised reptile fencing would be the most efficient way to achieve

clearance of the site within a defined time frame. Therefore, grazing will be combined with a variety of measures which could include reptile fencing. A high density of reptile refugia at the site followed by up to 90 days of trapping to translocate reptiles to nearby receptor sites. Where very low numbers of reptiles are recorded during trapping a reduction in trapping effort to 60 days will be considered by the ecologist overseeing the translocation. A destructive search of the development area will also be undertaken, this may include soil stripping under the supervision of an ecologist.

All translocation works will be undertaken in the reptile active season which runs from April to October. Given the size of the site and the scale of the project it will be necessary to undertake translocation works in phases over a number of years. In advance of each phase of construction the grazing regime in that area will be increased to ensure the sward is as short as practically possible, supplemented by cutting as required to ensure a short sward is maintained prior to construction in each phase.

During the initial development of the reservoir the footprint of the works will cover virtually all of the site. Reptile habitat will be avoided on the periphery of the site, particularly around Gypsies Plain on the eastern edge of the site, in the south-west and along the northern boundary shoreline. These areas and other perimeter reptile habitat to be retained should be protected from accidental incursions during construction works, through the use of Heras fencing, or similar.

In addition to re-instating grazing at the site, mitigation will include management of a section of birch dominated woodland and associated stream corridor immediately to the north of the site. This work will be undertaken in advance of works commencing on site and allow reptiles to disperse into this area as the site becomes less suitable for reptiles through grazing.

4.6.3 Compensation

It will be necessary to provide a suitable receptor area for animals translocated away from the site. A number of receptor sites will be developed within Havant Thicket woodland where 2018 surveys have confirmed no or extremely small existing reptile populations. It may also be possible to set up receptor sites within Southleigh Forest (see **Map 5**) and / or Staunton Country Park. **Table 5** provides the areas, associated management proposals and availability of the receptor areas in Havant Thicket woodland. The overall area of compensation in Havant Thicket woodland providing suitable reptile habitat initially is 47.86 hectares of which 38.24 hectares will have a high initial carrying capacity. Carrying capacity in new areas of reptile habitat within Havant Thicket woodland will be increased through installation of hibernacula and log piles.

The assessment of initial carrying capacity is based on the speed at which suitable habitat will be developed in managed areas, local conditions, and their suitability for reptiles and previous experience of receptor site development. Those site with higher initial carrying capacity will be suitable to accept a higher number of translocated animals initially.

Table 5: Compensation works for reptiles in Havant Thicket woodland

Management Area	Description	Area (ha)	Availability	Initial Carrying Capacity
Forest Meadows	Clearance of young birch trees which have regenerated in previous clear fell areas to create permanent open space	2.22	Short, medium and long-term suitability for reptiles	High
Clear-fell Area	Felling and clearance of pine plantations, subsequent planting of native broadleaved trees	4.07	Short-term suitability for reptiles (~10 years)	High
Woodland stream enhancement	Opening up of stream corridors, with graded edge	1.12	Short, medium and long-term suitability for reptiles	High
Priority Ecological Corridors along existing rides	Create graded edges to existing ride network, providing enhanced reptile habitat	9.62	Short, medium and long-term suitability for reptiles	Medium
Pond Enhancements	Conifers around Forestry England ponds removed allow light to enter area.	1.57	Short, medium and long-term suitability for reptiles	High
Management of birch dominated areas	Creation of racks through birch dominated woodland to either encourage existing broadleaved tree or plant new broadleaved woodland (leaving some unplanted clearings)	28.7	Short term suitability for reptiles (10~years)	High

The clearfell areas outlined will be undertaken in advance of site clearance works beginning to enable a receptor sites to develop within Havant Thicket woodland in advance of translocation works. The habitat works will also be phased to ensure the habitat created is at optimum suitability for reptiles when the phased translocation occurs throughout the construction process.

In addition, a new area of woodland will be planted on Gipsies Plain which will link SCP and Havant Thicket woodland. This woodland will be planted well in advance of construction works beginning and will provide woodland edge habitat for reptiles totalling approximately 300 metres in length. Reptile hibernacula will be installed adjacent to the ephemeral waterbodies within the new woodland.

Furthermore, the young planted areas of woodland within new fencing will create suitable reptile habitat for ~10-15 years. New woodland areas, with associated edge habitat with excellent suitability for reptiles has been created on Deerslaughter Plain in the south-west corner of the site.

In the long-term the grassland developed around the reservoir (36.71 hectares) will provide excellent reptile habitat for animals to recolonise from Havant Thicket woodland. It is anticipated that the south facing margins of the wetland will comprise a mosaic of grassland, scrub, wet woodland and ephemeral pools (10.2 hectares of wetland).

Creation of the new on-site woodland and parkland including two ephemeral ponds and hibernacula between Havant Thicket woodland and SCP. The Phase 1 and 2 planting areas will create 3.77 hectares of suitable reptile habitat.

Given that reptiles will be able to recolonise the site once construction has been completed and embankment grassland develops a proportion of the compensatory habitat within Havant Thicket woodland has been included which will have short-term carrying capacity (~10 years). 10 years is the period over which the habitat on the south facing embankment on the site will develop as suitable reptile habitat. This time period will also allow recolonisation of the area by all four common species of reptile.

It is envisaged that suitable reptile habitat will be available in the site by the time the areas in Havant Thicket woodland are planted as broadleaved woodland which will slowly reduce their suitability for reptiles.

The proposed broadleaved woodland creation works within Southleigh Forest and the HIWWT wood pasture creation will provide long-term benefits for the local populations of reptiles, beyond the compensation requirements detailed above.

Overall, there will be a 109 hectare increase in high quality habitat reptiles, although not all of this habitat will available in the long-term as woodland develops (see **Appendix 4** for further details).

4.7 Great Crested Newt

4.7.1 Baseline and Habitat Loss

One pond will be lost (0.65 hectares Upper Lake, a shaded pond within woodland clearing in The Avenue) to the reservoir and the water from the wetland will encroach into one pond in Havant Thicket woodland. Neither of these ponds have been identified as supporting great crested newts. A further 37 ponds were recorded within a 500 metre radius of the site and a low population of great crested newt is present within three ponds in Havant Thicket woodland. The closest is approximately 122 metres north of

the proposed reservoir (Grid reference, SU 72230 10309, **Appendix 1**). The development footprint mainly comprises grassland and broadleaved woodland, providing suitable terrestrial habitat for great crested newt.

There will be approximately 0.46 hectares (approximately two percent) of the suitable terrestrial habitat within 250 metres of breeding ponds permanently lost as a result of the development proposals. A further 2.63 hectares of suitable terrestrial habitat with 250 metres of breeding ponds will be temporarily lost during construction.

4.7.2 Mitigation

In advance of construction the development proposals will be revisited to reassess their potential impact on great crested newt. The results of this review will be used to assess whether a great crested newt EPSM licence is required. If a great crested newt licence is assessed to be required then the mitigation will likely comprise manipulation of habitat to reduce the suitability for great crested newt and translocation of any individuals found within the reservoir footprint to the more suitable habitat to the north.

4.7.3 Compensation

Two ephemeral ponds were dug in early 2019 as part of the Advance Planting at Gipsies Plain (0.004 hectares). Creation of the advance planting on-site woodland linkage between Havant Thicket woodland and SCP, as well as enhancement of existing boundary hedgerows. These habitats are suitable for great crested newt during both their aquatic and terrestrial phases.

Creation of 10.2 hectares of new on-site wetland habitat is likely to provide enhanced habitat for great crested newts and the new grassland and woodland habitats will provide suitable terrestrial habitats. Additional hibernacula will be created.

Restoration of existing ponds, within Havant Thicket woodland, which are currently heavily shaded with limited aquatic vegetation will also provide compensation.

The large-scale wider-site habitat enhancement work in Havant Thicket woodland and Bell's Copse will improve habitat for great crested newts.

Overall, there will be a 29 hectare increase in high quality habitat for great crested newt (see **Appendix 4** for further details).

4.8 Terrestrial Invertebrates

4.8.1 Baseline and Habitat Loss

Invertebrate surveys in 2018 recorded a total of four Red Data Book species, eight Nationally Scarce species, three S41 species and one Hampshire BAP species. In the context of the presence of similar habitats such as broadleaved woodland, open

grassland and waterbodies within the local landscape the on-site invertebrate assemblage is not considered to be particular diverse.

Loss of 139 hectares of grassland and 14.3 hectares of woodland/scrub with suitability for a range of terrestrial invertebrates.

4.8.2 *Mitigation*

During construction boundary trees and woodland and their associated invertebrate assemblage will be protected from accidental encroachment through the installation of fencing.

Given the difficulty in locating, identifying and assessing the current status of many of the notable invertebrate species recorded on and adjacent to the site it is not proposed to provide specific mitigation for particular invertebrate species. However, the loss of habitat supporting these species will be off-set by habitat creation and management works within the site and Havant Thicket woodland, as detailed in Section 3.0. This will create excellent habitat to support a diverse assemblage of invertebrates.

4.8.3 *Compensation*

Compensation for loss of on-site habitats will comprise two main elements; enhancement and development of a mosaic of habitats within the ecological enhancement area and compensatory habitats developed within the site.

Habitat restoration works proposed at Havant Thicket will provide suitable habitat for a range of scarce and notable species. Details of the works that are particularly relevant to invertebrates are presented in **Table 6**.

Table 6: Compensation works in Havant Thicket woodland with benefits for terrestrial invertebrates

Management Area	Description	Area	Suitability
Forest Meadows	Clearance of young birch trees which have regenerated in previous clear fell areas to create permanent open space. These areas will be managed as open habitats with graded edges.	2.22	Long term suitability for various invertebrate species including white admiral and silver-washed fritillary. The clearing will be sheltered, providing a warm and sunny area, characteristics that are particularly favoured by a variety of invertebrates including various hoverflies and bees. These areas will also provide additional suitable habitat for glow worm, a species known to be present locally.
Clear-fell Area	Felling and clearance of pine plantations, subsequent planting of native broadleaved trees.	4.07	Short-term suitability for species which rely on open habitats. Long-term suitability for a variety of notable species, especially the significant number of moth species likely to be supported by the site which rely on

Management Area	Description	Area	Suitability
			broadleaved woodland habitats. Initially, this area will also provide additional suitable habitat for glow worm.
Woodland stream enhancement	Opening up of stream corridors, with graded edge. On-going rotational management will be undertaken.	1.12	Suitable habitat for a range of invertebrate species including purple emperor. These areas will also provide additional suitable habitat for glow worm.
Priority Ecological Corridors along existing rides	Creating graded edges to existing ride network, providing enhanced habitat. On-going rotational management will be undertaken.	9.62	Increased foraging and nesting habitat for a variety of woodland and scrub species, especially purple emperor and various hoverflies and bees. These areas will also provide additional suitable habitat for glow worm.
Pond Enhancements	Conifers around Forestry England ponds removed to allow light to enter area and increase riparian vegetation.	1.57	Compensation for loss of Upper Lake (The Avenue). Willows that will flourish around the edges of the newly opened ponds will provide suitable habitat for a range of species, especially purple emperor.
Management of birch dominated areas	Creation of racks through birch dominated woodland to either encourage existing broadleaved trees or plant new broadleaved woodland to diversify woodland.	28.7	Medium and long-term suitability for a range of woodland invertebrate species, including many species currently present within on-site habitats. Initially these areas will also provide additional suitable habitat for glow worm.

As part of the development of the reservoir grassland habitat around the perimeter of the site will be subject to management regimes which will provide varied grassland sward heights with suitability for numerous species.

Deadwood, particularly larger limbs, will be moved into retained on and off-site woodlands. This will provide deadwood for saproxylic invertebrates.

The management proposals within Havant Thicket woodland will provide significant enhancement for purple emperor, especially in priority ecological corridors, along stream corridors and as part of pond enhancement works. The graded edges to many of these habitats will increase the extent of sallows within the site, which are particularly important for the species. In the long-term there will also be an increase in the area of oaks within close proximity to the population of purple emperor present within Havant Thicket woodland.

Overall, there will be a 108 hectare increase in high quality habitat terrestrial invertebrates and the proposals will significantly diversify the local landscape for this species group (see **Appendix 4** for further details).

4.9 Aquatic Ecology

4.9.1 Baseline Condition and Habitat Loss

Aquatic invertebrate surveys undertaken by Atkins in April 2020 on the intermittent headwaters of Riders Lane Stream identified seven species of notable invertebrates. Of these there are two beetles listed as Nationally Scarce (*Ochthebius pusillus* and *Hydrochus angustatus*) and one Nationally Scarce caddisfly (*Limnephilus bipunctatus*) (Atkins, 2020a). The intermittent nature of the streams coupled with several culvert structures downstream result in these watercourses being considered suboptimal for fish, other than 'minor' species such as stickleback, minnow, stoneloach and bullhead.

4.9.2 Mitigation

As part of the construction works mitigation for aquatic ecology will include:

- Improvements to river substrate for all pipeline crossings (3 x 20 metre river length) – using gravels/pebbles to cover concrete bed and also reinstating banks
- Translocation of aquatic invertebrate communities at locations with some of the highest diversity as part of enabling works.

Where works are undertaken in association with streams a pre-construction checks will be undertaken and Invasive Non-Native Invasive Species removed, particularly Himalayan balsam which has been recorded along the pipeline route previously. Where Non-Native Invasive Species are recorded these will be managed to prevent additional spread associated with the construction works.

Further details on the mitigation measures in relation to aquatic ecology are presented in the Outline Environmental Management Plan (Atkins, 2020b).

4.9.3 Compensation

The overall compensation strategy for aquatic ecology will comprise a package of measures that contribute to the overall compensation for the impact of the development. The final make-up of the overall WFD-driven compensation works will be developed and agreed by PW, LPAs and the EA over the coming weeks, and set out in the WFD Article 4.7 case, and future versions of the BMCS and its implementation plans.

These have been quantified as part of the Biodiversity Net Gain assessment for Rivers (Atkins, 2020a) which was included within the ES as report reference HTR-ATX-XX-RP-0070 Appendix 15.4 ES Volume 4.

MoRPh surveys[6] and wider catchment walkovers have been used to identify opportunities for compensation within the Hermitage Stream catchment. This has identified the following potential elements of the final compensation package in relation to aquatic ecology that is to be agreed with the Environment Agency:

- Creation of 10.2 hectares of wetland habitat;
- Creation of new compensation flow channel totalling 250 metres (see **Map 4**).
- Compensation flow regime with opportunity to develop an intermittent or continual flow regime with more consistent water quality compared to current baseline;
- Additional ditch habitat created within the site;
- Improvements to headwater streams upstream of the reservoir (including woody debris);
- Creation of 106 hectares of open water habitat;
- Improvements to culverts in the Riders Lane Stream catchment – to improve habitats and fish passage[7];
- Wider catchment measures, i.e. fencing around poached banks in upper Riders Lane Stream and work to reduce pesticides inputs into the Headwater Streams;
- Restoration of one or more sections of the Hermitage Stream;
- There will be four new wetland areas created around the northern edge of the reservoir, plus provision of an area for wet grassland habitat creation to the east of the retained wetland;
    - The wetland will be fed by three headwater streams, and will also be in continuity with the reservoir water level under normal operation conditions when the reservoir water levels are between 39.0 – 39.5 metres Above Ordnance Datum (AOD).
    - Structures will retain water at naturally consistent levels in the wetland when the main reservoir water levels are lower than 38.8 m AOD, such as during lengthy operations or drought. They will be built during the very first earthworks season, initially to retain flows from headwater streams, allowing these to be diverted away from the reservoir construction area.
    - The retained wetland area will be approx. 6.8 hectares when the main reservoir level is at 38.8 metres AOD. The wetland area will be approximately 10.2 hectares when the reservoir is full.
    - The wetlands will have variable water depths and will include a number of islands.

[6] As requested by the Environment Agency
[7] In line with the Water Framework Directive objectives for the Hermitage Stream

- Reedbed areas which will be suitable for variety of wetland invertebrate species and is likely to encourage a diverse dragonfly assemblage and the alder leaf beetle given the likely increase in alder at the site as a result of the wetland creation. The reservoir, and wetland together will provide excellent new habitat for aquatic invertebrate species. It will also attract a range of different wildlife and bird species to the site.

A new compensation flow channel will be created between the reservoir's Control House and the Riders Lane Stream this will create 250 metres of new aquatic habitat and carry the reservoir's compensation flow. There will be a controlled compensation flow from the reservoir as required by the Environment Agency to maintain the health of the ecology and wider environment in and downstream of the Riders Lane stream. Exact details on the reservoir's compensation flow will be subject to agreement with the Environment Agency. Conceptually, this could be several different options:

- Applying a continual flow, using median (Q50) gauged flow from the Hermitage Stream Gauging Station factored by area to the catchment upstream of the reservoir embankment using the CATCHMOD model;
- Continuation of the current intermittent nature of the catchment (mimic natural wetting and drying); or,
- A hybrid regime based on 1 and 2.

New ditch habitats will be created around the reservoir embankment, capturing overland flows from the embankment area and will simulate natural wetting and drying which currently occurs in existing ditch habitats, notably to the east of the site. Upstream of the reservoir, localised woodland stream enhancements on intermittent headwaters of Riders Lane Stream will also provide some compensation for permanent losses of watercourse extents, through improving existing habitat as well as culvert improvements (which currently do not relay flow reliably). Localised tree felling will open up the tree canopy and provide woody debris for the streams, increasing habitat diversity.

Once filled, the reservoir itself will provide up to 106 hectares of open water habitat at Top Water Level. This will create a new lake waterbody under the Water Framework Directive. There will be aeration equipment, controlled from the Control House, to manage reservoir water quality and prevent adverse effects as a result of thermal stratification. This will have downstream benefits for dissolved oxygen levels. The compensation flow will also result in more consistent water quality and an improvement in primary and secondary productivity (which is considered positive), with no negative effects on ecological functioning of watercourse or WFD status anticipated from the

impact of the development on this flow regime. This is also in context of variable water quality in the current river system.

The reservoir will cause a significant reduction of the amount of nitrogen discharged into Langstone Harbour SAC SSSI, especially during periods when the reservoir is filling (e.g. following construction and recharge following drier weather).

Three culverts in the Riders Lane Stream will be upgraded to allow operational flow releases to occur safely. Improvements to in stream and bankside habitats and to fish passage will be undertaken as part of this work, meaning that WFD Mitigation Measures for the Hermitage Stream WFD waterbody will be implemented for these culverts. Finer materials will be placed inside the new culvert pipes, providing fish passage improvements. An inverted entry/exit will be implemented to new culvert pipes along with the installation of soft habitats within the pipe to improve watercourse connectivity.

With regard to fencing, some areas in the (upper) Riders Lane Stream have been considered to benefit from this and reduce inputs from sediments and nutrients into the catchment. Portsmouth Water will also work with catchment partners to remove pesticide inputs into the headwater streams north of the reservoir.

With regard to waterbody level restoration, the amount and type of river habitat mitigation required in the Hermitage Stream waterbody remains to be finally resolved with the Environment Agency. Portsmouth Water has made a clear commitment to delivering the necessary level of aquatic habitat mitigation reasonably required to offset the impacts of the development on the Hermitage Stream waterbody.

This outline BMCS is intended by the Environment Agency and Natural England to be an adaptable document in relation to the ways in which these commitments are discharged and will therefore be amended and updated through the delivery process with their input and agreement.

5.0 MONITORING AND REVIEW

5.1 Introduction

This outline BMCS has been written to extend over a number of years, during which environmental conditions may change in response to natural and external influences that cannot be anticipated at this time. This section sets out a framework for monitoring of site conditions and the evolution of the BMCS in response to the data gathered. Further details of the ecological monitoring and review at the site are presented in the Atkins Outline Ecological Management Plan (Atkins, 2020b).

5.2 Employed Ecologist

Portsmouth Water will employ an Ecological Clerk of Works to oversee the delivery of the ecological elements, carry out site supervision and spot checks to ensure the works are being delivered to a suitable standard. The employed ecologist will also carry out a site walkover every two years from the start of pre-construction works. The purpose of the walkover will be to identify any site changes which may require alteration to the BMCS or the need to update previously undertaken protected species surveys and will report by way of a written statement of findings. The walkover will also include a review of the mitigation and compensation measures implemented:

- The success of mitigation and compensation; and
- Changes to on-going management that maybe required.

The results of the review will be presented to Portsmouth Water and, where necessary, the BMCS will be updated.

6.0 EXPECTED TIMETABLE OF MITIGATION AND COMPENSATION WORKS

Table 7: Expected timetable of mitigation and compensation works

	Action / Year	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Pre-construction	Planting of woodland and standard trees on Gipsies Plain																		
	Bolstering of hedgerows adjacent to Gipsies Plain																		
	Planting of woodland and standard trees on Deerslaughter Plain																		
	Clear fell pine area (4.07 hectares) and create Forest Meadows in Havant Thicket woodland (2.22 hectares) to provide receptor area for reptiles																		
	Pond enhancement measures in Havant Thicket woodland																		
	Translocation of notable plant species from Upper Lake to Havant Thicket woodland ponds																		
	Translocation of notable plant species from on-site streams to suitable habitat within Havant Thicket woodland																		
	Vegetation protection measures in line with BS 5837:2012																		
	Erection of bat boxes in off-site areas																		
	Preparation, submission and granting of EPSM licence application to Natural England for bats																		
	Pre-construction badger survey																		
	Preparation, submission and granting of EPSM licence application to Natural England for hazel dormouse																		
	Hazel dormouse translocation works																		
	Pre-felling checks for roosting bats																		
	Felling of on-site woodland under the supervision suitability licensed and experienced ecologists																		
	Translocation of felled oak standards to create monoliths																		
	Erection of bat, dormouse and bird boxes in retained woody vegetation																		
	Preparation of a recreational strategy and costed Ecological Management Plan to ensure successful management of biodiversity																		
	Works timed to avoid nesting bird season, or undertaking breeding bird checks where this isn't possible																		
	Pre-construction grazing of grassland to reduce suitability for reptiles																		
	Creation of reptile hibernacula within Havant Thicket woodland																		
	Installation of reptile fencing and translocation of reptiles into receptor areas within Havant Thicket woodland																		

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	Action / Year	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	Reassessment of on-site habitat for suitability for great crested newt during terrestrial phase				■														
	Monitoring and review by project ecologist, site walkover		■		■														
	Southleigh Forest Management		■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	HIWWT partnership wood pasture creation		■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	Habitat enhancements to off-site streams				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Construction	Remainder of habitat enhancement works undertaken in Havant Thicket woodland					■	■	■	■	■	■	■	■	■					
	Guidance on task related lighting levels will be followed					■	■	■	■	■	■	■	■	■					
	Continued protection of vegetation in line with BS 5837:2012					■	■	■	■	■	■	■	■	■					
	Regular badger surveys during construction					■	■	■	■	■	■	■	■	■					
	Steep sided excavations will be covered overnight or a battered edge ramp inserted to allow any badgers which are trapped to escape of their own accord					■	■	■	■	■	■	■	■	■					
	Creation of new compensation flow channel totalling 250 metres					■	■												
	Improvements / restoration to Riders Lane Stream and Hermitage Stream delivered					■	■	■	■	■	■	■	■	■					
	Wider catchment measures, i.e. fencing around poached banks in upper Riders Lane Stream and work to reduce pesticides inputs into the Headwater Streams.					■	■	■	■	■	■	■	■	■					
	Monitoring and review by project ecologist, site walkover					■		■		■		■		■					
Post-construction	Guidance on task related lighting levels will be followed														■	■	■	■	■
	Creation of wetland, open water and grassland habitats across the site														■	■	■	■	■
	Monitoring and review by project ecologist, site walkover														■		■		■

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Appendix 1 Vegetation and Protected Species Surveys Undertaken 2005 - 2020

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Table 8: Ecological Survey Work Details

Survey Type	Surveyor	2005	2006	2007	2008	2009	2018	2019	2020
Vegetation – Phase 1	ECOSA	F	-	-	-	-	Updating walkover survey	-	-
Vegetation - National Vegetation Classification & Other detailed Survey	ECOSA	-	F	-	F	F	F	Lichen Survey	-
Tree surveys	Atkins	-	-	-	-	-	-		F
Bats - Transect Survey	ECOSA	F	F		F	F	-	-	-
Bats - Vantage Point (Fixed Area) Survey	ECOSA	-	-	-	F	-	F	-	-
Bats - Radio-tracking Survey (on and adjacent to site)	ECOSA	-	-	-	F	F	F[8]	-	-
Bechstein's Bats - Radio-tracking Survey (within 3 km)	ECOSA	-	-	-	F	F	F[9]	-	-
Bats - Static Detector Survey	ECOSA/PW	-	-	-	-	-	F	PW[10]	-
Bats - Roost Inspections in Woodlands (Hibernation)	ECOSA	-	-	-	-	F[11]	-	-	-
Ground Level Tree Assessment for bats (ECS, 2020)	ECS	-	-	-	-	-	-	-	F
Otter Survey	ECOSA	F	F	-	C	C	F	(see pipeline below)	
Water Vole Survey	ECOSA	F	F	-	C	C	F	(see pipeline below)	
Badger Survey	ECOSA (2005 -2018) PW (2020)	F	F	F	C	C	F	-	F[12]

[8] Only Bechstein's bat were radio-tracked during 2018, additional species radio-tracked in 2008
[9] One Bechstein's bat tracked from Staunton Country Park to Southleigh Forest roost and back (17th-20th July 2019)
[10] Surveys undertaken by Portsmouth Water's staff (bat surveys by Portsmouth Water (PW) Ecologist and nightjar surveys by Environment Lead & retired Hampshire County Council Ranger)
[11] Trees with suitable holes and crevices for bat roosts below approximately 5 m were investigated using an endoscope in The Avenue, Middle Clearing and Round Wood
[12] Survey around the edges of The Avenue and northern edge of Staunton Country Park woodlands to the south of the Reservoir Site by PW Ecologist on 13th May 2020.

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Survey Type	Surveyor	2005	2006	2007	2008	2009	2018	2019	2020
Hazel Dormouse Survey	ECOSA	F	F	F[13]	C/F	C[14]	-	-	-
Breeding Bird Survey - All Species	ECOSA	F	-	-	F	-	F	-	-
Breeding Bird Surveys - Nightjar	ECOSA/ PW	-	F	-	F	-	C	C, PW	-
Wintering Bird Survey	ECOSA	F	F	-	F	F	F	-	-
Reptile Survey (Site)	ECOSA	F	C	F	F	-	F	-	-
Reptile Survey – Havant Thicket woodland (FE land)	ECOSA	-	-	-	-	F[15]	F	-	-
Great Crested Newt Survey – Habitat Assessment	ECOSA	F	F	-	-	-	F	-	-
Great Crested Newt Survey - eDNA	ECOSA	-	-	-	-	-	F[16]	-	-
Great Crested Newt Survey - Population Assessment	ECOSA	F	F	-	-	-	F	-	-
Invertebrates - Daytime Visual Survey	ECOSA	F	C	C	C	-	F[17]	-	-
Invertebrates - Aquatic Survey (ARUP, 2009)	ARUP 2009; APEM 2020	-	-	-	F[18]	-	-	-	F[19]
Rivers and Streams (Baseline Geomorphology and River Habitat Survey)	ARUP	-	-	-	F	-	-	-	-
Pipeline Survey (Northern Section) - Extended Phase 1	ECOSA	-	-	F	-	-	-	-	-
Pipeline Corridor (safeguarded route) – Preliminary Ecological Appraisal	ECOSA	-	-	-	-	-	F	-	-
Pipeline Corridor (safeguarded route) – Further ecology surveys	PW	-	-	-	-	-	-	Targeted water vole/otter surveys	-

[13] Havant Thicket woodland and Staunton Country Park only
[14] One date - 5th June 2008
[15] Targeted transects in Havant Thicket woodland
[16] One pond at northern end of Bells Copse surveyed in 2019 results
[17] Survey effort was targeted to where priority species were recorded previously and to habitat with high suitability on the site
[18] Targeted to select reaches on site and downstream of the site based on professional judgement of the surveyor
[19] Survey locations agreed in consultation with the Environment Agency.

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Appendix 2 Bechstein's Bat Landscape Overview

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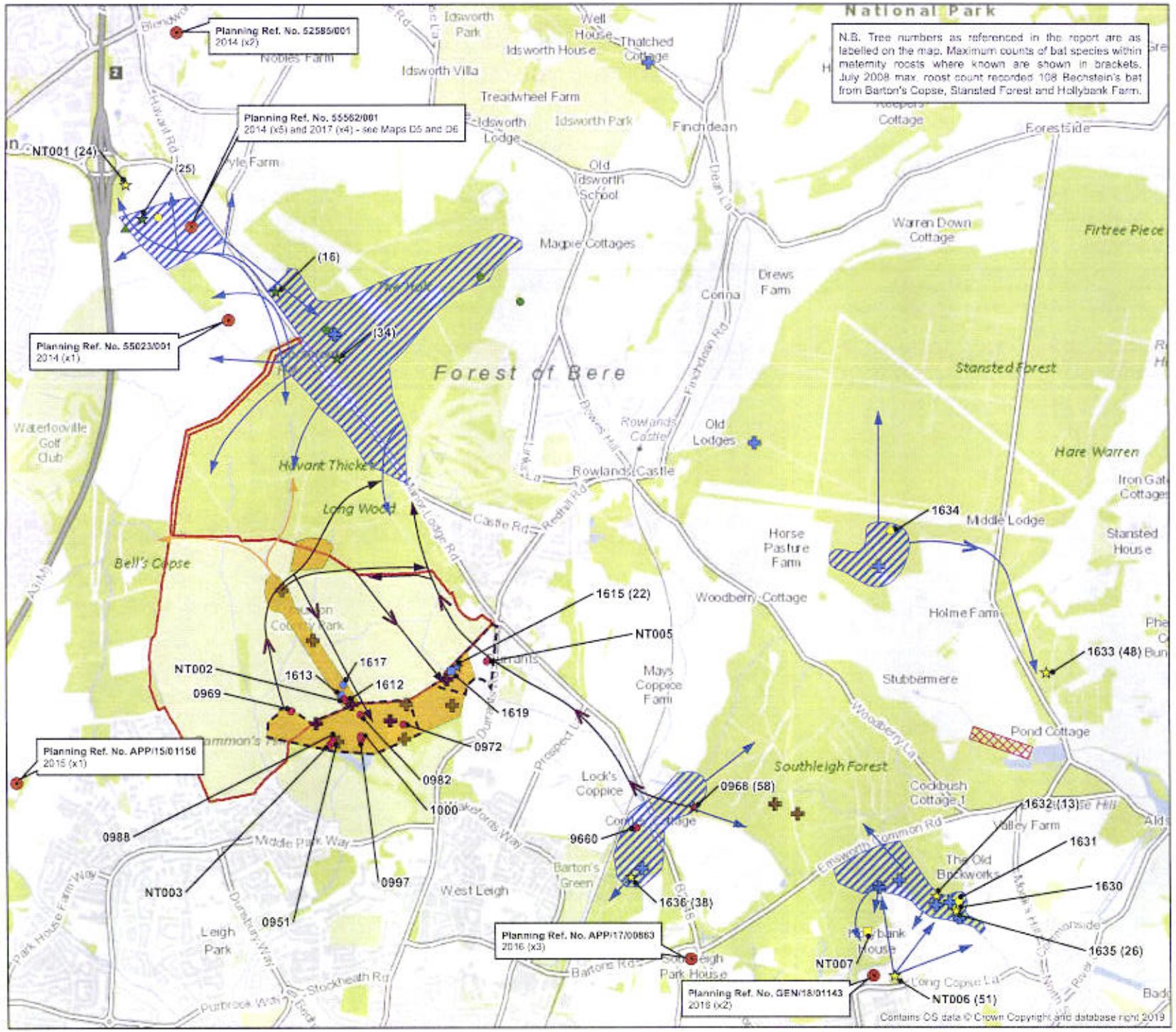

HAVANT THICKET WINTER STORAGE RESERVOIR

BAT ASSESSMENT

Map D42 - Bechstein's Bat Roosts, Foraging Areas and Movements Recorded Between 2008 and 2019

Client:	Portsmouth Water
Date:	January 2020
Status:	Final

KEY

- Site Boundary (the site)
- Development Site where Bechstein's Bat found during survey work (planning reference, year, number of bats)
- Hampshire Bat Group Capture site 27th July 2019: one female and three males (all judged to be juveniles) trapped only
- Bechstein's Bat Capture Site 2019
- Bechstein's Bat Capture Site 2009
- Bechstein's Bat Capture Site 2008
- Key Foraging Areas 2019
- Bat Movements 2019
- Key Foraging Areas 2009
- Bat Movements 2009
- Key Foraging Areas 2008
- Bat Movements 2008

ECOSA Records 2008-2018 (max. count)

- Bechstein's bat maternity roost, 2018
- Bechstein's bat roost (one individual), 2018
- Bechstein's bat maternity roost, 2009
- Bechstein's bat roost (three individuals), 2009
- Bechstein's bat roost (one individual), 2009
- Bechstein's bat maternity roost, 2008
- Bechstein's bat roost (seven individuals), 2008
- Bechstein's bat roost (one individual), 2008

WYG/EPR Records 2009 and 2014 (max. count)

- Bechstein's bat maternity roost, 2014
- Bechstein's bat roost (two individuals), 2014
- Bechstein's bat roost (one individual), 2014

Scale at A3: 1:20,000

0 250 500 1,000 Metres

N

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Appendix 3 Great Crested Newt Survey Results

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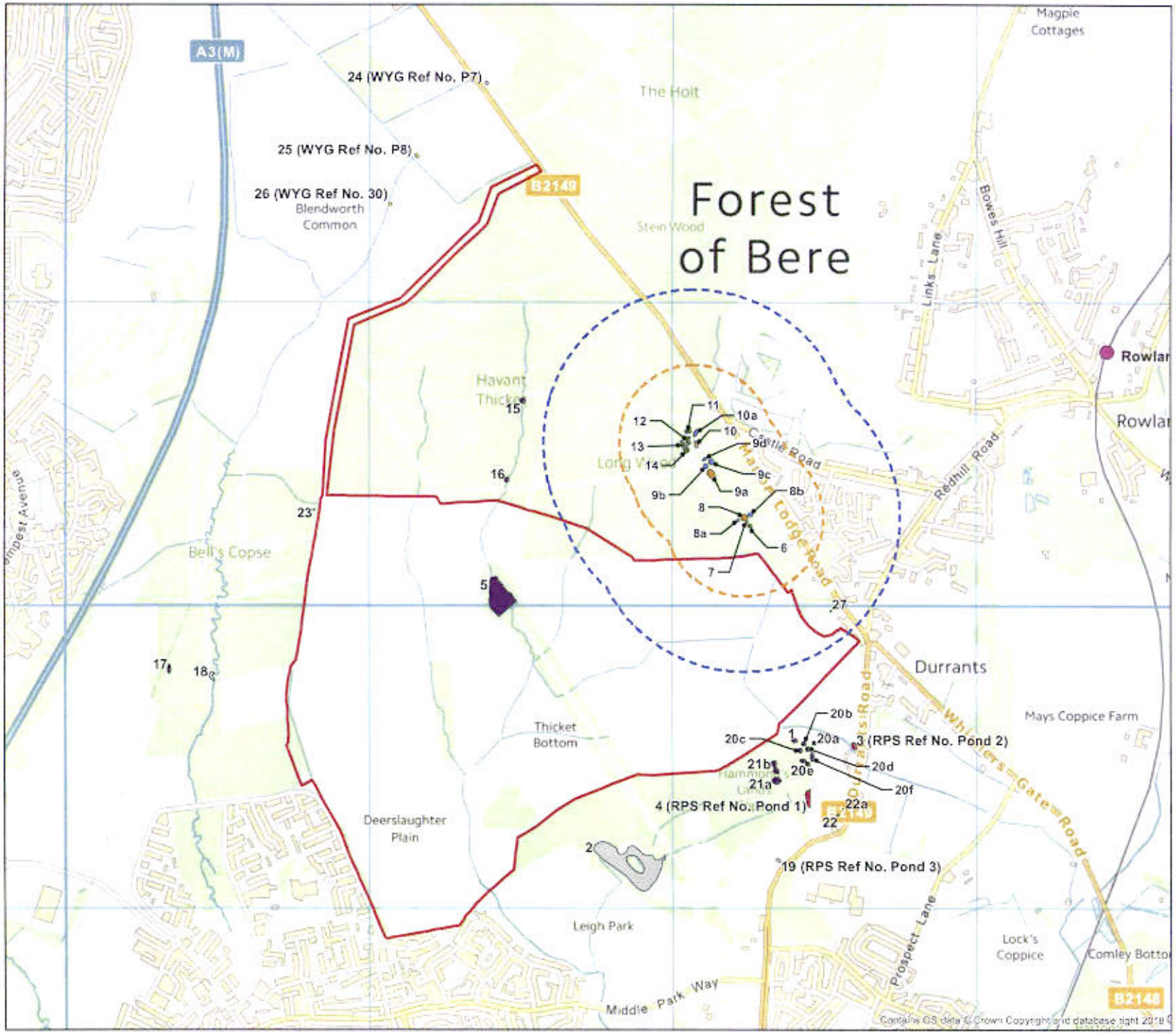

HAVANT THICKET WINTER STORAGE RESERVOIR

GREAT CRESTED NEWT ASSESSMENT

Map K4 - Great Crested Newt Survey - Location of Ponds Surveyed and Results

Client:	Portsmouth Water
Date:	May 2019
Status:	Final

KEY

- Site Boundary (the site)
- Confirmed GCN Pond Buffer: 250m Radius
- Confirmed GCN Pond Buffer: 500m Radius

Location of Ponds Surveyed and Survey Results

Pond Surveyed, Great Crested Newt (GCN) Status

- Pond subject to eDNA and GCN surveys by ECOSA in 2018. Positive result - GCN present (Ponds 8, 9a and 10)
- Pond subject to eDNA and GCN surveys by ECOSA in 2018. Negative result - GCN absent (Ponds 6, 7, 11, 12, 13 and 14)
- Pond subject to GCN survey by ECOSA in 2018. Negative result - GCN absent (Ponds 8a, 8b, 9b, 9c, 9d and 10a)
- Pond subject to eDNA survey by ECOSA in 2018. Negative result - GCN absent (Ponds 1, 5, 15, 16, 17, 20a, 20b, 20c, 20d, 20e, 20f, 21a, 21b 22 and 23)
- Pond subject to eDNA survey by RPS in 2017. Negative result - GCN absent (Pond 3 and Pond 4)
- Pond subject to GCN survey by WYG in 2014. Negative result - GCN absent (Pond 25 and Pond 26)
- Pond not surveyed - deemed unsuitable (Ponds 2, 18, 19, 22a, 24 and 27)

Scale at A3: 1:12,000

0 150 300 600 Metres

N

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Appendix 4 Summary of Habitat Loss/Gain for Notable Protected Species

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Table 9: Habitat loss and suitability[20] for species / species groups

Location	Habitat Type	Total Area of Loss (Hectares)	Bats (Foraging)	Bats (Roosting)	Badger	Hazel Dormouse	Birds	Reptiles	Great Crested Newt	Terrestrial Invertebrates	Aquatic Ecology
The Avenue	Lowland mixed deciduous woodland	6.16									
Middle Clearing	Lowland mixed deciduous woodland	2.17									
Round Wood	Lowland mixed deciduous woodland	1.39									
The Corsican Pine Plantation	Pine plantation	2.21									
Willow / blackthorn scrub	Broadleaved woodland	1.27									
Site-wide	Semi-improved grassland	139									
Streams	River (Ephemeral Watercourses)	0.37 (3.7 kilometre length)									
Upper Lake	Pond	0.65									
Wetland	Purple Moor Grass Rush Pasture	1.21									
Standard Trees	Broadleaved standard tree	29 trees									
Total Loss of Suitable Habitat (Hectares)	**N/A**	**N/A**	**156.18**	**13.03**	**156.18**	**14.95**	**156.18**	**140.92**	**3.09**	**156.18**	**0.37**

Table 10: Habitat creation and enhancement and suitability for species / species groups

Location	Location	Map Reference	Compensation Type	Habitat Type (Existing / To be Created)	Management	Area (Hectares)	Bats (Foraging)	Bats (Roosting)	Badger	Hazel Dormouse	Birds	Reptiles	Great Crested Newt	Terrestrial Invertebrates	Aquatic Ecology
Phase 1 Planting: Gipsies Plain	On-site	**Map 10, Map 4**	New habitat creation	Lowland mixed deciduous woodland and wood pasture / parkland, ephemeral ponds	Long-term management once developed	1.50									
Phase 2 Planting: Deerslaughter Plain	On-site	**Map 4**	New habitat creation	Lowland mixed deciduous woodland and Wood pasture / parkland	Long-term management once developed	2.48									
Cabbagefield Row	On-site	**Map 4**	Existing habitat enhancement	Lowland mixed deciduous woodland	Coppicing, glade creation	1.17									
Retained area of Round Wood	On-site	**Map 4**	Existing habitat enhancement	Lowland mixed deciduous woodland	Diversification of age structure	0.58									
Swanmore Road Shelterbelt	On-site	**Map 4**	Existing habitat enhancement	Lowland mixed deciduous woodland	Coppicing, glade creation, diversification of age structure	0.66									
Corsican Pine Plantation	On-site	**Map 4**	New habitat creation	Wet woodland	Felling of conifers, creation of wet woodland	1.66									
Scrub / bolstered edge habitat	On-site	**Map 4**	New habitat creation	Scrub	Edge habitat allowed to develop around perimeter of reservoir	0.90									

[20] Habitats with suitability for each species / species group is highlighted

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Location	Location	Map Reference	Compensation Type	Habitat Type (Existing / To be Created)	Management	Area (Hectares)	Bats (Foraging)	Bats (Roosting)	Badger	Hazel Dormouse	Birds	Reptiles	Great Crested Newt	Terrestrial Invertebrates	Aquatic Ecology
Small areas of on-site woodland creation	On-site	**Map 4**	New habitat creation	Lowland mixed deciduous woodland	Long-term management once developed	0.30									
Phase 1 and 2 planting areas	On-site	**Map 4**	Existing habitat enhancement	Neutral grassland	Long-term management to increase species diversity	1.63									
Hedgerows on Gipsies Plain	On-site	**Map 4**	Existing habitat enhancement	Hedgerow	Bolstering through the planting of native species	0.20									
Stream creation	On-site	**Map 4**	New habitat creation	River	Small section of created stream at southern edge of reservoir	0.02									
Wetland area with wet woodland fringes	On-site	**Map 4**	New habitat creation	Wetland and woodland	Management delivered through long-term management plan	12.36									
Created grassland along reservoir embankment	On-site	**Map 4**	New habitat creation	Neutral grassland	Management through grazing	15.83									
Created shoreline ephemeral shallows	On-site	**Map 4**	New habitat creation	Marshy grassland	Management delivered through long-term management plan	1.68									
Retained species poor rush pasture to be enhanced to Priority Habitat: Purple Moor Grass Rush Pasture	On-site	**Map 4**	Existing habitat enhancement	Purple Moor Grass Rush Pasture	Enhancement through sensitive grazing regime and careful management of hydrology	1.28									
Open water	On-site	**Map 4**	New habitat creation	Open water associated with reservoir	No specific management	106									
Retained and enhanced grassland	On-site and wider-site	**Map 4**	Existing habitat enhancement	Neutral grassland	Retained grassland around the perimeter of the site will be enhanced through positive ecological management	15.42									
Woodland at the base of The Avenue	On-site and wider-site	**Map 4**	Existing habitat enhancement	Lowland mixed deciduous woodland	Coppicing, glade creation, diversification of age structure	5.44									
Havant Thicket woodland: forest meadow	Wider-site	**Map 6**	New habitat creation	Purple Moor Grass Rush Pasture	Clearance of young birch trees which have regenerated in previous clear fell areas to create permanent open space	2.22									
Havant Thicket woodland: clear-fell area	Wider-site	**Map 6**	New habitat creation	Lowland mixed deciduous woodland	Felling and clearance of pine plantations, subsequent planting of native broadleaved trees	4.07									
Havant Thicket woodland: woodland stream enhancement	Wider-site	**Map 6**	Existing habitat enhancement	River	Opening up of stream corridors, with graded edge	1.12									
Havant Thicket woodland: pond enhancements	Wider-site	**Map 6**	Existing habitat enhancement	Ponds	Conifers around ponds removed allow light to enter area.	1.57									
Havant Thicket woodland: management of birch dominated areas	Wider-site	**Map 6**	Existing habitat enhancement / new habitat creation	Lowland mixed deciduous woodland	Creation of racks through birch dominated woodland to either encourage existing broadleaved tree or plant new broadleaved woodland	28.7									
Havant Thicket woodland: Bells Copse woodland management	Wider-site	**Map 6**	Existing habitat enhancement	Lowland mixed deciduous woodland	This oak-hazel woodland will be managed on a long-term hazel coppice rotation	3.87									

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Location	Location	Map Reference	Compensation Type	Habitat Type (Existing / To be Created)	Management	Area (Hectares)	Bats (Foraging)	Bats (Roosting)	Badger	Hazel Dormouse	Birds	Reptiles	Great Crested Newt	Terrestrial Invertebrates	Aquatic Ecology
Havant Thicket woodland: removal of path	Wider-site	Map 6	New habitat creation	Scrub	New graded scrub edge created to replace footpath	0.37									
Havant Thicket woodland: grassland / scrub mosaic management Area	Wider-site	Map 6	Existing habitat enhancement	Grassland and scrub mosaic	Rotational management of grassland and scrub along wayleave	3.4[1]									
Havant Thicket woodland: priority ecological corridors along existing rides	Wider-site	Map 6	Existing habitat enhancement	Graded edges to existing ride network	Graded edge with bramble and more mixed vegetation, rotational management	9.62									
Southleigh Forest	Off-site	Map 5	Existing habitat enhancement	Lowland mixed deciduous woodland	Felling of conifers, creation of wet woodland	74.96									
Wildlife Trust Partnership	Off-site	N/A	New habitat creation	Wood pasture	Management of existing farmland to create wood pasture	60[21]									
Wildlife Trust Partnership	Off-site	N/A	New habitat creation	Lowland meadow	Management of existing farmland to deliver semi-improved / unimproved grassland	20									
Total	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**378.81**	**272.34**	**184.52**	**93.93**	**73.22**	**378.34**	**250.83**	**33.02**	**263.85**	**124.23**

Table 11: Total Loss / gains for species / species groups

Species / Species Group	Loss (Hectares)	Compensation (Hectares)	Difference (Hectares)
Bats (Foraging)	156.18	272.34	+116.16
Bats (Roosting)	13.03	184.52	+171.49
Badger	156.18	93.93	-62.25
Hazel Dormouse	14.95	73.22	+58.27
Birds	156.18	378.34	+222.16
Reptiles	140.92	250.83	+109.91
Great Crested Newt	3.09	33.02	+29.93
Terrestrial Invertebrates	156.18	263.85	+107.67
Aquatic Ecology	0.37	124.23	+123.86

[21] 80 hectares of wood pasture in total inclusive of the 20 hectares of neutral grassland located in the same land parcel.

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Appendix 5 Biodiversity Net Gain Assessment

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Portsmouth Water

ATKINS

Member of the SNC-Lavalin Group

Havant Thicket Reservoir Project

Biodiversity Metric Report
Report for Terrestrial Habitats

Portsmouth Water Ltd.

18/09/2020

Atkins Doc No.: HTR-ATK-RZ-RE-RP-Z-0009

Atkins Revision No.: C01

Notice

This document and its contents have been prepared and are intended solely as information for Portsmouth Water Limited and use in relation to the Havant Thicket Reservoir.

Atkins Limited assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 34 pages including the cover.

Document history

PW Revision	Status	Purpose description	Originated	Checked	Reviewed	Authorised	Date
C01	B1	Final	CW	MB	LJB	LJB	18/09/20
P01		First Issue	CW	RB	MB		15/09/20

Client signoff

Client	Portsmouth Water Ltd.
Project	Havant Thicket Reservoir Project
Job number	5169117
Client signature / date	

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1. Introduction

Atkins Limited (Atkins, a member of the SNC Lavalin group) was commissioned by Portsmouth Water to undertake a study in which the Department for Environment, Food and Rural Affairs (Defra) Biodiversity Metric 2.0[1] published by Natural England would be applied where appropriate to the Havant Thicket Reservoir Project.

Biodiversity Net Gain (BNG) is an approach to development that leaves biodiversity in a better state than before. This report focusses on the habitat component of the Biodiversity Metric 2.0 only. A separate report, Appendix A15.4 of the Havant Thicket Reservoir Project Environmental Statement Volume 4, provides the equivalent calculations for the linear watercourse habitats.

This report presents:

- Baseline condition for on-site habitats and the biodiversity units that will be lost during the works required for the Scheme.
- Predicted biodiversity units to be created onsite through habitat creation and enhancement.
- Predicted biodiversity units to be created offsite through habitat creation and enhancement.

The Biodiversity Metric 2.0 calculations (referred to as the 'metric calculations') in this report, cover habitat losses and gains within the Reservoir Site, and do not include the Pipeline Corridor. This is because all habitat losses for the pipeline will be temporary and subject to bespoke mitigation / compensation through onsite restoration.

The Havant Thicket Reservoir Project will result in the unavoidable loss of ancient woodland and veteran trees, which are irreplaceable habitats. The Defra Biodiversity Metric 2.0 guidance (2019)[2], includes a series of principles that underpin the metric. Principle 4 states:

> *"Impacts on … irreplaceable habitats are not adequately measured by this metric, and will likely require separate consideration."*

The Biodiversity Net Gain, Good practice Principles for Development (CIRIA, 2019)[3] states:

> *A project affecting irreplaceable habitat, while not achieving BNG at the project level, can and should generate meaningful gains or net gains for other biodiversity features. These gains or net gains should be based on advice in this guide, while being clear that the development project overall cannot achieve BNG because of impacts on irreplaceable habitats."*

Due to the unavoidable loss of ancient woodland, including some individual veteran trees, which are irreplaceable habitats, the Scheme overall cannot achieve biodiversity net gain in good practice terms. For irreplaceable habitats, design has minimised their loss as far as practicable and a bespoke approach to compensation for these habitats has been designed in consultation with key stakeholders. The losses of ancient woodland and compensation for these losses are described in Chapter 9 Biodiversity in the Havant Thicket Reservoir Project Environmental Statement Volume 2. The compensation comprises a bespoke combination of onsite and offsite woodland and wood-pasture creation and enhancement. These areas of loss and compensation are therefore excluded from the metric calculations in this report.

In addition to irreplaceable habitats, the Biodiversity Metric 2.0 also indicates that loss of habitats that have been assigned to a 'very high' distinctiveness band[4] should be excluded from metric calculations, with bespoke compensation created instead. Areas of purple moor-grass and rush pasture priority habitat to be lost within the Reservoir Site are classified as a habitat of very high

[1] The Biodiversity Metric 2.0 USER GUIDE Beta Version. First Published July 2019. Natural England Joint Publication JP029
[2] The Biodiversity Metric 2.0 USER GUIDE Beta Version. First Published July 2019. Natural England Joint Publication JP029
[3] CIRIA (2019). The Biodiversity Net Gain, Good practice Principles for Development. Page 132. Section T3.7 Differentiating Biodiversity Losses / Gains From Impacts on Irreplaceable Habitats. https://cieem.net/wp-content/uploads/2019/02/C776a-Biodiversity-net-gain.-Good-practice-principles-for-development -A-practical-guide-web.pdf
[4] Habitats that are listed as Endangered or Critical on the European Red List of Habitats or Priority Habitats with a small amount of remaining habitat in the UK and with a lot of it unprotected by designation.

distinctiveness[5]. The areas of these habitats are shown on Figure 9.3 in Havant Thicket Project Environmental Statement Volume 3. The losses of purple moor-grass and rush pasture priority habitat and compensation for these losses are described in Chapter 9 Biodiversity in the Havant Thicket Project Environmental Statement Volume 2. The compensation comprises bespoke onsite purple moor-grass and rush pasture creation. These areas of loss and compensation are therefore excluded from the metric calculations in this report. However, some retained wet grassland will be enhanced to create purple moor-grass and rush pasture, and this specific element of work is included in this report.

[5] Priority habitats as defined in Section 41 of the Natural Environment and Rural Communities Act that are highly threatened, internationally scarce and require conservation action are assigned Very High distinctiveness under the Metric

2. Method

2.1. Application of the Biodiversity Metric 2.0

Areas of habitat to be lost, created or enhanced at the Reservoir Site have been taken from Chapter 9 Biodiversity in the Havant Thicket Reservoir Project Environmental Statement Volume 2.

Habitat areas, along with the condition of habitats, were inputted to the Defra Biodiversity Metric 2.0 Calculation Tool[6] in order to calculate the baseline habitat biodiversity units for the Reservoir Site. Habitat (area) units, hedgerow (linear) units and river (linear) units are all calculated separately and are not interchangeable.

A habitat's distinctiveness score is derived from its intrinsic biodiversity value, reflecting the rarity of the plant community, the time it takes to reach maturity, its value to fauna, and its ecosystem function. This score is pre-assigned and is pre-populated in the metric. A summary of the habitats present and their distinctiveness and their assumed condition can be found in Table A-1 – Broad Habitat Types Conversion to UK Habitat Classification and Summary of Compensation Strategy, in Appendix A of this Biodiversity Metric report.

Habitat condition was assigned based on professional judgement informed by data in the ECOSA Vegetation survey report[7]. The mapping in that report has not used a standard habitat classification system. Therefore, there has been subjective interpretation to convert to UK Habitat classification system that the Biodiversity Metric 2.0 uses, and the results of this exercise were reviewed and agreed by the original ECOSA habitat surveyor. A precautionary approach has been taken to condition assumptions, which are underpinned by detailed field survey data. Table A-1 – Broad Habitat Types Conversion to UK Habitat Classification and Summary of Compensation Strategy, in Appendix A of this Biodiversity Metric report illustrates how this conversion was undertaken. This table also includes a summary of the approach to compensation for each habitat type for reference.

The metric calculations use measures of a habitat's area (in hectares), its distinctiveness (rarity) and its condition, to calculate biodiversity units. The metric also involves additional multipliers to calculate post-development biodiversity units. These include delivery risk, spatial risk and temporal risk. Full details of the definitions of these multipliers and how the values for each multiplier are assigned to each habitat, are set out in the Biodiversity Metric 2.0 technical supplement[8].

The biodiversity units of each habitat, for both baseline and post-intervention works, are summed in the Biodiversity Metric 2.0 Biodiversity Unit Calculation Proforma to give a net total number of biodiversity units for both pre and post intervention land use change. The full data input into the metric and the resultant calculations within the metric are provided in Appendix B of this Biodiversity Metric report: Biodiversity Metric 2.0 Calculations for the Reservoir Site.

Following guidance within the Biodiversity Metric 2.0 user guide[9] habitats of low or medium distinctiveness were assigned low connectivity and habitats of high distinctiveness assigned moderate connectivity. The add-on connectivity tool was not applied, because Natural England have advised that it will be removed from the tool when it is issued in final version in winter 2020[10].

The Reservoir Site includes non-statutory designated sites and the importance of biodiversity to the Havant Thicket Reservoir Project is set out in local planning documents, so the 'strategic significance' of habitats at the Reservoir Site is set at high, as it is considered to be "within area formally identified in local strategy".

The metric calculations also include offsite interventions. Areas of habitat to be created and enhanced offsite are taken from the indicative proposals in the outline Biodiversity Mitigation and Compensation Strategy for potential offsite interventions, specifically a woodland / wood pasture creation project (excluding the part of this that compensates for loss of ancient woodland) being developed with Hampshire and Isle of Wight Wildlife Trust (HIWWT) and enhancement of

[6] Downloaded 13/07/2020. The Defra 2.0 metric is still in Beta test version with regular updates being published.
[7] Appendix A9.2 Vegetation survey report in the Havant Thicket Reservoir Project Environmental Statement Volume 4.
8 Crosher, I., Gold, S., Heaver, M., Heydon, M., Moore, L., Panks, S., Scott, S., Stone, D. and White, N. (2019) The Biodiversity Metric 2.0: Auditing and accounting for biodiversity value: Technical supplement (Beta version, July 2019). Natural England
9 Crosher, I., Gold, S., Heaver, M., Heydon, M., Moore, L., Panks, S., Scott, S., Stone, D. and White, N. (2019) The Biodiversity Metric 2.0: Auditing and accounting for biodiversity value: User guide (Beta version, July 2019). Natural England
[10] http://nepubprod.appspot.com/publication/5850908674228224

Southleigh Forest, a woodland owned by Portsmouth Water. Portsmouth Water are committed to work with partners to deliver such valuable offsite interventions.

2.2. Assumptions and Limitations to the Biodiversity Metric 2.0 Assessment

The Biodiversity Metric 2.0 calculator has been used for the assessment although this is currently in Beta format and may be subject to changes prior to its final release (expected in December 2020).

The metric provides a high-risk category that minimises the credits gained for more ecological valuable habitats, which is likely to underestimate the value of habitats that could be created given that the Reservoir Site will be managed as a nature reserve in the long-term.

There is uncertainty about the exact habitats that will establish in the wetland areas as these areas will be partially left to natural colonisation with a variety of water levels included in the design to support establishment of a variety of habitats, so assumptions have been made about the elements best described as ponds or reedbed habitat, based on professional judgement working with the wetland design specialists.

The Freshwater Biological Association 'Habitat Naturalness Assessment' is used to assess the condition of lakes. The average naturalness assessment scores for a lake are then converted into condition scores for use in Biodiversity Metric 2.0[11]. The assumed condition using the condition table for Lake Habitat Types[12], for the created reservoir is moderate given the wetland design's aspiration to increase the reservoir's naturalness and its biodiversity value and Portsmouth Water's commitment to long term management.

Linear habitats including watercourses have not been included in this assessment. A separate report, Appendix A15.4 of the Havant Thicket Reservoir Project Environmental Statement Volume 4, provides the equivalent metric calculations for the linear watercourse habitats.

Portsmouth Water are committed to maximising the ecological benefits of the Scheme and are including a range of mitigation and compensation measures that cannot be accounted for in a metric. For example, advance planting has already been undertaken within the Reservoir Site and the resultant reduced time to target condition for these areas cannot be reflected in the metric calculations. The proposals also include a visitor centre[13] to provide social and educational benefits and on-site staff will help manage the Reservoir Site and ensure habitats are able to develop into high value habitats in the long-term.

Detailed proposals are not available for the potential offsite habitat creation and enhancement measures, so a precautionary approach has been taken in estimating the areas affected and the potential success of habitat interventions. The overall compensation package includes a Capital Grants Scheme. It is not possible to predict the habitat interventions that will be funded by this Scheme so it is not included in the metric calculations.

[11] Details of the methodology for assessing naturalness are located at the following website: http://priorityhab.wpengine.com/contribute/

[12] Biodiversity metric 2.0 Technical Supplement - Beta Test Final (March, 2020)

[13] Note: The visitor centre footprint has not been included in this assessment The addition of the centre will generate further changes to net gain calculations.

3. Results and Discussion

3.1. Application of the Mitigation Hierarchy

The mitigation hierarchy has been used to design the reservoir and supporting development. This is described within Chapter 9 Biodiversity in the Havant Thicket Reservoir Project Environmental Statement Volume 2 and is not duplicated in this report.

3.2. Habitat Losses, Creation and Enhancement on the Reservoir Site

The following tables are copied from data in Chapter 9 Biodiversity in the Havant Thicket Reservoir Project Environmental Statement Volume 2. Table 3-1 sets out the predicted habitat losses. These summarise the losses in Appendix A of this Biodiversity Metric report. Greyed out rows show habitats where losses are subject to bespoke compensation, so they are not included in the metric calculations, but are shown here for completeness of data.

Table 3-1 - Habitat Predicted to be Lost at the Reservoir Site

Habitat type	Comments	Area Lost (ha)
Ancient Semi-Natural Woodland	IRREPLACEABLE HABITAT	9.92
Plantation on Ancient Woodland Sites	IRREPLACEABLE HABITAT	2.53
Purple moor-grass and rush pastures	Priority Habitat of very high distinctiveness	1.21
Damp to wet grassland and developing rush pasture	Non-Priority Habitat	77.73
Damp neutral to acid grassland	Non-Priority Habitat	42.15
Species-poor rush pasture and wetland	Non-Priority Habitat	4.07
Willow scrub	Non-Priority Habitat	0.98
Other scrub	Non-Priority Habitat	0.28
Pond[14]	Non-Priority Habitat	0.39
Made-up track with grass verges	Non-Priority Habitat	1.02

[14] Further information on Upper Lake provided in Aquatic habitats and species section below.

Table 3-2 sets out the predicted areas of habitat to be created. The greyed-out row is habitat creation contributing to compensation for loss of irreplaceable habitat, so it is not included in the metric calculations, but is shown here for completeness of data.

Table 3-2 - Summary of Habitat Creation within the Reservoir Site

Habitat Type	Comments	Indicative Area Created (ha)
Woodland/wood-pasture	Gipsies Plain and Deerslaughter Plain advance planting and additional small areas around the edge of the reservoir footprint	4.30
Grassland	Predominantly on the reservoir embankments	15.83
Wetland	Along northern edge of reservoir	10.21
Shoreline ephemeral shallows	Along wetland edge	1.68
Scrub/ bolstered woodland edge or hedgerows	Around reservoir footprint boundaries	0.91
Open water	The Reservoir (excluding the wetland area)	101.80

The Scheme would also result in construction of features such as the visitor centre and access roads, so the area of habitat loss is greater than the area of habitat to be created.

Within the Reservoir Site the following habitats would be retained and enhanced:

- 127.40 ha woodland retained, within which 52.7 ha would be enhanced, including an area enhanced to create purple moor-grass and rush pasture.
- 15.42 ha grassland retained.
- 1.29 ha species-poor rush pasture enhanced to species-rich purple moor-grass and rush pasture.

The retained and enhanced woodland area (greyed out in the relevant bullet point above) is not included in the metric calculations, because these interventions form part of the compensation for loss of ancient woodland and include the compensation for loss of purple moor grass rush pasture.

3.3. Biodiversity Metric 2.0 Summary Results for the Reservoir Site

Initial metric calculations are provided below for habitats excluding losses and compensation relating to ancient woodland and purple moor-grass and rush pasture priority habitat. These are based on the outline design as described in the Havant Thicket Reservoir Project Environmental Statement. These have been done using the current Beta testing version of Biodiversity Metric 2.0, December 2019[15].

Based on on-site post intervention including habitat retention, creation and enhancement, there is a predicted **net loss of 20.19 %** as detailed below in Table 3-3.

[15] The download of the metric table was carried out on 3rd March 2020. The add -on connectivity tool has not been used for this assessment.

Table 3-3 - Predicted Biodiversity Metric 2.0 Results for the Reservoir Site

On-Site Baseline	Total Site Area (ha)	156.99	Total Baseline Habitat Units	1,311.58
On-Site Post Intervention Including Retention, Creation, Enhancement	Total Site Area (ha)	156.99	Total Post Intervention Habitat Units	1,045.89
			Total Net Unit Change	**- 265.70**
			Total Net % Change Including On-Site habitat retention / creation	**-20.26% loss**

3.4. Alternative Biodiversity Metric 2.0 Summary Results for the Reservoir Site, with Revised Difficulty Multiplier

The Biodiversity Metric 2.0 calculator includes some fixed elements, such as the time to target condition and difficulty multipliers for creating or enhancing different habitat types. For example, the multiplier for creating/enhancing non-priority habitat ponds is 1, but the multiplier for creating/enhancing reedbeds is 0.67.

The largest area of habitat creation will be the open water of the reservoir itself. In the metric, reservoirs have a difficulty multiplier of 0.67. While creating reservoirs requires very specific site conditions and skilled engineering, the entire purpose of this Scheme is to create a viable reservoir. For this Scheme, engineering and environmental expertise will be used to design a reservoir that includes features, such as the wetland area, specifically incorporated to improve its value for nature conservation. It therefore appears inappropriate to apply the difficulty multiplier to this habitat type. For comparative purposes, the table below shows how applying a multiplier of 1 instead of 0.67 to the reservoir open water would alter the results.

This change in approach would result in a predicted **net loss of 0.54 %** as detailed in Table 3-4 below:

Table 3-4 - Predicted Biodiversity Metric 2.0 Results for Reservoir Site, with Revised Difficulty Multiplier

On-Site Baseline	Total Site Area (ha)	156.99	Total Baseline Habitat Units	1,311.58
On-Site Post Intervention Including Retention, Creation, Enhancement	Total Site Area (ha)	156.99	Total Post Intervention Habitat Units	1,045.89 - 525.11 + 783.74 ---------- 1,304.52
			Total Net Unit Change	**- 7.06**
			Total Net % Change Including On-Site habitat retention / creation	**-0.54 % loss**

3.5. Alternative Biodiversity Metric 2.0 Summary Results for the Reservoir Site, including Offsite Interventions

Off-site interventions are envisaged at two locations. These are a woodland and wood-pasture creation project being developed with HIWWT and enhancement of Southleigh Forest, a woodland owned by Portsmouth Water. While details of interventions may change, Portsmouth Water are committed to deliver such valuable interventions offsite, through either partnership or the Capital Grants Scheme.

The woodland and wood-pasture creation is planned to total 80 ha, but 55 ha of this would contribute to the compensation for loss of ancient woodland. Therefore, an additional 25 ha of habitat creation could contribute to the biodiversity metric calculation. The location of this site is not yet confirmed, so as a precaution it is assumed to be outside the Local Planning Authority area, but in a neighbouring one. The metric calculation is based on an assumption that 25 ha of arable cropland would be replaced by 15 ha of neutral grassland and 10 ha of mixed scrub. It is assumed that these habitats would be in good condition.

Southleigh Forest is approximately 3 km from the Reservoir Site. It contains areas of broadleaf woodland and coniferous plantation on an ancient woodland site. It lies within a core area for Bechstein's bats, so habitat enhancement would be valuable at this location. Habitat areas were not available to inform this metric calculation, so an indicative assumption is being made that 30 ha of coniferous plantation would be converted to broadleaf woodland and the remaining 45 ha is assumed to be lowland mixed deciduous woodland, and the condition of this habitat would be enhanced from poor to moderate. These figures are illustrative only. As a precaution, the condition of the enhanced habitats has been limited to moderate.

Together, the aim would be to develop 25 ha within a site to be secured by HIWWT, and with the 75 ha at Southleigh Forest these interventions would total 100 ha of offsite interventions.

Portsmouth Water is committed to work with partners to deliver such valuable offsite interventions.

Table 3-5 shows the combined results of onsite and indicative offsite interventions, giving the results using both the standard reservoir difficulty multiplier and the revised one (see Section 3.4 above) for the onsite element of the results.

Table 3-5 - Predicted Biodiversity Metric 2.0 Results for the Reservoir Site and Offsite Interventions

On-Site Baseline	Total Site Area (ha)	156.99	Total Baseline Habitat Units	1,311.58
On-Site Post Intervention Including Retention, Creation, Enhancement	Total Site Area (ha)	156.99	Total Post Intervention Habitat Units	1,045.89 (standard metric) or 1,304.52 (revised multiplier for reservoir)
Off-site assumed baseline	Total Site Area (ha)	100	Total Baseline Habitat Units	465.55
Off-site indicative Post intervention	Total Site Area (ha)	100	Total Post Intervention Habitat Units	687.72
			Net change at off-site locations	+ 222.17
			Total Net Unit Change	**-43.53 (standard metric) or +215.11 (revised multiplier for reservoir)**
			Total Net % Change	**-3.32 % (standard metric) or +16.40 % (revised multiplier for reservoir)**

This indicative metric calculation suggests that the interventions would result in a situation close to no net loss, based on the Biodiversity Metric 2.0. If the multiplier for the reservoir open water habitat is altered as discussed, the combination of onsite and offsite interventions would be predicted to result in a net gain of more than 15%.

3.6. Commentary on Changes in Habitat Types

To meet good practice guidance, interventions to deliver biodiversity net gain should not just take the headline numbers into account, but also consider the effects on individual habitat types to avoid 'trading down', where loss of a habitat of higher distinctiveness is compensated by creating larger areas of lower distinctiveness habitats. On the Reservoir Site, the largest area of habitat loss is other neutral grassland. Taking the offsite habitat interventions into account, there would still be a substantial loss of grassland.

The interventions envisaged at Southleigh Forest would result in gains relating to lowland mixed deciduous woodland, a habitat of higher distinctiveness (therefore 'trading up') and the woodland and wood-pasture creation project being developed with HIWWT includes grassland creation. However, there would still be a net loss of units relating to grassland that are not balanced by these interventions. It would therefore be beneficial to undertake additional grassland interventions. This net loss of grassland was taken into account in outlining the Capital Grants Scheme, as described

in Chapter 9 Biodiversity in the Havant Thicket Reservoir Project Environmental Statement Volume 2:

"The application of the Capital Grants scheme will be based on a series of criteria to be developed with Natural England and other stakeholders, to ensure that the funding delivers genuine benefits to biodiversity and the local community. These are likely to include criteria scoring that prioritises the following:

- *proximity to the scheme site. In particular, effort should be made to offset habitat losses within the same local planning authority (i.e. Havant Borough Council and East Hampshire District Council) or National Character Area (i.e. South Hampshire Lowlands).*
- *value for money and deliverability.*
- *grassland enhancement and creation projects will be prioritised.*
- *interventions benefiting bats and grassland birds will be prioritised.*
- *contribution to local policies and targets for biodiversity. For example, opportunities to contribute to targets set out in the Hampshire Biodiversity Opportunity Areas may be prioritised. In the context of the site's location, it would be of relevance to explore opportunities within the following BOAs:*
  - *the Forest of Bere Biodiversity Opportunity Area – e.g. restoration of lowland meadow and lowland dry acid grassland;*
  - *Portsdown Hill Biodiversity Opportunity Area – e.g. restoration of lowland calcareous grassland;*
  - *Chichester/Langstone Harbours and Hayling Island Biodiversity Opportunity Area – e.g. the restoration of PMGRP."*

The offsite interventions included in the indicative metric calculation in section 3.5 are hypothetical. However, in both cases, interventions are planned that would create / enhance areas to provide high nature conservation value. Whether or not the metric calculations are used to influence final designs, a range of other biodiversity priorities must also be taken into account. For the woodland and wood-pasture creation project being developed with HIWWT, priorities will be influenced by the location selected. For Southleigh Forest, the Bechstein's bat must be a priority influencing decisions. The application of the Capital Grants Scheme will provide further benefits to biodiversity, whether this forms habitat interventions, such as grassland creation and enhancement, or other measures.

4. Conclusions

The Biodiversity Metric 2.0 (Beta version) has been applied to the proposed Scheme at the Havant Thicket Reservoir Site, based on the design at the time of publication of the 2020 Environmental Statement.

Biodiversity Net Gain cannot be achieved in relation to irreplaceable habitat, such as ancient woodland. Losses of this habitat have been reduced as far as practicable, and bespoke compensation would be provided. The loss of ancient woodland and the bespoke compensation for that loss is excluded from the metric calculations. Areas of purple moor-grass and rush pasture, a priority habitat of very high distinctiveness would also be lost. In accordance with guidance embedded within the Biodiversity Metric 2.0, these losses have also been subject to bespoke compensation and are excluded from the metric calculations.

For the Reservoir Site itself, the Biodiversity Metric 2.0 calculator predicts a net loss of 265.70 units, equivalent to a -20.26% loss.

The results of the calculator are influenced by various fixed and variable factors. One of the fixed factors is a multiplier applied to created and enhanced habitat, which is set based on the difficulty of creation/enhancement of each habitat type. For this project, engineering and environmental expertise will be used to design a reservoir that includes features, such as the wetland area, specifically incorporated to improve its value for nature conservation. It is therefore suggested that the standard difficultly multiplier of 0.67 (the same as used for other habitats such as reedbed) is unnecessarily pessimistic, and a multiplier of 1 (as used for ponds) could be justified. For comparative purposes, a multiplier of 1 instead of 0.67 to the reservoir open water has been tested. With this adjustment, for the Reservoir Site itself, the Biodiversity Metric 2.0 calculator predicts a net loss of 7.06 units, equivalent to a -0.54% loss.

Indicative metric calculations have also been undertaken for interventions envisaged at a woodland and wood-pasture creation project being developed in partnership with Hampshire and Isle of Wight Wildlife Trust (HIWWT) and enhancement of Southleigh Forest, a woodland owned by Portsmouth Water. These are hypothetical, as no details are available at this stage, but they are included for information.

Taking the indicative offsite elements into account, using the Biodiversity Metric 2.0 calculator in its published form predicts a net loss of 43.53 units, equivalent to a -3.32% loss. If the difficulty multiplier for the reservoir habitat is amended from 0.67 to 1 for project-specific reasons, the metric calculations would predict a net gain of 215.11 units, equivalent to a +16.40% gain.

The offsite interventions included in the indicative metric calculation in section 3.5 are hypothetical. However, in both cases, interventions are being developed that would create / enhance areas to provide high nature conservation value. Whether or not the metric calculations are used to influence final designs, a range of other biodiversity priorities must also be taken into account. For the woodland and wood-pasture creation project being developed in partnership with HIWWT, priorities will be influenced by the location selected. For Southleigh Forest, the Bechstein's bat must be a priority influencing decisions.

The application of the Capital Grants Scheme will provide further benefits to biodiversity, whether this forms habitat interventions, such as grassland creation and enhancement, or other measures. Given the net loss of grassland at the Reservoir Site, grassland enhancement and creation have correctly been identified as a funding priority.

Appendices

Appendix A. Habitat Conversions Table

Table A-1 – Broad Habitat Types Conversion to UK Habitat Classification and Summary of Compensation Strategy

Vegetation type as described by ECOSA (with predominant NVC types)	Translation to UK Habitat Classification		Rationale for translation	Nature conservation importance	Biodiversity Metric 2.0 broad habitat	Biodiversity Metric 2.0 habitat type	Biodiversity Metric 2.0 habitat distinctiveness	Compensation strategy
WOODLAND including all areas on ancient woodland sites								
Broadleaved woodland including plantation (W10 Quercus robur-Pteridium aquilinum-Rubus fruticosus woodland)	The Avenue	w1f Lowland mixed deciduous woodland	Canopy dominated by mature pedunculate oak; understorey with hazel, hawthorn, holly and blackthorn; field layer dominated by bracken, bramble, common ivy and honeysuckle.	**IRREPLACEABLE HABITAT** Ancient semi-natural woodland[16] Priority Habitat – Lowland mixed deciduous woodland Thicket Bottom SINC Local Ecological Network of Hampshire – Core Non-statutory Site component	Not applicable	Not applicable	Not applicable	**Bespoke Compensation** **Excluded from BNG metric calculations as BNG cannot be delivered in relation to loss of irreplaceable habitat** Ancient woodland losses to be compensated by bespoke compensation.
	Middle Clearing	w1g Other woodland; broadleaved	Plantation of pedunculate oak; sparse understorey of hazel and hawthorn; grass-dominated field layer.	**IRREPLACEABLE HABITAT** Ancient semi-natural woodland[16] Middle Clearing SINC Local Ecological Network of Hampshire – Core Non-statutory Site component	Not applicable	Not applicable	Not applicable	**Bespoke Compensation** **Excluded from BNG metric calculations as BNG cannot be delivered in relation to loss of irreplaceable habitat** Ancient woodland losses to be compensated by bespoke compensation
	Round Wood	w1g Other woodland; broadleaved	Plantation of pedunculate oak; sparse understorey of holly and	**IRREPLACEABLE HABITAT**	Not applicable	Not applicable	Not applicable	**Bespoke Compensation** **Excluded from BNG metric calculations as BNG cannot be**

[16] As identified on Natural England's Ancient Woodland Inventory

Vegetation type as described by ECOSA (with predominant NVC types)	Translation to UK Habitat Classification		Rationale for translation	Nature conservation importance	Biodiversity Metric 2.0 broad habitat	Biodiversity Metric 2.0 habitat type	Biodiversity Metric 2.0 habitat distinctiveness	Compensation strategy
			hawthorn; grass-dominated field layer.	Ancient semi-natural woodland[16] Thicket Bottom Woods and Lake SINC Local Ecological Network of Hampshire – Core Non-statutory Site component				**delivered in relation to loss of irreplaceable habitat** Ancient woodland losses to be compensated by bespoke compensation. .
	Havant Thicket (ECOSA compartment W9)	w1f Lowland mixed deciduous woodland	Canopy dominated by mature pedunculate oak and silver birch; understorey with hazel; field layer dominated by bracken, bramble and honeysuckle.	**IRREPLACEABLE HABITAT** Plantation on Ancient Woodland Site[16] Havant Thicket SINC Local Ecological Network of Hampshire – Core Non-statutory Site component	Not applicable	Not applicable	Not applicable	**Bespoke Compensation** **Excluded from BNG metric calculations as BNG cannot be delivered in relation to loss of irreplaceable habitat** Ancient woodland losses to be compensated by bespoke compensation .
	Havant Thicket (ECOSA compartment W12)	w1g Other woodland; broadleaved	Plantation of beech; understorey of holly; sparse field layer of calcifugous vegetation.	**IRREPLACEABLE HABITAT** Plantation on Ancient Woodland Site[16] Havant Thicket SINC Local Ecological Network of Hampshire – Core Non-statutory Site component	Not applicable	Not applicable	Not applicable	**Bespoke Compensation** **Excluded from BNG metric calculations as BNG cannot be delivered in relation to loss of irreplaceable habitat** Ancient woodland losses to be compensated by bespoke compensation. .
Coniferous plantation (field layer conforming to W10 Quercus robur-Pteridium aquilinum-	Corsican pine plantation	w2c Other coniferous woodland	Plantation of Corsican pine with a field layer dominated by bracken and bramble.	**IRREPLACEABLE HABITAT** Plantation on Ancient Woodland Site[16])	Not applicable	Not applicable	Not applicable	**Bespoke Compensation** **Excluded from BNG metric calculations as BNG cannot be delivered in relation to loss of irreplaceable habitat**

Vegetation type as described by ECOSA (with predominant NVC types)	Translation to UK Habitat Classification		Rationale for translation	Nature conservation importance	Biodiversity Metric 2.0 broad habitat	Biodiversity Metric 2.0 habitat type	Biodiversity Metric 2.0 habitat distinctiveness	Compensation strategy
Rubus fruticosus woodland)				Havant Thicket SINC Local Ecological Network of Hampshire – Core Non-statutory Site component				Ancient woodland losses to be compensated by bespoke compensation. .
	Havant Thicket (ECOSA compartment W10)	w2c Other coniferous woodland	Plantation of spruce sp. with a field layer of bracken, bramble and honeysuckle.	**IRREPLACEABLE HABITAT** Plantation on Ancient Woodland Site[16] Havant Thicket SINC Local Ecological Network of Hampshire – Core Non-statutory Site component	Not applicable	Not applicable	Not applicable	**Bespoke Compensation** **Excluded from BNG metric calculations as BNG cannot be delivered in relation to loss of irreplaceable habitat** Ancient woodland losses to be compensated by bespoke compensation. .
Former heathland developing into scrub and secondary woodland (W4 Betula pubescens-Molinia caerulea woodland))	Havant Thicket (ECOSA compartment H3)	w1d Wet woodland	Regenerating thicket dominated by downy birch with grey willow; purple moor-grass present in field layer.	**IRREPLACEABLE HABITAT** Plantation on Ancient Woodland Site[16] **PRIORITY HABITAT**– Wet woodland Havant Thicket SINC Local Ecological Network of Hampshire – Core Non-statutory Site component	Not applicable	Not applicable	Not applicable	**Bespoke Compensation** **Excluded from BNG metric calculations as BNG cannot be delivered in relation to loss of irreplaceable habitat** Ancient woodland losses to be compensated by bespoke compensation. .
	Havant Thicket (ECOSA compartment H5)	w1d Wet woodland	Regenerating thicket dominated by downy birch with grey willow	**IRREPLACEABLE HABITAT** Plantation on Ancient Woodland Site[16]	Not applicable	Not applicable	Not applicable	**Bespoke Compensation** **Excluded from BNG metric calculations as BNG cannot be delivered in relation to loss of irreplaceable habitat**

Vegetation type as described by ECOSA (with predominant NVC types)	Translation to UK Habitat Classification	Rationale for translation	Nature conservation importance	Biodiversity Metric 2.0 broad habitat	Biodiversity Metric 2.0 habitat type	Biodiversity Metric 2.0 habitat distinctiveness	Compensation strategy
			PRIORITY HABITAT– Wet woodland Havant Thicket SINC Local Ecological Network of Hampshire – Core Non-statutory Site component				Ancient woodland losses to be compensated by bespoke compensation.
GRASSLANDS							
Species-rich marsh and rush pasture (M23 Juncus effusus/acutiflorus-Galium palustre rush-pasture)	f2b Purple moor-grass and rush pastures	Species-rich sward with sharp-flowered rush, soft-rush, compact rush and velvet bent. Other purple moor-grass and rush pasture indicator species include greater bird's-foot-trefoil, lesser spearwort, common marsh-bedstraw and water mint. Habitat not considered irreplaceable; it comprises a rush-pasture vegetation community that has developed in small areas along the margins of the streams and in hollows with impeded drainage. The extents do not comprise contiguous rush-pasture that could be considered to reflect historical management practices of an ancient pastoral landscape.	**PRIORITY HABITAT** – Purple moor-grass and rush pastures Local Ecological Network of Hampshire – Core Non-statutory Site component	Wetland	Purple moor-grass and rush pastures	Very high	**Bespoke Compensation** **Excluded from metric calculations in accordance with Natural England guidance as a Priority Habitat of very high distinctiveness**
Damp to wet grassland and developing rush pasture (MG10 Holcus lanatus-Juncus effusus rush-pasture & MG9 Holcus lanatus-Deschampsia cespitosa grassland)	g3c Other neutral grassland (a mosaic of g3c8 Holcus-Juncus neutral grassland and g3c7 Deschampsia neutral grassland)	Sward dominated by Yorkshire-fog with abundant rough meadow-grass and creeping buttercup, frequent soft-rush and compact rush. Semi-improved wildflower indicator species include cuckooflower and red clover. Coarser swards of Yorkshire-fog and tufted hair-grass locally dominant.	Non-Priority Habitat Local Ecological Network of Hampshire – Network Opportunity Area component (neutral grassland)	Grassland	Other neutral grassland	Medium	Same broad habitat or a higher distinctiveness habitat (like-for-like or better) required. Some grassland to be created on-site. Grassland will be one of the targets for creation / enhancement in off-site interventions that would contribute to metric calculations.

Vegetation type as described by ECOSA (with predominant NVC types)	Translation to UK Habitat Classification	Rationale for translation	Nature conservation importance	Biodiversity Metric 2.0 broad habitat	Biodiversity Metric 2.0 habitat type	Biodiversity Metric 2.0 habitat distinctiveness	Compensation strategy
		Transition to less mesotrophic rush-pasture (M23) swards indicated by presence of marsh thistle, velvet bent, greater bird's-foot-trefoil and lesser spearwort. These transitional swards are relatively species-poor with the indicator species not sufficiently frequent to conform to purple moor-grass and rush pastures Priority Habitat.					
Dry neutral to acid grassland (MG6 Lolium perenne-Cynosurus cristatus grassland & MG1 Arrhenatherum elatius grassland)	g3c Other neutral grassland (a mosaic of g3c5 Arrhenatherum neutral grassland and g3c6 Lolium-Cynosurus neutral grassland)	Majority of sward dominated by common bent with crested dog's-tail, red fescue and sweet vernal-grass. Semi-improved wildflower indicator species include red clover, common sorrel, ribwort plantain, common cat's-ear and meadow buttercup. Lowland meadow indicator species, including common knapweed and common bird's-foot-trefoil, locally frequent but not constant throughout sward. Ranker swards dominated by false oat-grass and cock's-foot.	Non-Priority Habitat Local Ecological Network of Hampshire – Network Opportunity Area component (neutral grassland)	Grassland	Other neutral grassland	Medium	Same broad habitat or a higher distinctiveness habitat required (like-for-like or better). Some grassland to be created on-site. Grassland will be one of the targets for creation / enhancement in off-site interventions that would contribute to metric calculations.
Species-poor rush pasture and wetland vegetation (MG10 Holcus lanatus-Juncus effusus rush-pasture)	g3c Other neutral grassland (g3c8 Holcus-Juncus neutral grassland)	Sward dominated by Yorkshire-fog with frequent soft-rush and compact rush.	Non-Priority Habitat Local Ecological Network of Hampshire – Network Opportunity Area component (neutral grassland)	Grassland	Other neutral grassland	Medium	Same broad habitat or a higher distinctiveness habitat (like-for-like or better) required. Some grassland to be created on-site. Grassland will be one of the targets for creation / enhancement in off-site interventions that would contribute to metric calculations.

Vegetation type as described by ECOSA (with predominant NVC types)	Translation to UK Habitat Classification	Rationale for translation	Nature conservation importance	Biodiversity Metric 2.0 broad habitat	Biodiversity Metric 2.0 habitat type	Biodiversity Metric 2.0 habitat distinctiveness	Compensation strategy
OTHER HABITATS							
Willow scrub	h3h Mixed scrub	Predominantly grey willow along watercourses and field boundaries[17]	Non-Priority Habitat Local Ecological Network of Hampshire – Hedgerow component	Heathland and shrub	Mixed scrub	Medium	Same broad habitat or a higher distinctiveness habitat (like-for-like or better) required. Some scrub to be created on-site. Scrub & Woodland will be among the targets for creation / enhancement in off-site interventions that would contribute to metric calculations.
Other scrub	h3d Bramble scrub	Linear scrub forming boundary features[17]	Non-Priority Habitat Local Ecological Network of Hampshire – Hedgerow component	Heathland and shrub	Bramble scrub	Medium	Same broad habitat or a higher distinctiveness habitat (like-for-like or better) required. Some scrub to be created on-site. Scrub & Woodland will be among the targets for creation / enhancement in off-site interventions that would contribute to metric calculations
Pond (Upper Lake)	r1a Eutrophic standing waters	Pond "this feature was considered to be of limited ecological value and is not considered to conform to the 'ponds' Priority Habitat"	Non-Priority Habitat Local Ecological Network of Hampshire – Core Non-statutory Site component	Lakes	Ponds (Non-Priority Habitat)	High	Same habitat required. Wetland Area and pond enhancement areas on site will offset loss, contributing to metric calculations.
Made-up tracks with grass verges	u1e Built linear features	Forestry gravel track	N/A	Urban	Built linear features	Very low	Compensation not required.

[17] BNG reporting and delivery could either be reported in hedgerow units or habitat units as these are tree lines. However, this would result in elements of double counting with the watercourses (for which separate compensation is being provided). For initial calculations these have therefore been reported as areas of scrub in the area calculations.

Appendix B. Biodiversity Metric 2.0 Calculations for the Reservoir Site

Havant Thicket Reservoir - onsite calculations

Headline Results

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On-site baseline	Habitat units	1311.58
	Hedgerow units	0.00
	River units	0.00
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	Habitat units	1045.89
	Hedgerow units	0.00
	River units	0.00
Off-site baseline	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (including habitat retention, creation, enhancement &	Habitat units	0.00
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention/creation)	Habitat units	-265.70
	Hedgerow units	0.00
	River units	0.00
Total net % change (including all on-site & off-site habitat creation + retained	Habitat units	-20.26%
	Hedgerow units	0.00%
	River units	0.00%

Hawant Thicket Reservoir - onsite calculations
A-1 Site Habitat Baseline

No.	Broad Habitat	Habitat type	Area (hectares)	Distinctiveness category	Distinctiveness score	Condition	Condition score	Ecological connectivity	Connectivity habitat	Connectivity multiplier	Strategic significance	Strategic significance	Strategic significance multiplier	Proposed action to address habitat losses	Evaluation of Total habitat units
1	Woodland	Broadleaved - Other woodland broadleaved	[illegible]	Medium	4	Moderate	2	Low	Connected habitat	1	Within area formally identified in relevant strategy	Highest strategic significance	1.15	Enhancement/Maintenance - Higher distinctiveness habitat created	[illegible]
2	Woodland	Broadleaved - Other woodland broadleaved	[illegible]	Medium	4	Moderate	2	Low	Connected habitat	1	Within area formally identified in relevant strategy	Highest strategic significance	1.15	Enhancement/Maintenance - Higher distinctiveness habitat created	[illegible]
3	Woodland	Broadleaved - Other woodland broadleaved	[illegible]	Medium	4	Moderate	2	Low	Connected habitat	1	Within area formally identified in relevant strategy	Highest strategic significance	1.15	Enhancement/Maintenance - Higher distinctiveness habitat created	[illegible]
4	Urban	Urban - Developed land; sealed surfaces	[illegible]	Low	2	N/A - Other	0	Low	Connected habitat	1	Within area formally identified in relevant strategy	Highest strategic significance	1.15	Compensation Not Required	0.00
5	Rivers and streams	Rivers and streams - Other rivers	[illegible]	Medium	4	Moderate	2	Low	Connected habitat	1	Within area formally identified in relevant strategy	Highest strategic significance	1.15	Enhancement/Maintenance - Higher distinctiveness habitat created	[illegible]
6	Rivers and streams	Rivers and streams - Other rivers	[illegible]	Medium	4	Moderate	2	Low	Connected habitat	1	Within area formally identified in relevant strategy	Highest strategic significance	1.15	Enhancement/Maintenance - Higher distinctiveness habitat created	[illegible]
7	Lake	Lake - Ponds (Non-Priority Habitat)	[illegible]	High	8	Moderate	2	Medium	Moderately connected habitat	1.1	Within area formally identified in relevant strategy	Highest strategic significance	1.15	Enhancement/Maintenance	[illegible]
8	Urban	Urban - Developed land; sealed surfaces	[illegible]	Low	2	N/A - Other	0	N/A	Connected not appropriate	1	Within area formally identified in relevant strategy	Highest strategic significance	1.15	Compensation Not Required	0.00
9	Urban	Urban - Developed land; sealed surfaces	[illegible]	Low	2	N/A - Other	0	N/A	Connected not appropriate	1	Within area formally identified in relevant strategy	Highest strategic significance	1.15	Compensation Not Required	0.00
10	Urban	Urban - Built linear features	[illegible]	Low	2	N/A - Other	0	N/A	Connected not appropriate	1	Within area formally identified in relevant strategy	Highest strategic significance	1.15	Compensation Not Required	0.00
11															
12															
13															
14															
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18															
19															
20															
21															
22															
23															
24															
25															
26															
		Total site area ha	[illegible]											Total Site baseline	[illegible]

Area retained	Area enhanced	Area created	Baseline units retained	Baseline units enhanced	Baseline units created	Baseline units lost	Area lost	Units lost	Bespoke measures Site agreed Y/N	Measures comments	Monitoring comments
[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Yes	[illegible]	[illegible]
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Yes	[illegible]	[illegible]
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Yes	[illegible]	[illegible]
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			

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Hayant Thicket Reservoir - onsite calculations

A-2 Site Habitat Creation

Condense / Show Columns | Condense / Show Rows

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Post development/ post intervention habitats																			
						Ecological connectivity			Strategic significance			Temporal multiplier		Difficulty multiplier			Comments	
Proposed habitat	Area (hectares)	Distinctiveness	Score	Condition	Score	Ecological connectivity	Connectivity	Connectivity multiplier	Strategic significance	Strategic significance	Strategic position multiplier	Time to target condition/ge	Time to target multiplier	Difficulty of creation	Difficulty of creation	Habitat units delivered	Assessor comments	Reviewer comments
Lakes - Reservoirs	101.8	Medium	4	Moderate	2	Low	Unconnected habitat	1	Within area formally identified in local strategy	High strategic significance	1.15	5	0.837	Medium	0.67	525.11	reservoir	
Grassland - Other neutral grassland	15.83	Medium	4	Fairly Good	2.5	Low	Unconnected habitat	1	Within area formally identified in local strategy	High strategic significance	1.15	12	0.652	Low	1	118.73	Outer Embankment	
Grassland - Other neutral grassland	6.36	Medium	4	Fairly Good	2.5	Low	Unconnected habitat	1	Within area formally identified in local strategy	High strategic significance	1.15	12	0.652	Low	1	47.70	Compartment 5	total compartment originally estimated to be 13 ha; reduced to take account of scrub creation and to balance area as part of compartment comprises area of grassland to be retained and enhanced
Lakes - Ponds (Non-Priority Habitat)	2.79	High	6	Good	3	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	5	0.837	Low	1	53.56	Compartment 4	
Lakes - Ponds (Non-Priority Habitat)	2.44	High	6	Good	3	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	5	0.837	Low	1	46.89	Pond within Compartment 3 (enhancement of existing 0.016 ha pond taken into account)	
Wetland - Reedbeds	0.51	High	6	Good	3	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	15	0.596	Medium	0.67	4.56	Reedbed within Compartment 3	
Wetland - Reedbeds	1.21	High	6	Good	3	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	15	0.596	Medium	0.67	10.82	Compartment 1	
Heathland and shrub - Mixed scrub	0.91	Medium	4	Good	3	Low	Unconnected habitat	1	Within area formally identified in local strategy	High strategic significance	1.15	7	0.779	Low	1	8.29	scrub at south edge of Hayant Thicket	
Wetland - Reedbeds	1.88	High	6	Fairly Good	2.5	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	12	0.652	Medium	0.67	15.93	shoreline ephemeral shallows	
Lakes - Ponds (Non-Priority Habitat)	2.72	High	6	Good	3	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	5	0.837	Low	1	52.03	Pond within Compartment 2	
Wetland - Reedbeds	0.52	High	6	Good	3	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	15	0.596	Medium	0.67	4.65	Reedbed within Compartment 2	
Woodland and forest - Lowland mixed deciduous woodland		High	6	Good	3	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	32+	0.323	High	0.33	0.33	N/A as this is compensating for ancient woodland	
Urban - Built linear features	3.51	V.Low	0	N/A - Other	0	N/A	Assessment not appropriate	1	Area/compensation not in local strategy/ no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	Including road, car park, and building	
Totals	140.28														TOTAL	866.74		

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Havant Thicket Reservoir - onsite calculations

A-3 Site Habitat Enhancement

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	Baseline habitats	Post development/ post intervention habitats											Comments	
		Change in distinctiveness and condition							Strategic significance	Temporal multiplier	Difficulty multiplier			
Baseline ref	Baseline habitat	Proposed habitat (Pre-populated but can be overridden)	Distinctiveness change	Condition change	Area (hectares)	Distinctiveness	Condition	Ecological connectivity / Ecological connectivity score	Strategic significance	Time to target condition/years	Difficulty of enhancement	Habitat units delivered	Assessor comments	Reviewer comments
1	Grassland - Other neutral grassland	Wetland - Purple moor grass and rush pastures	Medium - V.High	Lower Distinctiveness Habitat - Good	1.29	V.High	Good	Medium	Within area formally identified in local strategy	20	High	17.29		
							Good		Within area formally identified in local strategy					
							Good		Within area formally identified in local strategy					
							Good		Within area formally identified in local strategy					
							Good		Within area formally identified in local strategy					
							Good		Within area formally identified in local strategy					
				Total site area	1.29						Enhancement total	17.29		

Appendix C. Biodiversity Metric 2.0 calculations for the Reservoir Site and Indicative Offsite Interventions

On-site baseline	*Habitat units*	1311.58
	Hedgerow units	0.00
	River units	0.00
On-site post-intervention (Including habitat retention, creation, enhancement & succession)	*Habitat units*	1045.89
	Hedgerow units	0.00
	River units	0.00
Off-site baseline	*Habitat units*	465.55
	Hedgerow units	0.00
	River units	0.00
Off-site post-intervention (Including habitat retention, creation, enhancement &	*Habitat units*	687.72
	Hedgerow units	0.00
	River units	0.00
Total net unit change (including all on-site & off-site habitat retention/creation)	*Habitat units*	-43.53
	Hedgerow units	0.00
	River units	0.00
Total net % change (including all on-site & off-site habitat creation + retained habitats)	*Habitat units*	-3.32%
	Hedgerow units	0.00%
	River units	0.00%

Harvest Thicket Reservoir - onsite calculations
A-1 Site Habitat Baseline

Ref	Broad Habitat	Habitat type	Area (hectares)	Distinctiveness score	Score	Condition	Score	Ecological connectivity	Connectivity	Connectivity multiplier	Strategic significance	Strategic significance	Strategic significance multiplier	Comments on actions to enhance habitat losses	Contribution of total habitat units
1	Grassland	Grassland - Other neutral grassland	11.31	Medium	4	Moderate	2	Low	Connected Habitat	1	Within area formally identified in local strategy	Moderate-high significance	1.15	Some small habitat or a higher distinctiveness habitat required	[illegible]
2	Grassland	Grassland - Other neutral grassland	11.71	Medium	4	Moderate	2	Low	Connected Habitat	1	Within area formally identified in local strategy	Moderate-high significance	1.15	Some small habitat or a higher distinctiveness habitat required	[illegible]
3	Grassland	Grassland - Other neutral grassland	4.24	Medium	4	Moderate	2	Low	Connected Habitat	1	Within area formally identified in local strategy	Moderate-high significance	1.15	Some small habitat or a higher distinctiveness habitat required	[illegible]
4	Urban	Urban - Developed land; sealed surface	1.21	Vision	0	Poor - Other	0	Low	Connected Habitat	1	Within area formally identified in local strategy	Moderate-high significance	1.15	Compensation Not Required	0.00
5	Woodland and shrub	Woodland and shrub - Mixed scrub	0.24	Medium	4	Moderate	2	Low	Connected Habitat	1	Within area formally identified in local strategy	Moderate-high significance	1.15	Some small habitat or a higher distinctiveness habitat required	[illegible]
6	Woodland and shrub	Woodland and shrub - Mixed scrub	0.19	Medium	4	Moderate	2	Low	Connected Habitat	1	Within area formally identified in local strategy	Moderate-high significance	1.15	Some small habitat or a higher distinctiveness habitat required	[illegible]
7	Urban	Urban - Tree - Other Urban Tree(s) Habitat	0.24	High	6	Moderate	2	Medium	Moderately connected habitat	1.15	Within area formally identified in local strategy	Moderate-high significance	1.15	Some habitat created	[illegible]
8	Urban	Urban - Developed land; sealed surface	0.92	Vision	0	Poor - Other	0	None	Unconnected isolated habitat	1	Within area formally identified in local strategy	Moderate-high significance	1.15	Compensation Not Required	0.00
9	Urban	Urban - Developed land; sealed surface	2.83	Vision	0	Poor - Other	0	None	Unconnected isolated habitat	1	Within area formally identified in local strategy	Moderate-high significance	1.15	Compensation Not Required	0.00
10	Urban	Urban - Built linear feature	1.60	Vision	0	Poor - Other	0	None	Unconnected isolated habitat	1	Within area formally identified in local strategy	Moderate-high significance	1.15	Compensation Not Required	0.00
11															
12															
13															
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15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															
		Total site area ha	[illegible]											Total Site baseline	[illegible]

Area total unit	Area enhance ed	Area creation ha	Overall score units	Overall score units	Baseline units created	Area lost	Units lost	Bespoke measures that earned fee	Assessor comments	Business comments
[illegible]			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Yes	[illegible]	[illegible]
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Yes	[illegible]	[illegible]
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Yes	[illegible]	[illegible]
			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	

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Havant Thicket Reservoir - onsite calculations

A-2 Site Habitat Creation

Condense / Show Columns | Condense / Show Rows

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Post development/ post intervention habitats																				
						Ecological connectivity			Strategic significance			Temporal multiplier		Difficulty multipliers				Comments	
Proposed habitat	Area (hectares)	Distinctiveness	Score	Condition	Score	Ecological connectivity	Connectivity	Connectivity multiplier	Strategic significance	Strategic significance	Strategic position multiplie	Time to target condition/ye	Time to target multiplier	Difficulty of creation	Difficulty of creation	Habitat units delivered	Assessor comments	Reviewer comments
Lakes - Reservoirs	101.0	Medium	4	Moderate	2	Low	Unconnected habitat	1	Within area formally identified in local strategy	High strategic significance	1.15	5	0.837	Medium	0.67	[illegible]	reservoir	
Grassland - Other neutral grassland	15.03	Medium	4	Fairly Good	2.5	Low	Unconnected habitat	1	Within area formally identified in local strategy	High strategic significance	1.15	12	0.652	Low	1	11.77	Outer Embankment	
Grassland - Other neutral grassland	6.36	Medium	4	Fairly Good	2.5	Low	Unconnected habitat	1	Within area formally identified in local strategy	High strategic significance	1.15	12	0.652	Low	1	47.76	Compartment 0	total compartment originally estimated to be 10 ha; reduced to take account of scrub creation and to balance area as part of compartment comprises area of grassland to be retained and enhanced
Lakes - Ponds (Non- Priority Habitat)	2.79	High	6	Good	3	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	5	0.837	Low	1	[illegible]	Compartment 4	
Lakes - Ponds (Non- Priority Habitat)	2.44	High	6	Good	3	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	5	0.837	Low	1	40.43	Pond within Compartment 3 (enhancement of existing 0.016 ha pond taken into account)	
Wetland - Reedbeds	0.51	High	6	Good	3	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	15	0.596	Medium	0.67	4.19	Reedbed within Compartment 3	
Wetland - Reedbeds	1.21	High	6	Good	3	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	15	0.596	Medium	0.67	[illegible]	Compartment 1	
Headland and shrub - Mixed scrub	0.51	Medium	4	Good	3	Low	Unconnected habitat	1	Within area formally identified in local strategy	High strategic significance	1.15	7	0.779	Low	1	5.78	scrub at south edge of Havant Thicket	
Wetland - Reedbeds	1.08	High	6	Fairly Good	2.5	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	12	0.652	Medium	0.67	[illegible]	shoreline ephemeral shallows	
Lakes - Ponds (Non- Priority Habitat)	2.72	High	6	Good	3	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	5	0.837	Low	1	[illegible]	Pond within Compartment 2	
Wetland - Reedbeds	0.52	High	6	Good	3	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	15	0.596	Medium	0.67	4.31	Reedbed within Compartment 2	
Woodland and forest - Lowland mixed deciduous woodland		High	6	Good	3	Medium	Moderately connected habitat	1.1	Within area formally identified in local strategy	High strategic significance	1.15	32+	0.320	High	0.33	0.00	N/A as this is compensating for ancient woodland	
Urban - Built linear features	3.51	V.Low	0	N/A - Other	0	N/A	Assessment not appropriate	1	Area/compensation not in local strategy no local strategy	Low Strategic Significance	1	0	1.000	Low	1	0.00	Including road, car park and building	
Totals	[illegible]															[illegible]		

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Havant Thicket Reservoir - onsite calculations

A-3 Site Habitat Enhancement

Collapse / Show Columns | Collapse / Show Rows

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	Baseline habitats	Post development/ post intervention habitats											Comments	
		Change in distinctiveness and condition			Area (hectares)	Distinctiveness	Condition	Ecological connectivity	Strategic significance	Temporal multiplier	Difficulty multiplier	Habitat units delivered		
Baseline ref	Baseline habitat	Proposed habitat (Pre-populated but can be overridden)	Distinctiveness change	Condition change				Ecological connectivity score	Strategic significance	Time to target condition/ year	Difficulty of enhancement		Assessor comments	Reviewer comments
3	Grassland - Other neutral grassland	Wetland - Purple moor grass and rush pastures	Medium - V.High	Lower Distinctiveness Habitat - Good	1.29	V.High	Good	Medium	Within area formally identified in local strategy	20	High	17.28		
							Good		Within area formally identified in local strategy					
							Good		Within area formally identified in local strategy					
							Good		Within area formally identified in local strategy					
							Good		Within area formally identified in local strategy					
							Good		Within area formally identified in local strategy					
				Total site area	1.29						Enhancement total	17.28		

Havant Thicket Reservoir - onsite and indicative offsite ea

D-1 Off Site Habitat Baseline

Habitats and cover				Habitat distinctiveness		Habitat condition		Ecological connectivity			Strategic significance			Compensation ratio to achieve habitat baseline	Ecological Baseline Total habitat value
Parcel number	Broad habitat	Habitat type	Area (hectares)	Distinctiveness	Score	Condition	Score	Ecological connectivity	Connectivity	Connectivity multiplier	Strategic significance	Strategic significance	Strategic significance multiplier		Total habitat value
1	Woodland	[illegible]	22	Low	2	Not Applicable	1	Low	[illegible]	1	[illegible]	[illegible]	1.1	[illegible]	[illegible]
2	Woodland and forest	[illegible]	14	Low	2	Poor	1	Low	[illegible]	1	[illegible]	[illegible]	1.10	[illegible]	[illegible]
3	Woodland and forest	[illegible]	40	High	6	Poor	1	No data	[illegible]	1.1	[illegible]	[illegible]	1.40	[illegible]	[illegible]
4															
5															
6															
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20															
21															
22															
23															
		Total site area ha	[illegible]											Total Site baseline	[illegible]

Habitat enhancement/creation/restoration/maintenance value								Reasonable compensation for current loss or measures to be taken	Comments	
Area retained	Area enhanced	Area created/restored	Baseline value retained	Baseline value enhanced	Baseline value created/restored	Area lost	Baseline lost		Reasonable comments	Reviewer comments
			0	0.00	0.00	22.00	[illegible]			
	14		0	14.00	0.00	0.00	0.00			
	40		0	[illegible]	0.00	0.00	0.00		[illegible]	
0.00	[illegible]	0.00	0.00	[illegible]	0.00	[illegible]	[illegible]			

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Havant Thicket Reservoir - onsite and indicative offsit

D-2 Off Site Habitat Creation

						Post development post intervention habitat														
						Ecological connectivity														
Proposed habitat	Area ha	Distinctiveness	Score	Condition	Score	Ecological connectivity	Connectivity	Connectivity multiple	Strategic significance	Strategic significance	Strategic position	Time to target condition/ha	Time to target multiplier	Difficulty of creation	Difficulty of creation	Spatial risk category	Spatial risk multiplier	Habitat units delivered	Assessor comments	Reviewer comments
[illegible]	[illegible]	Medium	4	Good	3	Low	Unconnected habitat	1	Location ecologically desirable but not in local strategy	Medium strategic significance	[illegible]	[illegible]	[illegible]	Low	1	[illegible]	4.78	[illegible]		
[illegible]	[illegible]	Medium	4	Good	3	Low	Unconnected habitat	1	Location ecologically desirable but not in local strategy	Medium strategic significance	[illegible]	[illegible]	[illegible]	Low	1	[illegible]	4.78	[illegible]		
Totals	[illegible]																[illegible]	[illegible]		

Havant Thicket Reservoir - onsite a

D-3 Off Site Habitat Enhancement

		Post development/post intervention habitats														
	Baseline habitats														Comments	
			Change in distinctiveness and condition													
Baseline ref	Baseline habitat	Proposed habitat (Post-Population/Net can be accessible)	Distinctiveness change	Condition change	Area	Distinctiveness	Condition	Evidence of condition (if concerns)	Strategic significance	Impact multiplier time to target condition/form	Difficulty multiplier difficulty of enhancement	Spatial risk multiplier	Habitat units delivered	Resource comments	Business comments
1	Modified arable/ - Other coniferous woodland	Modified arable/ - Lowland mixed deciduous woodland	Low - High	Lower Distinctiveness Habitat - Moderate	M	High	Moderate	Medium	Within an locally identified local strategy	10+	High	Resource risk (Pillar NSA or Ancient Woodland) - lack of biodiversity net	[illegible]		
2	Modified arable/ - Lowland mixed deciduous woodland	Modified arable/ - Lowland mixed deciduous woodland	High - High	Poor - Moderate	M	High	Moderate	Medium	Within an locally identified local strategy	M	High	Resource risk (Pillar NSA or Ancient Woodland) - lack of biodiversity net	[illegible]		
				Total site area	79.44							Total off site area	[illegible]		

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Map 1 Site Location Plan

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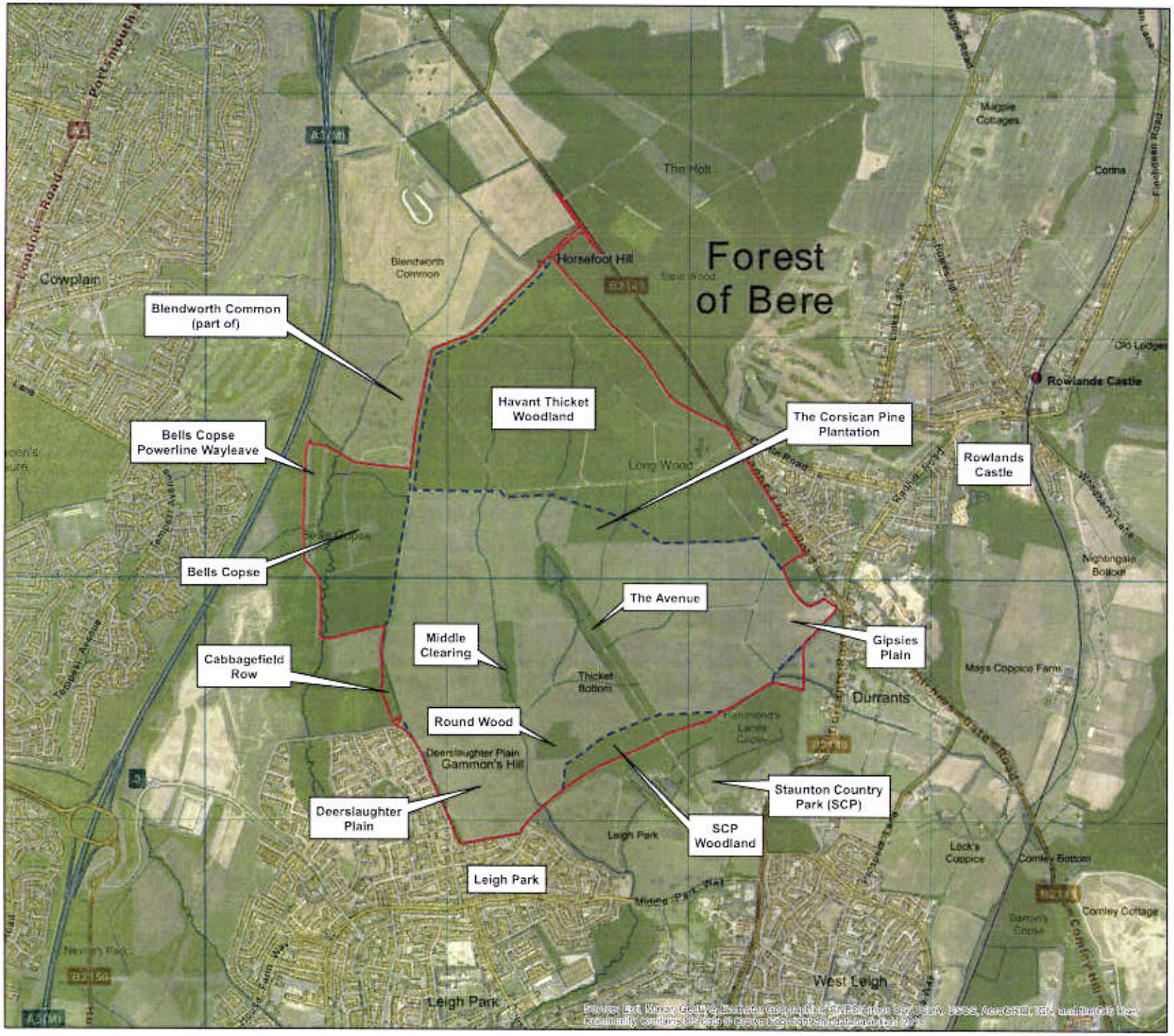

HAVANT THICKET WINTER STORAGE RESERVOIR

ECOLOGICAL MITIGATION AND COMPENSATION STRATEGY

Map 1 - Site Location Plan

Client:	Portsmouth Water
Date:	July 2020
Status:	Draft

KEY

Site Boundary (wider site)

Reservoir Site (the site)

Scale at A3: 1:15,000

0 0.25 0.5 Km

N

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Map 2 On Site Habitat Baseline

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HAVANT THICKET WINTER STORAGE RESERVOIR

ECOLOGICAL MITIGATION AND COMPENSATION STRATEGY

Map 2 - On Site Habitat Baseline

Client:	Portsmouth Water
Date:	July 2020
Status:	Draft

KEY

- Site Boundary (wider site)
- Reservoir Site (the site)
- Reservoir Top Water Level and Embankment
- Broadleaved Woodland including Plantation
- Coniferous Plantation
- Former Heathland developing into scrub and Secondary Woodland
- Dry Neutral to Acid Grassland
- Dry Acid Grassland and Bracken
- Damp to Wet Grassland and Developing Rush Pasture
- Species Rich Marsh and Rush Pasture
- Species Poor Rush Pasture and Wetland Vegetation
- Made-up Tracks with Grass Verges
- Willow Scrub
- Other Scrub
- Pond

Scale at A3: 1:6,500

0 50 100 200 Metres

N

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Map 3 Havant Thicket Woodland: Habitat Baseline

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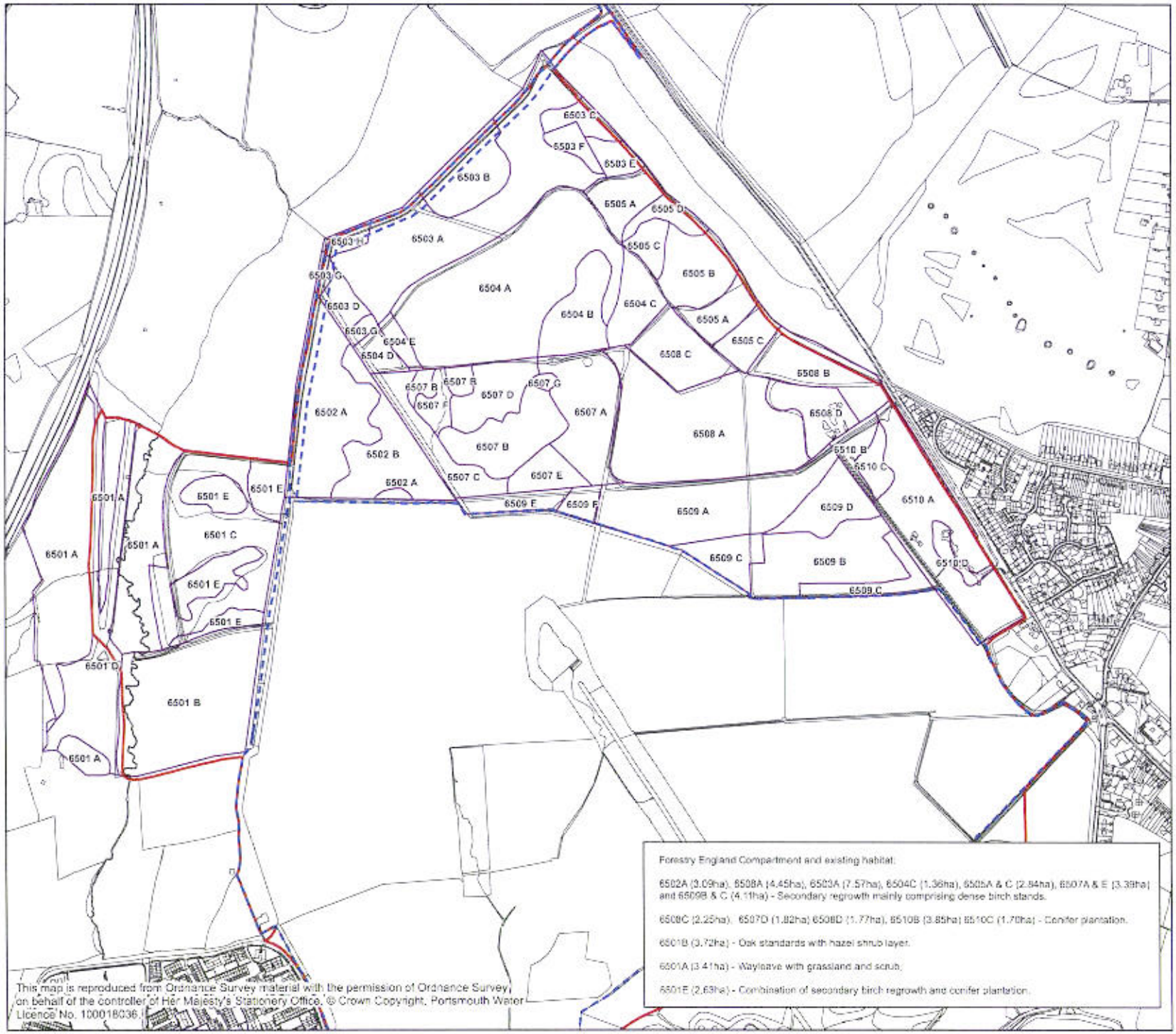

Forestry England Compartment and existing habitat:

6502A (3.09ha), 6508A (4.45ha), 6503A (7.57ha), 6504C (1.36ha), 6505A & C (2.84ha), 6507A & E (3.39ha) and 6509B & C (4.11ha) - Secondary regrowth mainly comprising dense birch stands.

6509C (2.25ha), 6507D (1.82ha) 6508D (1.77ha), 6510B (3.85ha) 6510C (1.70ha) - Conifer plantation.

6501B (3.72ha) - Oak standards with hazel shrub layer.

6501A (3.41ha) - Wayleave with grassland and scrub.

6501E (2.63ha) - Combination of secondary birch regrowth and conifer plantation.

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HAVANT THICKET WINTER STORAGE RESERVOIR

ECOLOGICAL MITIGATION AND COMPENSATION STRATEGY

Map 3 - Havant Thicket Woodland: Habitat Baseline

Client:	Portsmouth Water
Date:	July 2020
Status:	Draft

KEY

- Site Boundary (wider site)
- Reservoir Site (the site)
- Forestry Commission Compartments (as labelled on map)

Scale at A3: 1:8,000

0 100 200 Metres

N

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Map 4 On Site Retained, Enhanced and Created Habitat

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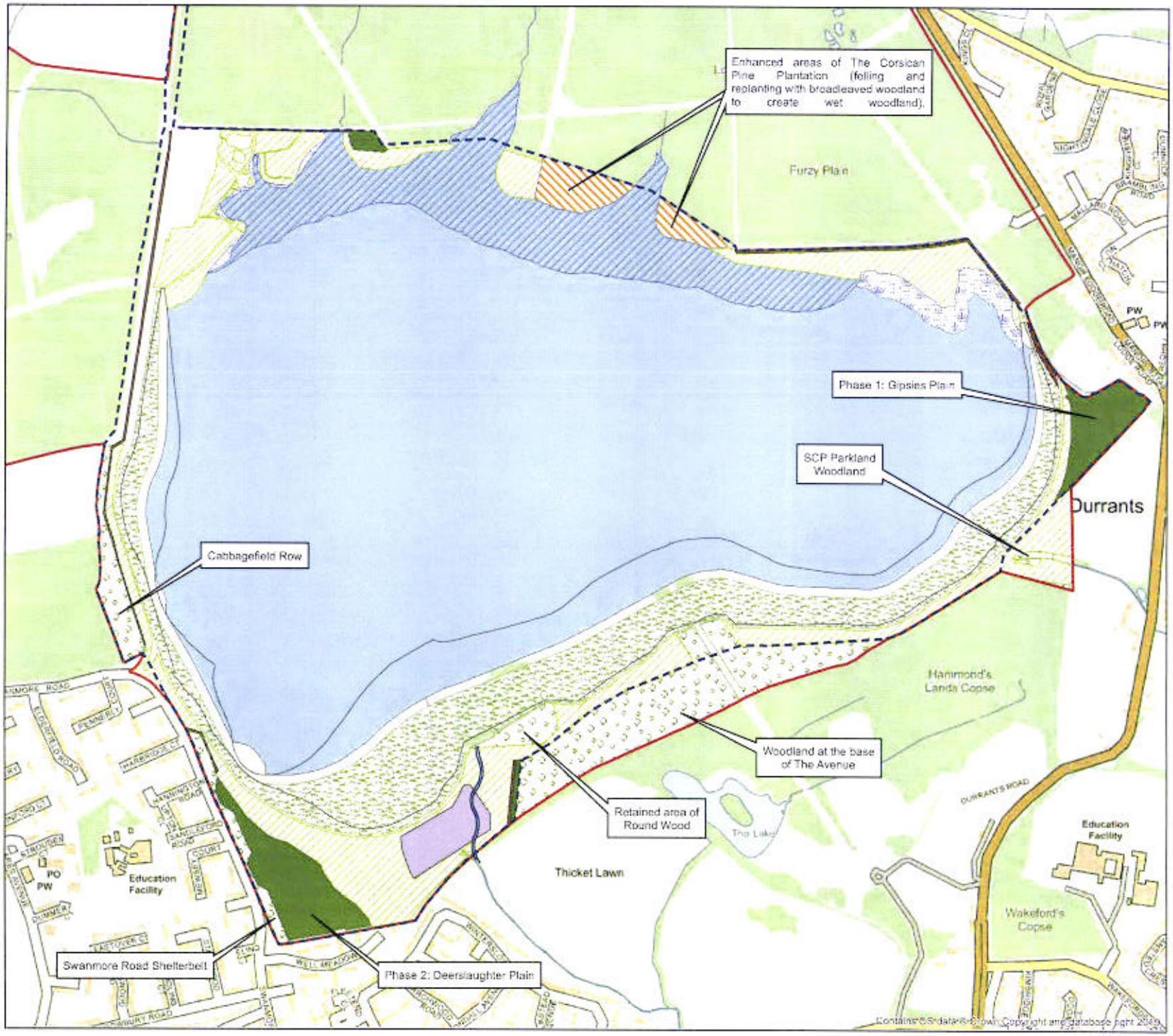

HAVANT THICKET WINTER STORAGE RESERVOIR

ECOLOGICAL MITIGATION AND COMPENSATION STRATEGY

Map 4 - On Site Retained, Enhanced and Created Habitat

Client:	Portsmouth Water
Date:	July 2020
Status:	Draft

KEY

- Site Boundary (wider site)
- Reservoir Site (the site)
- Reservoir Top Water Level
- Outer Reservoir Embankment
- Retained and Enhanced Grassland
- Retained Woodland
- Retained Species Poor Rush Pasture to be Enhanced to Priority Habitat: Purple Moor Grass Rush Pasture
- Conifer Clearfell Area
- Created Grassland
- Created Woodland/Woodpasture
- Created Shoreline Ephemeral Shallows
- Created Scrub/Bolstered Edge Habitat
- Wetland Area with Retained Wet Woodland Fringes
- Created Stream

Scale at A3: 1:6,500

0 50 100 200 Metres

N

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Map 5 Southleigh Forest

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HAVANT THICKET WINTER STORAGE RESERVOIR

ECOLOGICAL MITIGATION AND COMPENSATION STRATEGY

Map 5 - Southleigh Forest

Client:	Portsmouth Water
Date:	August 2020
Status:	Draft

KEY

- Site Boundary (wider site)
- Reservoir Site (the site)
- Southleigh Forest

Scale at A3: 1:17,500

0 0.5 1 Km

N

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Map 6 Havant Thicket Woodland: Habitat Enhancement Plan

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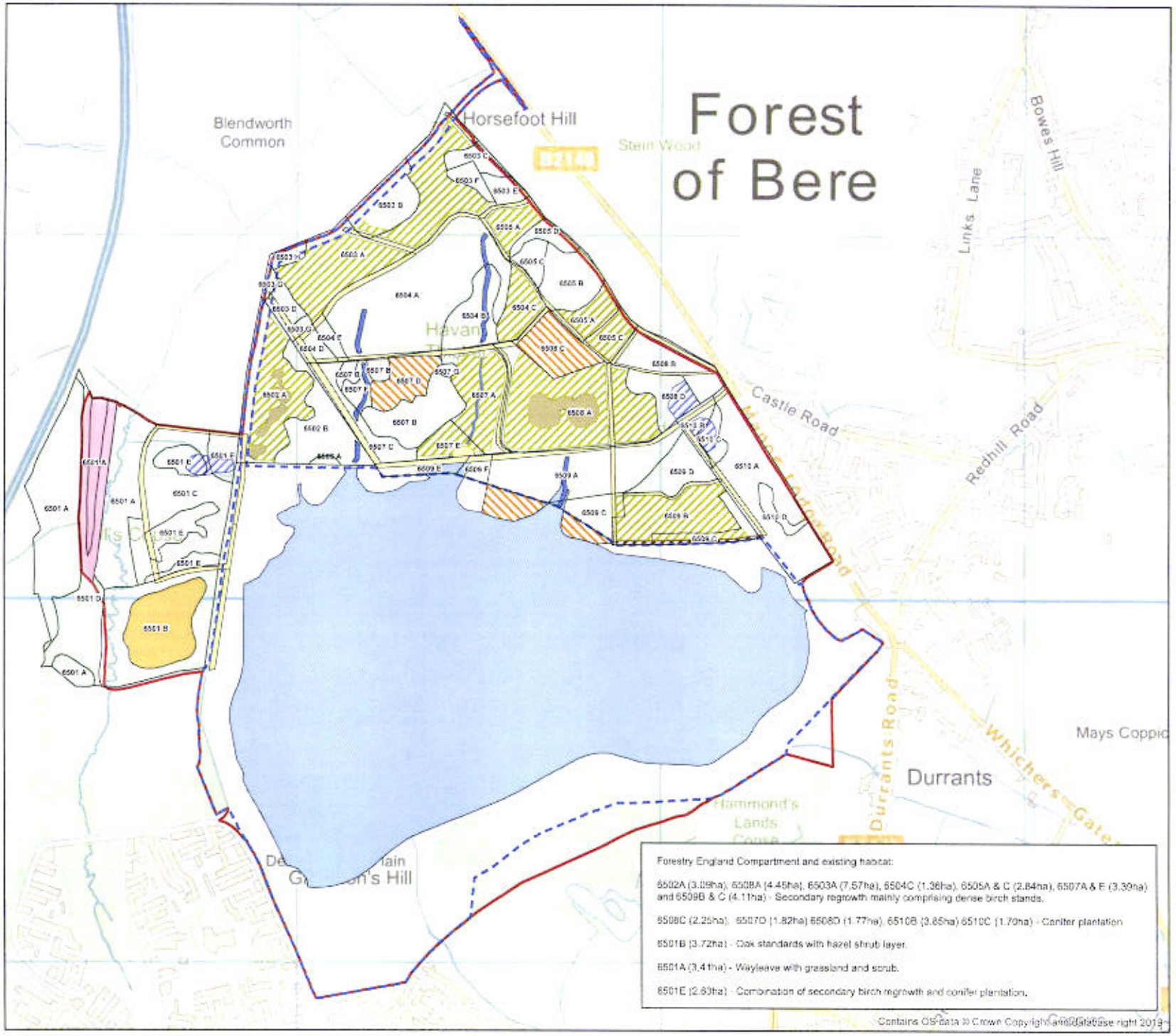

HAVANT THICKET WINTER STORAGE RESERVOIR

ECOLOGICAL MITIGATION AND COMPENSATION STRATEGY

Map 6 - Havant Thicket Woodland: Habitat Enhancement Plan

Client:	Portsmouth Water
Date:	July 2020
Status:	Draft

KEY

- Site Boundary (wider site)
- Reservoir Site (the site)
- Reservoir Top Water Level
- Forestry Commission Compartments (as labelled on map)
- Birch Dominated Compensation Areas (28.7ha)
- Conifer Clearfell Areas (any existing broadleaved trees retained and area re-planted with deciduous trees) (5.75ha)
- Path Removed (new graded scrub edge created) (0.37ha)
- Ecological Corridor Enhancement Area (9.62ha)
- Forest Meadow Creation (indicative areas) (2.22ha)
- Grassland/Scrub Mosaic Management Area (3.41ha)
- Pond Enhancement Areas (1.57ha)
- Stream Corridor Enhancement Area (1.12ha)
- Bell's Copse Woodland Management Area (3.87ha)

Scale at A3: 1:10,000

0 100 200 400 Metres

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Map 7 Habitat Compensation for Bats

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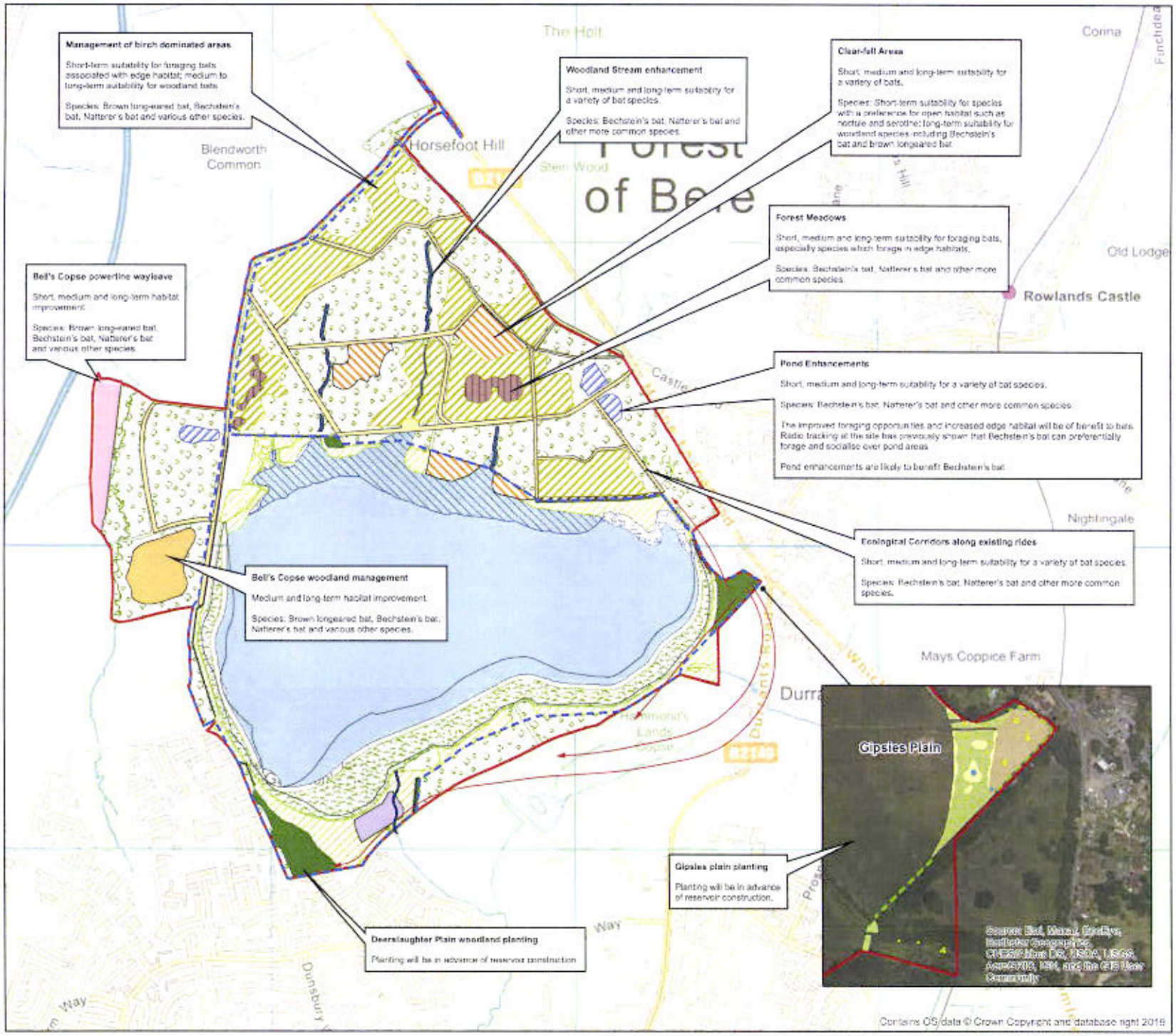
HAVANT THICKET WINTER STORAGE RESERVOIR

ECOLOGICAL MITIGATION AND COMPENSATION STRATEGY

Map 7 - Habitat Compensation for Bats

Client:	Portsmouth Water
Date:	July 2020
Status:	Draft



KEY

- Site Boundary (wider site)
- Reservoir Site (the site)
- Reservoir Top Water Level
- Outer Reservoir Embankment
- Retained and Enhanced Grassland
- Retained Woodland
- Retained Species Poor Rush Pasture to be Enhanced to Priority Habitat, Purple Moor Grass Rush Pasture
- Created Grassland
- Created Woodland/Woodpasture
- Created Shoreline Ephemeral Shallows
- Created Scrub/Bankside Edge Habitat
- Wetland Area with Retained Wet Woodland Fringes
- Created Stream
- Birch Dominated Compensation Areas
- Conifer Clearfell Areas (any existing broadleaved trees retained and area re-planted with deciduous trees)
- Path Removed (new graded scrub edge created)
- Ecological Corridor Enhancement Area
- Forest Meadow Creation (indicative areas)
- Grassland/Scrub Mosaic Management Area
- Pond Enhancement Areas
- Stream Corridor Enhancement Area
- Bell's Copse Woodland Management Area
- Gipsies Plain: Location of Standard (3 metres in height)
- Gipsies Plain: Hedgerow Bolstering
- Gipsies Plain: Pond (ephemeral)
- Gipsies Plain: Area of Natural Regeneration (to form a more natural, graded edge / mosaic)
- Gipsies Plain: Understorey Planting
- Gipsies Plain: Wood Pasture
- Linking habitats to retain connectivity between Staunton Country Park and Havant Thicket woodland

Scale at A3: 1:12,000

0 100 200 400 Metres

N

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Map 8 Hazel Dormouse Translocation and Displacement Plan

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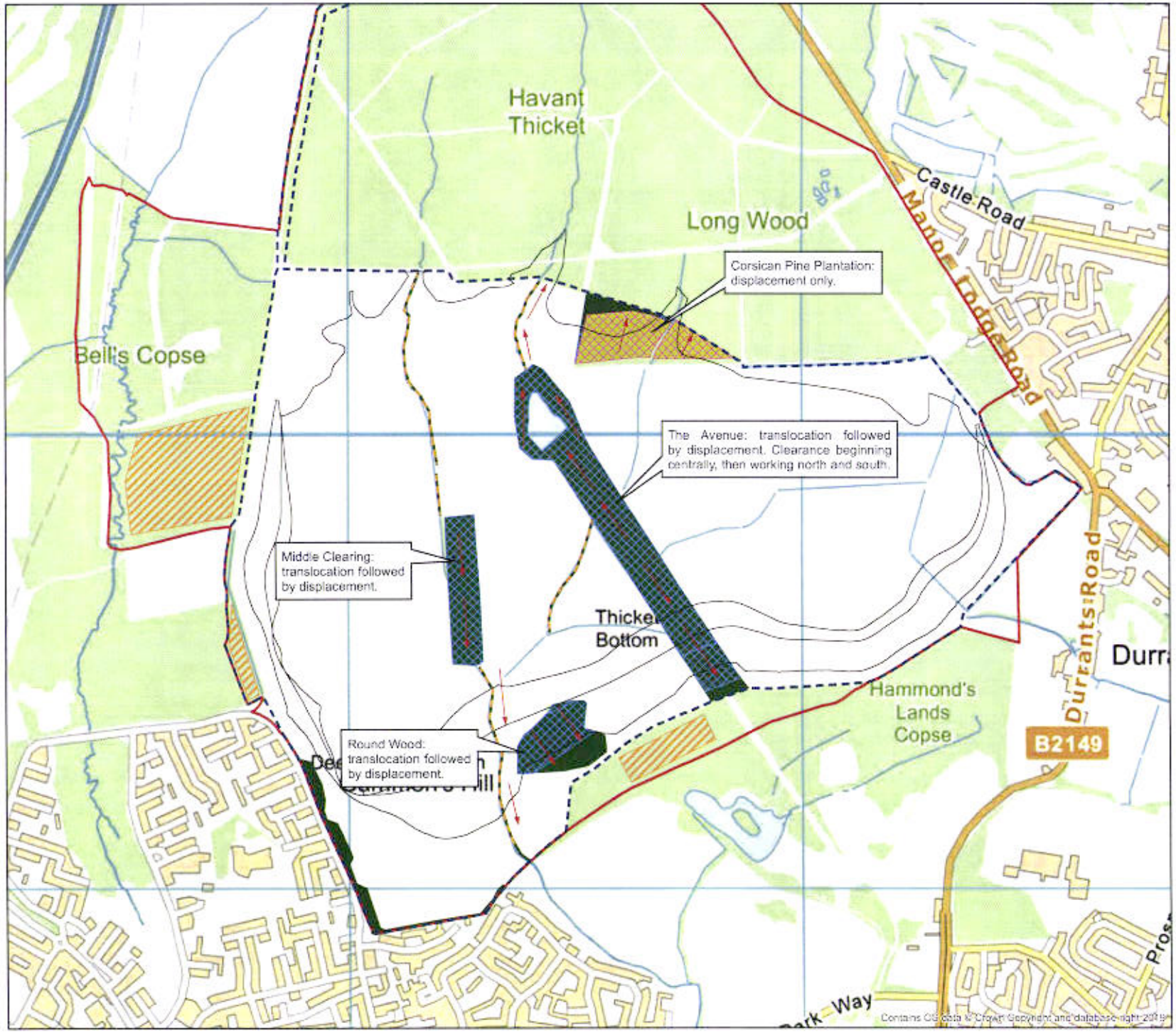

HAVANT THICKET WINTER STORAGE RESERVOIR

ECOLOGICAL MITIGATION AND COMPENSATION STRATEGY

Map 8 - Hazel Dormouse Translocation and Displacement Plan

Client:	Portsmouth Water
Date:	July 2020
Status:	Draft

KEY

- Site Boundary (wider site)
- Reservoir Site (the site)
- Reservoir Top Water Level and Embankment

Suitable Hazel Dormouse Habitat

- Broadleaved Woodland (including plantation)
- Coniferous Woodland
- Treelines

Capture and Exclusion

- Semi-natural Broadleaved Woodland, Single Stage Clearance or Two Stage, Clearance depending on time of year
- Coniferous Woodland, Single Stage Clearance or Two Stage, Clearance depending on time of year
- Treelines, Single Stage Clearance or Two Stage, Clearance depending on time of year
- Hazel Dormouse Displacement
- Soft Release Pens for translocated hazel dormouse within areas marked

N.B. All impacts will destroy dormouse habitat. Where dormouse habitat is to be destroyed, dormouse will be captured and excluded as per the marked areas on the plan, and removed to nearest and/or adjacent areas of suitable habitat.

Scale at A3: 1:8,000

0 200 400 Metres

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Map 9 Habitat Mitigation and Compensation for Hazel Dormouse

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HAVANT THICKET WINTER STORAGE RESERVOIR

ECOLOGICAL MITIGATION AND COMPENSATION STRATEGY

Map 9 - Habitat Mitigation and Compensation for Hazel Dormouse

Client:	Portsmouth Water
Date:	July 2020
Status:	Draft

KEY

- Site Boundary (wider site)
- Reservoir Site (the site)
- Reservoir Top Water Level
- Embankment
- Retained Woodland
- Created Scrub/Bolstered Edge Habitat
- Birch Dominated Compensation Areas
- Conifer Clearfell Areas (any existing broadleaved trees retained and area re-planted with deciduous trees)
- Path Removed (new graded scrub edge created)
- Ecological Corridor Enhancement Area
- Forest Meadow Creation (indicative areas)
- Grassland/Scrub Mosaic Management Area
- Pond Enhancement Areas
- Stream Corridor Enhancement Area
- Bell's Copse Woodland Management Area
- Created Woodland/Woodpasture

Scale at A3: 1:10,000

0 100 200 400 Metres

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Map 10 Phase 1 Planting Area

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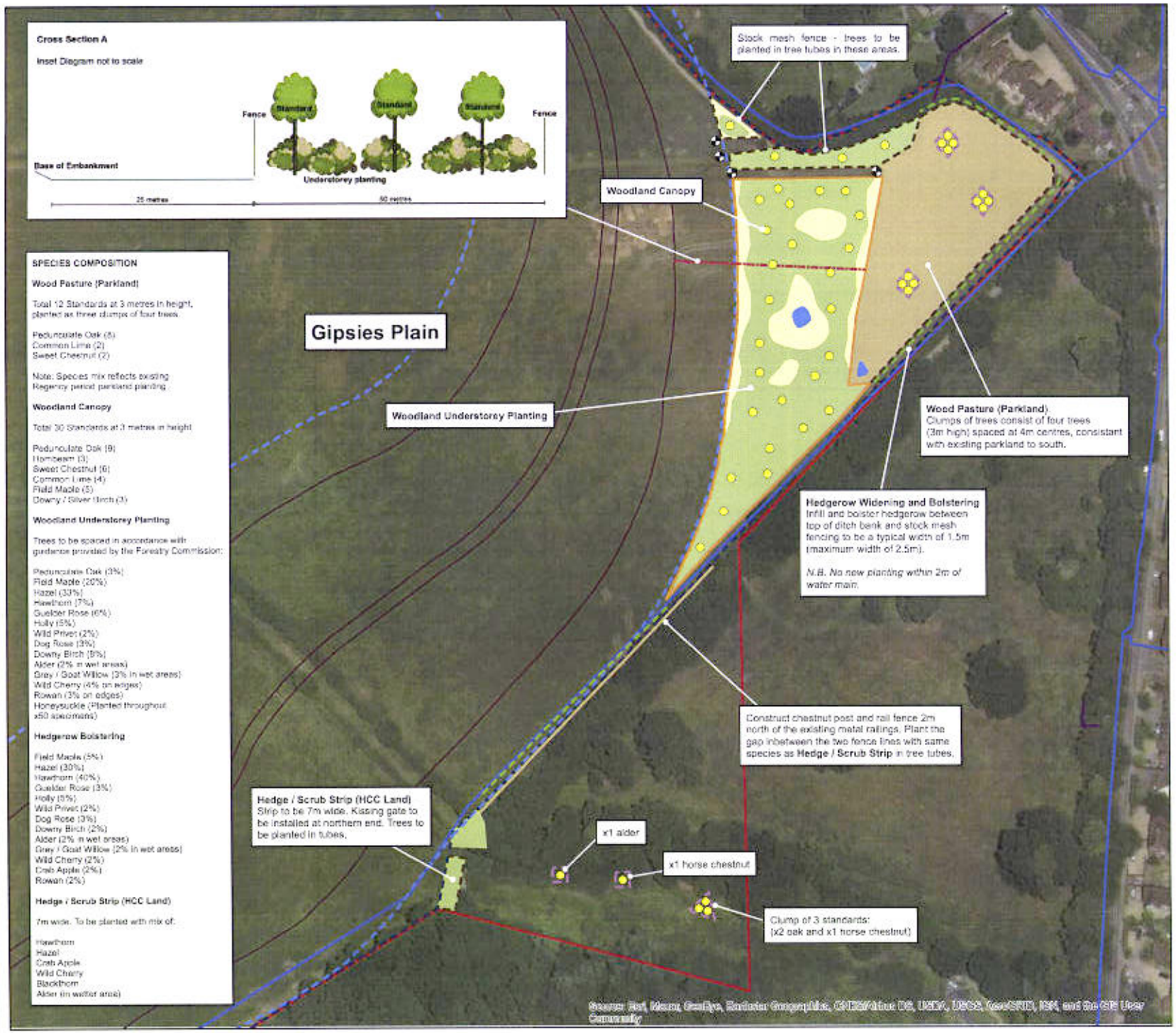

HAVANT THICKET WINTER STORAGE RESERVOIR

ECOLOGICAL MITIGATION AND COMPENSATION STRATEGY

Map 10 - Phase 1 Planting Area

Client:	Portsmouth Water
Date:	July 2020
Status:	Draft

KEY

- Reservoir Site (the site)
- Water Main
- Private Water Main
- Reservoir Embankment
- Embankment Buffer: 25 metres
- Cross Section A (see inset
- Wood Pasture
- Understorey Planting
- Area of Natural Regeneration (to form a more natural, graded edge / mosaic)
- Pond (ephemeral)
- Hedgerow Bolstering
- Stock Mesh Fencing (trees to be planted in tree tubes)
- Chestnut Post and Rail Fence
- Deer Fencing
- Protection Fencing (to be consistant with HCC lottery funded planting)
- Location of Standard (3 metres in height)
- Gate (to allow passage of livestock)

Scale at A3: 1:1,500

0 5 10 20 30 40 Metres

N

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APPENDIX 3
IMPLEMENTATION PLAN

Technical Note

Project:	Havant Thicket Reservoir (HTR)		
TN Ref. No:	HTR-ATK-XX-XX-RP-T-0003		
Subject:	Implementation Plan for Off Site Biodiversity Mitigation and Compensation		
Author:	Atkins		
Date:	01/04/2021	Project No.:	5202641
Distribution:	Lewis Oliver Julia Mansi	Representing:	Havant Borough Council East Hampshire District Council

1. Introduction

1.1. Purpose

This Implementation Plan sets out the process for how Portsmouth Water will implement *off site* mitigation as part of a bespoke approach to compensation comprising a combination of onsite and offsite woodland and wood pasture creation and enhancement as described in the Havant Thicket Reservoir (HTR) Outline Biodiversity Mitigation and Compensation Strategy. It provides certainty on how the offsite compensation and enhancement measures to mitigate impacts arising from habitat loss on site will be delivered and managed to provide long term ecological benefits, and ensure long-term commitment and partnership working, and funding of third party projects. It is the intention that this Plan will inform the Section 106 Agreement for the reservoir and pipeline, providing the mechanism for review and approval of offsite mitigation measures.

On site mitigation

Biodiversity mitigation measures relating to the Reservoir Site are not covered in this Implementation Plan. Onsite measures include 52 hectares of habitat creation/restoration and are described in the HTR Outline Biodiversity Mitigation and Compensation Strategy and in the Outline Environmental Management Plan. The detailed Biodiversity Mitigation and Compensation Strategy would be created as part of the detailed design and provide a framework for plans linked to the phasing of the works. A Memorandum of Understanding has been signed by the three key landowners (Forestry England, Hampshire County Council and Portsmouth Water) and talks are being progressed in preparation of the signing of the tripartite agreement. Agreements are in place for the commencement of management works in Havant Thicket in line with details set out in the HTR Outline Biodiversity Mitigation and Compensation Strategy.

On site measures relating to the pipeline are described in the Outline Environmental Management Plan, which includes commitment to an Ecological Mitigation Management Plan (EMMP) for the pipeline. The EMMP would be developed as part of detailed design.

2. Outline Biodiversity Mitigation and Compensation Strategy

2.1. Overview

The planning applications for the Havant Thicket Reservoir (APP/20/00990) and Pipeline (APP/20/00991) submitted in October 2020 include the HTR Outline Biodiversity Mitigation and Compensation Strategy (ECOSA 2020) that describes Portsmouth Water's outline proposals for onsite and offsite mitigation, compensation and enhancement.

2.2. Scope

The HTR Outline Biodiversity Mitigation and Compensation Strategy provides a framework for onsite and offsite compensation and enhancement measures to mitigate ecological impacts related to the permanent loss of irreplaceable habitats (ancient woodland, and veteran trees), loss of ephemeral streams and other habitats, and impacts on a range of protected species including hazel dormice *Muscardinus avellanarius* and roosting, foraging and commuting bat species, especially Bechstein's bat *Myotis bechsteinii*.

The strategy includes measures for the:

- Onsite areas comprising the main reservoir site and the ecological enhancement areas that do not form part of the reservoir footprint, i.e. the Forestry England (FE) Havant Thicket woodland to the north and the connected Bell's Copse to the west of the site and Hampshire County Council's (HCC) Staunton Country Park (SCP) to the south; and
- Off-site areas including East Hampshire District Council land north of Havant Thicket, Southleigh Forest that lies to the east of the site and mitigation options being developed with Environment Agency in relation to loss of ephemeral streams.

The strategy was informed by a comprehensive ecological baseline and detailed pre-application discussions between Portsmouth Water, Hampshire County Council, Natural England, Environment Agency and Forestry England and other stakeholder engagement events.

2.3. Objectives

The HTR Outline Biodiversity Mitigation and Compensation Strategy is based on the following core elements:

1. Create an environmentally-led design based on the mitigation hierarchy approach of avoid, minimise, or compensate. As far as practical, compensation will be provided within the site and wider site for the key impacts;
2. Ensure appropriate mitigation and compensation is implemented for protected and notable species. European Protected Species licences will be obtained where required;
3. Create a mosaic of new and high-quality habitats on the site, including a new open waterbody with a retained wetland offering variable water depths, a variety of vegetation types and islands for added habitat complexity and to act as for roosting and nesting sites for birds;
4. Land that forms part of the wider site will be enhanced through the delivery of a long-term ecological management plan in partnership with Forestry England and Hampshire County Council:
5. Restoration and creation of off-site high biodiversity value habitats and ecological restoration of Southleigh Forest;
6. Work with the Environment Agency to identify and deliver a reasonable level of habitat mitigation required to offset the impacts of the development on the waterbody (expected to be delivered through a catchment partnership approach); and
7. Support others to enhance and study existing habitats offsite through provision of a Capital Grants Scheme.

2.4. Offsite compensation and enhancement prescriptions

As noted above, the onsite elements of the HTR Outline Biodiversity Mitigation and Compensation Strategy are outside the scope of this document. Offsite measures are broken down into two elements: measures to take place following specific prescriptions; and measures that are not individually specified but would be supported financially through awarding capital grants.

The habitat and species-specific offsite compensation and enhancement prescriptions relating to terrestrial habitats include:

- Delivery of 80 hectares of substantial new pasture-woodland habitat (including grassland) off-site; and
- Ecological management of Southleigh Forest (an offsite Portsmouth Water owned landholding of mixed woodland) involving the phased replacement of pine plantation with lowland mixed deciduous woodland providing favourable habitat and potential receptor site for protected species.

To mitigate the impact on watercourses, the Strategy indicates that overall Water Framework Directive (WFD) driven compensation works will be developed and agreed by Portsmouth Water, Havant Borough Council, and the Environment Agency.

The long list of practicable measures that was developed to fulfil Article 4.7 condition (a) has now been agreed with the Environment Agency and is deemed sufficient for the purposes of Article 4.7. A short-listing exercise has been undertaken to reduce the full list of practicable measures to generate an agreed package of measures.

2.5. Capital Grants Scheme

Appendix 5 of the HTR Outline Biodiversity Mitigation and Compensation Strategy - Biodiversity Metric Report for Terrestrial Habitats (Atkins 2020) - refers to Chapter 9, Biodiversity, of the Environmental Statement Volume 2 which outlines the Capital Grants Scheme and takes into account application of offsite habitat interventions such as grassland creation and enhancement to compensate for the net loss of grassland onsite:

- "The application of the Capital Grants Scheme will be based on a series of criteria to be developed with Natural England and other stakeholders, to ensure that the funding delivers genuine benefits to biodiversity and the local community. These are likely to include criteria scoring that prioritises the following:
  - *Proximity to the scheme site. In particular, effort should be made to offset habitat losses within the same local planning authority (i.e. Havant Borough Council and East Hampshire District Council) or National Character Area (i.e. South Hampshire Lowlands).*
  - *Value for money and deliverability with suitable match funded projects prioritised.*
  - *Grassland enhancement and creation projects will be prioritised.*
  - *Interventions benefiting bats, including new native woodland and wood pasture planting, and grassland birds will be prioritised.*
- Contribution to local policies and targets for biodiversity. For example, opportunities to contribute to targets set out in the Hampshire Biodiversity Opportunity Areas may be prioritised. In the context of the site's location, it would be of relevance to explore opportunities within the following BOAs:
  - *Forest of Bere Biodiversity Opportunity Area – e.g. restoration of lowland meadow and lowland dry acid grassland;*
  - *Portsdown Hill Biodiversity Opportunity Area – e.g. restoration of lowland calcareous grassland;*
  - *Chichester/Langstone Harbours and Hayling Island Biodiversity Opportunity Area – e,g, the restoration of PMGRP."*

3. Implementation Process

3.1. Proposed mechanism

The action plans listed below, and detailed in Appendices 1 to 4, will form the proposed mechanism to agree and implement the compensation activities for offsite areas identified in the HTR Outline Biodiversity Mitigation and Compensation Strategy and to ensure commitment to these measures as part of the Section 106 Agreement.

The mitigation and compensation measures will be delivered over a long period of time and in some instances on land outside of the applicant's control, Portsmouth Water will therefore be working with willing partners to deliver their aspirations. Each action plan provides clarification on the implementation of the offsite measures in the HTR Outline Biodiversity Mitigation and Compensation Strategy, and mitigation and compensation measures will be designed in consultation with the County Ecologist. Commitments will be clearly set out in the s106 legal agreement, will be enforceable and will be subject to a monitoring strategy in order that the predicted benefits of the mitigation measures can be measured and, where necessary, further actions implemented.

3.2. Action Plans for offsite implementation

1. Creation of 80 hectares of woodland/wood pasture creation (including 20 hectares of neutral grassland)

Portsmouth Water is currently exploring several options, which will be judged against agreed criteria to ensure that the best outcome for biodiversity is achieved. Once the short list has been developed, the options will be discussed with Natural England and the county ecologist for comment/review.

Key principles and timetable for delivery will be agreed and secured through approval of the action plan. The principles will ensure the area(s) of wood pasture creation is maximised in suitably connected locations to not only address the loss of woodland associated with the project, but also to maximise benefits to protected species affected by the proposal, especially Bechstein's bats. Given that these measures are required due to the irreplaceable loss of ancient woodland, agreements should be secured to ensure this land will be appropriately managed for the lifetime of the development.

In order to accurately account for the different habitat types being created for inclusion in the Biodiversity Net Gain metric, the 80 hectares of wood pasture creation comprises 60 hectares woodland and 20 hectares grassland. This habitat will be managed as part of the wood pasture agreement with the delivery partner for that element and further details of the location and long term management will be submitted for approval.

2. Up to 72 hectares of habitat restoration in Southleigh Forest.

The long-term management plan for restoration of this woodland is currently being developed and will be secured via an action plan which will be agreed by the local planning authorities, Natural England and Forestry Commission. An appropriate timetable for the restoration works will be included to avoid excessive disturbance to the area's bat communities.

3. Compensation for the loss of 3.7km of ephemeral stream

A package of mitigation and compensation measures has been developed and agreed with the Environment Agency, on 05/03/21, to off-set the loss of 3.7km of watercourses that will be directly lost due to the Scheme's embankment construction activity, some of which is considered to be high quality habitat. Package no.2, details a plan for the water environment which includes both on-site and off-site mitigation and compensation totalling up to 5.5km of watercourse improvement. The process to reach the agreed mitigation and compensation package involved the development of a short-listing process which used the long-list of practicable measures derived for the Water Framework Directive Article 4.7 derogation as a starting point. The process was agreed with the Environment Agency at a series of expert workshops. The short listing process reduces the full list of practicable measures to a short list of deliverable options.

The agreed package no.2 will be examined in detail through more site-specific analyses to develop conceptual designs for the shortlisted measures. This will include, amongst others, further detail on site specific constraints and opportunities along with a cost-effectiveness analyses. The package no.2 identifies a set of measures which can be delivered as part of the overall mitigation and compensation strategy for the scheme. The agreed package no.2 forms the basis of the s106 agreement.

4. Capital Grants Scheme to provide funding to study and enhance biodiversity locally.

Portsmouth Water is currently working on the criteria, but it will be designed to prioritise species and habitats that have been lost or displaced by the project. The proposal is to commence the scheme in 2029, or upon commencement of the operation of the reservoir, with a sum of £40,000 provided per annum for local conservation projects over a 30 year period.

Discussions are being held with key landowners and stakeholders e.g. local wildlife groups, farmer clusters / other land owners, local planning authorities, to scope out projects that can secure wider gains for wildlife.

Table 3.1 Summary of Action Plans

Action plans for offsite implementation	Description
Creation of 80 hectares of new wood pasture and neutral grassland habitat	Creation of 80 ha of new wood pasture (60 hectares) and neutral grassland habitat (20 hectares) through a partnership. The location of this area is currently still in discussion and will be subject to land availability. The project will be delivered as one large unit of land if possible, but if that is not, smaller parcels of land will be acquired, ideally next to existing parcels of woodland.
Up to 72 hectares of habitat restoration in Southleigh Forest	Up to 72 hectares of habitat restoration within Southleigh Forest: a mixed species plantation will be brought into positive ecological management. A detailed management plan will be prepared for the woodland to include the gradual felling of plantation woodland and restoration to a more semi-natural woodland over a 30 year period.
Compensation and enhancement package for the loss of 3.7km of ephemeral stream	The Water Framework Directive Article 4.7 paper informs the mitigation and compensation plan. A long list of practicable measures for the Hermitage Stream catchment has been developed in consultation with the Environment Agency. This was followed by a short-listing exercise which enabled the full list of practicable measures to be reduced to a short list of deliverable options. The agreed package no.2 (agreed with the Environment Agency on 05/03/21) totals up to 5.5km of watercourse improvement and will be delivered as part of the overall mitigation and compensation strategy for the scheme. Within the Riders Lane Stream catchment, the scheme has provision for a new compensation flow channel and additional ditch habitat to the east of the scheme. Portsmouth Water is in the process of agreeing a suitable compensation flow regime for the Riders Lane Stream.
Capital Grants Scheme to fund biodiversity enhancements	A Capital Grants Scheme to provide funding to study and enhance biodiversity to improve ecological networks and corridors and a biodiversity strategy for the area's Bechstein's bat population. The scheme will commence in 2029 and will run for a minimum 30 year period.

The four action plans are included within **Appendices 1 to 4**. Each action plan is structured to provide:

- An overview of the offsite habitat and species-specific compensation and enhancement prescribed in HTR Outline Biodiversity Mitigation and Compensation Strategy;
- Location of offsite habitat and species-specific compensation and enhancement;
- Baseline conditions;
- Aims and objectives;
- Roles and responsibilities;
- Offsite planning and preparation;
- Delivery prescription;
- Programme of works; and
- Reporting and review measures.

3.3. s106 Agreement commitments

It is proposed that the action plans will form the mechanism to ensure commitment to, and implementation of, the offsite mitigation and compensation set out in the HTR Outline Biodiversity Mitigation and Compensation Strategy. This document will be appended to the s106 agreement and the following key commitments within the action plans would be incorporated into the s106 Agreement:

1. **Creation of 80 hectares of new wood pasture and neutral grassland habitat**
   - Portsmouth Water will set up a Project Team prior to commencement of development which will include the County Ecologist and Natural England.
   - The Project Team will identify suitable sites for delivering new woodland and wood pasture and develop a programme of works.
   - Where land is owned by Portsmouth Water, they will be responsible for the delivery and long-term management of the new habitats, unless that responsibility is taken on by a project partner. Legal agreements will be drawn up between partners to ensure delivery.
   - Where Portsmouth Water do not own the land, they will sign long-term agreements with project partners to ensure the delivery of woodland/wood pasture. Where such agreements are in place, it will be the responsibility of those partners to deliver the new woodland.

2. **Up to 72 hectares of habitat restoration in Southleigh Forest**
   - A 10 year woodland management plan will be submitted to the Local Planning Authorities and County Ecologist prior to commencement of reservoir development.
   - Monitoring reports will be provided to the Local Planning Authorities and County Ecologist at 5 year intervals.

3. **Compensation and enhancement package for the loss of 3.7km of ephemeral stream**
   - Implementation of 'Package 2', agreed on-site and off-site mitigation and compensation, totalling up to 5.5km of watercourse improvement.

4. **A Capital Grant Scheme to fund biodiversity enhancements**
   - A Capital Grants Scheme will be set up to provide funding for conservation projects in the local area. The Scheme will commence upon completion of the Havant Thicket Reservoir scheme and will run for a minimum 30 year period, or once the grant fund has been used. The total fund available for the Grants Scheme is £1.2m. The fund will be set at a cap of £1.2m for the duration of the project, with a maximum fund of £40,000 per annum (p.a) available for 30 years. If the fund is not fully spent in any year it should be rolled over to be spent in future years (or paid to the Local Planning Authorities for the same purpose) on recommendations from the steering group.
   - A Capital Grants Scheme Committee will be set up to assess projects against the set criteria and successful applicants will have the sole responsibility of delivering their projects.

Appendix 1 Woodland Creation

Action plan structure	Description
Overview	This long-term project will see the creation of up to 80 hectares of woodland/wood pasture (60ha woodland 20ha grassland). The ambition is to deliver as much as possible in the local area, to compensate for on-site woodland loss. The new woodland would be planted over a maximum 15 year period, in order to ensure variability in the structure of the new habitat. Original proposals were worked up in partnership with the Hampshire and Isle of Wight Wildlife Trust (HIWWT), but difficulties in them acquiring land have meant that other options are now being explored. Portsmouth Water has since been liaising with several potential partners to deliver the woodland as part of a wider project to revert agricultural land to woodland or wood pasture and improve connectivity across the landscape.
Location of offsite habitat and species-specific compensation and enhancement.	It is not currently possible to confirm exactly where the woodland creation will be, but Portsmouth Water has been having detailed conversations with several landowners and project leads. We are currently reviewing a long list of options covering over 600ha spread over c10 broad locations. Locality is particularly important, not just because we are looking to address the woodland losses locally, but also to ensure that the habitat connectivity in the local area is enhanced. This is particularly important given the existing woodland blocks present and the benefit that linking those blocks would have for contributing to the Nature Recovery Network. In addition, local woodland planting would help re-enforce foraging and commuting opportunities for bats, in particular Bechstein's *Myotis bechsteinii*. Recent opportunities that are being discussed involve a partnership project that could deliver a landscape scale scheme east of Southleigh Forest and extending to Kingley Vale National Nature Reserve.
Baseline conditions	It is not possible to determine baseline conditions at present, but the aspiration is to create new woodland/wood pasture on agricultural land since this would be beneficial for water source protection as well as woodland creation. Portsmouth Water's aim is to develop the new woodland habitat over a maximum 15 years period, in order to provide variability in its structure. Initially some standard trees would be planted at low density, and the woodland would be allowed to develop over time, thereby creating different habitats as it develops. Grazing would be used to mimic natural processes as the woodland develops, but essentially the habitats would be allowed to naturally develop with minimal interventions. The primary purpose will be to create semi-natural woodland rather than a plantation woodland.
Aims and objectives	The overall aim of this project will be to create new woodland/wood pasture habitat with a varied structure. Ideally the selected site will be situated locally and link up existing woodland habitats and thereby contribute to the Nature Recovery Network.

	In addition to the woodland creation, the development of this new habitat will be beneficial for a variety of species, including some that have been impacted by the reservoir proposals. For example, linking up woodland corridors between the proposed reservoir site, Southleigh and Stansted Forests and further east, could strengthen and/or enhance commuting/foraging routes for bats and provide better habitat connectivity for less mobile species, such as the hazel dormouse *Muscardinus avellanarius*.
Roles and responsibilities	It will be the responsibility of Portsmouth Water to secure land for the project that meets the aims and objectives. A project team will be set up to help source and secure any land not owned by Portsmouth Water. The team will comprise HTR environmental team and key stakeholders / partners who can optimise delivery of the project. We would be inviting expertise from the Local Planning Authority (LPA), in consultation with Hampshire County Council Ecology Team and Natural England. Where land is owned by Portsmouth Water, they will be responsible for the delivery and long-term management of the new habitats, unless that responsibility is taken on by a project partner. Legal agreements will be drawn up between partners to ensure delivery. Where Portsmouth Water do not own the land, they will sign long-term agreements with project partners, minimum 80 years, to ensure the delivery of woodland/wood pasture. Where such agreements are in place, it will be the responsibility of those partners to deliver the new woodland for the duration of the scheme.
Offsite planning/preparation	Portsmouth Water is currently in discussion with several potential partners with a view to deliver a landscape scale project aimed at delivering new woodland/wood pasture, reducing nitrate inputs at source and improving connectivity for wildlife across the wider landscape. We are proposing to set up a steering group (project team and selection committee) who will make recommendations, to be agreed by the LPA.
Delivery prescription	Delivery prescriptions will be detailed once the site/s have been selected and a long term management plan will be prepared. It will be important to ensure that management prescriptions align with adjoining land in order to ensure continuity. Proposals will aim to provide a matrix of habitats that will provide the opportunity to support species that have been displaced by the HTR proposals.
Programme of works	At this time, it is not possible to provide a programme of works since that will be determined by the availability of land and where it is located. There are several pressing deadlines for the project team; for Portsmouth Water the most pressing of these is the need to secure this long-term project and provide assurance that the project will be delivered. It is anticipated that at least some of the land will become available within 2021, and at that point a programme of works will be provided. For the initiation phase we provide the following programme; • Spring 2021 set up project team and site selection committee; • Spring – Summer 2021 establish outline criteria for land selection; and • Summer - Autumn 2021, contact landowners to discuss options; • Establish legal agreements and design of habitat creation;

- Establish long-term management and monitoring strategy.

Reporting and Review

Monitoring activities will involve selected key species and/or habitats to establish change over time. Monitoring will commence with habitats surveys, with species selected as the habitats develop. The following species groups are suggested in the first instance, but other species groups may be included over time.

- Vegetation – the structure and diversity would be monitored as it develops.
- Bats – targeted bat surveys will be carried out on a five year basis. Typical surveys will include bat box checks, remote detector, transects and capture.
- Hazel Dormouse – monitoring surveys will be used to establish presence and breeding success.
- Breeding bird – surveys will be used to establish changes in species over time.
- Invertebrate – selected surveys will be carried out for targeted species groups, likely to involve butterfly transects, moth trapping and Coleoptera surveys.

Monitoring will be varied depending on species, and as habitats develop and change over time. Reports would be submitted on a five year intervals.

Appendix 2 Southleigh Forest

Action plan structure	Description
Overview	This long term project will see the Portsmouth Water owned woodland brought back into a favourable condition through the implementation of an 80 year management plan (reviewed and submitted on a 10 year basis), thereby restoring a plantation woodland to one that is more semi-natural. A variety of species, including bats, hazel dormouse, woodland birds and invertebrate species will benefit. In addition, partnership working with neighbouring landowners could see the large woodland blocks of Southleigh and Stansted Forests linked up, thereby contributing to the Nature Recovery Network.
Location of offsite habitat and species-specific compensation and enhancement	Southleigh Forest comprises a c.72 ha woodland located c.2km south-east of the proposed reservoir site. The woodland is centred at National Grid Reference SU 744 090 and forms part of a larger woodland block that extends to the north, south, east and west. The woodland straddles the Hampshire/Sussex border with c.25ha located in West Sussex. It is bordered on its southern boundary by Emsworth Common Road and on its western boundary by Woodberry Lane. It is situated in an area that appears to be a local stronghold for Bechstein's bat *Myotis bechsteinii* and as such its restoration would be extremely beneficial for this species, as well as other bat species.
Baseline conditions	The site comprises a c.72ha lowland mixed deciduous woodland, with the majority of it included on the Ancient Woodland Inventory as Plantation on an Ancient Woodland Site (PAWS). Two smaller areas along the northern edge are included as Ancient Semi-natural Woodland (ASNW), the remainder is not included on the inventory. Given its status and ASNW and PAWS, much of the site is designated for its nature conservation value at county level and as such a Site of Importance for Nature Conservation (SINC). The woodland was previously managed under a woodland grant, submitted in 1997, but management has long since ceased. As such the woodland is now overstood and would benefit from management interventions and a long-term management plan. The woodland supports 32 Ancient Woodland Vascular Plant species. Three species are considered notable Wild Strawberry *Fragaria vesca*, Wood-sorrel *Oxalis acetosella* and Tormentil *Potentilla erecta*. Species data is limited but detailed bat survey work carried out by the Portsmouth Water survey team and Hampshire Bat Group, has resulted in at least 12 species recorded within a 1km radius of the woodland: brown long-eared *Plecotus auritus* and Natterer's *M. nattereri* bats have been captured within Southleigh Forest. A badger sett *Meles meles* is located in the extreme north of the site, and several bird species typical of woodland habitat have been recorded, including the Firecrest *Regulus ignicapilla*, which is included on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended). During walkover surveys in 2020 the silver-washed fritillary *Argynnis paphia* butterfly was recorded. This is a UK Biodiversity Action Plan species of conservation concern.

Aims and objectives	The overarching plan is to restore the PAWS woodland to one that is more semi-natural. This will include the provision of woodland clearings and rides for the benefit of foraging bats and invertebrates. Bringing the woodland back into regular management will provide a variety of different habitats and allow the under-storey to develop and that will provide improved habitat for hazel dormouse. Ephemeral streams and ponds are present, allowing more light to these waterbodies will be beneficial for aquatic macro-invertebrate species. The long-term objective is to deliver a PAWS restoration returning the woodland to native lowland deciduous woodland. Management prescriptions will be necessarily vague to allow for changes as habitats develop and will be delivered over the long-term to ensure diversity in the age and structure of the woodland. Dead wood will be left standing where it is safe to do so, but otherwise will be felled and left in-situ for the benefit of saproxylic invertebrates.
Roles and responsibilities	The Head of Water Resources, Leakage and Smart Meters (who manages the Catchment and Biodiversity team) at Portsmouth Water holds responsibility for the delivery of the woodland management plan, but the works will be outsourced to a delivery partner. If the woodland is transferred to a delivery partner, that partner will take on the legal obligation to manage the woodland for biodiversity. Appropriate funding will be provided by Portsmouth Water to enable the delivery of the long term management plan.
Offsite planning/preparation	A 10 year woodland management plan will be prepared by Hampshire and Isle of Wight Wildlife Trust (HIWWT), and shared with Natural England and the County Ecologist for review and comment. Once agreed it will be submitted to Forest Services for approval. This will provide the appropriate permissions to commence with the woodland restoration works. As the land owner, Portsmouth Water will not have to seek additional permissions to carry out the proposed works, aside from the need to review and update the management plan on a 10 year basis. The initial woodland management plan will also provide an overview of the longer term management of the woodland; covering 80 years demonstrating how the site will be restored and managed over this time period. Although, beyond the initial 10 years these will be high level aspirations with no legal standing.
Delivery prescription	Delivery prescriptions will be detailed in the 10 year management plan being prepared by HIWWT. These prescriptions will be reviewed every five years and adapted as required. A long-term delivery partner will be sought for the on-going management and monitoring requirements. There is an aspiration to link the management of Southleigh Forest with other local woodlands, discussions are on-going.
Programme of works	The management plan will be written and submitted in 2021, with the aim of commencing management works in the autumn of 2021, assuming all permissions are received. Anticipated programme of works: • Spring 2021 preparation of 10 year woodland management plan by HIWWT and submit felling license; • Spring – Summer 2021 establish outline actions for long term management and delivery partner/s; and

- Autumn 2021, commencement of restoration works;
- 2022 onwards: deliver long-term management and monitoring strategy of indicator species/habitats.

Reporting and Review

Monitoring activities will involve selected key species and/or habitats to establish change over time. Initial thoughts will be to monitor species that have been displaced by the reservoir project;

- Vegetation – composition of woodland and variety of woodland flora.
- Bats – targeted bat surveys will be carried out on a five year basis. Typical surveys will include bat box checks, remote detector, transects and capture surveys.
- Hazel Dormouse – monitoring surveys will be used to establish presence and breeding success.
- Breeding bird – surveys will be used to establish changes in species over time.
- Invertebrate – selected surveys will be carried out for targeted species groups, likely to involve butterfly transects, moth trapping and saproxylic species.
- Aquatic macro-invertebrate – monitoring of species assemblages within ephemeral water courses and ponds.

Monitoring will be varied depending on species, for example butterfly transects would be annual, nesting birds annual/bi-annual whereas bat and dormouse surveys would be carried out at five year intervals. Reports would be submitted on a five year intervals.

Appendix 3 Ephemeral Streams

Action plan structure	Description
Overview	This proposal for the HTR will see mitigation and compensation delivered for the loss of 3.7km of watercourses that will be directly lost due to the Scheme's embankment construction activity, some of which is considered to be high quality habitat. The Scheme is located in the Riders Lane Stream which is a sub-catchment of the Hermitage Stream water body. The mitigation and compensation 'package no. 2', will provide a mixture of on-site and off-site improvements and aims to create, or improve, riverine habitat through a range of different techniques.
Location of offsite habitat and species-specific compensation and enhancement	The agreed package, no.2, for the water environment includes both on-site and off-site mitigation and compensation totalling up to 5.5km of watercourse improvement. The on-site mitigation and compensation plan (approximately 1.57km) concentrates efforts in the headwater streams upstream of the reservoir. Off-site mitigation and compensation is spread across the wider catchment and includes measures on other reaches of the Riders Lane Stream (part of the Lake Stream) (approximately 0.45km), Hermitage Stream (approximately 2.99km) and Park Lane Stream (approximately 0.47km). Improvements along Lake Stream will provide mitigation for distinct species lost under the Scheme's footprint. Specifically, the measures seek to do the following work at each of the numbered items: • Measure no. 8. New compensation flow channel (0.25km) – new compensation flow channel from reservoir to Riders Lane Stream. • Measure no. 27. Hermitage Stream (0.41km) - Park House Farm Way to Middle Park Way (Reach C) – Restore the channel, where possible removing bed and bank protection and re-naturalisation of the channel accordingly. • Measure no. 29. Hermitage Stream (0.57km) - Riders Lane Stream to Barncroft Way (Reach D) - Restore the channel, where possible removing bed and bank protection and re-naturalisation of the channel accordingly. • Measure no. 5. Riders Lane Stream (0.14km) – New channel near Rowlands Castle – new channel connecting wetland scrapes and field drains • Measure no. 26. Hermitage Stream (0.42km) - Bushey Lease to Park House Farm Way (Reach B) - Restore the channel, where possible removing bed and bank protection and re-naturalisation of the channel accordingly. • Measure no. 7. Riders Lane Stream (0.45km) - The Lake Stream - macrophyte work – improvements to stream profile, creation of on-line ponds and developing areas that are suitable for macrophyte translocation. • Measure no. 28. Hermitage Stream (0.69km) - Middle Park Way to Riders Lane Stream (previously restored) - Enhance the existing channel through the removal of bed protection where deemed feasible and required. • Measure no. 30. Hermitage Stream (0.34km) - Barncroft Way to New Road (Reach E) - Restore the channel, where possible

	removing bed and bank protection and re-naturalisation of the channel accordingly. • Measure no. 2. Riders Lane Stream (0.55km) - Headwater Stream 2 (HS2) - improvements to stream profile, creating on-line ponds, improvements to existing ponds, river restoration, natural flood management and development of areas that are suitable for macrophyte translocation. • Measure no. 3. Riders Lane Stream (0.08km) - Headwater Stream 3 (HS3) improvements to stream profile, creating on-line ponds, improvements to existing ponds, river restoration, natural flood management and development of areas that are suitable for macrophyte translocation. • Measure no. 1. Riders Lane Stream (0.43km) - Headwater Stream 1 (HS1) improvements to stream profile, creating on-line ponds, improvements to existing ponds, river restoration, natural flood management and development of areas that are suitable for macrophyte translocation. • Measure no. 23. Hermitage Stream (0.56km) - Queen's Inclosure to Burnside (road) – Opening up of the channel, restoration and natural flood management. • Measure no. 4. Riders Lane Stream (0.13km) - Ponds in Long Wood - improvements to existing pond network and treatment of invasives • Measure no. 15. Park Lane Stream (0.47km) - Tributary north golf course- river restoration through removal of bed and bank protection and re-naturalisation of channel profile. Total length of improvement 5.49km
Baseline conditions	The existing watercourses under the scheme's footprint are small, previously modified, ephemeral watercourses. The channels while relatively homogenous were found to support a diverse range of invertebrate species including Nationally Scarce taxa and taxa indicative of groundwater upwelling. There is also a pond within the reservoir footprint which contains a macrophyte community indicative of acidic undisturbed conditions. Works across the wider Riders Lane Stream include improvements on similar watercourses whilst improvements to the middle to lower Hermitage Stream focus on wider, very modified, reaches which are largely lined with concrete on both bed and banks. Proposed works on the headwaters to Hermitage and Park Lane Stream are focused on improvements to small, modified watercourses.
Aims and objectives	The overarching package of works aims to provide improvements to the water environment across the wider Hermitage Stream Catchment. The package of works (package no.2) will provide sufficient length of watercourse improvement and an appropriate balance of measures to satisfy Biodiversity Net Gain commitments as agreed with Environment Agency on 05/03/21. It will also enable a joined-up network of quality habitat improvements that will mitigate against the high conservation habitat lost from the scheme. The works aim to provide a re-naturalisation of a significant proportion of the wider Hermitage Stream catchment enabling both improved connectivity and ecological resilience to be achieved. Some measures focus on relocating the more unique macroinvertebrate and macrophyte communities under the reservoir footprint and create habitat conditions to support these species.

	The success of the works package will be judged by the extent to which the improvements can improve the ecological and geomorphological functioning of the water environment. This is both on a reach-by-reach basis as well as an overall catchment improvement.
Roles and responsibilities	The Head of Water Resources, Leakage and Smart Meters (who manages the Catchment and Biodiversity team) at Portsmouth Water holds responsibility for the delivery of the mitigation and compensation plan for the water environment, but work will be outsourced to a delivery partners.
Offsite planning/preparation	Portsmouth Water will need to identify delivery partners who can support in the development and delivery of the package of works. Before then, each of the design concepts will need to be furthered following a review of practical constraints and opportunities. Concepts will need to be agreed with respective landowners and stakeholders. Any refinement to the list of measures in package no.2 will need to be undertaken at this stage. Any refinement will need to be based on whether any factors are identified which will impact the delivery of any of the measures that would either make them technical infeasible or disproportionately costly. In the event of this happening, an alternative measure would need to be considered from the long-list that could be delivered and match, as closely as possible, the objectives of the measure that was being removed. This would need to be mirrored by the length of improvement gained. This process would need to be agreed with the Environment Agency. Once the measures and concepts are confirmed, outline and detailed design will be developed along with all necessary work to fulfil consenting requirements. Management plans will also need to be developed and agreed. Consenting and construction would follow. Ongoing consultation with all stakeholders is seen as a priority for delivering the package of works.
Delivery prescription	Delivery prescriptions will be detailed once the sites have been selected, designs developed, and a management plan prepared. It will be important to ensure that management prescriptions align with adjoining land to ensure continuity. A long-term delivery partner will be sought for any on-going management and monitoring requirements.
Programme of works	At this time, it is not possible to provide a programme of works since it will be determined by the availability of land and where it is located. Once Portsmouth Water has the assurance that the project will be delivered mitigation and compensation can be planned accordingly. From the water environment perspective, this should be split into two phases. The first, is within Phase 1 of the programme which involves site clearance. In this phase, mitigation needs to be delivered where it is required to off-set key habitats impacted by the scheme. This will need to be delivered in the vicinity of the site to enable translocation of key species into these areas prior to the watercourses within the footprint of the scheme being impacted. The second part of the programme will include the remainder of the mitigation and compensation package which will largely consist of off-site works and can be delivered any time after the design phase of the project commences. Timing of these works will be dependent on a range of factors which include landowner and stakeholder agreements as well as the whole design consenting and delivery process. A programme for the mitigation and compensation works will be developed once Portsmouth Water have assurance that the scheme can go forward. This will also include a monitoring and management programme following the implementation of any measures.

Reporting and Review	Monitoring activities will involve selected key species and/or habitats to establish change over time. Monitoring will commence with habitats surveys, with species-specific surveys undertaken alongside and as the habitats develop. • Fluvial geomorphology - MoRPh surveys to assess habitat development assess before and after implementation • Macrophytes - the structure and diversity would be monitored before and after implementation • Invertebrates - selected surveys will be carried out for targeted species groups before and after implementation • Protected species - selected surveys will be carried out for protective species before and after implementation Monitoring will be varied depending on species, and as habitats develop and change over time. Reports would be submitted on a five-year intervals.

Appendix 4 Capital Grants Scheme

Action plan structure	Description
Overview	The proposal for the HTR will see the majority of the 160 hectare site developed, and therefore the on-site space available for mitigation and compensation measures is limited. Where habitats will remain unaffected by the proposals, such as the extreme east of Gipsies Plain or south west corner of the site at Gammon's Hill, advance planting has already taken place. Other on-site mitigation/compensation measures, such as the new 10ha wetland, will be delivered during and post construction. In order to provide robust mitigation and compensation measures and ensure that biodiversity net gain is delivered on the ground, Portsmouth Water will fund a long term Capital Grants Scheme.
Location of offsite habitat and species-specific compensation and enhancement	At this time it is not possible to detail the location of accepted grant applications, however, set criteria will be developed and these will prioritise projects in the local area, and for species that have been impacted by the HTR proposals. However, it is important not to be too prescriptive with the criteria as some projects that are further away from the HTR may be particularly beneficial for a certain species.
Capital Grant Scheme provision	The Capital Grants Scheme fund will be set at a cap of £1.2m for the duration of the project, which would be equivalent to providing a £15,000 sum for 80 years. However, the project fund will be delivered over a 30 year period, thereby providing £40,000 per annum for that period. If the fund is not fully spent in any year it should be rolled over to be spent in future years (or paid to the Local Planning Authorities for the same purpose) on recommendations from the steering group.
Aims and objectives	The objectives of the grants scheme will be to provide funding for conservation projects in the local area. These will ultimately be determined by the steering group but broadly they will seek to achieve the following: • Enhancement or creation of new habitats, such as woodland, grassland or wetland habitats. These will be particularly beneficial where they link up existing habitats thereby contributing to the Nature Recovery Network; • Species specific studies aimed at furthering the knowledge base for priority species, such as bats (e.g. Bechstein's and Alcathoe), hazel dormouse and aquatic macro-invertebrates; • Survey equipment for the use of knowledge enhancement in the local area.
Roles and responsibilities	The overall project owner will be Portsmouth Water, but a Capital Grants Scheme Steering Group will be set up to assess projects against the set criteria. Successful applicants will have the sole responsibility of delivering their projects.
Offsite planning/preparation	It is not possible to detail the planning and preparation scope at this time since these will be determined by the steering group and will be dependent on the scope of each project.

Delivery prescription	It is not possible to detail delivery prescriptions at this time since these will be determined by the steering group and will be dependent on the scope of each project.
Programme of works	The Capital Grants Scheme will commence upon completion of the HTR in 2029 and will run for a maximum period of 80 years, or once the grant fund has been used. The total fund available for the Grants Scheme is £1m. Anticipated programme of works: • 1st Quarter 2027 – establishment of steering group; • 2nd – 3rd Quarter 2027 – set scheme criteria; • 2nd Quarter 2029 and annually – commencement of Capital Grants Scheme, applications invited from April to June annually; • 3rd Quarter 2029 and annually – evaluation of applications during July and August; • 3rd Quarter 2029 and annually – award to successful applicants in September. • Monitoring and reporting as required thereafter.
Reporting and Review	Successful applicants will be required to monitor the outcomes of their projects against their specific objectives and report on an appropriate basis, which will be determined by the project scope e.g. annually, bi-annually.

APPENDIX 4
HIGHWAYS DRAWINGS

HTR-ATK-XX-ZZ-DR-D-0001

HTR-ATK-XX-ZZ-DR-D-0002

HTR-ATK-AR-RE-DR-D-0006 Rev C04

HTR-ATK-AR-RE-DR-D-0010 Rev C01

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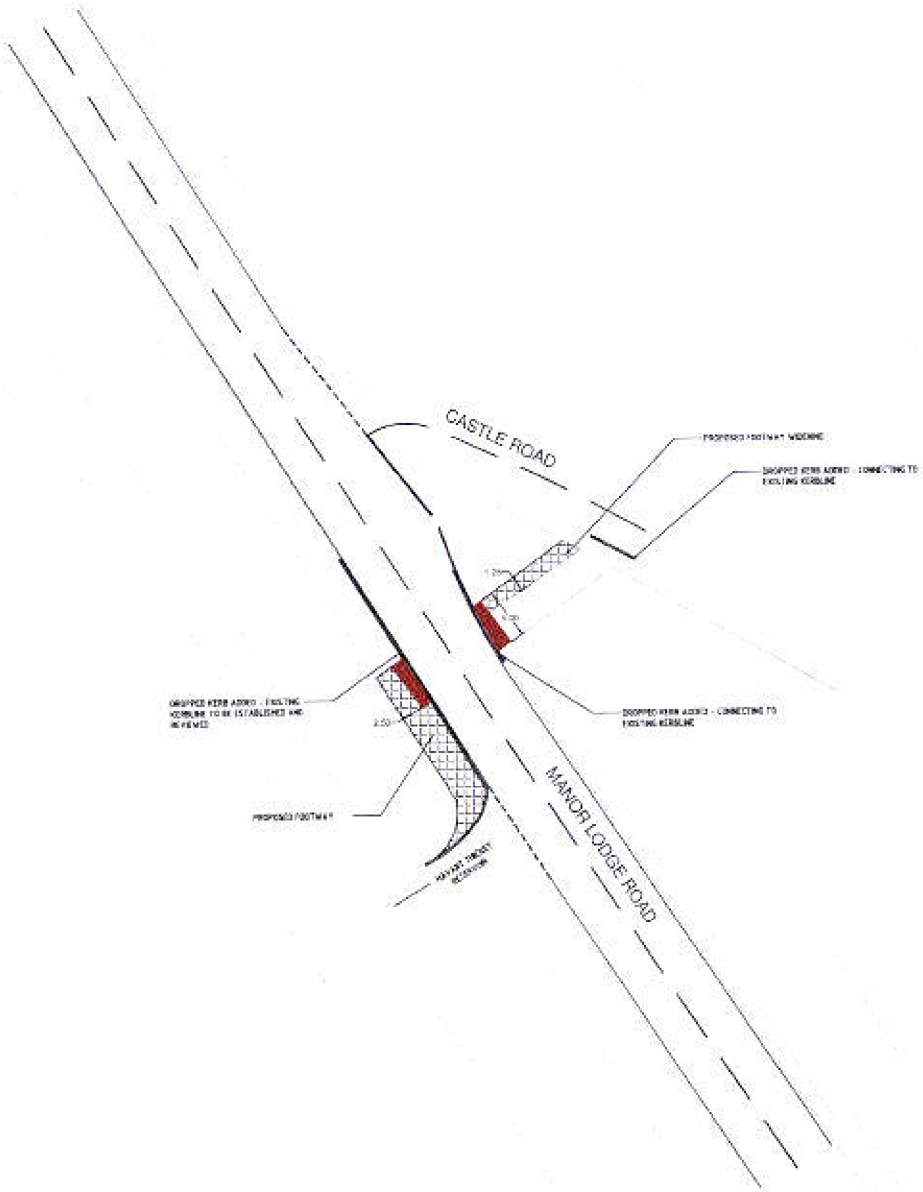

NOTES

1. THIS DRAWING IS A CONCEPT DRAWING ONLY AND HAS NOT BEEN SUBJECT TO A FULL DETAILED HIGHWAY DESIGN. IF THIS CONCEPT IS TO BE PROGRESSED FURTHER A FULL DETAILED DESIGN EXERCISE WILL BE CARRIED OUT.
2. DO NOT SCALE FROM THIS DRAWING.
3. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.
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GENERAL KEY

- PROPOSED TACTILE PAVING
- PROPOSED DROPPED KERB LINE
- PROPOSED FOOTWAY WIDENING

Rev					Description	Date
P01.1 S0	—	—	—	—	First Issue	

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Drawing Suitability: Initial non-contractual code — Status: S0

Contractor's Drawing Number: HTR ATK-XX-ZZ-DR-D 0001

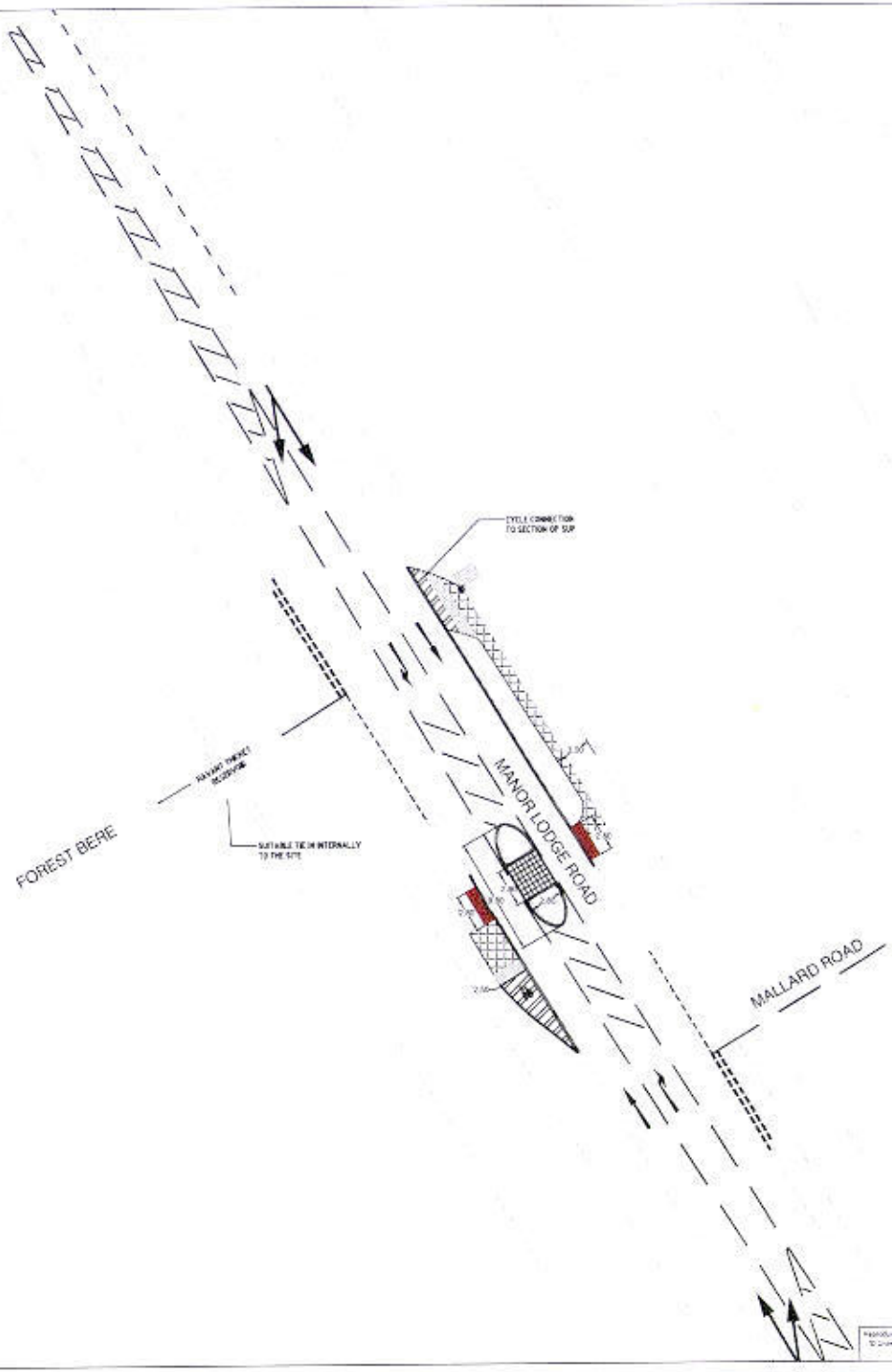
Portsmouth Water

Project Ref. No.	Sheet	Scale	Sheet Size
HTR	1 of 1	1:200	A1

Project Title: HAVANT THICKET RESERVOIR

Drawing Title: DESIGN OPTIONS NMU ACCESS 1 CASTLE ROAD/MANOR LODGE ROAD (SHEET 1 OF 2)

Portsmouth Water Drawing Number — Rev: P01.1



NOTES

1. THIS DRAWING IS A CONCEPT DRAWING ONLY AND HAS NOT BEEN SUBJECT TO A FULL DETAILED HIGHWAY DESIGN. IF THIS CONCEPT IS TO BE PROGRESSED FURTHER A FULL DETAILED DESIGN EXERCISE WILL BE CARRIED OUT.
2. DO NOT SCALE FROM THIS DRAWING.
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GENERAL KEY

PROPOSED TACTILE PAVING

PROPOSED DROPPED KERB LINE

PROPOSED FOOTWAY WIDENING

Rev Indice	Ch	Ch	Ch	Ch	Description	Date
TEC	—	—	—	—	Final issue	—
3A						

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Drawing Suitability: [n/a] non-contractual code — Status: S0

Contractors Drawing Number: HTR — ATK-XX-ZZ-DR-D-0002 (Type / Discipline / Layout / Type 1 / Sys 1 / Number)

Portsmouth Water

Project Ref. No.	Sheet	Scale	Drawn Size
HTR	1 of 1	1:200	A1

Project Title: HAVANT THICKET RESERVOIR

Drawing Title: DESIGN OPTIONS NMU ACCESS 2 MANOR LODGE ROAD/MALLARD ROAD (SHEET 2 OF 2)

Portsmouth Water Drawing Number: HTR 1

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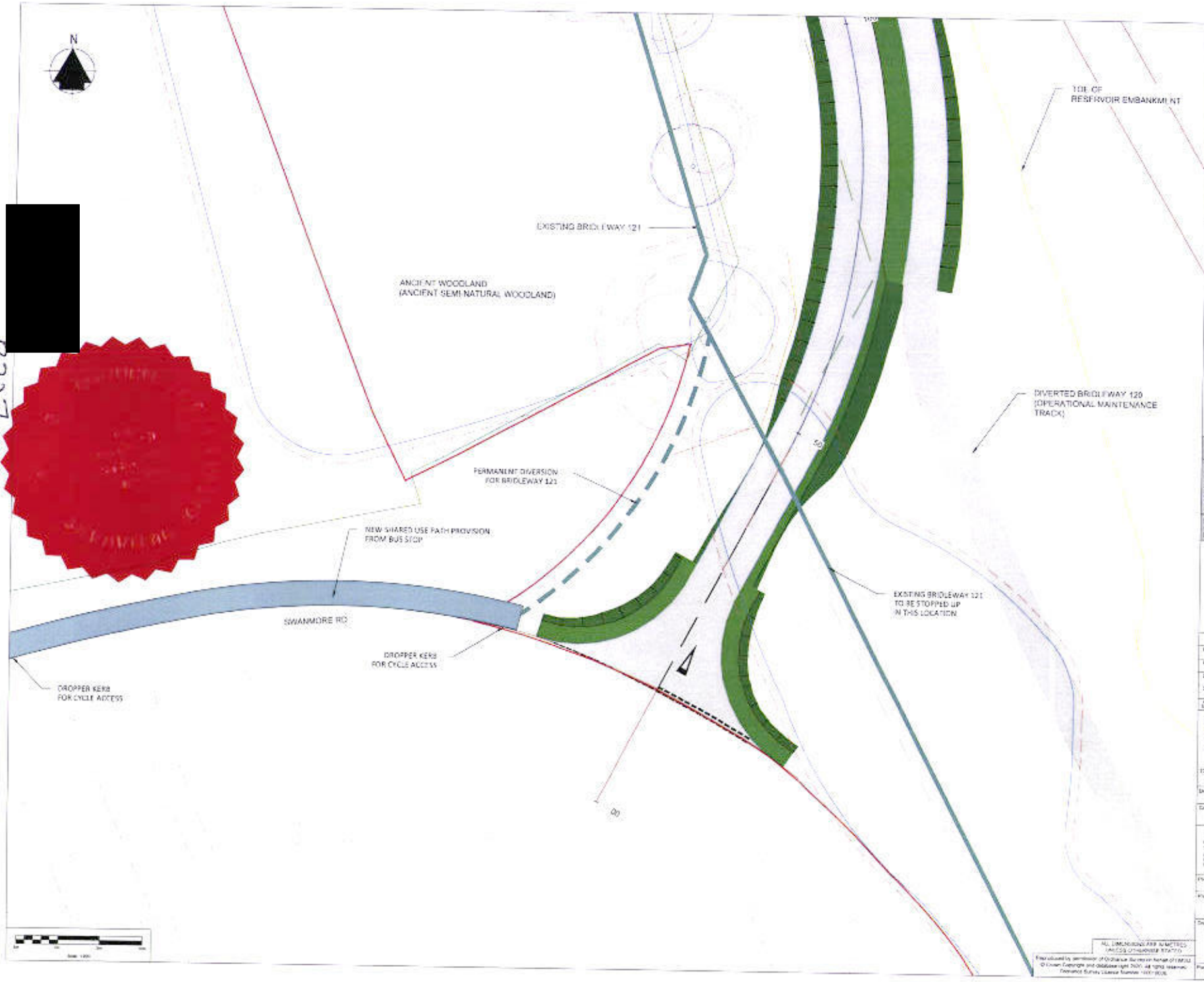

KEY (not to scale)

- Category A tree
- Category B tree
- Category C tree
- Category U tree
- Root Protection Area (RPA)
- Ancient Woodland boundary
- Ancient Woodland Clearfelled boundary
- Red Line Boundary

NOTES

1. All dimensions in metres unless otherwise stated.

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, all significant residual risks (hazards to very high) are indicated on the drawing with warning triangles; the risk register, in its entirety, is available on drawings HTR-ATK-ZZ-ZZ-DR-HG-0001 to 0007. The reference numbers shown against each triangle will correlate to data stored on these schedules.

Environmental Risks are not shown on the drawings and reference should be made to the following:
Document – HTR-ATK-00-00-RP-Z-0009 Outline Environmental

Rev Status	Rev No	Drn By	Chk By	App By	Auth By	Description	Date
C01 A1	FC	AP	AHR	W	W	First Issue	30/09/20
C02 A1	EC	AP	AHR	W	W	FOR PLANNING	13/11/20
C03 B2	FC	AP	AHR	W	W	FOR REVIEW	19/11/20
C04 A1	FC	AP	AHR	W	W	FOR PLANNING	15/03/21

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Drawing Suitability: Initial non-contractual code — Status: A1

Contract/Drawing Number: HTR - ATK - AR - RE - DR - D 0006 (Hub / Originator / Discipline / Type / Sub / Number)

Portsmouth Water

Project Ref. No: HTR | Sheet: 1 of 1 | Scale: 1:200 | Drawing Size: A1

Project Title: HAVANT THICKET RESERVOIR

Drawing Title: ACCESS ROUTES VEHICLE ACCESS JUNCTION SOUTH (SWANMORE ROAD)

Portsmouth Water Drawing Number | Rev: C04

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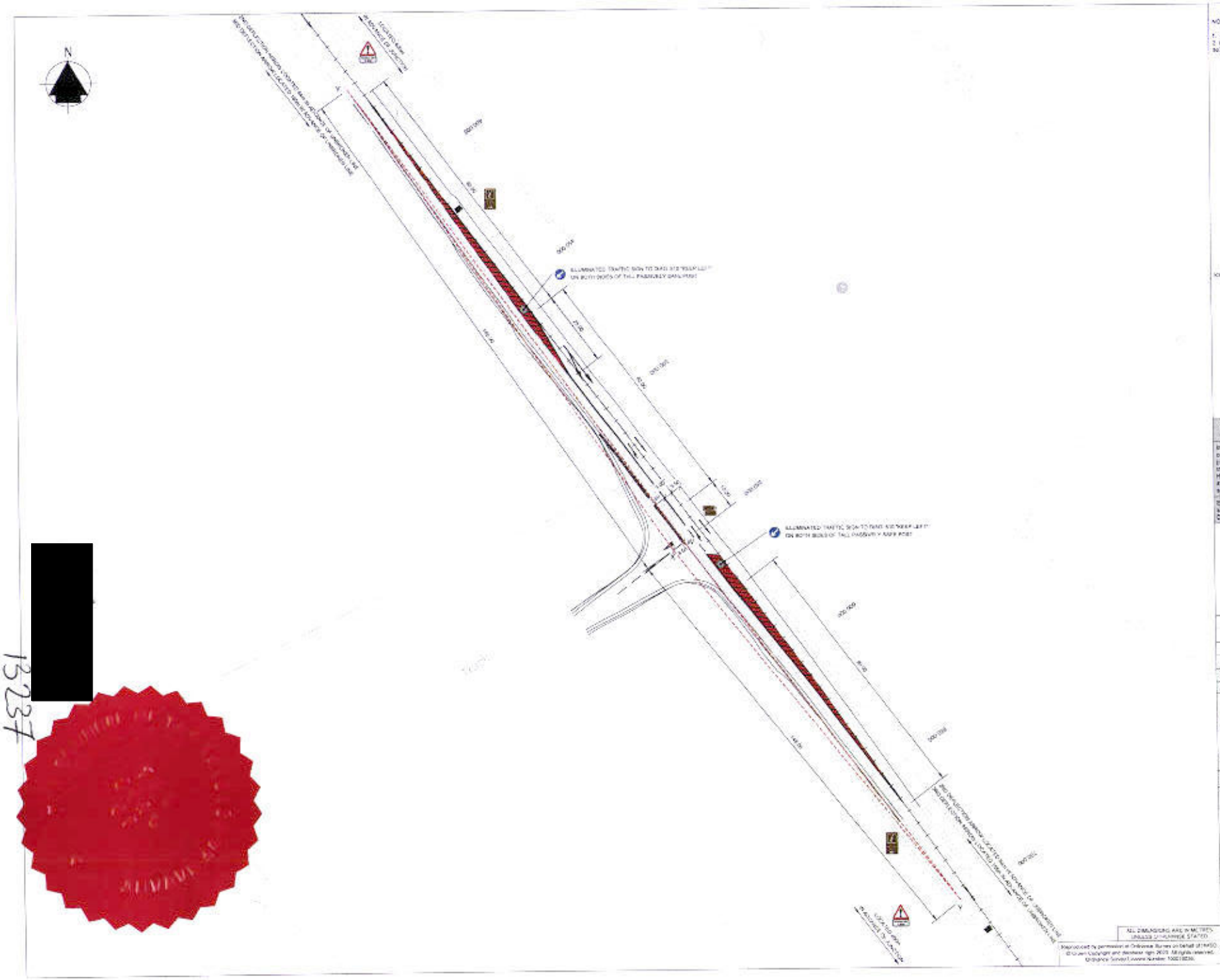

NOTES:

1. ALL DIMENSIONS IN METRES UNLESS OTHERWISE STATED
2. LOCATION OF TRAFFIC SIGNS AND ROAD MARKINGS FOR INDICATIVE PURPOSE ONLY

KEY

VISIBILITY SPLAYS

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/ risks normally associated with the types of work detailed on this drawing, all significant residual risks (moderate to very high) are indicated on the drawing with warning triangles; the risk register, in its entirety, is available on drawings HTR-ATK-ZZ-XX-DR-HS-0001 to 0007. The reference numbers shown against each triangle will correlate to risks shown on these schedules.

Environmental risks are not shown on the drawings and reference should be made to the following:
Document – HTR-ATK-XX-XX-RP-Z-0069 Outline Environmental

Rev Status	Drn	Chk	Rev Dr	Rev Ch	Date	Description	Date
CST A1	PT	NJH	KP	NR	3-0-0 Initial issue		22/04/20

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Drawing Suitability: Initial non-contractual code — Status: A1

Contractors Drawing Number: HTR - ATK - AR - RE - DR - D - 0010
Project | Originator | Volume | Location | Type | Role | Number

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Havant Hampshire PO9 1LG
REGISTERED in ENGLAND No. 2744401

Portsmouth Water

Project ref. No.	Sheet	Scale	Sheet Size
HTR	1 of 1	NTS	A1

Project Title: HAVANT THICKET RESERVOIR

Drawing Title: ACCESS ROUTES VEHICLE ACCESS JUNCTION NORTH (B2149)

Portsmouth Water Drawing Number: 201 — Rev: 0

[redacted]

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APPENDIX 5
PLANNING PERMISSIONS

DRAFT DECISION NOTICE ONLY

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For: Portsmouth Water

The Town and Country Planning (Development Management Procedure) (England) Order 2015
Grant of Planning Permission

Application Number: APP/20/00990
Site Address: Havant Thicket, adjacent to Sir George Staunton Country Park, Reservoir and Pipe Line, Middle Park Way, Havant
Proposal: Hybrid application seeking: 1) Full Planning permission for Development of a reservoir for raw water storage, A pumped storage reservoir, with the minimum required total storage capacity of 8,700 million litres (Ml), to support the planned bulk supply transfer of at least 21Ml/d in extreme (currently defined as 1:200 year) drought conditions; Construction of an earth embankment adjacent to Staunton Country Park ; Construction of an overflow discharge/spillway at the south-western side of the reservoir and associated works; Construction of a new junction on the B2149 Manor Lodge Road and a new junction on Swanmore Road. Provision of viewing areas on the southern embankment and western edge of the reservoir.
2) Outline application for (matters to be considered outlined in Table 2.2 in the submitted Development Specification) control house partially incorporated within landscaped earth mounding adjacent to the south west embankment; together with provision of other earth embankments. Construction of a visitor centre / cafe, with storage areas and welfare facilities to the northwest of the reservoir to be used for recreational and education purposes; Provision of picnic area(s) and children's play area(s). Access routes from both junctions to the visitor car park; visitor car park comprising 193 car parking spaces and between 70 and 75 overflow spaces plus spaces for staff, coach/minibus and disabled drivers sited to the north west of the reservoir. Creation of a permanent wetland on the northern side of the reservoir and construction of bird watching hide/screen(s); recreational facilities for public amenity. Provision of perimeter tracks and a network of bridleways, cycle paths and footpaths; Construction of a slipway on the western bank of the reservoir for operational use only and a small section of the proposed pipeline (210m).

Further to your application received on 02 November 2020 (which was valid from 13 November 2020) Havant Borough Council, as Local Planning Authority **Grants Planning Permission** for the above proposal in accordance with the submitted plans and particulars as detailed below.

This permission is subject to compliance with:

Our Ref: APP/20/00990

(i) The plans and other documents submitted with regard to your application; and

(ii) The following conditions:

Conditions:

1 The development must be begun not later than five years beginning with the date of this permission.
Reason: To comply with the requirements of Section 91 of the Town and Country Planning Act 1990 as amended by Section 51 of the Planning and Compulsory Purchase Act 2004.

2 No part of the development hereby approved in outline (as set out in the Development Specification, Table 2.2, enclosed below) shall be commenced, except for site clearance, set up and remediation works, and ground investigations until applications for written approval of the details of the siting, scale and external appearance of the development, and the landscaping of the site (herein after called "the reserved matters") have been submitted to and approved by the Local Planning Authority. Application(s) for approval of the matters reserved by this planning permission must be made not later than the expiration of 5 years from the date of this decision notice; and Development must be begun not later than the expiration of 2 years from the final approval of reserved matters for the relevant phase, or, in the case of approval on different dates, the approval of the last such matter to be approved.
Reason: The application was submitted as part outline part full application in accordance with the provisions of Article 3(1) of the Town and Country Planning (General Development Procedure) Order 1995 and in accordance with the provisions of Section 92 of the Town and Country Planning Act, 1990 and the Planning and Compulsory Purchase Act 2004.

Table 2.2: Scheme Parameters

Element	Parameter	Level of detail
Reservoir capacity	Minimum required total capacity: 8,700 million litres Maximum capacity: at least 9,600 million litres, up to a Top Water Level (TWL) of 39.5m AOD.	Fixed
Supply rate	Output capacity: at least 21 Ml/d in extreme (currently defined as 1 200 year) drought conditions	Fixed
Embankment	Max 26m high Crest level 40.5m AOD Length 2,770m Inside slope: to range from 1.5 to 1.7 Outside slope: majority 1.7 with local variations to 1.5 at Round Wood and the Avenue woodland (see below) Outer toe (edge): +/- 2m horizontal range (north to south) Crest line position: 0 – 37m horizontal range (to north) to accommodate any potential future need for reducing the outer face slope from 1.5 to 1.7.	Outline
Embankment adjacent to Staunton Country Park	Toe (edge) of the embankment is fixed at a minimum of 25m from the edge of woodland along the southern boundary of the Site (known as Hammond's Lands Copse). Length of embankment at 1.5 is approximately 185m along this stretch and 390m of embankment with slope varying from 1.5 to 1.7 Staircase detail along alignment of The Avenue joining pedestrian access from Staunton Country Park with viewing area at the crest	Fixed
Top Water Level (TWL)	39.5m AOD 1.0m freeboard (height from TWL to embankment crest) to prevent/limit overtopping	Fixed
Spillway / overflow	3m long weir/ 700mm diameter pipe	Fixed
Slope protection material	Range of up to 450mm thick layer of protection. Rip-rap (rock armour). Rock mattresses would be brushed with topsoil allowing planting with aquatic / marginal species such as reeds and sedge grasses.	Fixed
Lowest operating level	27.5m AOD Lowest 20% to be considered dead storage, minimum level before reservoir operationally fails.	Fixed

Element	Parameter	Level of detail
Emergency drawdown facility	Discharge capacity of 10.9 m^3/s Reservoir can be lowered by 1/3 of water depth in 6 days 1.4m diameter scour pipe and submerged discharge valve discharging into Riders Lane Stream at the proposed control house 1.2m diameter inlet /outlet pipe discharging into the Hermitage Stream 3km downstream	Fixed
Wetland retaining structure	A retained wetland extending for approximately 1.3km along the northern shoreline 4No. retained wetland compartments, plus provision of an area for wet grassland habitat creation to the east of the retained wetland Retention of wetland during drought levels in main reservoir Minimum area of retained wetland provided ~10ha	Outline (commitment to minimum area)
Control house	Maximum width of building frontage: 33m Maximum height of building wall above external ground level 6m (excluding security fence) Schedule of accommodation: total area approximately 430m^2 (excluding courtyard) Reinforced concrete outer structure with cladding, composite roof slab with green roof, steel frame /blockwork internal walls	Outline
Visitor Centre	Maximum envelope of 35m x 55m and maximum height of 10m	Outline
Bird Hide	Maximum envelope of 9m x 20m and maximum height of 5m	Outline
Viewing Area	Location along the western boundary and outline design	Outline
Vehicle Access	New junctions off B2149 (to the north) and Swanmore Road (to the south).	Fixed
Northern Access Route from junction with B2149 and car park	Single lane single, 3.65m wide carriageway with passing bays and 0.5m verges with 0.9m embankment slopes and a 6.45m wide footprint	Outline

3 The development hereby permitted shall be carried out in accordance with the following approved plans:

Drawings
HTR-ATK-ZZ-ZZ-DR-L-0001 Outline Masterplan
HTR-ATK-ZZ-ZZ-DR-L-0006 Planning Application Strategy Key Plan
HTR-ATK-ZZ-ZZ-DR-L-0007 Key Plan 1
HTR-ATK-ZZ-ZZ-DR-L-0008 Key Plan 2
HTR-ATK-ZZ-ZZ-DR-L-0009 Key Plan 3
HTR-ATK-ZZ-ZZ-DR-L-0012 Landscape Plan - Control House
HTR-ATK-ZZ-ZZ-DR-L-0013 Landscape Plan - Staircase
HTR-ATK-ZZ-ZZ-DR-L-0014 Landscape Plan - Gipsies Plain
HTR-ATK-ZZ-ZZ-DR-L-0015 Landscape Plan - North West Corner
HTR-ATK-ZZ-ZZ-DR-L-0016 Landscape Plan - Viewing Platform
HTR-ATK-ZZ-ZZ-DR-L-0018 Section A
HTR-ATK-ZZ-ZZ-DR-L-0019 Section B + C
HTR-ATK-ZZ-ZZ-DR-L-0020 Section D + E
HTR-ATK-AR-RE-DR-D-0001 Northern Access Route off B2149
HTR-ATK-AR-RE-DR-D-0002 Northern Access Junction off B2149
HTR-ATK-AR-RE-DR-D-0005 Vehicle Access Route South revC04
HTR-ATK-AR-RE-DR-D-0006 Vehicle Access Junction South revC04

Documents
Engineering and Design Report
Planning Statement
Development Specification
Environmental Statement (Volumes 1 - 4) including Non-Technical Summary. The Volume 4 Appendices include the following standalone reports:
Outline Construction Environmental Management Plan including Record of Environmental Actions and Commitments or REAC
(ES_Volume_4_Appendix_A2.1_OEMP)
Transport Assessment (ES_Volume_4_Appendix_A13.1_TA)
Flood Risk Assessment (ES_Volume_4_Appendix_A15.2_FRA)

Water Framework Directive Compliance Assessment
(ES_Volume_4_Appendix_A15.1_WFD)
Arboricultural Impact Assessment (ES_Volume_4_Appendix_A9.14_AIA)
HTR-ATK-RZ-RE-DR-L-113 Revised Tree Protection Plan Sheet 37 of 40 (revP01.1)
Design and Access Statement
Statement of Community Involvement
Outline Biodiversity Mitigation and Compensation Strategy
Article 4.7 Statement

ADDITIONAL INFORMATION SUBMITTED FEBRUARY 2021
A Summary of the Benefits of Havant Thicket Resevoir
HTR TNPS02 Traffic Distribution Sensitivity revision_V2.0 dated 25/01/2021
HTR TNPS03 Report on Northern Access Layout dated 29/01/2021
HTR Water Framework Directive Article 4.7 29/01/2021

ADDITIONAL INFORMATION SUBMITTED APRIL 2021
Access for Non Motorised Users - Technical Note dated 01/04/2021
Access Strategy, Rat Running and Construction Management - Technical Note dated 01/04/2021
Framework Construction Management Plan dated 31/03/2021
Article 4.7 Shortlisting Methodology dated 01/04/2021
Transport Assessment Addendum - Framework Travel Plan dated 01/04/2021
Implementation Plan for Off Site Biodiversity Mitigation and Compensation dated 01/04/2021

Reason: - To ensure provision of a satisfactory development.

Phasing

4 Prior to the commencement of development, a detailed phasing plan for the development shall be submitted to and approved by the Local Planning Authority. The development shall be carried out in accordance with the approved phasing plan and no variation shall be made without the prior written approval of the Local Planning Authority. Approval will not be given if in the reasonable opinion of the Local Planning Authority the proposed variation creates new environmental impacts which exceed the range or scale of those measured and assessed in the Environmental Statement (including the further information) and which the Local Planning Authority considers may require further or additional mitigation measures.
Reason: The Environmental Impact and merits of the proposed development have been assessed on this basis.

Construction Environmental Management Plan

5 No phase of the development approved under Condition 4 shall commence until a phase specific Construction Environmental Management Plan for that parcel has been submitted to, and approved in writing by, the Local Planning Authority. The CEMP shall be based upon, and be in broad accordance with, Volume 4 Appendix A2.1 of the application Environmental Statement (Outline Environmental Management Plan). It should demonstrate that the risk to controlled waters will be appropriately managed, and include both temporary and permanent construction features and detail information on locations of proposed techniques such as cofferdams, culverting and piping and the associated flood risks and mitigation measures. The development shall be carried out strictly in accordance with the approved details.
Reason: To ensure that the construction process is carried out in a manner which will minimise disturbance, pollution & nuisance to neighbouring properties or within the public realm. To avoid inappropriate parking practices, and turning and manoeuvring of construction vehicles which adversely impact either the use- or

safety- of the public highway. This condition is imposed having due regard to policies DM10 & CS15 (Havant Borough Local Plan (Core Strategy) 2011), and the National Planning Policy Framework 2019.

6 No phase of the development approved under Condition 4 shall commence until a Construction Method Statement (CMS) for that phase has been submitted to and approved in writing by the Local Planning Authority. The development shall be carried out in accordance with the approved details.
Reason: To ensure that the construction process is carried out in a manner which will minimise disturbance, pollution & nuisance to neighbouring properties.

Reserved Matters - Visitor Centre area

7 The reserved matters application for the North West Corner (including visitor centre and car park) submitted pursuant to Conditions 2 and 4 shall include:
- Consideration of the play area location (currently in proximity to the bin store, a more suitable location should be explored);
- Any non-residential buildings to achieve BREEAM 'Very Good' certification and/or contribute to a reduction in greenhouse gas emissions using 'Fabric First' principles and renewable technology (i.e. solar PV);
- Closed Circuit Television (CCTV) cameras linked to a monitoring station to provide for immediate response to incidents as they are occurring;
- Electric Vehicle (EV) parking spaces and charging points;
- Cycle parking (within a covered sheffield stand).

Regarding the latter, cycle parking for e-bikes, tandem bikes, cargo bikes and bicycles used by disabled visitors should be considered and provided.
Reason: In the interests of safety, social inclusion and sustainable development.

Highways and amenity

Hours of working

8 No construction on the reservoir site shall take place outside the hours of 07:30-18:00 Monday to Friday, 07:30-13:00 on Saturday and no Sunday working, with the exception of specific works that shall have been agreed in writing with the Local Planning Authority in advance and shall include details of the task, the date and duration of works. No works shall take place on Bank or Public Holidays.
Reason: In the interests of the amenities of local residents.

Construction noise and vibration

9 No phase of the development approved under Condition 4 shall commence until a construction noise and vibration management plan, including a targeted scheme wide construction noise and vibration monitoring and reporting programme, has been submitted to, and approved in writing by, the Local Planning Authority. The development shall be carried out in accordance with the approved details.
Reason: To ensure that construction noise and vibration is managed effectively so that levels do not regularly exceed the threshold for significant impacts.

10 No phase of the development approved under Condition 4 shall commence until a revised and updated assessment of potential noise and vibration arising during construction shall be prepared in accordance with BS 5228-1:2009+A1:2014. The assessments shall include likely eligibility for noise insulation or temporary re housing and shall be submitted to and approved in writing by the Local Planning Authority and construction carried out in accordance with the agreed recommendations.
Reason: To minimise potential noise impacts on nearby sensitive receptors.

11 Subject to Condition 10 [ABOVE], no night time working shall take place, unless

otherwise in accordance with a scheme submitted to and approved in writing by the Local Planning Authority. Night-time works to be carried out strictly in accordance with the approved scheme.
Reason: To avoid potentially significant impacts of noise and vibration upon residential receptors.

Construction Traffic Management Plan (CTMP)

12 A) No development shall take place until a Construction Traffic Management Plan (CTMP) has been submitted to, and approved in writing by, the Local Planning Authority (in consultation with Hampshire County Council as local highways authority). B) No phase of the development approved under Condition 4 shall commence until a phase specific CTMP for that parcel has been approved in writing by the local planning authority. The CTMP(s) shall include all commitments set out in the Framework CTMP, dated 31/03/2021, submitted with the planning applications and will include a Construction Traffic Management Strategy and Construction Worker Travel Plan. The CTMP shall include the following:

- vehicle routing plans
- proposed programme and duration
- number of construction personnel including travel arrangements and mitigation where necessary
- alterations to the highway, including temporary and / or permanent, to enable construction
- details of the number of construction and delivery vehicles using the public highway (no abnormal loads are anticipated at this stage)
- traffic management details
- compounds and laydown area details
- highway condition surveys
- methods for managing the site to prevent mud onto the highway
- details of on-site contractor parking.

The CTMP shall be implemented in accordance with the agreed details.
Reason: To ensure the safe and efficient operation of the highway network.

Site access

13 Before each phase of development approved under Condition 4 above is commenced, a scheme indicating the provision to be made within that phase for people with disabilities to gain access to publicly accessible area and buildings shall have been submitted to and approved in writing by the Local Planning Authority. The agreed scheme shall be implemented before the land and/or buildings concerned are brought into use.
Reason: In the interests of social inclusion and sustainable development.

Signage strategy

14 Before the development of the final phase (visitor facilities phase) of development approved under Condition 4 above is commenced, a signage strategy for the operational phase of the site shall be submitted to, and approved in writing by, the Local Planning Authority. The development shall be carried out in accordance with the approved details before commencement of the operation phase and retained thereafter.
Reason: In the interests of highway safety, visitor amenity and safety and protection of new and existing habitats.

15 Prior to commencement of construction of the visitor facilities a Wayfinding Infrastructure Strategy shall be submitted to, and approved in writing by, the Local Planning Authority in consultation with the Highway Authority. The Strategy should include the design and location of signage, seating and public art across the site. Signage should not be limited to the visitor centre, trails and bird watching areas, but should also include key areas surrounding Havant Thicket such as, but not limited to, Dunsbury Park, Horndean, Leigh Park, Rowlands Castle and Staunton

Country Park. The requirements of the Wayfinding Infrastructure Strategy shall be implemented in full prior to visitor facilities first being brought into use.
Reason: In the interests of highway safety, visitor amenity and safety and protection of new and existing habitats.

Sustainable access

16 The following site access improvements for non-motorised users (within the red line boundary) will be implemented in full prior to completion of the Access Junctions, as outlined on drawing HTR ATK RP - Z - 0076:
a) Improved site access at Cedar Drive to connect to the diverted bridleway with new kissing (accessible and cycle friendly) and horse friendly gates (Access 3);
b) A new bridleway access into the site to the north of the southern access road (diversion of Bridleway 121);
in accordance with the Access for Non Motorised Users Technical Note, dated 01/04/2021, submitted with the planning applications and Planning Drawings: HTR-ATK-AR-RE-DR-D-0005-Vehicle Access Route South Plan revC04; HTR-ATK-AR-RE-DR-D-0006-Vehicle Access Junction South (Swanmore Road) revC04. Furthermore, investigations shall take place to provide a further non-motorised users on the northern access to provide a direct north-south sustainable link.
Reason: In the interests of highway safety, visitor amenity and safety and protection of new and existing habitats.

17 The following site access improvements for non motorised users (within the red line boundary) will be implemented in full prior to completion of the visitor facilities:
a) Localised upgraded of existing site access at the south western corner of the site close to junction of Swanmore Road and Well Meadow (Access 6);
b) A new gated pedestrian and cycle access to be provided from Swanmore Road into the site south of the new vehicular access (Access 7);
c) A bridleway crossing will be provided from the new southern access route to link the diverted Bridleway 120 to the junction of the existing Bridleways 120 and 121 in accordance with (Access 8),
in accordance with the Access for Non Motorised Users Technical Note, dated 01/04/2021, submitted with the planning applications and Planning Drawings: HTR-ATK-AR-RE-DR-D-0005-Vehicle Access Route South Plan revC04; HTR-ATK-AR-RE-DR-D-0006-Vehicle Access Junction South (Swanmore Road) revC04.
Reason: In the interests of highway safety, visitor amenity and safety and protection of new and existing habitats.

Non-motorised users

18 Unless otherwise agreed in writing before the development of the final phase (visitor facilities) of development, details of how through movement of traffic has been prevented by the detailed design, in the form of a physical barrier within the car park to ensure visitors can not travel between the north and south access (rat-running), and details of measures to deter motorcyclist access shall be submitted to and agreed in writing by the Local Planning Authority. The barriers should also be provided at the northern and southern entrances and locked at night time to prevent anti-social behaviour. The development shall be carried out in accordance with the approved details and retained thereafter.
Reason: In the interests of highway safety, visitor amenity and safety and protection of new and existing habitats.

Northern access

19 No development shall commence on site until the works to the vertical profile on the B2149, in accordance with drawing HTR-ATK-AR-RE-DR-D-0010, has been undertaken to the satisfaction of the Local Planning Authority, in consultation with the Highway Authority, and as such approved in writing, unless otherwise agreed in

writing by the Local Planning Authority.
Reason: In the interests of highway safety, visitor amenity and safety and protection of new and existing habitats.

Historic Environment
Lighting strategy

20 No phase of the development approved under Condition 4 shall commence until a Lighting Strategy for that phase or parcel has been approved by the local planning authority. The Strategy must include:
- Proposed specifications for external lighting of service areas, parking, buildings, signs, open space and access junctions.
- Measures to prevent obtrusive light to residents and distraction of motorists.
- Measures to minimise light pollution.
- Appropriate energy efficiency technology
- Permanent lighting will comprise hooded luminaires directed away from vegetation, particularly the boundary hedgerows and treelines to avoid any light spill onto retained vegetation.

Lighting will follow good practice current at the time of detailed design. The new lighting will be task-related, associated with the visitor centre and associated car park and with no lighting on the access roads. The lux level will be as low as possible to meet their purpose safely and effectively.
The lighting for each phase or parcel shall be carried out in accordance with the approved Lighting Strategy and shall be retained and maintained as such thereafter.
Reason: In the interests of safety, visual and residential amenity and habitats and the environment.

Archaeological Evaluation (Written Scheme)
21 No phase of development approved under Condition 4 hereby approved shall commence until an Archaeological Management Plan (AMP) has been submitted to, and approved in writing by, the Local Planning Authority. The AMP will provide appropriately for all aspects of archaeological recording and will serve as an over-arching Written Scheme of Investigation for all archaeological works.
Reason: To record important archaeological features.

Archaeological Evaluation (Programme)
22 No development within a Development Phase shall commence until the applicant has submitted, and the Local Planning Authority has approved, a written scheme for the programme of archaeological mitigation within that Development Phase area. The programme for archaeological mitigation shall then be implemented in accordance with the agreed written scheme.

This condition may be discharged on an individual Development Phase basis or on a section by section basis.

Reason - To mitigate the effect of the works associated with the development upon any heritage assets and to ensure that information regarding these heritage assets is preserved by record for future generations. This is a pre-commencement requirement because of the need to secure satisfactory archaeological protection in advance of each individual Development Phase commencing.

Archaeological Evaluation (Recording)
23 No development within a Development Phase shall commence until the applicant has submitted, and the Local Planning Authority has approved in writing, a Written Scheme for recording all historic assets within that Development Phase area. The recording of all historic assets shall then be implemented in accordance with the agreed scheme.

This condition may be discharged on an individual Development Phase basis or on a section by section basis.

Reason - To mitigate the effect of the works associated with the development upon any heritage assets and to ensure that information regarding these heritage assets is preserved by record for future generations. This is a pre-commencement requirement because of the need to secure satisfactory archaeological protection in advance of each individual Development Phase commencing.

Archaeological Evaluation (Publishing)

24 Following completion of archaeological fieldwork within a Development Phase, a report shall be produced in accordance with an approved programme including, where appropriate, post-excavation assessment, specialist analysis and reports, publication and public engagement related to that Development Phase area and submitted to the Local Planning Authority.

This condition may be discharged on an individual Development Phase basis or on a section by section basis.

Reason - To contribute to the knowledge and understanding of past uses and activities on site by ensuring that opportunities are taken to capture evidence from the historic environment and to make this publicly available

Historic environment - The Avenue

25 No development of the Embankment phase, approved under Condition 4, hereby approved shall commence until the applicant has submitted, and the Local Planning Authority has approved in writing options for enhancement and interpretation of the historic environment. Measures shall include the following:

i. A mechanism to interpret the role of the Avenue in the understanding of value of the Leigh Park RPG and Sir George Staunton Conservation Area in order to offset the harm caused by its partial removal.

ii. The full extent of the Avenue is fully recorded before it is further truncated. This should include a photographic record and a detailed plan showing all features of historical interest.

iii. A landscaping scheme is devised to integrate the reservoir with the Avenue a detailed Scheme of Soft and Hard Landscape Works has been submitted to and approved in writing by the Local Planning Authority.

iv. A timetable for implementation and arrangements for maintenance of the approved details

The designs should be developed in consultation with Historic England and the Local Planning Authority Heritage Manager, as well as the Hampshire County Archaeologist, where appropriate. The development shall be carried out in accordance with the approved details and retained thereafter.

Reason: To ensure the protection of important heritage and historical features.

Public safety

26 Prior to construction of the Embankment phase of development approved under Condition 4 above, a scheme indicating the measures to reduce the risk of drowning shall be submitted to and approved by the Local Planning Authority. The development shall be carried out in accordance with the approved details and retained thereafter.

Reason: In the interests of safety for the general public.

Landscape

27 Any reserved matters application for layout or landscaping submitted pursuant to Condition 4 shall include the submission of a Tree Survey and updated Arboricultural Impact Assessment (including a Tree Constraints Plan), Arboricultural Method Statement and Tree Protection Plan showing the tree or group of trees, the Root Protection Area(s) and the crown spread(s) in relation to the proposed

development. All tree root protection areas identified, shall be protected by protection fencing in accordance with BS 5837:2012.
The approved tree protection measures shall be implemented before any equipment, machinery, or materials are brought on to the site in connection with the works. They shall be retained intact for the duration of the construction works and shall only be removed or altered following completion of that phase.
Reason: To preserve the amenity visual amenity of the locality.

28 No phase of the development approved under Condition 4 shall commence until full details of the landscaping of that parcel has been submitted to and approved by the Local Planning Authority. Each reserved matter application shall set out how it complies with the approved planning drawings and any subsequent amendments shall be agreed in writing with the Local Planning Authority. The details shall include:

i) Written specifications (including cultivation and other operations associated with plant and grass establishment,

ii) Planting methods, tree pits & guying methods,

iii) Schedules of plants, noting species, planting sizes and proposed numbers/densities where appropriate,

iv) Retained areas of grassland cover, scrub, hedgerow, trees and woodland,

v) Manner and treatment of watercourses, ditches and banks,

vi) Details of all hard-surfaces, such as paths, access ways, seating areas and parking spaces, including their appearance, depth and permeability,

ix) A timetable for implementation of the soft and hard landscaping works.

The scheme of Landscaping Works shall be implemented in accordance with the approved timetable. Any plant which dies, becomes diseased or is removed, within 10 years shall be replaced with another of similar type and size, unless otherwise agreed in writing by the Local Planning Authority. The development shall be carried out in accordance with the approved details and retained thereafter.

Reason: In the interests of visual amenity and managing impact on the existing habitats.

Renewable energy

29 No development shall take place until a Renewable Energy Strategy has been submitted to, and approved in writing by, the Local Planning Authority. The development shall be carried out in accordance with the approved details and retained thereafter.
Reason: In the interests of sustainable development.

Flood risk and drainage

Contamination

30 If, during development, contamination not previously identified is found to be present at the site then no further development (unless otherwise agreed in writing with the local planning authority) shall be carried out until a remediation strategy detailing how this contamination will be dealt with has been submitted to, and approved in writing by, the local planning authority. The remediation strategy shall be implemented as approved.
Reason: To ensure that the development does not contribute to, and is not put at unacceptable risk from or adversely affected by, unacceptable levels of water

pollution from previously unidentified contamination sources at the development site. In line with paragraph 170 of the National Planning Policy Framework.

Flood risk

31 The development shall be carried out in accordance with the submitted flood risk assessment (ref HTR-ATK-XX-XX-RP-Z-0042, titled A15.2 Flood Risk Assessment Report, compiled by Atkins on behalf of Portsmouth Water Ltd dated 01/09/20) and the mitigation measures it details. These mitigation measures shall be fully implemented prior to operation and subsequently in accordance with the scheme's timing/phasing arrangements. The measures detailed throughout the FRA shall be retained and maintained thereafter throughout the lifetime of the development.
Reason:
o To reduce the risk of flooding to the proposed development and future occupants
o To ensure flood risk off site is not increased as a result of the proposed development in line with paragraph 163 of the National Planning Policy Framework.

32 No phase of the development approved under Condition 4 shall commence until a detailed scheme, to ensure the development will not increase the risk of flooding, has been submitted to, and approved in writing by, the local planning authority. Specifically, further details should be provided where relevant to that phase including:
o A detailed drainage management plan that adequately details the management of the drainage associated with the phase.
o Detailed information surrounding a number of permanent structural elements including the proposed dimensions and height of the embankment, associated spillway, control house and wetland retaining structure (including the proposed piped controls).
o Detailed information including the long-term maintenance scheduled for the proposed development.
o Detailed information on the proposed location and design of the visitor centre, including proposed finished floor levels.
o Should the proposed access routes to and from the visitor centre be situated within proximity to main river or within the flood zone then further details should be provided on the associated impacts on flood risk and the proposed mitigation measures.
The scheme shall be fully implemented and subsequently maintained, in accordance with the scheme's timing/phasing arrangements, or within any other period as may subsequently be agreed, in writing, by the Local Planning Authority.
Reason: To reduce the risk of flooding to the proposed development and its future users. This is in line with paragraph 163 of the National Planning Policy Framework.

33 The Reservoir Scheme shall be constructed in accordance with the parameters set out in Table 2.2 of the Development Specification, as set out in Condition 2, and the design standards and principles set out in the Design and Access Statement and summarised in Section 3 of the Development Specification.
Reason: To ensure the development reflects the approved scheme.

Drainage

34 Construction of the Visitor Centre development shall not commence until details of the proposed means of foul and surface water sewerage disposal have been submitted to, and approved in writing by, the Local Planning Authority. The development shall be carried out in accordance with the approved details.
Reason: To ensure appropriate provision of foul and surface water sewerage disposal.

35 Prior to construction of the Embankment phase of development approved under

Condition 4 above, an On-site Emergency Flood Plan shall be submitted to, and agreed in writing by, the Local Planning Authority. The development shall be carried out in accordance with the details approved.
Reason: To ensure that residual flood risks on site are safely managed in accordance with the NPPF.

Ecology

36 No phase of the development approved under Condition 4 shall commence until full details of all ecological mitigation, compensation and enhancement measures (to be informed as necessary by up-to-date survey and assessment) and on-going monitoring of mitigation measures required for each reserved matters application (including both ecological works directly related to that Development Phase reserved matters area and any works associated with that area but lying outside of the boundary of that area) shall be submitted for approval to the Local Planning Authority. Such details shall be in accordance with the ecological mitigation, compensation and enhancement measures detailed within the Outline Biodiversity Mitigation and Compensation Strategy (ECOSA, September 2020), the Habitats Regulations Assessment (Atkins/Portsmouth Water, September 2020) and the Implementation Plan for Off Site Biodiversity Mitigation and Compensation (Atkins, April 2021. Any such approved measures shall thereafter be implemented in strict accordance with the agreed details and with all measures maintained in perpetuity, unless otherwise agreed in writing by the Local Planning Authority.
Reason: To protect and enhance biodiversity in accordance with the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, NERC Act 2006, NPPF and Policy CS 11 of the Havant Borough Core Strategy March 2011.

37 The development shall be carried out in accordance with the European Protected Species (EPS) licences for hazel dormouse (Natural England reference-2020-50257-EPS-AD2) and bats (Natural England reference-2020-50625-EPS-AD2) issued by Natural England. The requirements of the licences shall be adhered to, unless varied through agreement with Natural England.

Reason: To protect and enhance biodiversity in accordance with the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, NERC Act 2006, NPPF and Policy CS11 of the Havant Borough Core Strategy March 2011.

38 An Ecological Clerk of Works (ECoW) shall be appointed, to be full time on site during site preparation and clearance and during any works in sensitive areas, and to undertake regular monitoring visits throughout the construction programme.
Reason: To protect and enhance biodiversity in accordance with the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, NERC Act 2006, NPPF and Policy CS 11 of the Havant Borough Core Strategy March 2011.

Soil management

39 No phase of the development approved under Condition 4 shall commence until a Soil Management Plan has been submitted to and approved in writing by the Local Planning Authority. The Plan shall include separate management of ancient woodland soils for restoration. The Plan shall include a timetable for the carrying out of the works, once approved. The development shall be carried out in accordance with the approved details and timetable.
Reason: To support reinstatement of the landscape disturbed by the construction works.

Other Important Information:

(1) This notice only relates to the decision of Havant Borough Council as Local Planning Authority under the Town and Country Planning Acts. It does not relate to any other application that may be required under the Building Regulations or under any other Act, Regulation, Byelaw or Order where the Council's approval may be needed. For further guidance as to the need for consent under the Building Regulations please phone 023 9244 6571.

(2) Your attention is drawn to the attached information regarding firstly your right to appeal to the Planning Inspectorate, if you are aggrieved by the Council's decision, and secondly the rights of an owner to, in certain circumstances serve a purchase notice on the Council. See www.planningportal.gov.uk/pcs.

(3) Any failure to adhere to the details of the approved plans, and other documents or to comply with any conditions listed above may lead to enforcement action being taken by the Council. If you wish to depart from the approved details or conditions in any way you should contact the Planning and Development service at the Plaza or by telephoning 023 9244 6015.

(4) In accordance with paragraphs 38-50 of the NPPF Havant Borough Council (HBC) takes a positive and proactive approach and works with applicants/agents on development proposals in a manner focused on solutions by:

- Offering a pre-application advice service, and
- Updating you of any issues that may arise in the processing of your application and where possible suggesting solutions, and,

In this instance:

- You sought and were provided with pre-application advice, and you were updated about issues after the initial site visit,

(5) This permission was granted subject to a planning obligation agreement made under Section 106 of the Town & Country Planning Act 1990 dated ..... which requires .....

(6) Your attention is drawn to the provisions of the Water resources Act 1991 and the Land Drainage Bylaws 1981. The consent of the Environment Agency is required for any work or structures in, under, over or within 8 metres of the top of the bank of a main river. You are advised to contact the Environment Agency on 0370 8506506 for further information.

(7) Your attention is drawn to the provisions of the Conservation (Natural Habitats, &c.) Regulations 1994 which makes it an offence to deliberately capture, kill or disturb a European Protected Species or to damage or destroy the breeding site or resting place of such an animal. It may be possible to obtain a licence from the Department for Environment Food and Rural Affairs (DEFRA) if the loss of a protected species cannot be avoided. For further advice about licences you can contact DEFRA European Wildlife Division on 08459 33 55 77.

(8) The grant of planning permission does not entitle you to obstruct a public right of way. If it is necessary to stop up or divert a right of way in order to enable the development permitted to be carried out you should apply without delay to either; Havant Borough Council in the case of a footpath or bridleway (under Section 257

of the Town and Country Planning Act 1990) or the Department of Communities and Local Government (CLG) for any other issues (under Section 247 of the Town and Country Planning Act 1990).

Simon Jenkins

Simon Jenkins
Director of Regeneration and Place

DATE TO BE CONFIRMED WHEN ABLE TO BE ISSUED

TOWN AND COUNTRY PLANNING ACT 1990

NOTIFICATION TO BE SENT TO AN APPLICANT WHEN A LOCAL PLANNING AUTHORITY REFUSE PLANNING PERMISSION OR GRANT IT SUBJECT TO CONDITIONS

- These notes are for information only and do not purport to set out the law on the subject.
- Only the applicant possesses the right of appeal.

Appeals to the Secretary of State

- If you are aggrieved by the decision of your local planning authority to refuse permission for the proposed development or to grant it subject to conditions, then you can appeal to the Secretary of State under section 78 of the Town and Country Planning Act 1990.

- If this is a decision on a planning application relating to the same or substantially the same land and development as is already the subject of an enforcement notice and you want to appeal against your local planning authority's decision on your application, then you must do so within 28 days of the date of this notice.

- If an enforcement notice is served relating to the same or substantially the same land and development as in your application and if you want to appeal against your local planning authority's decision on your application, then you must do so within 28 days of the date of service of the enforcement notice, or within 6 months [12 weeks in the case of a householder appeal] of the date of this notice, whichever period expires earlier.

- If this is a decision to refuse planning permission for a householder application and you want to appeal against your local planning authority's decision then you must do so within 12 weeks of the date of this notice.

- If this is a decision to refuse planning permission for a minor commercial application and you want to appeal against your local planning authority's decision then you must do so within 12 weeks of the date of this notice.

- If this is a decision to refuse express consent for the display of an advertisement and you want to appeal against your local planning authority's decision then you must do so within 8 weeks of the date of receipt of this notice.

- If this is a decision to refuse consent to work on a tree which is subject to a Tree Preservation Order and you want to appeal against your local planning authority's decision then you must do so within 28 days of the date of this notice.

- If this is a decision to refuse any other type of application and you want to appeal against your local planning authority's decision then you must do so within 6 months of the date of this notice.

- **Appeals can be made online at:** https://www.gov.uk/planning-inspectorate.
  If you are unable to access the online appeal form, please contact the Planning Inspectorate to obtain a paper copy of the appeal form on tel: 0303 444 5000.

- The Secretary of State can allow a longer period for giving notice of an appeal but will not normally be prepared to use this power unless there are special circumstances which excuse the delay in giving notice of appeal.

- The Secretary of State need not consider an appeal if it seems to the Secretary of State that the local planning authority could not have granted planning permission for the proposed development or could not have granted it without the conditions they imposed, having regard to the statutory requirements, to the provisions of any development order and to any directions given under a development order.

If you intend to submit an appeal that you would like examined by inquiry, then you must notify the Local Planning Authority and Planning Inspectorate (inquiryappeals@planninginspectorate.gov.uk) at least 10 days before submitting the appeal. Further details are on GOV.UK.

Our Ref: APP/20/00990

IMPORTANT NOTICE FOR APPLICANTS WITH REGARD TO BUILDING REGULATIONS

This notice only relates to the decision of Havant Borough Council under the Town and Country Planning Acts. It does not relate to any other application that may be required any other Act, Regulation, Byelaw or Order where the Council's approval may be needed.

For further guidance as the need for consent under the Building Regulations, please telephone Havant Borough Council's Building Control team on:

023 9244 6571

Our Ref: APP/20/00990

DRAFT DRAFT DRAFT DRAFT DRAFT

For: Portsmouth Water PLC
Atkins
Nova North
11 Bressenden Place
Westminster
London
SW1E 5BY

TOWN & COUNTRY PLANNING ACT 1990 (as amended)
TOWN & COUNTRY PLANNING (DEVELOPMENT MANAGEMENT PROCEDURE) (ENGLAND) ORDER 2015

NOTICE OF PERMISSION **51680/001**

Proposal: Hybrid application seeking:
1) Full Planning permission for Development of a reservoir for raw water storage, A pumped storage reservoir, with the minimum required total storage capacity of 8,700 million litres (Ml), to support the planned bulk supply transfer of at least 21Ml/d in extreme (currently defined as 1:200 year) drought conditions; Construction of an earth embankment adjacent to Staunton Country Park ; Construction of an overflow discharge/spillway at the south-western side of the reservoir and associated works; Construction of a new junction on the B2149 Manor Lodge Road and a new junction on Swanmore Road. Provision of viewing areas on the southern embankment and western edge of the reservoir.
2) Outline application for (matters to be considered outlined in Table 2.2 in the submitted Development Specification) control house partially incorporated within landscaped earth mounding adjacent to the south west embankment; together with provision of other earth embankments. Construction of a visitor centre / cafe, with storage areas and welfare facilities to the northwest of the reservoir to be used for recreational and education purposes; Provision of picnic area(s) and children's play area(s). Access routes from both junctions to the visitor car park; visitor car park comprising 193 car parking spaces and between 70 and 75 overflow spaces plus spaces for staff, coach/minibus and disabled drivers sited to the north west of the reservoir. Creation of a permanent wetland on the northern side of the reservoir and construction of bird watching hide/screen(s); recreational facilities for public amenity. Provision of perimeter tracks and a network of bridleways, cycle paths and footpaths; Construction of a slipway on the western bank of the reservoir for operational use only and a small section of the proposed pipeline (210m).

Site Address: Havant Thicket Winter Storage Reservoir, Manor Lodge Road, Rowlands Castle (Rowlands Castle Parish)

The Planning Authority GRANTS Planning Permission in accordance with your application, plans and details submitted therewith, which was registered on 13 November, 2020, subject also to the following conditions:-

1 The development must be begun not later than five years beginning with the date of this permission.
Reason: To comply with the requirements of Section 91 of the Town and Country Planning Act 1990 as amended by Section 51 of the Planning and Compulsory Purchase Act 2004.

2 No part of the development hereby approved in outline (as set out in the Development Specification, Table 2.2, enclosed below) shall be commenced, except for site clearance, set up and remediation works, and ground investigations until applications for written approval of the details of the siting, scale and external appearance of the development, and the landscaping of the site (herein after called "the reserved matters") have been submitted to and approved by the Local Planning Authority. Application(s) for approval of the matters reserved by this planning permission must be made not later than the expiration of 5 years from the date of this decision notice; and Development must be begun not later than the expiration of 2 years from the final approval of reserved matters for the relevant phase, or, in the case of approval on different dates, the approval of the last such matter to be approved.
Reason: The application was submitted as part outline part full application in accordance with the provisions of Article 3(1) of the Town and Country Planning (General Development Procedure) Order 1995 and in accordance with the provisions of Section 92 of the Town and Country Planning Act, 1990 and the Planning and Compulsory Purchase Act 2004.

Table 2.2: Scheme Parameters

Element	Parameter	Level of detail
Reservoir capacity	Minimum required total capacity: 8,700 million litres Maximum capacity: at least 9,660 million litres, up to a Top Water Level (TWL) of 39.5m AOD.	Fixed
Supply rate	Output capacity: at least 21 Ml/d in extreme (currently defined as 1:200 year) drought conditions	Fixed
Embankment	Max 20m high Crest level 40.5m AOD Length 2,770m Inside slope: to range from 1:5 to 1:7 Outside slope: majority 1:7 with local variations to 1:5 at Round Wood and the Avenue woodland (see below) Outer toe (edge): +/- 2m horizontal range (north to south) Crest line position: 0 – 37m horizontal range (to north) to accommodate any potential future need for reducing the outer face slope from 1:5 to 1:7	Outline
Embankment adjacent to Staunton Country Park	Toe (edge) of the embankment is fixed at a minimum of 25m from the edge of woodland along the southern boundary of the Site (known as Hammond's Lands Copse). Length of embankment at 1:5 is approximately 185m along this stretch and 390m of embankment with slope varying from 1:5 to 1:7 Staircase detail along alignment of The Avenue joining pedestrian access from Staunton Country Park with viewing area at the crest	Fixed
Top Water Level (TWL)	39.5m AOD 1.0m freeboard (height from TWL to embankment crest) to prevent/limit overtopping	Fixed
Spillway / overflow	3m long weir/ 700mm diameter pipe	Fixed
Slope protection material	Range of up to 450mm thick layer of protection. Rip-rap (rock armour). Rock mattresses would be brushed with topsoil allowing planting with aquatic / marginal species such as reeds and sedge grasses	Fixed
Lowest operating level	27.5m AOD Lowest 20% to be considered dead storage; minimum level before reservoir operationally fails	Fixed

Element	Parameter	Level of detail
Emergency drawdown facility	Discharge capacity of 10.9 m^3/s Reservoir can be lowered by 1/3 of water depth in 6 days 1.4m diameter scour pipe and submerged discharge valve discharging into Riders Lane Stream at the proposed control house 1.2m diameter inlet /outlet pipe discharging into the Hermitage Stream 3km downstream	Fixed
Wetland retaining structure	A retained wetland extending for approximately 1.3km along the northern shoreline 4No. retained wetland compartments, plus provision of an area for wet grassland habitat creation to the east of the retained wetland Retention of wetland during drought levels in main reservoir Minimum area of retained wetland provided ~10ha	Outline (commitment to minimum area)
Control house	Maximum width of building frontage: 33m Maximum height of building wall above external ground level 6m (excluding security fence) Schedule of accommodation: total area approximately 430m^2 (excluding courtyard) Reinforced concrete outer structure with cladding, composite roof slab with green roof, steel frame /blockwork internal walls	Outline
Visitor Centre	Maximum envelope of 35m x 55m and maximum height of 10m	Outline
Bird Hide	Maximum envelope of 9m x 20m and maximum height of 5m	Outline
Viewing Area	Location along the western boundary and outline design	Outline
Vehicle Access	New junctions off B2149 (to the north) and Swanmore Road (to the south)	Fixed
Northern Access Route from junction with B2149 and car park	Single lane single, 3.65m wide carriageway with passing bays and 0.5m verges with 0.9m embankment slopes and a 6.45m wide footprint	Outline

3 The development hereby permitted shall be carried out in accordance with the following approved plans:

Drawings
HTR-ATK-ZZ-ZZ-DR-L-0001 Outline Masterplan
HTR-ATK-ZZ-ZZ-DR-L-0006 Planning Application Strategy Key Plan
HTR-ATK-ZZ-ZZ-DR-L-0007 Key Plan 1
HTR-ATK-ZZ-ZZ-DR-L-0008 Key Plan 2
HTR-ATK-ZZ-ZZ-DR-L-0009 Key Plan 3
HTR-ATK-ZZ-ZZ-DR-L-0012 Landscape Plan - Control House
HTR-ATK-ZZ-ZZ-DR-L-0013 Landscape Plan - Staircase
HTR-ATK-ZZ-ZZ-DR-L-0014 Landscape Plan - Gipsies Plain
HTR-ATK-ZZ-ZZ-DR-L-0015 Landscape Plan - North West Corner
HTR-ATK-ZZ-ZZ-DR-L-0016 Landscape Plan - Viewing Platform
HTR-ATK-ZZ-ZZ-DR-L-0018 Section A
HTR-ATK-ZZ-ZZ-DR-L-0019 Section B + C
HTR-ATK-ZZ-ZZ-DR-L-0020 Section D + E
HTR-ATK-AR-RE-DR-D-0001 Northern Access Route off B2149

HTR-ATK-AR-RE-DR-D-0002 Northern Access Junction off B2149
HTR-ATK-AR-RE-DR-D-0005 Vehicle Access Route South revC04
HTR-ATK-AR-RE-DR-D-0006 Vehicle Access Junction South revC04

Documents
Engineering and Design Report
Planning Statement
Development Specification
Environmental Statement (Volumes 1 - 4) including Non-Technical Summary.
The Volume 4 Appendices include the following standalone reports:
Outline Construction Environmental Management Plan including Record of Environmental Actions and Commitments or REAC
(ES_Volume_4_Appendix_A2.1_OEMP)
Transport Assessment (ES_Volume_4_Appendix_A13.1_TA)
Flood Risk Assessment (ES_Volume_4_Appendix_A15.2_FRA)
Water Framework Directive Compliance Assessment
(ES_Volume_4_Appendix_A15.1_WFD)
Arboricultural Impact Assessment (ES_Volume_4_Appendix_A9.14_AIA)
HTR-ATK-RZ-RE-DR-L-113 Revised Tree Protection Plan Sheet 37 of 40 (revP01.1)
Design and Access Statement
Statement of Community Involvement
Outline Biodiversity Mitigation and Compensation Strategy
Article 4.7 Statement

ADDITIONAL INFORMATION SUBMITTED FEBRUARY 2021
A Summary of the Benefits of Havant Thicket Resevoir
HTR TNPS02 Traffic Distribution Sensitivity revision_V2.0 dated 25/01/2021
HTR TNPS03 Report on Northern Access Layout dated 29/01/2021
HTR Water Framework Directive Article 4.7 29/01/2021

ADDITIONAL INFORMATION SUBMITTED APRIL 2021
Access for Non Motorised Users - Technical Note dated 01/04/2021
Access Strategy, Rat Running and Construction Management - Technical Note dated 01/04/2021
Framework Construction Management Plan dated 31/03/2021
Article 4.7 Shortlisting Methodology dated 01/04/2021
Transport Assessment Addendum - Framework Travel Plan dated 01/04/2021
Implementation Plan for Off Site Biodiversity Mitigation and Compensation dated 01/04/2021

Reason: - To ensure provision of a satisfactory development.

4 ***Phasing***
Prior to the commencement of development, a detailed phasing plan for the development shall be submitted to and approved by the Local Planning Authority. The development shall be carried out in accordance with the approved phasing plan and no variation shall be made without the prior written approval of the Local Planning Authority. Approval will not be given if in the reasonable opinion of the Local Planning Authority the proposed variation

creates new environmental impacts which exceed the range or scale of those measured and assessed in the Environmental Statement (including the further information) and which the Local Planning Authority considers may require further or additional mitigation measures.
Reason: The Environmental Impact and merits of the proposed development have been assessed on this basis.

5 ***Construction Environmental Management plan***
No phase of the development approved under Condition 4 shall commence until a phase specific Construction Environmental Management Plan for that parcel has been submitted to, and approved in writing by, the Local Planning Authority. The CEMP shall be based upon, and be in broad accordance with, Volume 4 Appendix A2.1 of the application Environmental Statement (Outline Environmental Management Plan). It should demonstrate that the risk to controlled waters will be appropriately managed, and include both temporary and permanent construction features and detail information on locations of proposed techniques such as cofferdams, culverting and piping and the associated flood risks and mitigation measures. The development shall be carried out strictly in accordance with the approved details.
Reason: To ensure that the construction process is carried out in a manner which will minimise disturbance, pollution & nuisance to neighbouring properties or within the public realm. To avoid inappropriate parking practices, and turning and manoeuvring of construction vehicles which adversely impact either the use- or safety- of the public highway. This condition is imposed having due regard to policies DM10 & CS15 (Havant Borough Local Plan (Core Strategy) 2011), and the National Planning Policy Framework 2019.

6 No phase of the development approved under Condition 4 shall commence until a Construction Method Statement (CMS) for that phase has been submitted to and approved in writing by the Local Planning Authority. The development shall be carried out in accordance with the approved details.
Reason: To ensure that the construction process is carried out in a manner which will minimise disturbance, pollution & nuisance to neighbouring properties.

7 ***Reserved Matters - Visitor Centre area***
The reserved matters application for the North West Corner (including visitor centre and car park) submitted pursuant to Conditions 2 and 4 shall include:
- Consideration of the play area location (currently in proximity to the bin store, a more suitable location should be explored);
- Any non-residential buildings to achieve BREEAM 'Very Good' certification and/or contribute to a reduction in greenhouse gas emissions using 'Fabric First' principles and renewable technology (i.e. solar PV);
- Closed Circuit Television (CCTV) cameras linked to a monitoring station to provide for immediate response to incidents as they are occurring;
- Electric Vehicle (EV) parking spaces and charging points;
- Cycle parking (within a covered sheffield stand).
Regarding the latter, cycle parking for e-bikes, tandem bikes, cargo bikes and bicycles used by disabled visitors should be considered and provided.

Reason: In the interests of safety, social inclusion and sustainable development.

8 ***Highways and amenity***

No construction on the reservoir site shall take place outside the hours of 07:30-18:00 Monday to Friday, 07:30-13:00 on Saturday and no Sunday working, with the exception of specific works that shall have been agreed in writing with the Local Planning Authority in advance and shall include details of the task, the date and duration of works. No works shall take place on Bank or Public Holidays.

Reason: In the interests of the amenities of local residents

9 **Construction noise and vibration**

No phase of the development approved under Condition 4 shall commence until a construction noise and vibration management plan, including a targeted scheme wide construction noise and vibration monitoring and reporting programme, has been submitted to, and approved in writing by, the Local Planning Authority. The development shall be carried out in accordance with the approved details.

Reason: To ensure that construction noise and vibration is managed effectively so that levels do not regularly exceed the threshold for significant impacts.

10 No phase of the development approved under Condition 4 shall commence until a revised and updated assessment of potential noise and vibration arising during construction shall be prepared in accordance with BS 5228-1:2009+A1:2014. The assessments shall include likely eligibility for noise insulation or temporary re housing and shall be submitted to and approved in writing by the Local Planning Authority and construction carried out in accordance with the agreed recommendations.

Reason: To minimise potential noise impacts on nearby sensitive receptors.

11 Subject to Condition 10 [ABOVE], no night time working shall take place, unless otherwise in accordance with a scheme submitted to and approved in writing by the Local Planning Authority. Night-time works to be carried out strictly in accordance with the approved scheme.

Reason: To avoid potentially significant impacts of noise and vibration upon residential receptors.

12 Construction Traffic Management Plan (CTMP)

A) No development shall take place until a Construction Traffic Management Plan (CTMP) has been submitted to, and approved in writing by, the Local Planning Authority (in consultation with Hampshire County Council as local highways authority). B) No phase of the development approved under Condition 4 shall commence until a phase specific CTMP for that parcel has been approved in writing by the local planning authority. The CTMP(s) shall include all commitments set out in the Framework CTMP, dated 31/03/2021, submitted with the planning applications and will include a Construction Traffic Management Strategy and Construction Worker Travel Plan. The CTMP shall include the following:

- vehicle routing plans
- proposed programme and duration
- number of construction personnel including travel arrangements and mitigation where necessary
- alterations to the highway, including temporary and / or permanent, to enable construction
- details of the number of construction and delivery vehicles using the public highway (no abnormal loads are anticipated at this stage)
- traffic management details
- compounds and laydown area details
- highway condition surveys
- methods for managing the site to prevent mud onto the highway
- details of on-site contractor parking.

The CTMP shall be implemented in accordance with the agreed details.
Reason: To ensure the safe and efficient operation of the highway network.

13 Site access
Before each phase of development approved under Condition 4 above is commenced, a scheme indicating the provision to be made within that phase for people with disabilities to gain access to publicly accessible area and buildings shall have been submitted to and approved in writing by the Local Planning Authority. The agreed scheme shall be implemented before the land and/or buildings concerned are brought into use.
Reason: In the interests of social inclusion and sustainable development.

14 Signage strategy
Before the development of the final phase (visitor facilities phase) of development approved under Condition 4 above is commenced, a signage strategy for the operational phase of the site shall be submitted to, and approved in writing by, the Local Planning Authority. The development shall be carried out in accordance with the approved details before commencement of the operation phase and retained thereafter.
Reason: In the interests of highway safety, visitor amenity and safety and protection of new and existing habitats.

15 Prior to commencement of construction of the visitor facilities a Wayfinding Infrastructure Strategy shall be submitted to, and approved in writing by, the Local Planning Authority in consultation with the Highway Authority. The Strategy should include the design and location of signage, seating and public art across the site. Signage should not be limited to the visitor centre, trails and bird watching areas, but should also include key areas surrounding Havant Thicket such as, but not limited to, Dunsbury Park, Horndean, Leigh Park, Rowlands Castle and Staunton Country Park. The requirements of the Wayfinding Infrastructure Strategy shall be implemented in full prior to visitor facilities first being brought into use.
Reason: In the interests of highway safety, visitor amenity and safety and protection of new and existing habitats.

16 Sustainable access

The following site access improvements for non-motorised users (within the red line boundary) will be implemented in full prior to completion of the Access Junctions, as outlined on drawing HTR ATK RP - Z - 0076:

a) Improved site access at Cedar Drive to connect to the diverted bridleway with new kissing (accessible and cycle friendly) and horse friendly gates (Access 3);

b) A new bridleway access into the site to the north of the southern access road (diversion of Bridleway 121);

in accordance with the Access for Non Motorised Users Technical Note, dated 01/04/2021, submitted with the planning applications and Planning Drawings: HTR-ATK-AR-RE-DR-D-0005-Vehicle Access Route South Plan revC04; HTR-ATK-AR-RE-DR-D-0006-Vehicle Access Junction South (Swanmore Road) revC04. Furthermore, investigations shall take place to provide a further non-motorised users on the northern access to provide a direct north-south sustainable link.

Reason: In the interests of highway safety, visitor amenity and safety and protection of new and existing habitats.

17 The following site access improvements for non motorised users (within the red line boundary) will be implemented in full prior to completion of the visitor facilities:

a) Localised upgraded of existing site access at the south western corner of the site close to junction of Swanmore Road and Well Meadow (Access 6);

b) A new gated pedestrian and cycle access to be provided from Swanmore Road into the site south of the new vehicular access (Access 7);

c) A bridleway crossing will be provided from the new southern access route to link the diverted Bridleway 120 to the junction of the existing Bridleways 120 and 121 in accordance with (Access 8),

in accordance with the Access for Non Motorised Users Technical Note, dated 01/04/2021, submitted with the planning applications and Planning Drawings: HTR-ATK-AR-RE-DR-D-0005-Vehicle Access Route South Plan revC04; HTR-ATK-AR-RE-DR-D-0006-Vehicle Access Junction South (Swanmore Road) revC04.

Reason: In the interests of highway safety, visitor amenity and safety and protection of new and existing habitats.

18 Non-motorised users

Unless otherwise agreed in writing before the development of the final phase (visitor facilities) of development, details of how through movement of traffic has been prevented by the detailed design, in the form of a physical barrier within the car park to ensure visitors can not travel between the north and south access (rat-running), and details of measures to deter motorcyclist access shall be submitted to and agreed in writing by the Local Planning Authority. The barriers should also be provided at the northern and southern entrances and locked at night time to prevent anti-social behaviour. The development shall be carried out in accordance with the approved details and retained thereafter.

Reason: In the interests of highway safety, visitor amenity and safety and protection of new and existing habitats.

19 Northern access

No development shall commence on site until the works to the vertical profile on the B2149, in accordance with drawing HTR-ATK-AR-RE-DR-D-0010, has been undertaken to the satisfaction of the Local Planning Authority, in consultation with the Highway Authority, and as such approved in writing, unless otherwise agreed in writing by the Local Planning Authority.

Reason: In the interests of highway safety, visitor amenity and safety and protection of new and existing habitats.

20 Historic Environment
Lighting strategy

No phase of the development approved under Condition 4 shall commence until a Lighting Strategy for that phase or parcel has been approved by the local planning authority. The Strategy must include:

- Proposed specifications for external lighting of service areas, parking, buildings, signs, open space and access junctions.
- Measures to prevent obtrusive light to residents and distraction of motorists.
- Measures to minimise light pollution.
- Appropriate energy efficiency technology
- Permanent lighting will comprise hooded luminaires directed away from vegetation, particularly the boundary hedgerows and treelines to avoid any light spill onto retained vegetation.

Lighting will follow good practice current at the time of detailed design. The new lighting will be task-related, associated with the visitor centre and associated car park and with no lighting on the access roads. The lux level will be as low as possible to meet their purpose safely and effectively.

The lighting for each phase or parcel shall be carried out in accordance with the approved Lighting Strategy and shall be retained and maintained as such thereafter.

Reason: In the interests of safety, visual and residential amenity and habitats and the environment.

21 Archaeological Evaluation (Written Scheme)

No phase of development approved under Condition 4 hereby approved shall commence until an Archaeological Management Plan (AMP) has been submitted to, and approved in writing by, the Local Planning Authority. The AMP will provide appropriately for all aspects of archaeological recording and will serve as an over-arching Written Scheme of Investigation for all archaeological works.

Reason: To record important archaeological features.

22 Archaeological Evaluation (Programme)No development within a Development Phase shall commence until the applicant has submitted, and the Local Planning Authority has approved, a written scheme for the programme of archaeological mitigation within that Development Phase area. The programme for archaeological mitigation shall then be implemented in accordance with the agreed written scheme.

This condition may be discharged on an individual Development Phase basis or on a section by section basis.
Reason: To mitigate the effect of the works associated with the development upon any heritage assets and to ensure that information regarding these heritage assets is preserved by record for future generations. This is a pre-commencement requirement because of the need to secure satisfactory archaeological protection in advance of each individual Development Phase commencing

23 Archaeological Evaluation (Recording)
No development within a Development Phase shall commence until the applicant has submitted, and the Local Planning Authority has approved in writing, a Written Scheme for recording all historic assets within that Development Phase area. The recording of all historic assets shall then be implemented in accordance with the agreed scheme.

This condition may be discharged on an individual Development Phase basis or on a section by section basis.

Reason - To mitigate the effect of the works associated with the development upon any heritage assets and to ensure that information regarding these heritage assets is preserved by record for future generations. This is a pre-commencement requirement because of the need to secure satisfactory archaeological protection in advance of each individual Development Phase commencing.

24 Archaeological Evaluation (Publishing)
Following completion of archaeological fieldwork within a Development Phase, a report shall be produced in accordance with an approved programme including, where appropriate, post-excavation assessment, specialist analysis and reports, publication and public engagement related to that Development Phase area and submitted to the Local Planning Authority.

This condition may be discharged on an individual Development Phase basis or on a section by section basis.

Reason - To contribute to the knowledge and understanding of past uses and activities on site by ensuring that opportunities are taken to capture evidence from the historic environment and to make this publicly available

25 No development of the Embankment phase, approved under Condition 4, hereby approved shall commence until the applicant has submitted, and the Local Planning Authority has approved in writing options for enhancement and interpretation of the historic environment. Measures shall include the following:

i. A mechanism to interpret the role of the Avenue in the understanding of value of the Leigh Park RPG and Sir George Staunton Conservation Area in order to offset the harm caused by its partial removal.

ii. The full extent of the Avenue is fully recorded before it is further truncated. This should include a photographic record and a detailed plan showing all features of historical interest.

iii. A landscaping scheme is devised to integrate the reservoir with the Avenue a detailed Scheme of Soft and Hard Landscape Works has been submitted to and approved in writing by the Local Planning Authority.

iv. A timetable for implementation and arrangements for maintenance of the approved details

The designs should be developed in consultation with Historic England and the Local Planning Authority Heritage Manager, as well as the Hampshire County Archaeologist, where appropriate. The development shall be carried out in accordance with the approved details and retained thereafter.

Reason - To ensure the protection of important heritage and historical features.

26 Public safety
Prior to construction of the Embankment phase of development approved under Condition 4 above, a scheme indicating the measures to reduce the risk of drowning shall be submitted to and approved by the Local Planning Authority. The development shall be carried out in accordance with the approved details and retained thereafter.
Reason: In the interests of safety for the general public.

27 Landscape
Any reserved matters application for layout or landscaping submitted pursuant to Condition 4 shall include the submission of a Tree Survey and updated Arboricultural Impact Assessment (including a Tree Constraints Plan), Arboricultural Method Statement and Tree Protection Plan showing the tree or group of trees, the Root Protection Area(s) and the crown spread(s) in relation to the proposed development. All tree root protection areas identified, shall be protected by protection fencing in accordance with BS 5837:2012.
The approved tree protection measures shall be implemented before any equipment, machinery, or materials are brought on to the site in connection with the works. They shall be retained intact for the duration of the construction works and shall only be removed or altered following completion of that phase.
Reason: To preserve the amenity visual amenity of the locality.

28 No phase of the development approved under Condition 4 shall commence until full details of the landscaping of that parcel has been submitted to and approved by the Local Planning Authority. Each reserved matter application shall set out how it complies with the approved planning drawings and any subsequent amendments shall be agreed in writing with the Local Planning Authority. The details shall include:

i) Written specifications (including cultivation and other operations associated with plant and grass establishment,

ii) Planting methods, tree pits & guying methods,

iii) Schedules of plants, noting species, planting sizes and proposed numbers/densities where appropriate,

iv) Retained areas of grassland cover, scrub, hedgerow, trees and woodland,

v) Manner and treatment of watercourses, ditches and banks,

vi) Details of all hard-surfaces, such as paths, access ways, seating areas and parking spaces, including their appearance, depth and permeability,

ix) A timetable for implementation of the soft and hard landscaping works.

The scheme of Landscaping Works shall be implemented in accordance with the approved timetable. Any plant which dies, becomes diseased or is removed, within 10 years shall be replaced with another of similar type and size, unless otherwise agreed in writing by the Local Planning Authority. The development shall be carried out in accordance with the approved details and retained thereafter.

Reason: In the interests of visual amenity and managing impact on the existing habitats.

29 Renewable energy
No development shall take place until a Renewable Energy Strategy has been submitted to, and approved in writing by, the Local Planning Authority. The development shall be carried out in accordance with the approved details and retained thereafter.
Reason: In the interests of sustainable development.

30 Flood risk and drainage
Contamination
If, during development, contamination not previously identified is found to be present at the site then no further development (unless otherwise agreed in writing with the local planning authority) shall be carried out until a remediation strategy detailing how this contamination will be dealt with has been submitted to, and approved in writing by, the local planning authority. The remediation strategy shall be implemented as approved.
Reason: To ensure that the development does not contribute to, and is not put

at unacceptable risk from or adversely affected by, unacceptable levels of water pollution from previously unidentified contamination sources at the development site. In line with paragraph 170 of the National Planning Policy Framework.

31 Flood risk

The development shall be carried out in accordance with the submitted flood risk assessment (ref HTR-ATK-XX-XX-RP-Z-0042, titled A15.2 Flood Risk Assessment Report, compiled by Atkins on behalf of Portsmouth Water Ltd dated 01/09/20) and the mitigation measures it details. These mitigation measures shall be fully implemented prior to operation and subsequently in accordance with the scheme's timing/phasing arrangements. The measures detailed throughout the FRA shall be retained and maintained thereafter throughout the lifetime of the development.

Reason:

o To reduce the risk of flooding to the proposed development and future occupants

o To ensure flood risk off site is not increased as a result of the proposed development in line with paragraph 163 of the National Planning Policy Framework.

32 No phase of the development approved under Condition 4 shall commence until a detailed scheme, to ensure the development will not increase the risk of flooding, has been submitted to, and approved in writing by, the local planning authority. Specifically, further details should be provided where relevant to that phase including:

o A detailed drainage management plan that adequately details the management of the drainage associated with the phase.

o Detailed information surrounding a number of permanent structural elements including the proposed dimensions and height of the embankment, associated spillway, control house and wetland retaining structure (including the proposed piped controls).

o Detailed information including the long-term maintenance scheduled for the proposed development.

o Detailed information on the proposed location and design of the visitor centre, including proposed finished floor levels.

o Should the proposed access routes to and from the visitor centre be situated within proximity to main river or within the flood zone then further details should be provided on the associated impacts on flood risk and the proposed mitigation measures.

The scheme shall be fully implemented and subsequently maintained, in accordance with the scheme's timing/phasing arrangements, or within any other period as may subsequently be agreed, in writing, by the Local Planning Authority.

Reason: To reduce the risk of flooding to the proposed development and its future users. This is in line with paragraph 163 of the National Planning Policy Framework.

33 The Reservoir Scheme shall be constructed in accordance with the parameters set out in Table 2.2 of the Development Specification, as set out in Condition 2, and the design standards and principles set out in the Design and Access Statement and summarised in Section 3 of the Development Specification.
Reason: To ensure the development reflects the approved scheme.

34 Drainage
Construction of the Visitor Centre development shall not commence until details of the proposed means of foul and surface water sewerage disposal have been submitted to, and approved in writing by, the Local Planning Authority. The development shall be carried out in accordance with the approved details.
Reason: To ensure appropriate provision of foul and surface water sewerage disposal

35 Prior to construction of the Embankment phase of development approved under Condition 4 above, an On-site Emergency Flood Plan shall be submitted to, and agreed in writing by, the Local Planning Authority. The development shall be carried out in accordance with the details approved.
Reason: To ensure that residual flood risks on site are safely managed in accordance with the NPPF.

36 Ecology
No phase of the development approved under Condition 4 shall commence until full details of all ecological mitigation, compensation and enhancement measures (to be informed as necessary by up-to-date survey and assessment) and on-going monitoring of mitigation measures required for each reserved matters application (including both ecological works directly related to that Development Phase reserved matters area and any works associated with that area but lying outside of the boundary of that area) shall be submitted for approval to the Local Planning Authority. Such details shall be in accordance with the ecological mitigation, compensation and enhancement measures detailed within the Outline Biodiversity Mitigation and Compensation Strategy (ECOSA, September 2020), the Habitats Regulations Assessment (Atkins/Portsmouth Water, September 2020) and the Implementation Plan for Off Site Biodiversity Mitigation and Compensation (Atkins, April 2021. Any such approved measures shall thereafter be implemented in strict accordance with the agreed details and with all measures maintained in perpetuity, unless otherwise agreed in writing by the Local Planning Authority.
Reason: To protect and enhance biodiversity in accordance with the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, NERC Act 2006, NPPF and Policy CS 11 of the Havant Borough Core Strategy March 2011.

37 The development shall be carried out in accordance with the European Protected Species (EPS) licences for hazel dormouse (Natural England reference- 2020-50257-EPS-AD2) and bats (Natural England reference-2020-50625-EPS-AD2) issued by Natural England. The requirements of the

licences shall be adhered to, unless varied through agreement with Natural England.
Reason: To protect and enhance biodiversity in accordance with the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, NERC Act 2006 and the NPPF.

38 An Ecological Clerk of Works (ECoW) shall be appointed, to be full time on site during site preparation and clearance and during any works in sensitive areas, and to undertake regular monitoring visits throughout the construction programme.
Reason: To protect and enhance biodiversity in accordance with the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, NERC Act 2006, NPPF and Policy CS 11 of the Havant Borough Core Strategy March 2011.

39 Soil management
No phase of the development approved under Condition 4 shall commence until a Soil Management Plan has been submitted to and approved in writing by the Local Planning Authority. The Plan shall include separate management of ancient woodland soils for restoration. The Plan shall include a timetable for the carrying out of the works, once approved. The development shall be carried out in accordance with the approved details and timetable.
Reason: To support reinstatement of the landscape disturbed by the construction works.

Any variation or departure from the approved plans will require the prior approval of the Planning Authority before works commence.

Simon Jenkins
Director of Regeneration and Place
Date:

Supplementary Information

These are advice notes to the applicant and are not part of the planning conditions.

1. This notice only relates to the decision of East Hampshire District Council as Local Planning Authority under the Town and Country Planning Acts. It does not relate to any other application that may be required under the Building Regulations or under any other Act, Regulation, Byelaw or Order where the Council's approval may be needed. For further guidance as to the need for consent under the Building Regulations please phone 023 9244 6571.

2. Your attention is drawn to the attached information regarding firstly your right to appeal to the Planning Inspectorate, if you are aggrieved by the Council's decision, and secondly the rights of an owner to, in certain circumstances serve a purchase notice on the Council. See www.planningportal.gov.uk/pcs.

3. Any failure to adhere to the details of the approved plans, and other documents or to comply with any conditions listed above may lead to enforcement action being taken by the Council. If you wish to depart from the approved details or conditions in any way you should contact the Planning and Development service at the Plaza or by telephoning 023 9244 6015.

4. In accordance with paragraphs 38-50 of the NPPF Havant Borough Council (HBC) takes a positive and proactive approach and works with applicants/agents on development proposals in a manner focused on solutions by:

- Offering a pre-application advice service, and
- Updating you of any issues that may arise in the processing of your application and where possible suggesting solutions, and,

In this instance:

- You sought and were provided with pre-application advice, and you were updated about issues after the initial site visit,

5. This permission was granted subject to a planning obligation agreement made under Section 106 of the Town & Country Planning Act 1990 dated ..... which requires .....

6. Your attention is drawn to the provisions of the Water resources Act 1991 and the Land Drainage Bylaws 1981. The consent of the Environment Agency is required for any work or structures in, under, over or within 8 metres of the top of the bank of a main river. You are advised to contact the Environment Agency on 0370 8506506 for further information.

7. Your attention is drawn to the provisions of the Conservation (Natural Habitats, &c.) Regulations 1994 which makes it an offence to deliberately capture, kill or disturb a European Protected Species or to damage or destroy the breeding site or resting place of such an animal. It may be possible to obtain a licence from the Department for Environment Food and Rural Affairs (DEFRA) if the loss of a protected species cannot be avoided. For further advice about licences you can contact DEFRA European Wildlife Division on 08459 33 55 77.

8. The grant of planning permission does not entitle you to obstruct a public right of way. If it is necessary to stop up or divert a right of way in order to enable the development permitted to be carried out you should apply without delay to either; Havant Borough Council in the case of a footpath or bridleway (under Section 257 of the Town and Country Planning Act 1990) or the Department of Communities and Local Government (CLG) for any other issues (under Section 247 of the Town and Country Planning Act 1990).

The applicant is advised that there may be a need to comply with the requirements of the Party Wall etc Act 1996 before starting works on site. The Act relates to work which involves:

- work on an existing wall shared with another property
- building on the boundary with a neighbouring property
- work involving excavating near a boundary

The Party Wall etc Act is not enforced or administered by the Council but you should understand your obligations to notify adjoining owners and be aware of the circumstances under which a dispute can arise. For further information on the Party Wall Act 1996 there is an explanatory booklet available at the Planning Portal: www.planningportal.gov.uk

The following Planning Policies were considered when making the above decision:-

East Hampshire District Local Plan: Joint Core Strategy
CP1 - Presumption in favour of sustainable development
CP2 - Spatial Strategy
CP9 - Tourism
CP16 - Protection and provision of social infrastructure
CP17 - Protection of open space, sport & recreation & built facilities
CP18 - Provision of open space, sport and recreation and built facilities
CP19 - Development in the countryside
CP20 - Landscape
CP21 - Biodiversity
CP23 - Gaps between settlements
CP25 - Flood Risk
CP26 - Water resources/ water quality
CP27 - Pollution
CP28 - Green Infrastructure
CP29 - Design
CP30 - Historic Environment - including impact on setting of South Downs National Park
CP31 - Transport

East Hampshire District Local Plan: Second Review
HE8 - Development affecting the setting of a ~~Listed Building~~ Conservation Area
HE17 - Archaeological & Ancient Monuments
U12 - The site south of Havant Thicket

Building Regulations

This decision is not an approval under the Building Regulations. It is your responsibility to make any necessary applications. If in doubt, you are advised to contact the Council's Building Control Section building.control@easthants.gov.uk

DRAFT DECISION NOTICE ONLY

Havant
BOROUGH COUNCIL

Public Service Plaza
Civic Centre Road
Havant
Hampshire PO9 2AX

T 023 9247 4174
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www.havant.gov.uk

To:
Joanne Farrar
Atkins Global
Nova North
11 Bressenden Place
Westminster
London
SW1E 5BY

For: Portsmouth Water

The Town and Country Planning (Development Management Procedure) (England) Order 2015
Grant of Outline Planning Permission

Application Number: APP/20/00991
Site Address: Pipeline from Proposed Reservoir Site, Middle Park Way to land adjacent to, West Street, Havant
Proposal: Outline application for (matters to be considered outlined in Table 2.2 in the submitted Development Specification) development of a new pipeline to transfer water from Bedhampton Springs to fill the reservoir in the winter and draw it off to treat and supply when needed in the summer comprising: Construction of an underground, bi-directional pipeline linking the reservoir with the existing pumping station at Bedhampton; Emergency drawdown discharge structure at Hermitage Stream; Upgrades to existing culverts; Washout and air valve chambers (typically below ground).

Further to your application received on 02 November 2020 (which was valid from 27 November 2020) Havant Borough Council, as Local Planning Authority, **Grants Outline Planning Permission** for the above proposal in accordance with the submitted plans and particulars as detailed below.

This permission is subject to compliance with:

(i) The plans and other documents submitted with regard to your application; and

(ii) The following conditions:

Conditions:

1 The development must be begun not later than five years beginning with the date of this permission.
Reason: To comply with the requirements of Section 91 of the Town and Country Planning Act 1990 as amended by Section 51 of the Planning and Compulsory Purchase Act 2004.

2 No part of the development hereby approved in outline shall be commenced until

an application or applications for written approval of the details of the route of the pipeline and the siting, scale and external appearance of the emergency drawdown discharge structure, and landscaping (hereinafter called "the reserved matters") have been submitted to and approved by the Local Planning Authority. Application(s) for approval of the matters reserved by this planning permission must be made not later than the expiration of 5 years from the date of this decision notice; and Development must be begun not later than the expiration of 2 years from the final approval of reserved matters for the relevant phase, or, in the case of approval on different dates, the approval of the last such matter to be approved.
Reason: The application was submitted as part outline part full application in accordance with the provisions of Article 3(1) of the Town and Country Planning (General Development Procedure) Order 1995 and in accordance with the provisions of Section 92 of the Town and Country Planning Act, 1990.

3 The development hereby permitted shall be carried out in accordance with the following approved plans:

Drawings
HTR-ATK-ZZ-ZZ-GS-Z-0140 Site Location Plan
HTR-ATK-PI-BR-DR-C-0009 Overall Plan and Route
HTR-ATK-PI-BR-DR-C-0021 Red Line Boundary Drawing (Ch0-1600)
HTR-ATK-PI-BR-DR-C-0022 Red Line Boundary Drawing (Ch1600-3200)
HTR-ATK-PI-BR-DR-C-0023 Red Line Boundary Drawing (Ch3200-4500)
HTR-ATK-PI-BR-DR-C-0014 Site Plan (Ch0-800)
HTR-ATK-PI-BR-DR-C-0015 Site Plan (Ch800-1600)
HTR-ATK-PI-BR-DR-C-0016 Site Plan (Ch1600-2400)
HTR-ATK-PI-BR-DR-C-0017 Site Plan (Ch2400-3200)
HTR-ATK-PI-BR-DR-C-0018 Site Plan (Ch3200-4000)
HTR-ATK-PI-BR-DR-C-0019 Site Plan (Ch4000-4564)
HTR-ATK-PI-BR-DR-C-0010 Typical Stream Crossing Detail
HTR-ATK-PI-BR-DR-C-0011 Typical Pipeline Construction Detail
HTR-ATK-PI-BR-DR-C-0012 Typical Under Track Crossing Detail
HTR-ATK-PI-BR-DR-C-0013 Hermitage Discharge Structure Detail
HTR-ATK-PI-BR-DR-C-0020 Typical Culvert Detail

Documents
Engineering and Design Report
Planning Statement
Development Specification
Environmental Statement (Volumes 1 - 4) including Non-Technical Summary. The Volume 4 Appendices include the following standalone reports:
Outline Construction Environmental Management Plan including Record of Environmental Actions and Commitments or REAC (ES_Volume_4_Appendix_A2.1_OEMP)
Transport Assessment (ES_Volume_4_Appendix_A13.1_TA)
Flood Risk Assessment (ES_Volume_4_Appendix_A15.2_FRA)
Water Framework Directive Compliance Assessment (ES_Volume_4_Appendix_A15.1_WFD)
Arboricultural Impact Assessment (ES_Volume_4_Appendix_A9.14_AIA)
HTR-ATK-RZ-RE-DR-L-113 Revised Tree Protection Plan Sheet 37 of 40 (revP01.1)
Design and Access Statement
Statement of Community Involvement
Outline Biodiversity Mitigation and Compensation Strategy
Article 4.7 Statement
ADDITIONAL INFORMATION SUBMITTED FEBRUARY 2021
A Summary of the Benefits of Havant Thicket Resevoir
HTR TNPS02 Traffic Distribution Sensitivity revision_V2.0 dated 25/01/2021
HTR TNPS03 Report on Northern Access Layout dated 29/01/2021

HTR Water Framework Directive Article 4.7 29/01/2021
ADDITIONAL INFORMATION SUBMITTED APRIL 2021
Access for Non Motorised Users - Technical Note dated 01/04/2021
Access Strategy, Rat Running and Construction Management - Technical Note dated 01/04/2021
Framework Construction Management Plan dated 31/03/2021
Article 4.7 Shortlisting Methodology dated 01/04/2021
Transport Assessment Addendum - Framework Travel Plan dated 01/04/2021
Implementation Plan for Off Site Biodiversity Mitigation and Compensation dated 01/04/2021

Reason: - To ensure provision of a satisfactory development.

4 Prior to the commencement of development, a detailed phasing plan for the development shall be submitted to and approved in writing by the Local Planning Authority. The development shall be carried out in accordance with the approved phasing plan and no variation shall be made without the prior written approval of the Local Planning Authority. Approval will not be given if, in the reasonable opinion of the Local Planning Authority, the proposed variation creates new environmental impacts which exceed the range or scale of those measured and assessed in the Environmental Statement (including the further information) and which the Local Planning Authority considers may require further or additional mitigation measures.
Reason: The Environmental Impact and merits of the proposed development have been assessed on this basis.

5 No phase of the development approved under Condition 4 shall commence until a phase specific Construction Environmental Management Plan for that parcel has been submitted to, and approved in writing by the Local Planning Authority. The CEMP shall be based upon, and be in broad accordance with, Volume 4 Appendix A2.1 of the application Environmental Statement (Outline Environmental Management Plan). It should demonstrate that the risk to controlled waters will be appropriately managed, and include both temporary and permanent construction features and detail information on locations of proposed techniques such as cofferdams, culverting and piping and the associated flood risks and mitigation measures. The development shall be carried out strictly in accordance with the approved details.
Reason: To ensure that the construction process is carried out in a manner which will minimise disturbance, pollution & nuisance to neighbouring properties or within the public realm. To avoid inappropriate parking practices, and turning and manoeuvring of construction vehicles which adversely impact either the use- or safety- of the public highway. This condition is imposed having due regard to policies DM10 & CS15 (Havant Borough Local Plan (Core Strategy) 2011), and the National Planning Policy Framework 2019.

6 No phase of the development approved under Condition 4 shall commence until a Construction Method Statement (CMS) for that phase has been submitted to and approved in writing by the Local Planning Authority. The development shall be carried out in accordance with the approved details.
Reason: To ensure that the construction process is carried out in a manner which will minimise disturbance, pollution & nuisance to neighbouring properties.

7 A) No development shall take place until a Construction Traffic Management Plan (CTMP) has been submitted to, and approved in writing by, the Local Planning Authority (in consultation with Hampshire County Council as local highways authority). B) No phase of the development approved under Condition 4 shall

commence until a phase specific CTMP for that parcel has been approved in writing by the local planning authority. The CTMP(s) shall include all commitments set out in the Framework CTMP, dated 31/03/2021, submitted with the planning applications and will include a Construction Traffic Management Strategy and Construction Worker Travel Plan. The CTMP shall include the following:

- Vehicle routing plans
- proposed programme and duration
- number of construction personnel including travel arrangements and mitigation where necessary
- alterations to the highway, including temporary and / or permanent, to enable construction
- details of the number of construction and delivery vehicles using the public highway (no abnormal loads are anticipated at this stage)
- traffic management details
- compounds and laydown area details
- highway condition surveys
- methods for managing the site to prevent mud onto the highway
- details of on-site contractor parking.

The CTMP shall be implemented in accordance with the approved details.

Reason: To ensure the safe and efficient operation of the highway network.

8 No phase of the development approved under Condition 4 shall commence until a phase specific Traffic management and construction measures for that parcel has been submitted to, and approved in writing by, the Local Planning Authority. This shall include the following:

a) Vehicular, pedestrian and cyclist diversion plans
b) Details of type of traffic management
c) Details of highway reinstatement
d) Construction methodology and details
e) Material and spoil storage

The development shall be implemented in accordance with the approved details.
Reason: To ensure the safe and efficient operation of the highway network.

9 No construction on the pipeline site shall take place outside the hours of 08:30-18:00 Monday to Friday, 09:00-13:00 on Saturday and no Sunday working, except works on the adopted highway, where alternative arrangements are to be agreed between the Highway Authority and Local Planning Authority, with the exception of specific works that shall have been agreed in writing with the Local Planning Authority in advance and shall include details of the task, the date and duration of works. No works shall take place on Bank or Public Holidays.
Reason: In the interests of the amenities of local residents.

10 No phase of the development approved under Condition 4 shall commence until a revised and updated assessment of potential noise and vibration arising during construction shall be prepared in accordance with BS 5228-1:2009+A1:2014. The assessments shall include likely eligibility for noise insulation or temporary re housing and shall be submitted to and approved in writing by the Local Planning Authority and construction carried out in accordance with the agreed recommendations.
Reason: To minimise potential noise impacts on nearby sensitive receptors.

11 Subject to Condition 10 [ABOVE], no night time working shall take place, except works on the adopted highway, where alternative arrangements are to be agreed between the Highway Authority and Local Planning Authority, unless otherwise in

accordance with a scheme submitted to and approved in writing by the Local Planning Authority. Night-time works to be carried out strictly in accordance with the approved scheme.
Reason: To avoid potentially significant impacts of noise and vibration upon residential receptors.

12 No phase of development approved under Condition 4 hereby approved shall commence until an Archaeological Management Plan (AMP) has been submitted to, and approved in writing by, the Local Planning Authority. The AMP will provide appropriately for all aspects of archaeological recording and will serve as an over-arching Written Scheme of Investigation for all archaeological works.
Reason: To record important archaeological features.

13 No development within a Development Phase shall commence until the applicant has submitted, and the Local Planning Authority has approved, a written scheme for the programme of archaeological mitigation within that Development Phase area. The programme for archaeological mitigation shall then be implemented in accordance with the agreed written scheme. This condition may be discharged on an individual Development Phase basis or on a section by section basis.
Reason - To mitigate the effect of the works associated with the development upon any heritage assets and to ensure that information regarding these heritage assets is preserved by record for future generations. This is a pre-commencement requirement because of the need to secure satisfactory archaeological protection in advance of each individual Development Phase commencing.

14 No development within a Development Phase shall commence until the applicant has submitted, and the Local Planning Authority has approved in writing, a Written Scheme for recording all historic assets within that Development Phase area. The recording of all historic assets shall then be implemented in accordance with the agreed scheme.
This condition may be discharged on an individual Development Phase basis or on a section by section basis.
Reason - To mitigate the effect of the works associated with the development upon any heritage assets and to ensure that information regarding these heritage assets is preserved by record for future generations. This is a pre-commencement requirement because of the need to secure satisfactory archaeological protection in advance of each individual Development Phase commencing.

15 Following completion of archaeological fieldwork within a Development Phase, a report shall be produced in accordance with an approved programme including, where appropriate, post-excavation assessment, specialist analysis and reports, publication and public engagement related to that Development Phase area and submitted to the Local Planning Authority. This condition may be discharged on an individual Development Phase basis or on a section by section basis.
Reason - To contribute to the knowledge and understanding of past uses and activities on site by ensuring that opportunities are taken to capture evidence from the historic environment and to make this publicly available.

16 Any reserved matters application for layout or landscaping submitted pursuant to Conditions 2 and 4 shall include:
a) The submission of a Tree Survey and updated Arboricultural Impact Assessment (including a Tree Constraints Plan), Arboricultural Method Statement and Tree Protection Plan showing the tree or group of trees, the Root Protection Area(s) and the crown spread(s) in relation to the proposed development. All tree

root protection areas identified, shall be protected by protection fencing in accordance with BS 5837:2012.

b) The approved tree protection measures shall be implemented before any equipment, machinery, or materials are brought on to the site in connection with the works. They shall be retained intact for the duration of the construction works and shall only be removed or altered following completion of that phase.

c) A landscaping reinstatement scheme for all open parts of the site, where loss occurs due the development, which shall include the planting and maintenance of a number of semi-mature native broad leaf trees (UK grown and sourced in line with current biosecurity guidelines) to be planted in a sustainable location as per the British Standard guidelines. The information shall include:

i) Written specifications (including cultivation and other operations associated with plant and grass establishment,

ii) Planting methods, tree pits & guying methods,

iii) Schedules of plants, noting species, planting sizes and proposed numbers/densities where appropriate,

iv) Retained areas of grassland cover, scrub, hedgerow, trees and woodland,

v) A timetable for implementation of the soft and hard landscaping works.

The scheme of Landscaping Works shall be implemented in accordance with the approved timetable. Any plant which dies, becomes diseased or is removed, within 10 years shall be replaced with another of similar type and size, unless otherwise agreed in writing by the Local Planning Authority. The development shall be carried out in accordance with the approved details and retained thereafter.

Reason: To preserve the amenity visual amenity of the locality.

17 If, during development, contamination not previously identified is found to be present at the site then no further development (unless otherwise agreed in writing with the local planning authority) shall be carried out until a remediation strategy detailing how this contamination will be dealt with has been submitted to, and approved in writing by, the local planning authority. The remediation strategy shall be implemented as approved.

Reason: To ensure that the development does not contribute to, and is not put at unacceptable risk from or adversely affected by, unacceptable levels of water pollution from previously unidentified contamination sources at the development site. In line with paragraph 170 of the National Planning Policy Framework.

18 The development shall be carried out in accordance with the submitted flood risk assessment (ref HTR-ATK-XX-XX-RP-Z-0042, titled A15.2 Flood Risk Assessment Report, compiled by Atkins on behalf of Portsmouth Water Ltd dated 01/09/20) and the mitigation measures it details. These mitigation measures shall be fully implemented prior to operation and subsequently in accordance with the scheme's timing/phasing arrangements. The measures detailed throughout the FRA shall be retained and maintained thereafter throughout the lifetime of the development.

Reason: o To reduce the risk of flooding to the proposed development and future occupants

o To ensure flood risk off site is not increased as a result of the proposed development in line with paragraph 163 of the National Planning Policy Framework.

19 No phase of the pipeline development approved under Condition 4 shall commence until a detailed scheme, to ensure the development will not increase the risk of flooding, has been submitted to, and approved in writing by, the local planning authority. Specifically, further details should be provided where relevant to that phase including:

o Detailed information on the proposed emergency drawdown discharge structure.

o Detailed information surrounding the proposed upgrading of the culverts, in order to not increase flood risk associated with the Emergency discharge and as detailed in table 4.2 and section 4.17 of the FRA

o Detailed information including the long term maintenance scheduled for the proposed development, including but not limited to the proposed pipeline and culverts.
o Detailed information for the crossing of watercourses where these are proposed.
The scheme shall be fully implemented and subsequently maintained, in accordance with the scheme's timing/phasing arrangements, or within any other period as may subsequently be agreed, in writing, by the Local Planning Authority.
Reason: To reduce the risk of flooding to the proposed development and its future users. This is in line with paragraph 163 of the National Planning Policy Framework.

20 Prior to construction of the development approved under Condition 4 above, an On-site Emergency Flood Plan shall be submitted to, and agreed in writing by, the Local Planning Authority. The development shall be carried out in accordance with the details approved.
Reason: To ensure that residual flood risks on site are safely managed in accordance with the NPPF.

21 No phase of the development approved under Condition 4 shall commence until full details of all ecological mitigation, compensation and enhancement measures (to be informed as necessary by up-to-date survey and assessment) and on-going monitoring of mitigation measures required for each reserved matters application (including both ecological works directly related to that Development Phase reserved matters area and any works associated with that area but lying outside of the boundary of that area) shall be submitted for approval to the Local Planning Authority. Such details shall be in accordance with the ecological mitigation, compensation and enhancement measures detailed within the Outline Biodiversity Mitigation and Compensation Strategy (ECOSA, September 2020), the Habitats Regulations Assessment (Atkins/Portsmouth Water, September 2020) and the Implementation Plan for Off Site Biodiversity Mitigation and Compensation (Atkins, April 2021. Any such approved measures shall thereafter be implemented in strict accordance with the agreed details and with all measures maintained in perpetuity, unless otherwise agreed in writing by the Local Planning Authority.
Reason: To protect and enhance biodiversity in accordance with the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, NERC Act 2006, NPPF and Policy CS 11 of the Havant Borough Core Strategy March 2011.

22 An Ecological Clerk of Works (ECoW) shall be appointed, to be full time on site during site preparation and clearance and during any works in sensitive areas, and to undertake regular monitoring visits throughout the construction programme.
Reason: To protect and enhance biodiversity in accordance with the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019, NERC Act 2006, NPPF and Policy CS 11 of the Havant Borough Core Strategy March 2011.

23 The Pipeline development (APP/20/00991) shall not commence until the reservoir development (Havant reference APP/20/00990 and East Hampshire District Council reference 51680/001) has commenced.
Reason: In order to ensure coordination of development of the reservoir and pipeline development in accordance with polices CS18 and AL6 of the Havant Borough Local Plan (Allocations) July 2014.

Other Important Information:

(1) This notice only relates to the decision of Havant Borough Council as Local

Planning Authority under the Town and Country Planning Acts. It does not relate to any other application that may be required under the Building Regulations or under any other Act, Regulation, Byelaw or Order where the Council's approval may be needed. For further guidance as to the need for consent under the Building Regulations please phone 023 9244 6573.

(2) Your attention is drawn to the attached information regarding firstly your right to appeal to the Planning Inspectorate, if you are aggrieved by the Council's decision, and secondly the rights of an owner to, in certain circumstances serve a purchase notice on the Council. See www.planningportal.gov.uk/pcs.

(3) Any failure to adhere to the details of the approved plans, and other documents or to comply with any conditions listed above may lead to enforcement action being taken by the Council. If you wish to depart from the approved details or conditions in any way you should contact the Planning and Development Service at the Civic Offices or by telephoning 023 9244 6015.

(4) Your attention is drawn to the provisions of Section 12 of the Hampshire Act 1983, relating to access for the Fire Brigade. A copy of the Act may be inspected at the Planning and Development Reception at the Civic Offices.

(5) Before undertaking any work which affects a public highway (including a footpath) you must obtain specific written approval from the Head of Technical Services, Havant Borough Council, Civic Offices, Civic Centre Road, Havant PO9 2AX (tel. no (023)9244 6428/9). This requirement applies not only to the creation of new vehicle accesses involving excavation within a footway, verge or carriageway but also to the stopping of existing access(es) or the construction of new boundary walls and foundations immediately alongside the public highway.

(6) You are advised that consent may be required from Southern Water Services Ltd to build in the vicinity of public sewer. You can inspect a copy of the Southern Water Services Maps of public sewers, which are held by Technical Services at the Civic Offices to determine the proximity of any public sewer to the proposed development. If you are in any doubt or need information regarding the procedure for obtaining consent from Southern Water Services Ltd, you should seek further advice from the Development Control Manager, Southern Water Services Ltd (01962 714585).

(4) In accordance with paragraphs 38-50 of the NPPF Havant Borough Council (HBC) takes a positive and proactive approach and works with applicants/agents on development proposals in a manner focused on solutions by:

- Offering a pre-application advice service, and
- Updating you of any issues that may arise in the processing of your application and where possible suggesting solutions, and,

In this instance:

- You sought and were provided with pre-application advice,
- You were updated about issues after the initial site visit,

(5) This permission was granted subject to a planning obligation agreement made under Section 106 of the Town & Country Planning Act 1990 dated ..... which requires .....

(6) Your attention is drawn to the provisions of the Water resources Act 1991 and the Land Drainage Bylaws 1981. The consent of the Environment Agency is required for any work or structures in, under, over or within 8 metres of the top of the bank of a main river. You are advised to contact the Environment Agency on 0370 8506506 for further information.

(7) Your attention is drawn to the provisions of the Land Drainage Act 1991. The consent of the Environment Agency is required if it is proposed to fill, divert, obstruct or culvert a watercourse (including drainage ditches). You are advised to contact the Environment Agency on 0370 8506506.

(8) The grant of planning permission does not entitle you to obstruct a public right of way. If it is necessary to stop up or divert a right of way in order to enable the development permitted to be carried out you should apply without delay to either; Havant Borough Council in the case of a footpath or bridleway (under Section 257 of the Town and Country Planning Act 1990) or the Department of Communities and Local Government (CLG) for any other issues (under Section 247 of the Town and Country Planning Act 1990).

Simon Jenkins

Simon Jenkins
Director of Regeneration and Place

DATE TO BE CONFIRMED WHEN ABLE TO BE ISSUED

TOWN AND COUNTRY PLANNING ACT 1990

NOTIFICATION TO BE SENT TO AN APPLICANT WHEN A LOCAL PLANNING AUTHORITY REFUSE PLANNING PERMISSION OR GRANT IT SUBJECT TO CONDITIONS

- These notes are for information only and do not purport to set out the law on the subject.
- Only the applicant possesses the right of appeal.

Appeals to the Secretary of State

- If you are aggrieved by the decision of your local planning authority to refuse permission for the proposed development or to grant it subject to conditions, then you can appeal to the Secretary of State under section 78 of the Town and Country Planning Act 1990.

- If this is a decision on a planning application relating to the same or substantially the same land and development as is already the subject of an enforcement notice and you want to appeal against your local planning authority's decision on your application, then you must do so within 28 days of the date of this notice.

- If an enforcement notice is served relating to the same or substantially the same land and development as in your application and if you want to appeal against your local planning authority's decision on your application, then you must do so within 28 days of the date of service of the enforcement notice, or within 6 months [12 weeks in the case of a householder appeal] of the date of this notice, whichever period expires earlier.

- If this is a decision to refuse planning permission for a householder application and you want to appeal against your local planning authority's decision then you must do so within 12 weeks of the date of this notice.

- If this is a decision to refuse planning permission for a minor commercial application and you want to appeal against your local planning authority's decision then you must do so within 12 weeks of the date of this notice.

- If this is a decision to refuse express consent for the display of an advertisement and you want to appeal against your local planning authority's decision then you must do so within 8 weeks of the date of receipt of this notice.

- If this is a decision to refuse consent to work on a tree which is subject to a Tree Preservation Order and you want to appeal against your local planning authority's decision then you must do so within 28 days of the date of this notice.

- If this is a decision to refuse any other type of application and you want to appeal against your local planning authority's decision then you must do so within 6 months of the date of this notice.

- **Appeals can be made online at:** https://www.gov.uk/planning-inspectorate.
  If you are unable to access the online appeal form, please contact the Planning Inspectorate to obtain a paper copy of the appeal form on tel: 0303 444 5000.

- The Secretary of State can allow a longer period for giving notice of an appeal but will not normally be prepared to use this power unless there are special circumstances which excuse the delay in giving notice of appeal.

- The Secretary of State need not consider an appeal if it seems to the Secretary of State that the local planning authority could not have granted planning permission for the proposed development or could not have granted it without the conditions they imposed, having regard to the statutory requirements, to the provisions of any development order and to any directions given under a development order.

If you intend to submit an appeal that you would like examined by inquiry, then you must notify the Local Planning Authority and Planning Inspectorate (inquiryappeals@planninginspectorate.gov.uk) at least 10 days before submitting the appeal. Further details are on GOV.UK.

Our Ref: APP/20/00991

IMPORTANT NOTICE FOR APPLICANTS WITH REGARD TO BUILDING REGULATIONS

This notice only relates to the decision of Havant Borough Council under the Town and Country Planning Acts. It does not relate to any other application that may be required any other Act, Regulation, Byelaw or Order where the Council's approval may be needed.

For further guidance as the need for consent under the Building Regulations, please telephone Havant Borough Council's Building Control team on:

023 9244 6571