

Appendix A Full consultation responses for Pipeline application – APP/20/00991

1.1 County Ecologist

As you know I have been involved in detailed pre-application discussions with the applicant alongside Natural England and Forestry Commission officers, as well as having attended consultation events with other stakeholder representatives. These discussions have taken place over several years and I have a sound overall knowledge of the site, the scope of ecological studies undertaken, the predicted impacts, and the proposed outline ecological mitigation, compensation and enhancement strategy. The application is accompanied by detailed ecological information. I have carefully reviewed the Environmental Statement Chapter 2 Biodiversity (Atkins/Portsmouth Water, September 2020) and each of the habitat- and species-specific technical reports and appendices (ECOSA, various dates). I have reviewed the Outline Biodiversity Mitigation and Compensation Strategy (ECOSA, September 2020) and the Habitats Regulations Assessment (Atkins/Portsmouth Water, September 2020). In order to be concise I have attempted to comment in detail only on the most significant issues as I see them. The views of Natural England and the Environment Agency are critical in judging the overall acceptability of the scheme as proposed (in that there are separate licensing regimes for impacts to certain species and the water environment) and I may of course need to provide updated or amended comments in light of advice from other statutory consultees. I also recognise that there are likely to be changes to details of ecological impacts and mitigation measures as a result of other consultee comments, and that for a project of such scale there will be amendments required as the project progresses.

Scope of ecological surveys

Ecological assessments at the site have taken place over a considerable period of time and have at times been extremely focussed. I have no concerns over the scope, scale and standard of ecological assessments and I acknowledge the significant effort involved in assessing the ecological baseline over many years using expert technical advice. The robust baseline allows a greater level of certainty with respect to predicted impacts and is used to shape the overall ecological mitigation, compensation and enhancement package. I also acknowledge the applicant's willingness to undertake updating or new surveys at the request of key consultees, and the open sharing of information with me and others over several years.

Comment on overall impacts

A project of this scale cannot be realised without significant ecological impacts, and it is clear that there are substantial implications for the existing natural environment of Havant Thicket: the proposals would require the permanent loss of irreplaceable habitats such as ancient woodland and veteran/notable trees as well as substantial losses of other woodland, grassland, scrub and seasonal watercourses and other waterbodies. Impacts to habitats are summarised as follows: c.13 Ha of semi-natural woodland to be removed, c. 18 mature veteran trees to be removed, c. 29 scattered broadleaved trees to be removed, c.139 Ha of grassland removed, and impacts to c.3.7km of ephemeral stream habitat. The surveyed area supports a range of protected species, including nationally-rare species of bat as well as badger, hazel dormouse, common reptiles, great crested newt, breeding birds and notable invertebrate species. The profound change of land-use would result in significant impacts to many of these species. Many of the impacts cannot be directly compensated on a like-for-like basis and there is an acknowledgement that mitigation, compensation and enhancement measures must be viewed as a whole package, many of the benefits of which may not be realised for many years, just as many of the impacts will be permanent or of long duration. Given the scale of the proposals there is necessarily a reliance on off-site measures which primarily entail woodland management interventions to enhance habitat. Some of the mitigation measures for certain species – bats and hazel dormice in particular – will require

intensive hands-on interventions and long-term commitment from the applicant to ensure that species are protected in accordance with any European Protected Species licence conditions.

In summary, my overall conclusion is that despite very obvious significant impacts to the current nature conservation value of the site, the scheme as proposed is likely to deliver substantial biodiversity value in the medium-to-long term, albeit in a different form to the habitats that currently exist. The permanent loss of ancient woodland and veteran trees is essentially impossible to mitigate and so there must be a case made for overriding reasons (which are beyond the scope of my advice). These substantial losses can be mitigated to a degree by the proposed new woodland planting (linking Havant Thicket woodland and Staunton Country Park) and the extensive habitat creation and management works proposed for surrounding areas that will improve the ecological value of woodland, grassland and linear watercourse habitats for a range of species over time: there is no doubt that substantial biodiversity gains can be made through better management of the surrounding woodland.

Further details have been provided of proposed off-site mitigation, compensation and enhancement measures. These details are contained within the Implementation Plan for Off Site Biodiversity Mitigation and Compensation (Atkins, April 2021) as well as the Technical Note – Article 4.7 WFD Short-listing methodology (Atkins, March 2021) and accompanying Letter to Portsmouth Water - Havant Thicket Winter Storage Reservoir – Water Framework Directive (WFD) Article 4.7 (Environment Agency, 18 February 2021). These matters are discussed below.

Bats

Extensive bat survey works over a period of ten years has resulted in a robust understanding of the bat populations of the site and surrounding area. Data collected from the site and adjacent areas, as well as those collected for other development sites in the wider landscape, provide a very useful overview of the bat assemblage in context. Analysis of these data provide insights into seasonal trends and activity by location. Detailed discussion and interpretation of the results is included.

At least thirteen bat species have been recorded within the surveyed area. The most significant finding is the presence of the very rare Bechstein's bat, which has been shown to roost on site in small numbers (although not during the most recent surveys) and which uses the site for foraging, commuting and presumably social purposes. The application site clearly forms part of a much larger area of habitat used by the local Bechstein's bat population, and there is a likelihood that the south-east Hampshire population is functionally linked to larger populations in West Sussex: indeed, a link has been proven for the common and widespread Natterer's bat. Following discussion with Natural England, I agree with the applicant's assessment that there is a likely (but so far unproven) functional link between Bechstein's bat populations in this area of south-east Hampshire and larger populations associated with the Singleton & Cocking Tunnels Special Area of Conservation in West Sussex, approximately 15km east of the application site. Using a precautionary approach it is prudent to assume functional linkage between bat populations in these two areas and that impacts to bats and bat habitat within the application site would affect SAC supporting habitat.

I note the detailed analysis of data which appears to show that the application site itself does not support maternity roosts and that individual Bechstein's bats used the site for only a small percentage of time compared with off-site areas. Nevertheless, the importance of the site for this species is acknowledged. In terms of roosting bats, the site has been shown to support brown-long eared bat, Natterer's bat and Bechstein's bat. It is recognised that given the presence of woodland and trees on site it is highly likely that other bat species will roost also, and that bats continually change their roosting locations. The proposal will result in the

loss of substantial areas of bat habitat in the form of woodland, trees and open grassland and will remove numerous trees with bat roosting potential.

Impacts to bat species will, at least in the short-term, be substantial due to woodland and grassland loss. In the longer term, the reservoir site (the open water, new wetland and grassland embankments) will offer suitable foraging habitat for a range of bat species. The proposed woodland enhancements will also offer new opportunities for bat species, as will the programme of roosting box installation (natural tree roost opportunities being generally scarce within surrounding forestry woodland and of course being reduced due to the loss of the Avenue). The proposed funding scheme should be focussed on securing meaningful landscape-level enhancements for bats such as reconnecting habitats; details of these can be provided at a later stage and their delivery should be a key indicator of mitigation success.

I understand that the applicant has been discussing licensing matters with Natural England specialists and that a bespoke approach to licensing is required. In terms of the LPA's judgement on the Habitats Regulations derogation tests, in recognition of the exceptional nature of this project I am willing to accept that the favourable conservation status of bats can be maintained if the proposed compensation and enhancement measures can be delivered as proposed: the use of soft-felling techniques, the reuse of tree limbs with roost features, and the installation of bat roosting boxes in the wider landscape are all suitable methods of mitigation. This very much depends on the delivery of meaningful off-site improvements that will benefit the same bat population. On the deliverability of landscape-scale mitigation, compensation and enhancement measures for bats I have provided further comment below.

Due to the exceptional nature of this project there is an unavoidable degree of uncertainty over the efficacy of proposed compensatory and enhancement measures. The new woodland plantings at Gipsies and Deerslaughter Plains (already completed) provides useful linkage between areas of woodland habitat but will not approach a comparable condition to the lost habitat for some decades although their function as a habitat corridor/foraging area in the coming years is acknowledged. In essence, lost habitat is not being directly replaced (certainly not in the short term) but rather the carrying capacity/suitability of existing habitat is being enhanced through a range of measures. Aside from direct comparisons of area measurements it is not really possible to robustly equate areas of loss to areas of compensation/enhancement in a qualitative manner: the proposed areas of enhancement far exceed those of impact and so one must assume that there would be a beneficial effect overall. The whole package of on- and off-site mitigation, compensation and enhancement measures together does provide for a robust framework

This development will affect bats, European Protected Species (EPS) which receive strict legal protection under UK law by the Wildlife and Countryside Act 1981 (as amended) and under EU law by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (commonly referred to as the Habitats Regulations). Where developments affect EPS, permission can be granted unless the development is likely to result in a breach of the EU Directive underpinning the Habitats Regulations and is unlikely to be granted an EPS licence from Natural England to allow the development to proceed under a derogation from the law.

Will the development result in a breach of the EU Directive?

Yes, unmitigated, the development has potential to result in harm to individual bats and result in impacts to the favourable conservation status of bat species locally.

Is the development unlikely to be licensed?

An EPS licence can only be granted if the development proposal is able to meet three tests:

1. the consented operation must be for 'preserving public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment'; (Regulation 53(2)(e))
2. there must be 'no satisfactory alternative' (Regulation 53(9)(a)); and
3. the action authorised 'will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range' (Regulation 53(9)(b)).

It is for you as the case officer to assess the proposals against the first two tests – you may wish to ask for further information from the applicant. In order to assess the development against the third test, sufficient details must be available to show how killing/injury/disturbance of bats will be avoided and how any loss or damage to habitat will be compensated. In this case, I consider that sufficient information has been provided to assess impacts to bat populations. In terms of maintaining the favourable conservation status of bat species, the proposed mitigation, compensation and enhancement measures offer a comprehensive package of measures to avoid direct harm to roosting bats, to mitigate the impacts of habitat removal, to provide enhanced roosting opportunities on- and off-site and to provide substantial long-term landscape-scale habitat enhancements. This is an exceptional proposal and a bespoke approach is required. The application is supported by extremely detailed information on bats and the applicant has engaged in detailed discussions with Natural England licensing. On this basis I am confident that the favourable conservation status of bats overall can be maintained at the population level. As detailed below, I would recommend that full updated details of all bat mitigation, compensation and enhancement measures are provided alongside future applications for each phase of development.

Hazel dormouse

A population of hazel dormice is present, inhabiting woodland and scrub areas throughout the site. This is not surprising as the species is relatively widespread throughout Hampshire. The proposals will remove substantial areas of dormouse habitat and have the potential to result in harm to individual dormice and the severance and fragmentation of dormouse populations. Mitigation includes standard two-phase habitat removal coupled with the capture, holding and soft-release of animals within enhanced habitat outside the site boundary. This is the only realistic option to avoid direct harm to dormice and acceptable in principle. My main concern would be the security of any animal holding pens at this site: the high levels of antisocial behaviour means that damage to pens and animals within is a clear risk.

This development will affect hazel dormice, a European Protected Species (EPS) which receives strict legal protection under UK law by the Wildlife and Countryside Act 1981 (as amended) and under EU law by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (commonly referred to as the Habitats Regulations). Where developments affect EPS, permission can be granted unless the development is likely to result in a breach of the EU Directive underpinning the Habitats Regulations and is unlikely to be granted an EPS licence from Natural England to allow the development to proceed under a derogation from the law.

In this case, I consider that sufficient information has been provided to assess impacts to hazel dormice. In terms of maintaining the favourable conservation status of this species, the proposed mitigation, compensation and enhancement measures offer a comprehensive

package of measures to avoid direct harm to dormice, to mitigate the impacts of habitat removal, and to provide long-term landscape-scale habitat enhancements. The applicant has engaged in detailed discussions with Natural England licensing. On this basis I am confident that the favourable conservation status of dormice can be maintained at the population level. As detailed below, I would recommend that full updated details of all dormouse mitigation, compensation and enhancement measures are provided alongside future applications for each phase of development.

Birds

The main impacts will be from the loss of woodland and grassland habitat. The loss of grassland will result in the loss of breeding skylark and meadow pipit habitat. Lapwing used to breed more numerously at the site but numbers have dropped substantially in recent years, and the proposals would impact the single territory recorded in 2018. Other species impacted include woodland, scrub and grassland species such as song thrush, dunnoek, linnet, warblers and tits. Mitigation will entail the removal of suitable habitat outside the nesting season. In terms of compensatory habitat, the new woodland/scrub plantings, the new wetland and grassland and the off-site woodland enhancements will provide new opportunities for a range of bird species, albeit mostly different species.

Reptiles

The grassland and scrub/woodland edge habitats across the site support all four common reptile species in good numbers. A substantial area of reptile habitat is to be impacted, requiring the capture and removal of potentially hundreds of animals from the site. Mitigation measures comprise capture and translocation of animals to enhanced areas within adjacent woodland. This is acceptable in principle, although I would not underestimate the practical difficulties in capturing and removing so many animals from the construction site.

Amphibians

Great crested newts (GCN) occur within ponds in the surrounding area. I would not consider the proposals to result in significant impacts to this species and am content with the proposed mitigation, compensation and enhancement measures.

This development will affect GCN, a European Protected Species (EPS) which receives strict legal protection under UK law by the Wildlife and Countryside Act 1981 (as amended) and under EU law by the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 (commonly referred to as the Habitats Regulations). Where developments affect EPS, permission can be granted unless the development is likely to result in a breach of the EU Directive underpinning the Habitats Regulations and is unlikely to be granted an EPS licence from Natural England to allow the development to proceed under a derogation from the law.

In this case, I consider that sufficient information has been provided to assess impacts to GCN. In terms of maintaining the favourable conservation status of this species, the proposed mitigation, compensation and enhancement measures offer a comprehensive package of measures to avoid direct harm to GCN, to mitigate the impacts of habitat removal, and to provide long-term habitat enhancements. The applicant has engaged in detailed discussions with Natural England licensing. On this basis I am confident that the favourable conservation status of GCN can be maintained at the population level. As detailed below, I would recommend that full updated details of all GCN mitigation, compensation and enhancement measures are provided alongside future applications for each phase of development.

Invertebrates

The loss of extensive areas of woodland, scrub and grassland habitat will undoubtedly impact various invertebrate species. The loss of a significant length of seasonal stream

habitat will result in impacts to some rare/notable aquatic invertebrate species. Mitigation for terrestrial invertebrates includes the overall woodland enhancements and it can be expected that the new wetland area will support invertebrate populations. In terms of mitigating impacts to the seasonal streams, I understand that discussions between the applicant and the Environment Agency has resulted in a scheme of off-site river restoration measures, entailing in-channel and riparian enhancements.

Overall comments on protected and notable species

There will be substantial impacts to a suite of protected and notable species, resulting in the loss of a considerable extent of semi-natural habitat. Given the scale and timescale of impacts there is essentially no scope for retention of meaningful habitat within the site. The bulk of mitigation is therefore related to salvage of individual animals from the construction footprint and the timing of operations to minimise impacts. The removal and translocation of animals such as hazel dormice and common reptile species is reliant on the availability of suitable receptor habitat within adjacent land.

I am content that species capture and translocation works will be undertaken in an acceptable way consistent with best-practice guidelines.

Overall mitigation strategy

The proposed outline mitigation and compensation strategy relies on several strands: the removal of certain protected/notable species from within the construction footprint; the use of habitat manipulation techniques to render habitat less suitable prior to construction; a commitment to long-term habitat management works in surrounding land; the use of artificial nesting and roost boxes; a commitment to substantial new grassland and pasture-woodland habitats off-site; the creation of new habitats within the developed site; enhancements to retained watercourses and waterbodies; and the establishment of a fund for ecological improvements.

I acknowledge the large scope and scale of the proposed mitigation and compensation measures and the efforts employed to date in ensuring that key stakeholders have been involved in their scope and design. Within the reservoir site itself the proposed land-use changes are so profound that it is essentially impossible to make meaningful comparative judgements between losses and gains that take full account of impacts to habitats, species and the local ecological network. Whilst recognising the significant ecological impacts arising from the proposal, there is no doubt, in my opinion, that there would be a significant biodiversity gain from a wetland habitat on such a vast scale and I very much welcome the proposed dedicated wetland habitat at the northern shore of the site. The wetland (containing open water, marsh, wet woodland, exposed muds and wet/damp grassland) will provide a valuable habitat for many species that do not currently occur as well as for many of the species already present. The benefits of the new reservoir and dedicated wetland area should be felt within the nearby designated Solent coastal habitats: it can be expected that bird species associated with the Solent SPAs (especially waders, wildfowl and terns) will utilise the reservoir and wetland. The additional habitat may assist in mitigating the effects of recreational pressure on the Solent intertidal and terrestrial habitats. The expected reduction in nutrient input to the Solent will also be of overall benefit.

The extensive enhancements to woodland habitat within the immediate surrounds and further afield are ambitious and would almost certainly provide benefits for a range of species associated with woodland, scrub and edge habitats. The delivery of enhancements is dependent upon a long-term commitment and partnership working with adjacent landowners. Woodland management operations should increase the availability of open areas such as rides and track junctions and also rotational coppice, suiting species such as invertebrates, birds and hazel dormouse. Post-construction, the reservoir embankments will provide valuable grassland habitat that will likely be of greater species-richness than the

existing site. This habitat will be attractive to ground-nesting bird species that are to be impacted by the proposed works.

The site as proposed would undoubtedly be a significant visitor attraction and presents many opportunities for promoting the natural environment. The proposed visitor centre should act as a hub for visitors and is an excellent opportunity for public engagement and interpretation: I do not personally see an issue with this being situated at the water's edge and consider that this provides an excellent opportunity to engage the public as happens at many large wetland sites. It is hoped that public engagement activities will take place in future years. The landscaping areas surrounding the visitor centre offer an opportunity for further wildlife-rich habitat and I would expect that every opportunity is taken to embed biodiversity within the more formal areas of the site through the use of wildflower-rich grassland throughout as well as the provision of locally-relevant habitats such as acid grassland/heathland/bare ground.

Overall, I am supportive of the outline proposals for biodiversity mitigation, compensation and enhancement. Following consultation responses from myself and Natural England, further information has been provided on the scope, location, timing and delivery of off-site measures. These are contained in the submitted Implementation Plan and the four Action Plans contained within. In summary, proposed off-site mitigation, compensation and enhancement measures include:

- Creation of 60 Ha of pasture woodland and 20 Ha of neutral grassland.
- 72 Ha of woodland enhancement within Southleigh Forest.
- 5.5km of watercourse enhancement.
- £40,000 per annum for 30 years from 2029 towards Capital Grants Scheme.

The location for the creation of the pasture woodland and neutral grassland totalling c.80 Ha is yet to be confirmed, and it is stated that several options are being reviewed across the local landscape. I understand that one option entails woodland situated to the east of the application site. The scope of proposed works is detailed, with the stated purpose of enhancing the local ecological network by creating and enhancing woodland linkages. There is clearly work to do in determining the location and extent of these proposals but I am supportive of this measure.

Southleigh Forest is owned by Portsmouth Water. Much of the woodland is classified as Plantation on Ancient Woodland (PAW) and it is proposed to actively manage these areas, alongside areas of non-plantation ancient woodland, to improve habitat quality. A management plan is being devised by the Hampshire & Isle of Wight Wildlife Trust and will be funded by Portsmouth Water. The plan is being developed currently and will be subject to review and comment by key consultees.

A package of proposed enhancement works to various ephemeral watercourses has been agreed in principle with the Environment Agency's part of the Article 4.7 Water Framework Directive. These measures will provide enhancements to headwater streams north of the proposed reservoir as well as to several watercourses within the wider landscape to the south. The proposed measures include channel restoration of e.g. profile, banks, channel substrate; on-line ponds; improvements to other pond habitats; areas of plant translocation. It is the view of the EA that, subject to legal agreement, these measures will ensure that 5.5km of watercourses are enhanced and is sufficient to compensate for the identified impacts.

The proposed Capital Grants Scheme will provide c. £40,000 per annum for 30 years from 2029 onwards in order to deliver projects to enhance habitats in the local landscape.. An

outline list of project objectives has been provided, focussing on enhancing the local ecological network, enhancing knowledge of protected species distribution and status, and providing equipment for local knowledge gathering. It is proposed to establish a steering group to assess potential projects and monitor the scheme.

Overall, I welcome the submission of the Implementation Plan and Action Plans. These provide a useful level of further detail to demonstrate the scope of the proposed works and methods of delivery. I do acknowledge that there is uncertainty over the exact location and nature of some aspects but consider that these further details can be provided through future planning submissions and secured through appropriate legal agreements. I would suggest that, subject to the satisfaction of other key consultees, the submitted outline details form the basis for planning conditions. These should secure further full details for each recognised phase of works, the effect of which should be that works cannot proceed until all details are agreed.

The key issue is to ensure that for each phase of development there is a clear strategy for ecological mitigation, compensation and enhancement. The strategy should ideally be contained within a single document, of a consistent form, providing full details of the phase of development works and the ecological measures that will address any identified impacts. In recognition of the mix of on- and off-site measures, and the likely complex timing of delivery (with off-site measures being delivered in a rolling programme at various locations and times), any condition wording should allow for flexibility. An essential component is to have a 'running total' of mitigation, compensation and enhancement delivery in order that the applicant, LPA and other stakeholders can keep track of what is being delivered, where and by whom. I would strongly recommend the use of tabulated information and spatially presented data.

1.2 Environment Agency

The increase in water supply from the building of the reservoir will enable a bulk supply of water to be supplied to Southern Water. They have a forecast deficit in water in the Hampshire area due to required reductions on their abstraction licences on the heavily designated Rivers Test and Itchen. Additional water made available from this scheme will help meet this forecast deficit. The scheme is already included in both Portsmouth and Southern Water's Water Resource Management Plans.

We are now in a position to confirm that we have no objection to the planning proposals as submitted subject to a number of conditions and/or legal agreements on a variety of issues including flood risk and the Water Framework Directive. Please see our detailed comments below in relation to each area of our remit and the requirements that we are seeking in order to ensure that the project is delivered in a way that protects and enhances the environment.

Water Framework Directive (WFD)

The environmental objectives of the WFD are set out in Article 4 of the Directive and relate to ensuring the continued protection of the condition of all waterbodies and the development of plans to deliver measures to improve failing water bodies to a good condition (or better). The two key objectives against which new developments or schemes should be assessed are;

- No deterioration of status (or potential) for surface and groundwaters; and
- Achievement of good status (or potential) by 2021 or 2027, for waterbodies currently failing to achieve this status or potential.

WFD compliance assessments for new developments and schemes must demonstrate that the proposals will not result in the deterioration in status (or potential) of any water body.

Where a waterbody is at a status less than good (or potential), it must be demonstrated that the implementation of the proposals will not prevent the water body from meeting good status (or potential) in the future.

Following the completion of a WFD compliance assessment, Havant Thicket Reservoir was deemed to have the potential to cause deterioration of the impacted water body of the Riders Lane Stream which is part of the Hermitage Stream water body. The main area of concern relates to the construction of the embankment and reservoir footprint. The resulting loss of habitat is significant with the direct loss of 3.7km of headwater habitat within the Riders Lane Stream. The length of watercourse lost will account for approximately 42% of headwaters and 18% of the entire length of watercourse within the water body.

The WFD uses the term "quality elements" to refer to the different indicators of ecological quality comprising its ecological status classification schemes. The quality elements used to assess ecological status are: biological, chemical and physicochemical, and hydromorphological quality elements.

The assessment identified that both biological and hydromorphological WFD quality elements were at risk of deterioration. Specifically invertebrates, macrophytes, phytoplankton and hydromorphology. A deterioration of any one, or more quality element can cause an overall deterioration and lowering of class status at the water body scale, this is contrary to the objectives of WFD.

In a situation where there remains a potential for deterioration, even after including embedded mitigation, the scheme can only go forward if granted a derogation under Article 4.7 of the WFD. To do this, evidence is required to meet a series of "Tests". This information is set out in document reference - HTR-ATK-XX-XX-RP-2-0067.

We attended a number of workshops with Portsmouth Water and their consultants to determine the evidence requirements to meet the tests of Article 4.7, these being:

- a) All practicable steps are to be taken to mitigate the adverse impacts on the water body concerned;
- b) The reasons for modifications or alterations are specifically set out and explained in the RBMP;
- c) The reasons for those modifications or alterations are of overriding public interest and/or the benefits to the environment and to society of achieving the objectives set are outweighed by the benefits of the new modifications or alterations to human health, to the maintenance of human safety or to sustainable development, and;
- d) The beneficial objectives served by those modifications or alterations of the water body cannot for reasons of technical feasibility or disproportionate cost be achieved by other means, which are a significantly better environmental option.

The WFD Article 4.7 assessment (document reference - HTR-ATK-XX-XX-RP-2-0067) describes the outcome of this process. We have worked with Portsmouth Water to identify a long list of practicable measures that would be appropriate to fulfil Article 4.7 test (a). We have agreed that this long list was sufficient for the purposes of fulfilling the Article 4.7 derogation. We reviewed the information contained within WFD Article 4.7 assessment which outlines the reasoning for the potential non-compliance under the WFD and details the necessary justification to meet each of the tests required under the derogation process. We are satisfied that sufficient evidence has been provided to meet the tests and can therefore be used to inform the decisions of the relevant Local Planning Authorities (Havant Borough Council and East Hampshire District Council) when deciding the outcome of the submitted planning applications.

Following the above process, a shortlisting exercise was undertaken to reduce the list from

the full list of practicable measures to a short list of deliverable options which could be used to define the level of mitigation and compensation required for the watercourses impacted by the scheme. We have had ongoing dialogue with regard to this process which has resulted in a short list of deliverable measures being derived. We have confirmed that we are content that 'package 2' (as laid out in document reference HTR-ATK-XX-XX-PP-T-0003 Implementation Plan for Off Site Mitigation and Compensation Appendix 3) includes sufficient mitigation and compensation for the scheme. We believe that this package provides sufficient length of watercourse improvement (5.5km) and an appropriate balance of measures to satisfy both the Article 4.7 requirements and also Biodiversity Net Gain commitments, which is discussed below.

In agreeing the package of mitigation and compensation with Portsmouth Water, it has been critical to identify measures that are both environmentally sound and appropriate for the scale of loss that will result from the development. The impacts that have been identified cannot be readily mitigated or compensated for, due to the distinctiveness of the habitat. Meaning the habitat to be lost cannot be recreated. Therefore, we have sought a package of measures that once implemented will provide a joined up network of quality habitat improvements that will mitigate and compensate against the high value conservation habitat lost from the scheme.

Therefore, the proposal will only be acceptable to us and legally compliant under the Water Framework Directive once the package of measures has been secured. We advise that a legal agreement should be put in place to secure the delivery of the mitigation and compensation package proposed by the applicant.

The agreed package, 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.

We agree with the principles set out in document HTR-ATK-XX-XX-PP-T-0003. A full implementation plan will need to be agreed, which we want to be consulted on. A robust governance process for timely implementation of the mitigation and compensation should also be put in place. This must be secured through the planning permission process.

The package of measures includes restoration of the Hermitage Stream. The measures proposed are based upon feasibility and design work undertaken jointly by Havant Borough Council and Environment Agency in 2013. We shared with Portsmouth Water all the information that was compiled at the time, including drawings and costings. The mitigation and compensation measures agreed as part of the water environment package should be in keeping with the design work previously undertaken, including the removal of concrete bed and banks.

Portsmouth Water have provided approximate costs for the package of measures detailed in a technical note dated 11/03/21 (Version 3). We do not consider the cost presented in this paper as a cost cap. The figure presented is based upon our costings from 2013 (which are now somewhat dated) and the design team's judgment. We believe the costs presented are realistic but require further assessment.

Portsmouth Water will be responsible for delivering the quantum of mitigation and compensation agreed. However, the company may choose to work with a delivery partner to

achieve cost effectiveness. We are not opposed in principle to agreeing a cost cap for the water environment package, but this will need further discussion.

Portsmouth water will be responsible for delivery of the mitigation and compensation agreed. If the identified measures are shown to be unfeasible, additional measures will need to be identified that provide the same if not greater length of water watercourse improvement and contribution to the environment.

Document HTR-ATK-XX-XX-PP-T-0003 sets out the broad timescale for the delivery of the water environment mitigation and compensation package. Whilst we support this in principle, we strongly recommend that as part of any legal agreement a detailed delivery plan is agreed, which we would want to be consulted on.

Portsmouth Water have confirmed via the WFD assessment processes that neither the construction of the pipeline or emergency drawdown will preclude future restoration of the Hermitage Stream, which is a fundamental part of their Water Environment mitigation and compensation package. Consideration should be given to aligning the timing of the pipeline construction with that of the compensation measures identified for the Hermitage stream.

Biodiversity

The development will result in the loss of 3.7km of watercourse as described above, as well as other wetland habitats. This scale of loss is significant and without mitigation and/or compensation would be unacceptable.

Appendix A9.3 Aquatic Ecology (document reference: HTR-ATK-ZZ-ZZ-RP-Z-0147) has shown that the watercourses to be impacted by the development support rare and nationally scarce aquatic invertebrates. The specialist taxa that have been identified are indicative of groundwater supply and ephemeral flow conditions. This form of headwater stream habitat is of high conservation value and a Priority Habitat.

The Environmental Statement (document reference HTR-ATK-ZZ-ZZ-RP-Z-0109) acknowledges the value of the streams that will be lost. "9.150. Given the ephemeral nature of the intermittent headwaters of Riders Lane Stream, as well as their position within a more rural setting in an otherwise predominantly urban catchment, these watercourses are considered to be intrinsically important. They provide a unique habitat that acts to improve aquatic species diversity and functional habitat resilience as a potential primary colonisation source for the catchment".

As described above, this habitat and therefore the species which are supported cannot be readily mitigated or compensated for, as it's a habitat type that cannot be recreated. This is why ensuring a package of mitigation and compensation at appropriate scale for the loss is critical.

Section 3 of the Biodiversity Net Gain for Rivers assessment describes what is believed to be inconsistencies with the Biodiversity Metric 2.0., and their influences on the calculations. We acknowledge that the Defra Biodiversity Metric is still evolving and the uncertainties this may have caused for the assessment. Section 3 identifies three main areas of concern. The distinctiveness score, time to target and the rationale for calculating units based on river length, rather than area. A Biodiversity Metric 3.0 is currently in preparation and is due for release soon. We feel that the updated metric addresses the points raised in relation to distinctiveness and time to target. Our understanding is that the updated metric will continue to use river length and not area. This recognises the importance of river habitat and processes that underpin their functionality. We believe whilst the bespoke package of measures deviates from the metric, it does however provide measures that not only fulfil the requirements of the Water Framework Directive but provides significant gains for the environment.

Further impacts to these watercourses would continue through subsequent construction phases, including borrow pit excavation, embankment construction and reservoir filling, until these streams are fully lost under the footprint of the reservoir". What is not clear is how the flows (including sediment management/pollution prevention) to the downstream watercourse will be managed during construction, this will need to be addressed at detailed design.

Flood Risk

We have reviewed the FRA Model, the breach model, the emergency discharge modelling and the impact of the reservoir on the flood risk. The modelling has been signed off through a review process which confirms that the techniques and assumptions used are satisfactory.

The proposed development will however only meet the National Planning Policy Framework's requirements in relation to flood risk subject to relevant planning conditions.

We can provide the following information on the characteristics of flooding at this site to help with your decision:

The FRA states that the requirements of the Reservoirs Act 1975, and proposed mitigation measures in place (including but not limited to the emergency discharge strategy, the regular maintenance and inspection of the reservoir) make it highly unlikely that a breach will occur. Regardless, the breach and associated failure of the embankment has been modelled as required by the Reservoirs Act 1975. Figure 8.1 of the Flood Risk Assessment indicates the impact of a breach event on the nearby communities downstream of the reservoir.

We have reviewed the associated flood risk model of the Reservoir, including the model generated to help assess and inform the FRA and Emergency Discharge. As well as this proposed modelling, we have also reviewed the proposed Breach Model, separately from the planning application. Following our reviews of the models, we are satisfied with the techniques used and subsequently the accuracy of the conclusions and assessment of the flood risk that all models generate.

In all circumstances where warning and emergency response is fundamental to managing flood risk, we advise local planning authorities to formally consider the emergency planning and rescue implications of new development in making their decisions. As such, we recommend you consult with your emergency planners and the emergency services to determine whether the proposals are safe in accordance with the guiding principles of the PPG.

Water Quality

Ongoing discussion with the Applicants and their consultants resulted in an agreed approach to establishing a baseline and undertaking an impact assessment for hydrology and water quality. The water quality model applied to this project was developed through extensive consultation with us and we can confirm that the resulting model is a suitable basis for modelling the water quality impacts of the projects. The bespoke model has provided a useful quantitative element for the assessment of impacts on water quality. Overall, the results of the modelling and analysis show the water quality in the reservoir will be good, there will be a low to moderate risk to water treatment from algal growth. Impacts on the downstream watercourses however are positive with a clear improvement in water quality predicted due to the quality of the Havant and Bedhampton Spring Water being of better quality than the existing water in the Hermitage Stream.

Groundwater Protection

The majority of the works associated with this development are on greenfield locations and underlain by unproductive strata or secondary aquifers. As such there are not likely to be many groundwater quality/contamination issues with the proposed development. The Bedhampton and Havant springs Source protection zone would occur at depth beneath the site. This source provides a strategically important water supply, including for the proposed reservoir, so should be suitably protected.

1.3 Highway Authority

A separate application has been made in relation to the laying of the pipeline between Bedhampton and the proposed Havant Thicket Reservoir under application APP/20/00990. These works are linked to the wider application for the reservoir construction (APP/20/00990) and some matters between the applications overlap. The responses in relation to highway matters should be read together. Some elements of the below are repeated within the Highway Authority's previous response, however in order to provide continuity and clarity it has been stated again where necessary.

Pipeline Location

The route of the pipeline is proposed on drawing number HTR-ATK-PI-BR-DR-C-0009 and includes sections, circa 2km of the 4.5km length, which are proposed to be laid within the public highway. The following roads are included within the proposed route:

- Middle Park Way
- High Lawn Way
- Dunsbury Way
- Willisfield Road
- Riders Lane
- Highclere Avenue
- Ewhurst Close
- Purbrook Way
- Barncroft Way
- Fraser Road
- North Street
- Bedhampton Road
- Bruswick Gardens

At this stage the detailed design of the pipeline is unknown along with the proposed construction methodology. The application sets out a broad redline boundary for the proposed works only. The details will need to be appropriately conditioned to ensure the Highway Authority are able to agree the design/location of any works within the Highway and ensure there are no adverse impacts on any highway infrastructure.

It is forecast that works to complete the pipeline will be undertaken within 2023 and 2026. Construction of the pipeline will be undertaken in 3 periods so construction on the highway may not be continuous across the 3 years.

The Highway Authority previously requested that further information is required in order to determine that this application will not result in significant harm on the local highway network. This including the following details to be provided.

- A high-level programme of works and timetable should be submitted
- Key junctions on the local road network to be assessed for the worse case scenario of traffic impact

- Assessment of diversion of traffic during road closures/traffic management
- Framework Traffic Management Strategy showing, but not limited to, the following; Proposed diversion routes, traffic management plans, indicative programme of works, appropriate mitigation measures to minimise the impact of the works on the highway
- Personal Injury Accident data to be reviewed based on the proposed road closures/diversions
- Restricting the use of road space near existing schools
- Diversion plans for cyclists where appropriate when road closures are required.
- Framework Construction Traffic Management Plan
- Highway reinstatement proposals
- Highway tree impact assessment
- Updated construction detail plan

The applicant and the Highway Authority has been engaging in discussion over the above and a Framework Construction Traffic Management Plan has been provided for both the construction of the reservoir and the construction of the pipeline. The applicant has stated that due to the current work undertaken to date, some of the requested information cannot be provided until further detailed work is undertaken and a design and build contractor is on board, which will be appointed if planning permission is approved by the Local Planning Authority.

Construction Traffic Management Plan

In order to address a number of the concerns above a Framework Construction Traffic Management Plan has been submitted by the applicant which covers both the reservoir construction and pipeline elements of the development. The Framework CTMP outlines measures which aim to reduce the impact that associated construction vehicles will have on the local highway network. Should the Local Planning Authority be minded to approve this application, a Construction Traffic Management Plan should be secured through condition which provides further detailed plans/information on the measures within the Framework CTMP and for the full CTMP to be in accordance with the Framework CTMP.

It should be noted that should any permanent highway alterations as a result of the pipeline construction may result in the applicant needing to enter into a Section 278 legal agreement.

The applicant has set out in the Framework Construction Traffic Management Plan for the pipeline element that the full CTMP will include the following;

- A Full CTMP for any phase of works area;
- Detailed programme and duration of construction;
- Restrictions of the number construction personnel per a day to a maximum of 125 workers. The CTMP secured restricting travel arrangements to be outside of peak hours and further mitigation where necessary;
- Detail of any alterations to the highway, including temporary and / or permanent, to enable construction and to obtain the necessary highway approvals for any changes;
- Details of the number of construction and delivery vehicles permitted to utilise the southern access fixed at up to 30 HGV movements per day and 6 per hour.
- Traffic management details of the pipeline installation;
- Details of any additional compounds and laydown area which are not located within the reservoir site
- Highway condition surveys of all construction traffic routes;
- Wheel washing facilities for managing the site to prevent mud onto the highway and road sweepers to be utilised if required;

- Details of onsite contractor parking;
- Commitment to avoid school term times where the pipeline runs close to school

The Highway Authority is satisfied that through securing the Framework CTMP and the obligation for the applicant to provide a Full CTMP in accordance with the Framework CTMP prior to any works phase, any impact on the local road network can be suitably mitigated against. This will compliment the formal highway licences and permits the applicant will need to apply for when constructing the pipeline under the highway. Traffic Management plans will need to be provided, which should include pedestrian, cycling and vehicular diversions for every phase of works undertaken. The details of the CTMP are further covered in the Highway Authority's reservoir response.

The applicant has included in Appendix A of the Framework CTMP, a table of proposed road closures and diversion routes. The Highway Authority has undertaken a high level review and only has a concern over the Dunsbury Way closure and the diversion on to Riders Lane. Whilst this is not a matter for the Local Planning Authority to consider at this stage, it is a note to the applicant to revisit the diversion routing and the Highway Authority welcomes continued engagement with the applicant to ensure traffic management and diversions are suitable agreed in a timely manner.

Highway Trees

The Highway Authority cannot find any additional Arboricultural information on the impact and potential loss/damage to highway trees as part of this application, however this is in part due to the pipeline route not being finalised at this time. In order to progress this matter, the Highway Authority is willing to secure the need for an Arboricultural Method Statement undertaken by a qualified Arboriculturist to be provided, specifically for the impact on highway trees, when the pipeline route is finalised. This should include the following:

- Arboricultural information in line with BS5837:2012 Trees in relation to demolition, design and construction
- Tree survey data indicating any trees growing on HCC land
- Tree constraints plan (TCP) showing how trees have been considered in the design proposal to minimise impact on important trees
- Arboricultural Impact Assessment (AIA) including a clear description of all trees lost or pruned for the proposal
- Tree Protection Plan (TPP) showing how retained trees will be safeguarded through the proposal and construction phase.
- Where county-owned trees have to be removed a CAVAT (Capital Asset Valuation for Amenity Trees) system and workings for this valuation

The Section 106 legal agreement will secure the above and the applicant will need to agree that no trees will be removed/pruned/cut until a CAVAT assessment has been agreed with the Highway Authority and the applicant will pay any mitigation costing should any highway trees need to be felled. A commitment to pay any required CAVAT payments must be secured within the S106 agreement. The Highway Authority welcome engagement throughout the design process to determine tree ownership and requirements for any tree works. No works can be undertaken to any highway tree without the required method statement and agreement from the Highway Authority.

Recommendation

The Highway Authority is satisfied that the Framework CTMP covers the measures outlined in the previous response and therefore is satisfied that through continued dialogue with the applicant, and securing the CTMP through planning the impact of the pipeline construction can be minimised and managed appropriately. Having regard to the above the Highway

Authority raise no objection to the application subject to the following conditions and Section 106 obligations;

Conditions

- Provision of a full CTMP prior to commencement of any phase of the pipeline
- Provide a full phasing plan prior to the commencement on site
- Prior to commencement of any phase for the proposed cable location details and construction methods to be submitted to the planning authority for approval in consultation with the Highway Authority. This should include provision of the following:
 - a) Proposed pipe location and the location of any supporting infrastructure
 - b) Proposed construction methodology
 - c) Proposed reinstatement
 - d) Details of any impacts on existing services or highway infrastructureThe above details should be submitted along side the proposed traffic management construction measures as set out below. On Completion of the works 'as built' drawings should be provided to the Highway Authority.
- Prior to any phase being commenced, details of traffic management and construction measures to include but not be limited to;
 - (a) Vehicular, pedestrian and cyclist diversion plans
 - (b) Details of type of traffic management
 - (c) Details of highway reinstatement
 - (d) Construction detail

Obligations

- Commitment to pay to the Highway Authority any required CAVAT payment prior to the loss of any highway trees
- For the provision of Arboricultural Method Statements prior to the commencement of any phase of works on the highway that impact highway trees.
- No pipeline works can start on site until such time as the Northern Access and Southern Access as secured within the reservoir application have been built to Hampshire County Council's satisfaction through application APP/20/00990
- Prior to any phase being commenced a Full Travel Plan to be provided to the Highway Authority to agree. The measures contained within should be based on the Framework Travel Plan submitted with the reservoir application including:
 - (a) Minibus travel for staff to pipeline from compound in the reservoir site
 - (b) Collective travel from hotel(s) should these be provided
 - (c) Sustainable transport incentives for local staff
 - (d) Action plan to reduce reliance on private car use
 - (e) Travel Plan Bond
- Payment of the £1500 travel plan approval and £3000 per annum monitoring fees unless already complied with under application APP/20/00990.