

Havant Thicket Reservoir

Renewable Energy Strategy (Phase 1 to 5)

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1. Context

1.1 Purpose of this document

This Renewable Energy Strategy (RES) has been prepared for submission to Havant Borough Council (HBC) and East Hampshire District Council (EHDC) in order to secure the discharge of planning conditions relating to the Havant Thicket Reservoir planning permissions.

Specifically, the RES relates to:

Condition 29 attached to planning permission APP/20/00990 (HBC); and

Condition 29 attached to planning permission 51680/001 (EHDC), the wording of which is identical:

“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.”

1.2 Scope of this document

This document provides the required RES sufficient to enable the partial discharge of the planning conditions to enable the commencement of development under the reservoir planning permissions, and the construction of Phases 1 to 5 of the reservoir:

Phase 1 – Northern Access Route

Phase 2 - Forestry England Track Raising and Culverts

Phase 3 – Southern Access Route

Phase 4 – Wetland Earth Embankment and Control Structures

Phase 5 – Main Embankment Earthworks

It is intended that a further and more detailed RES (or RES's) will be submitted to 're-discharge' the planning condition for later phases of the reservoir development (Phases 6 to 10), as the engineering and mechanical and electrical designs of the reservoir scheme are developed in detail, and the soft and hard landscaping and visitor facilities details are prepared and submitted as part of future reserved matters approvals. Under this approach, it is proposed that a subsequent and more detailed RES (or RES's) would be submitted for approval by the local planning authorities as part of:

1. The reserved matters for Phases 6, 7, 8 and 9: the reservoir culvert, valve tower, spillway and bi-directional pipe (Phase 6), the Control House (Phase 7), site wide soft landscaping (Phase 8) and site wide hard landscaping (Phase 9) – to consider and report renewable energy proposals as part of these phases
2. The reserved matters for Phase 10 (the visitors centre) – to consider and report renewable energy proposals as part of this phase

The RES relates to Scope 1 (direct) emissions and Scope 2 (indirect emissions from consumption of purchased electricity, heat or steam) only. It does not seek to address Scope 3 emissions (those in the supply chain for goods and services).

The RES also only relates to the measures to be taken in relation to the design and operation of the reservoir development and not its construction. Construction related carbon has been considered and addressed as part of the Environmental Statement submitted with the planning applications, and any construction related mitigation measures (i.e. specific construction equipment and construction working practices) fall to be considered within the Construction Environmental Management Plan (CEMP) and Construction Method Statement (CMP) and not this RES).

1.3 Structure of this document

Section 2 of this document summarises the relevant development plan and other policies and guidance relevant to renewable energy.

Section 3 identifies the references to renewable energy in the Reservoir planning permission and application documentation.

Section 4 identifies the renewable energy principles for the proposed reservoir.

Section 5 then reviews the potential for renewable energy as part of Phases 1 to 5.

Section 6 draws conclusions.

2. Renewable Energy planning policy and guidance

2.1 The Development Plan

The Development Plan comprises:

- East Hampshire District Council:
 - Part 1 - Joint Core Strategy (2014)
 - Part 2 - Housing and Employment Allocations (2016)
 - Local Plan Second Review (2006)
- Havant Borough Council:
 - Local Plan (Core Strategy) adopted March 2011
 - Local Plan (Allocations) adopted July 2014

Both Councils are preparing new Local Plans, which when adopted will replace the existing development plans for their areas. These are not yet at a stage where they carry material weight in decision making.

2.2 Relevant Development Plan policies

The existing Development Plan is relatively silent on policies relating to renewable energy provision, other than in relation to on site renewables and energy efficiency for new housing and other built forms of development.

HBC Core Strategy Policy CS14 promotes the efficient use of resources, with part 2 of the policy stating that planning permission will be granted for development that “*Locally contributes to the delivery of the PUSH target of 100MW of renewable energy by 2020 for the whole of the PUSH area. Major areas of development must ensure that their on site renewable energy production is maximised and resource efficiency is maximised*”.

Supporting text paragraph 7.29 states that:

“Renewable energy technology is a rapidly developing market where new products and improved efficiency and reliability are continuously emerging, together with changing public perceptions. Technologies that are currently not considered viable, or are only emerging such as tidal power, biomass, energy and heat from waste and ground source heat will become more viable. The use of renewable technologies will have an increasing role to play in energy production in the borough over the plan period. In any new development the priority is on reducing the amount of energy we use, following the principles of – Lean – reduce energy consumption; Clean – generate energy using low carbon technologies and Green – generate energy using renewable sources. The council will require all major areas of development to produce on-site renewable energy as there are economies of scale that mean the technologies will be more effective. Major Development Areas are defined as 250 dwellings or more and 5,000 square metres of non-residential floorspace. Further information on the

technologies that could be appropriate in the borough can be found in the Havant Energy Study (Savills 2005) and the PUSH Energy Study (Atkins 2009)."

HBC Core Strategy Policy CS18 refers to Strategic Site Delivery, with Site 2 being Havant Thicket Reservoir. The Strategic Site Profile for Site 2 includes "renewable energy infrastructure" within the list of infrastructure for the site. The 'Development Requirements' for Site 2 includes that "*The proposal should realise the potential for renewable energy dependent on nature conservation and other site constraints*".

EHDC Joint Core Strategy Objective 19 is: "*To plan for new development to be built to a high quality that promotes the use of sustainable resources in developments, in particular to minimise waste, increase energy efficiency in new and existing developments and to maximise the proportion of energy generated from renewable sources within environmental constraints*".

EHDC Joint Core Strategy Policy CP24 requires new residential development and non-residential development over 500sqm to achieve BREEAM 'Excellent' standards, with part (b) of the policy going on to also require that it "*provides at least 10% of energy demand from decentralised and renewable or low carbon energy sources (if possible, including connections to a district heating system), unless it is proven that this is not feasible or viable*". Policy CP24 also states that "Major areas of development *must ensure that their on-site renewable or low carbon energy production and resource efficiency is maximised. Where on-site proposals to achieve higher levels of carbon reduction are not feasible or viable 'allowable solutions' should be used.*" The policy clarifies that 'major development' in this context is defined as 10 dwellings or more, or 0.5 hectares or more.

Core Strategy paragraph 7.43 goes on to state that "*Proposals for renewable energy developments will be considered on their merits and consideration will be given to whether their scale, form, design and materials are sympathetic with the surrounding landscape or built environment, and whether they would impact on the local community, economy, nature conservation and historical interests*".

2.3 National Planning Policy Framework (NPPF) and Planning Practice Guidance (PPG)

NPPF paragraph 152 states that "*The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.*".

NPPF paragraph 157 states that in determining planning applications, "*local planning authorities should expect new development to:*

- a) comply with any development plan policies on local requirements for decentralised energy supply unless it can be demonstrated by the applicant, having regard to the type of development involved and its design, that this is not feasible or viable; and*
- b) take account of landform, layout, building orientation, massing and landscaping to minimise energy consumption. "*

NPPF 158 then goes on to state that when determining planning applications for renewable and low carbon development, "*local planning authorities should:*

- a) not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions; and*

b) approve the application if its impacts are (or can be made) acceptable. Once suitable areas for renewable and low carbon energy have been identified in plans, local planning authorities should expect subsequent applications for commercial scale projects outside these areas to demonstrate that the proposed location meets the criteria used in identifying suitable areas."*

* The NPPF contains a footnote providing additional guidance on proposed wind turbines – stating that *"Except for applications for the repowering of existing wind turbines, a proposed wind energy development involving one or more turbines should not be considered acceptable unless it is in an area identified as suitable for wind energy development in the development plan; and, following consultation, it can be demonstrated that the planning impacts identified by the affected local community have been fully addressed and the proposal has their backing."*

The online **Planning Practice Guidance** (PPG) provides additional national guidance on renewable energy provision. Paragraph ID: 5-001-20140306 states that *"Increasing the amount of energy from renewable and low carbon technologies will help to make sure the UK has a secure energy supply, reduce greenhouse gas emissions to slow down climate change and stimulate investment in new jobs and businesses. Planning has an important role in the delivery of new renewable and low carbon energy infrastructure in locations where the local environmental impact is acceptable"*.

The PPG goes on to provide detailed guidance on the different types of renewable technologies and supports the identification of specific policies and proposals within Local Plans to guide their future provision.

2.4 Other relevant evidence studies and guidance

The Paris Agreement was adopted through the twenty first session of the Conference of Parties (COP21) in December 2015, entering into force on 4th November 2016 and the UK ratified the Agreement on 18th November 2016. Article 2 of the Paris Agreement sets out the ambition of holding the increase of global average temperature to "well below 2°C" and to pursue efforts to limit temperature increase to 1.5 °C. It was acknowledged that to achieve these ambitions, there is a requirement to ensure Parties reach global peaking of greenhouse gas emissions as soon as possible and do so by employing means that allow pathways toward *"low greenhouse gas emissions and climate-resilient development"*.

The UK Climate Change Act (2008) commits the UK government to reducing greenhouse gas emissions by at least 100% of 1990 levels (net zero) by 2050. The Government expects each local authority to contribute to meeting the targets and reducing overall demand for energy. The Government introduces legally binding commitments to carbon reduction through specific carbon budgets, setting a cap on the maximum level of the net UK carbon account for each five-year budgetary period (e.g. The Carbon Budget Order 2021 – which set the carbon budget for the 2033-2037 budgetary period at 965 million tonnes of carbon dioxide equivalent).

The Planning and Energy Act (2008) enables local planning authorities to set requirements for energy use and energy efficiency in local plans, including a proportion of energy used in development to be generated from renewable and low carbon sources in the locality of the development.

Increasing numbers of Local Authorities around the UK are developing more ambitious energy policies. However, a 2019 government consultation on the implementation of the Future Homes Standard and uplift to Building Regulations proposed to restrict Local Authorities from setting their own standards. In January 2021, the government confirmed that Local Authorities will be allowed to continue to set their own energy standards for the time being.

The then DCLG published its “Planning practice guidance for renewable and low carbon energy” in July 2013 – the content of which has been updated and incorporated into the online Planning Practice Guidance (see above).

At a local level, EHDC has published a Renewable and Low Carbon Study (Nov 2018) – prepared by LUC, and published as part of the evidence base for its emerging Local Plan. The detail in the study, including a review of the potential for different renewable energy technologies to be adopted across the District, and the planning policy approach to their provision, have not yet been taken forward into detailed Local plan policies and proposals. The study identified that there is potential for significant renewable energy development, subject to consideration of detailed impacts associated with individual schemes, across a number of different technology types:

- Wind turbines.
- Photovoltaic (PV) solar arrays.
- Small scale hydro.
- Energy from waste.
- Renewable and low carbon heat.
- Biomass.
- Microgeneration technologies.

2.5 Portsmouth Water 2030 Net Zero Route Map

Portsmouth Water has published a [2030 Net Zero Route Map](#), which explains the actions that it is taking to reach the English water sector’s net-zero emissions target by 2030.

The Route Map identifies that the company’s current (2020) operational carbon footprint, before green grid electricity reductions as totalling 5,972 tonnes CO₂e (carbon dioxide equivalent). The emissions arise predominately from the use of grid electricity at operational sites (91.1% of emissions), with the remaining 8.9% comprising vehicle fleet, natural gas, generator fuel and business travel.

Portsmouth Water purchases 99% of its electricity from the UK grid backed by Renewable Energy Guarantee of Origin certificates (REGOs), meaning that 99% of its grid-electricity consumption is certified as carbon free.

The route map explains how Portsmouth Water plans to invest in further decarbonisation measures including:

- Minimising water leakage and promoting more efficient water usage.
- Investing in energy efficient measures to streamline consumption.
- Installing sub-metering across our sites to better monitor energy consumption.
- Decarbonising our vehicle fleet and optimising travel.
- Keeping to a minimum any carbon emissions from new projects and growth.

Of relevance to this RES is that Portsmouth Water is planning to increase on the existing renewable energy generation it has achieved, through developing additional renewable energy assets at its sites. It plans to replace a significant proportion of grid electricity demand at its sites with locally generated renewable electricity, comprising 12% by 2025 and 20% by 2030. The route map explains how, alongside this, it will also focus on efficiency of its water resource process operations, seeking to reduce the energy and carbon associated with the provision of water supplies to customers.

3. Renewable energy references in the approved Reservoir planning permissions and application documentation

3.1 The planning permissions for the reservoir

The only references to renewable energy in the planning permissions are in conditions 29 and condition 7, as follows:

Condition 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.”

Condition 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.”

3.2 Planning application documentation

The **Design & Access Statement** includes a ‘Sustainability Statement’ in chapter 9 of the document which includes a commitment to a number of sustainability principles, including:

3. Energy – “Maximise opportunities to improve operational energy efficiency of the new developments”.

Paragraph 9.8 of the Design and Access Statement states that “The Scheme design shall explore the viability to use renewable technologies in the new developments such as the visitor centre and the control house:

The design proposes use of energy efficient lighting (like LEDs) to reduce energy requirements of the new developments (visitor centre, car parks), alongside the use of natural material in the visitor centre to improve insulation and thereby the building energy performance.

The Planning permission approval for the outline design of the reservoir will be subject to a condition seeking a renewable energy strategy.”

Paragraph 9.13 of the Design & Access Statement states that “The Scheme design supports the UK’s Net Zero Carbon target by minimising where practical greenhouse gas emissions at all stages of the infrastructure lifecycle, and maximising opportunities for greenhouse gas removals”, noting specifically that:

The Scheme design is considering the use of renewable technologies for heating sources in the visitor centre and plans to put a living roof to give a mass to the roof for better insulation.”

Chapter 5 of the **Planning Statement** assessed the reservoir proposals against a number of topics, including Climate Change (paragraphs 5.104 to 5.109) and Sustainable Design and Construction (paragraphs 5.110 to 5.115). The assessment builds on the content of the Design and Access Statement, and also refers to the assessment of the effects of the reservoir development on climate change as set out in Chapter 16 of the **Environmental Statement**. The Planning Statement concludes that the reservoir development proposals accord with the relevant planning policies and guidance for both climate change and sustainable design and construction.

The climate change assessment in Chapter 16 of the **Environmental Statement** summarises the sustainable design, mitigation and enhancement measures embedded in the scheme, these include:

- Promoting renewable energy and low carbon design in the visitor and operational buildings.
- Ensuring materials for the embankment will be sourced onsite as far as possible, and where this is not possible local materials will be used.
- Providing a landscape engineering approach which integrates the embankment into the natural landscape as opposed to traditional carbon-intensive hard engineering approaches.
- Amending the design to reduce material requirements including, reducing the length of embankment, steepening parts of the slope, reducing the length of the embankment culvert and pipelines, increasing the space for topsoil storage onsite, and decreasing the construction time of the earthworks.
- Optimising the size of pipeline sections.

As a result of these measures, overall total greenhouse gas emissions for the reservoir and pipeline at construction stage have been calculated at approximately 177,000 tCO₂e (tonnes of carbon dioxide equivalent) over 10 years, the majority of which (95.8%) are derived from the reservoir embankment earthworks. The assessment identified operational stage emissions of approximately 49,222 tCO₂e, 42,984 tCO₂e (87.3%) of which relate to the operation of the reservoir including the control house and other activities, with the remaining 6,238 tCO₂e relating to the operation of the visitor centre and educational hide.

In addition, the significant compensation planting was not factored into this calculation so Portsmouth Water will be looking to maximise opportunities for greenhouse gas removals through sequestration by vegetation. Furthermore, the scheme will result in significant improvements to the public right of way networks into and across the site encouraging access to the site and wider area for those on foot, bicycle and horse.

The scheme was assessed in the **Environmental Statement** as unlikely to cause significant effects on climate, or significantly affect the UK's ability to meet its emissions reduction targets.

4. Renewable Energy Principles for the Reservoir

4.1 Operational energy use context

As noted in section 3.2 above, the Environmental Statement assessed the operational energy use and related emissions for the reservoir development. This was an assessment based on the outline design approved under the planning permissions, and would be expected to change as the detailed engineering design is prepared by the contractor and submitted for approval under the reserved matters process. The operational energy is largely related to the latter phases of the reserved matters submissions, particularly the reservoir culvert, valve tower, spillway and bi-directional pipe (Phase 6), the Control House (Phase 7), and the Visitor facilities (Phase 10).

The operational energy use at the reservoir site is expected to be irregular in nature, as the frequency and nature of any drawdown of the reservoir and use of on site pumps and other

equipment will be dictated by operational requirements that will vary seasonally, and year by year. In simple terms, if the weather in a given year is wet such that the reservoir does not need to be called on significantly to provide water resources for customers, then the reservoir would be expected to not need to be used, with consequential low energy use required. However, in dry conditions, when the reservoir water needs to be utilised for customer supplies then the energy use relating to pumps and other operational equipment both to draw down and then to refill the reservoir would be considerably higher. This fluctuating energy requirement will need to be considered as part of the development of renewable energy solutions for the development.

4.2 Energy principles

Taking into account the relevant Development Plan policies, national policy and guidance and relevant background studies and information, the RES for the reservoir development adopts the following energy principles as the basis for the strategy:

- prioritising energy reduction and energy efficiency first; then
- on site renewable energy provision; then
- off site renewable energy provision; and then
- securing renewable and/or low carbon energy supplies from the grid

4.3 Prioritising energy reduction and energy efficiency first

Through the detailed construction and engineering designs for the individual elements of the reservoir development, including mechanical and electrical designs, the contractor will seek to reduce the overall energy demands arising from the operation of the completed development.

Where there are options available for selection as part of design and engineering work, a preference for those options involving lower energy use and maximised energy efficiency will be made, unless there are health and safety, operational or regulatory reasons that require otherwise.

4.4 On site renewable energy provision

For each phase of the reservoir development, the potential for on-site renewable energy provision will be considered as an integral part of the engineering design development process. The outcomes will be reported in a renewable energy strategy relating to the relevant phases (see section 5 for the assessment for Phases 1 to 5). The types of on-site renewable energy provision which will be considered include:

- Wind turbines.
- Photovoltaic (PV) solar arrays.
- Small scale hydro / energy recovery.
- Microgeneration technologies, including small scale wind, biomass, air ground and water source heat pumps.

As context for the phase specific consideration of on site renewables potential, the following site-wide assessment of the overarching potential relating to each type is provided below.

Wind Turbines

Given the landscape, historic and biodiversity sensitivity of the reservoir site and surroundings, it is not considered that any medium to large scale implementation of wind turbines on the reservoir site could appropriately be accommodated within the environmental and planning constraints of the site.

There may be the potential for small scale renewable energy from wind associated with the visitor facilities, subject to the detailed design and consideration of other renewable energy opportunities within those facilities (see micro-generation below).

Photovoltaic (PV) Solar Arrays

On a similar basis to wind turbines, given the landscape and historic sensitivity of the reservoir site and surroundings, it is not considered that any medium to large scale implementation of ground mounted PV Solar Arrays on the reservoir site could appropriately be accommodated within the environmental and planning constraints of the site.

PV would not be capable of being accommodated on the reservoir embankment slopes, to ensure the protection of the embankment integrity. There is the potential for roof mounted PV to be considered as part of the detailed design process, however opportunities are limited given the relative lack of large scale built development as part of the reservoir proposals. It is also the case that the planning permission secures that the control house is largely built into the reservoir embankment, and the visitor facilities have indicatively been identified as having potential for a green roof.

There could be the potential for a floating PV array to be installed on part of the reservoir itself, however this would be expected to give rise to landscape and visual impacts given the environmental sensitivity of the reservoir location, and would need to be explored in detail before any proposals could be brought forward. There would be a need to consider the inter-relationship between any PV array and the operational requirements of the reservoir, and with factors including water quality, biodiversity, the recreational use of the reservoir, and the feasibility and viability of such a proposal.

Small scale hydro / energy recovery.

Small scale hydro and energy recovery opportunities should be considered as part of the detailed design of the planned water resources infrastructure within the reservoir site. It is not possible at this stage of the design process to confirm whether there is the potential to accommodate such renewable energy infrastructure within the wider operational requirements of the reservoir, nor whether the necessary hydraulic design of the scheme would present an opportunity or barrier to its implementation. This would be considered further as part of the detailed design processes, particularly for Phases 6 and 7.

However, it is expected that hydro-electric power, as might be generated by the gravity flow from the reservoir down to the Bedhampton pumping station, would not be economically viable. Typically, hydroelectric schemes rely on a certain amount of reservoir outflows being exceeded for 95% of the year, whereas the use of the gravity flow during supply from the reservoir is the opposite in nature, being only used in occasional droughts.

Similarly, a pumped storage scheme is likely to be unfeasible since this would rely on surplus flows at the Bedhampton spring source being available year-round (beyond the water required to top up the reservoir) and the existing surplus flows are only seasonal.

Microgeneration technologies, including small scale wind, biomass, air, ground and water source heat pumps.

There may be the potential for microgeneration technologies to be incorporated within the detailed design of the control house (Phase 7) and visitor facilities (Phase 10) subject to the detailed design process for these phases of the development.

4.5 Off site renewable energy provision

For each phase of the reservoir development, the potential for off-site renewable energy provision to provide renewable energy sources to meet operational energy requirements will be considered. The outcomes will be reported in a renewable energy strategy. The types of off-site renewable energy provision which will be considered include:

- Wind turbines.

- Photovoltaic (PV) solar arrays.
- Energy from waste.
- Biomass.

As noted in section 2.5, Portsmouth Water's 2030 Net Zero Route Map identifies a series of measures that it is implementing to reduce emissions associated with its operations. This includes a significant increase in the renewable energy generated at its operational sites.

Given the environmental sensitivity of the reservoir site, the potential for renewable energy generation on site may be limited (as explored in Section 4.4 above), however there is expected to be an opportunity to secure the provision of off-site renewable energy sources at other Portsmouth Water operational sites as part of the wider reservoir development project. This is currently being explored in detail by Portsmouth Water and its supplier partners. At this stage the following commentary of its potential can be provided.

The wider reservoir scheme involves works at the reservoir site itself and at Portsmouth Water's existing operational site in Bedhampton. There will also be associated network resilience works at their Farlington site. Whilst the reservoir site may be environmentally constrained, and Bedhampton has limited space together with environmental constraints, the Farlington site is considered to have significant potential to accommodate a ground mounted solar array. Through connecting the Farlington, Bedhampton and reservoir sites together by cable, renewable energy generated at Farlington has the potential to deliver significant capacity to meet operational energy requirements at Portsmouth Water's other sites. There is also the potential to connect this to Portsmouth Water's office headquarters, further reducing emissions.

Portsmouth Water is committed to investigating and pursuing the implementation of such a scheme, subject to the necessary technical, financial, consenting / environmental assessments and approvals being secured. This could bring significant renewable energy benefits for the reservoir development, meeting operational energy requirements associated with the later phases of the reservoir development, particularly the reservoir culvert, valve tower, spillway and bi-directional pipe (Phase 6), the Control House (Phase 7), and the Visitor facilities (Phase 10). It is intended that further details will be provided as part of the later RES which will be prepared and submitted to re-discharge planning condition 29 for those phases.

4.6 Securing renewable and/or low carbon energy supplies from the grid

Portsmouth Water already purchases 99% of its electricity from the UK grid backed by Renewable Energy Guarantee of Origin certificates (REGOs), meaning that 99% of its grid-electricity consumption is certified as carbon free.

5. Renewable energy potential in Phases 1 to 5

5.1 Overview of Phases 1 to 5 of the reservoir development

This RES relates to Phases 1 to 5 of the reservoir development:

- Phase 1 - Northern Access Route
- Phase 2 - Forestry England Track Raising and Culverts
- Phase 3 - Southern Access Route
- Phase 4 - Wetland Earth Embankment and Control Structures
- Phase 5 – Main Embankment Earthworks

The relevant renewable energy considerations related to these phases of development are outlined below.

5.2 Phase 1 to 5 - Prioritising energy reduction and energy efficiency first

Phases 1 to 5 comprise the construction of access roads and tracks, the provision of culverts underneath the track, and the construction of earth embankments and control structures for the wetland embankment area and main reservoir embankment. There are no ongoing operational energy requirements associated with these phases such that energy reduction or energy efficiency measures could be incorporated as part of the design of the phases

5.3 Phase 1 to 5 - On site renewable energy provision

Phases 1 to 5 comprise the construction of access roads and tracks, the provision of culverts underneath the track, and the construction of earth embankments and control structures for the wetland embankment area and main reservoir embankment. There are no significant mechanical or electrical installations proposed within these phases that require an ongoing operational energy source, nor significant built structures that could incorporate renewable energy provision as part of their design. There may be potential for energy recovery / micro-generation as part of any wetland embankment control structures, such as water source heat pumps in the wetland which will be filled at an early stage, before the completion of the main reservoir embankment. However, due to the environmental constraints being applied to the proposed wetland, this option would be limited to only the one (western) corner of the wetland where it meets the Visitor Centre.

As a consequence of the above, the conclusion reached is that there is either no or very limited scope for appropriate on site renewable energy provision as part of Phases 1 to 5 of the reservoir development.

5.4 Phase 1 to 5 - Off site renewable energy provision

Given the lack of any significant ongoing operational energy requirements as part of Phases 1 to 5, the conclusion reached is that there is no appropriate off site renewable energy provision required as part of Phases 1 to 5 of the reservoir development.

Phase 1 to 5 - Securing renewable and/or low carbon energy supplies from the grid

Given the lack of any significant ongoing operational energy requirements as part of Phases 1 to 5, the conclusion reached is that there is no need for renewable or low carbon energy supplies to be secured as part of Phases 1 to 4 of the reservoir development. Portsmouth Water already purchases 99% of its electricity from the UK grid backed by Renewable Energy Guarantee of Origin certificates (REGOs), meaning that 99% of its grid-electricity consumption is certified as carbon free.

6. Conclusions

This document provides a Renewable Energy Strategy (RES) sufficient to secure the partial discharge of Planning Conditions attached to planning permission APP/20/00990 (HBC), and 51680/001 (EHDC), the wording of which is identical:

“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.”

The RES identifies renewable energy principles for the reservoir development, and assesses the potential provision of renewable energy as part of Phases 1 to 5 of the reservoir development.

Having regard to the nature of the works proposed as part of Phases 1 to 5 of the reservoir development, the conclusion reached for these specific phases is that there is either no or very limited scope for appropriate renewable energy provision to be made.

This is considered to be a robust approach and conclusion that enables the partial discharge of Planning Conditions 29 for Phases 1 to 5.

It is proposed that subsequent RES submissions will be made for later phases of the reservoir development (Phases 6 to 10), and an application to re-discharge planning condition 29 will be made at that stage.

There is a significantly greater potential for renewable energy provision as part of those later phases, having regard to the nature of development proposed within Phases 6 to 10, including the culvert, valve tower, spillway, bi-directional pipe and control house, soft and hard landscaping, and the visitor facilities, which will be reported at that time.

An opportunity to secure the provision of off-site renewable energy sources at other Portsmouth Water operational sites as part of the wider reservoir development project and network resilience works is being explored in detail by Portsmouth Water and its supplier partners, and updates on the progress with this initiative will be reported in subsequent RES submissions.