

Topic	Summary of Public Comment	Applicant Response
Tunnelling	Consider that whole pipeline should be tunnelled. The introduction of micro-tunnelling is welcome but the distance between drive shafts and recovery shafts should be increased thereby reducing the overall number of shafts and less disruption to the people of Leigh Park on the surface. A far less intrusive option for Leigh Park would be to employ drives from Shaft 8 (Staunton Country Park) only, all the way to the Bedhampton works; spoil from the tunnels would be transported over a short section of Middle Park Way to the Petersfield Road dual carriageway and away.	Micro-tunnelling would be used along half (2.5km) of the total route, to build a concrete tunnel for each pipe to be installed in, with the tunnels constructed next to each other, section by section, without the need to dig a trench for the pipes to go in. This approach allows a more direct route to be taken. Some sections of the pipelines, going via open green spaces, would be installed using the ‘open cut’ method, with both pipes put in the same trench. In engineering terms, open-cut is the most cost-effective way to install pipework in open land, i.e. areas without buried services, rivers, or road crossings. It also allows a section of pipeline to be installed at a time to most effectively mitigate the impacts on the community, such as the schools and Rugby Club adjacent to the scheme at Hooks Farm Way Playing Fields. At the diameters being installed for this scheme, this method is technically capable of reaching lengths of circa 500m in one go, hence the need for multiple shafts along the route. Given the multiple shafts in this method of construction, it is typical to transition to open-cut where obstacles and obstructions (roads, rivers, etc.) are not in the way. A segmental tunnelling machine can tunnel large distances (up to 10km and beyond) in one go. This type of tunnelling is vastly more expensive (in the regions of 3-4 multiples) and significantly more complex. It is therefore only utilised for larger diameters and distances, when pipe jacking is not suitable. The CTMP and delivery instructions outline the routes construction traffic will use, to avoid Leigh Park, where possible, and residential roads.
Trees	Concern about the environmental impact, including questioning how many trees would need to be felled. The Tree Root Protective Matting shown around veteran trees at Shaft 2 is inadequate to withstand the indeterminate weight of six containers and other heavy tunnelling ancillary equipment; these tree roots must be protected by rigid steel plates. The Middle Park Way culvert expansion requires the removal of eight trees for site access and apparently just to clear some trees. No mitigation for this damage is given in the documents that I can find and no replanting arranged with at the site or nearby. There are plenty of places in the same location where trees can be planted to mitigate the damage. Additional planting can be made to ensure that wildlife have trees to live in and for the bat population to roam.	There is no loss of ancient woodland or veteran trees associated with the pipeline route and loss of all other trees has been minimised as far as possible. All works and tree losses are indicated in the planning drawings. 65 trees are identified for removal, most of the tree loss is moderate to low quality specimens. No BS Category A trees are proposed for removal to facilitate the Scheme. The tree loss is minimal in scale compared with the size of the Scheme. 19 trees have been identified for translocation (see Appendix A9.18 Pipeline A9.18 Pipeline Arboricultural Impact Assessment). The proposal includes significant tree planting to mitigate the loss of trees (see submitted Landscape Reinstatement Plans), and the revised pipeline will achieve minimum 10% biodiversity net gain’ by the creation or enhancement of affected area habitat type, this will be controlled through relevant planning conditions. Where ground protection matting is specified to protect tree roots and to minimise ground compaction within RPAs, notably in the root zone area of the veteran tree T083, this shall be of a sufficient specification to withstand the loading of the plant without compacting the underlying soils. The planning application proposes approximately 24 trees to be planted at Middle Park Way culvert location. LANDSCAPE REINSTATEMENT PLAN SHEET 9 (HTR-ATK-PL-XX-DR-L-0009 P03).
Ecology	Pipeline Ecological Management and Monitoring Plan states that additional off-site compensatory areas will be needed to provide a 10% net gain in biodiversity for the pipeline route. Have sites for this been determined? Concern about the loss of wetland habitat at reservoir site. Bedhampton layout drawing shows a potential additional parking area on open space to the west of Meyrick Road. This is located on a reptile mitigation area for a previous nearby housing development, which was controlled by planning conditions, and to which reptiles were relocated. What additional mitigation is proposed?	The EIA identifies that impacts to various protected and notable species can be avoided and or mitigated with appropriate care, and post development habitat compensation can serve to maintain and enhance biodiverse habitats. The habitat losses are predominantly temporary and landscape and habitats will be reinstated following construction. The provision of Biodiversity Net Gain (BNG) is an opportunity to deliver a real gain across the scheme area. BNG is a post-permission matter, full details of exactly how any BNG is to be delivered will come with a pre-commencement Biodiversity Gain Plan. Portsmouth Water is looking at it's own land to provide the off-site compensatory areas required. As part of the wider reservoir landscape management plan, amendments are proposed for the mitigation for Wet Grassland and Rush Pasture. The total amount committed to within the approved 2020 scheme remains unchanged but approximately 50% is proposed to be located north east of the reservoir within the wetlands area, whilst the other 50% will remain in the original location to the south west of the reservoir. All pipework external to the reservoir storage area will be fully buried and the ground above reinstated in line with the landscape and masterplan proposals. This area of land at Bedhampton will not be used as a parking area and revised plans will confirm this change.

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Water Quality	Has the environmental impact of (Polyaluminium Chloride) PAC dosing at Bedhampton springs been assessed? Do the Farlington pipe(s) washouts discharge directly, or via surface water sewers, to the Hermitage Stream, Langstone Harbour or Hilsa Creek? Washout infrastructure is not shown on the dual pipeline layout plans above the long-sections. For example; Drg.P7 for shaft W7, Drg.P4 shaft W4 and shaft W1. This application is for full permission, the detail for the location of all the washout infrastructure should be shown on these drawings. how is the washout operated? Is it an overland flow across the SINC grassland? Have the LPA & EA been provided with the adequate information to assess the impact of the washouts? '- Details on the likely frequency of wash out operation? - Likely volume of water that could be discharged? - Any potential environmental impacts of their operation? - Will there be a sweetening flow maintained in the pipelines at all times? (as Southern Water propose for their pipelines)	PAC would be dosed into reservoir water at Bedhampton via the transfer pipeline to Farlington WTW. This pipe will normally transfer spring water to Farlington and only transfer reservoir water when required to supplement spring water flows. The pumped reservoir water velocity should be sufficient to fluidise the PAC, however if any PAC does remain and enter the spring water, this will be removed on the filters at Farlington WTW. There is no routine flushing proposed for this pipeline. Washouts have been assessed within the Revised Environmental Statement Chapter 15 - Water Environment. Eight washout valves are included within the pipeline design. These are located at the run to waste, connection pipeline in Bedhampton PS, Shaft 1, Shaft 4, the emergency discharge chamber, Shaft 7, Section P9 and Section P10. The valves (besides the washout valves in Section P10) would either discharge to the adjacent watercourse: - via connection to an existing surface water drainage system, which in turn would outfall through an existing headwall structure; - via an overland pipe and pumping arrangement that will dewater the shaft; or - in the case of the washout valve at the emergency discharge chamber, via the proposed spillway structure. The washout valve in Section P10 will be pumped into the reservoir. There is an expected washout frequency of a 6 monthly testing / exercising of the emergency discharge valves and 12 monthly 'scouring' of the pipeline. The emergency discharge flows into study section 4, directly upstream of the confluence between Hermitage Stream and Riders Lane Stream, and study section 5 (Hermitage Stream – between confluence with Riders Lane Stream and nominal tidal limit south of Meyrick Road). Sediment in washout water is anticipated to be negligible given the water draw-off from the reservoir is at a higher level and each washout valve will effectively be catch pits or being pumped at a high level. During commissioning of the pumping station maximum flow is expected to be 530l/s over ~6 hours. During operation up to max discharge is expected to be 300l/s over ~1hour, once a year. There will be a sweetening flow maintained in the pipelines. The operation of sweetening flows will avoid stagnation of water and thus poor water quality.
Source Protection Zones	Concern over impact of development on Source Protection Zones.	The construction of a new shaft and pipeline within the vicinity of Bedhampton Springs presents a potential risk to water quality, water resources and biodiversity. The Portsmouth Water Catchment & Environment Team have been working alongside Ward and Burke reviewing, commenting and influencing the design and construction of the proposed scheme, to mitigate against environmental impacts. The Revised Environment Statement Chapter 15 - Water Environment, provides a detailed description of the geology, hydrology and hydrogeology of the shaft and pipeline route. It provides information on the sensitivity of the location, potential impacts and proposed mitigation measures. Portsmouth Water has worked alongside Ward and Burke in the production of the Construction Environmental Management Plan to ensure that the required protective measures are put in place to safeguard groundwater quality, for public supply during the construction phase of the pipeline. Submission of Pollution Management and mitigation Plans and Drainage Management Plans prior to commencement of each phase will be a condition of any planning permission.
Air valves	What information has been provided to the LPA on whether there could be earthy smells generated at the air valve locations? Will the operation of the air valves in shafts be audible at adjacent residential properties?	Ward & Burke would not anticipate "earth smells" being detectable at air valve locations. Air valves will be covered within locked chambers so should not be be audible to surrounding properties. Operation will be very infrequent.
Reservoir Inlet pipe	What extra drainage provision will be made where the inlet pipe passes through the cut off wall needed, and where it intersects the existing spring line? - will the inlet pipe be visible in the bottom of the reservoir during drawdown? - Have the visual & safety impacts of the exposed inlet pipe been fully assessed?	The detail of pipe crossing the embankment core will be developed during the detailed design stage and will be fully sealed if it passes through the core. No additional drainage is envisaged. The pipeline installed within the reservoir will not be visible within the normal operating range. H&S impacts have been assessed.
Impact on character and appearance of reservoir site - Conservation Area	The design quality of the building will be important given its open setting. It should not just be a standard green utility infrastructure kiosk. The applicant currently describes the building as an 'above ground kiosk'. It new building must be designed in such a way as to be in keeping with the rural and historic parkland setting, landscaping to screen the structure will be important.	The building design will be developed during the detailed design stage with architectural input to reflect the rural and parkland setting and design of the Control House. Landscape screening of the structure will be included in the design.

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Impact on Schools and Rugby Club (Hooks Farm Way open space)	Concerns over noise and disruption to St Thomas More's School and Havant Rugby Club.	Significant engagement has been undertaken with the school and Rugby club. The following commitments have been incorporated into the Scheme to help mitigate and compensate for the disruption during construction: • The more intrusive P2 open cut works have been moved to the Rugby off season (which corresponds to the school summer holidays). The area will be reinstated before the subsequent playing season and available for training use (this is only possible with 'open cut' method). • Use of the 3 x rugby pitches will not be impacted by the works regardless of installation program. Additionally, by following the boundaries of the playing fields, the overall "land take" of the works on the playing fields is reduced, as the pipeline route follows the haul road. • Noise levels and monitoring will be agreed prior to the works commencing. These levels will be set in the project's noise and vibration monitoring plan, monitored, and adhered to during the works. • Noise barriers (both fixed to the hoarding and mobile around the works) will be utilised during construction near St. Thomas Moore's School and Bidbury School, to eliminate the line-of-site between noise source and schools where possible. • Ward & Burke will be employing best practice dust suppression techniques for the works and will periodically review and improve dust suppression techniques as required. • An agreement has been reached with HBC to reinstate 'pitch 4' as a 60m x 35m pitch. This corresponds to the maximum size for U10 training and matches. It will also be reinstated with goal posts (which are currently not installed) to allow training use by other age grades. This will be reinstated by Havant Borough Council before the works commence. • Support will be offered to the rugby club to cover justifiable proportionate associated expenses incurred as a result of the works (such as additional bookings of the AFG astro-turf pitch or evidenced lost earnings) during the period. • Collaboration with HBC is ongoing to locate alternative local playing areas if deemed required. Currently a "pitch strategy" for the HBC area is being developed by the council and will be shared with the project team. • A specialist sports turf contractor/agronomist will advise and produce a scheme of works for the reinstatement of the playing field areas affected.
Residential amenity	A small number of residential properties will be extremely adversely impacted by noise and general disturbance for up to 2 years. The applicant should be encouraged to offer some form of compensation. Working hours should be agreed before application is determined. Overland pipeline will be an eyesore	Significant noise effects are predicted at 69 receptors for the construction of the pipeline corridor. These will be minimised with temporary acoustic screens, acoustic shrouds, implementation of best practicable means and through good communication. The Noise and Vibration Management Plan submitted with the application has been updated to provide further detail. A Section 61 Noise Consent will be sought with the Local Authority to agree appropriate mitigation measures. A Section 61 application includes: - Details of the works to be completed; - The method by which the works will be completed; - proposed process to minimise noise resulting from the works (mitigation); - Working hours. There will be a planning condition which will ensure that the developer offers noise insulation or the reasonable cost thereof to owners, where applied for by owners or occupiers, if agreed noise levels are exceeded. The scheme shall include provisions for non-residential buildings where the occupants are likely to be particularly sensitive to noise (including educational establishments), subject to individual consideration by the developer upon application by the affected party.
Impact on neighbour amenity - Stockheath Lane (Shaft 4)	The proposed access to Stockheath Lane is poorly sited and impacts last for over 2 years - alternative location suggested to south which would have less impact on nearby residents. Unnecessary loss of on-street parking in Stockheath Lane made necessary by the location of this access, the routing of outgoing HGV's to turn north for Stockheath Road, Riders Lane or Blendworth Crescent and objects to the lack of identified parking facilities for workers at Shaft 4. Noise and disturbance of HGV's and other vehicles slowing down, braking, accelerating and changing gear immediately outside their windows and the headlights of vehicles emerging from the access for at least part of the year will be shining directly into their living rooms. Move haul road south towards the end of houses on Stockheath Lane, nearer to the school.	Ward & Burke would not anticipate "earth smells" being detectable at air valve locations. Air valves will be covered within locked chambers so should not be audible to surrounding properties. Operation will be very infrequent.

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Highways	Traffic disruption of closures in Leigh Park - especially around shaft locations	The new pipelines route has been devised to minimise disruption, especially in terms of full road closures and impact on local schools, as much as possible. The previous construction method would have significantly greater impact in terms of traffic disruption as it was based on an 'open cut' trench installation method. This approach that would have required rolling roadblocks on multiple different key roads within the local area, and the increase in pipeline capacity (the purpose for the revised scheme) would have generated a greater number of vehicles using the previous construction methodology. We are also working closely with Hampshire County Council, as the local highways authority, to agree the Construction Traffic Management Plan for our work. The range of measures to minimise any impact on local communities is yet to be finalised, but are likely to include avoiding school drop-off and pick-up times where possible, and a limit to the average number of HGV movements per day. The plan will contain information on vehicle movements and the routes that construction traffic will be permitted to take in the area. This will be independently reviewed by the local council when finalised and the permitted number of vehicle movements along each route will be agreed and enforced as part of the planning conditions for the reservoir pipelines scheme. A lane closure has been opted for where possible to allow traffic to continue to use the road, and a short road closure where necessary to ensure safe and unobstructed access and egress to the site, preventing congestion on a residential road. An alternative route will be provided for road users. Traffic management will be used to ensure safe traffic movement through the lane closure. Shaft 5 – Riders Lane - A road closure will be in place on Riders Lane to allow access to Shaft 5 site compound for around 19 months. The area of closure is small, posing no direct obstruction to properties or driveways. A short diversion will be used, still allowing residents to enter properties in this area. Alternative parking is available on surrounding residential roads, as demonstrated in the parking survey. Shaft 6 – Dunsbury Way - There will be a lane closure on the western side of Dunsbury Way, lasting around 11 months. Shaft 7 – High Lawn Way - On High Lawn Way there will be an access that requires the partial closure of a residential loop to allow access to Shaft 7 site compound for around 23 months. The area of closure is small, only affecting numbers 77, 79, 81 and 83 High Lawn Way. Alternative parking is available on surrounding residential roads, as demonstrated in the parking survey, and access will still be possible to these properties on foot. Culverts – (Purbrook Way, Dunsbury Way, Middle Park Way) - There will be a lane closure on each side of the road, lasting around 5 weeks per side. By timing works for each side of culvert upgrade to be undertaken separately, a full road closure will only be required for a two week period, and an appropriate diversion has been provided.
Highways/Public Rights of Way	Phasing plan of PRoW needs to be reconsidered - very long closures in some areas	A meeting was held with Ramblers and routes have been adjusted in line with comments and discussions. The works have been phased in manner to try and reduce the overall duration of each diversion.
Impact on highways-travel plan	Commends the applicant for looking into the opportunities to reduce car use by workers but given how unlikely it is to use public transport then no need to submit a travel plan. Even with the travel plan almost all, if not all, workers will travel to the various sites individually by private car irrespective of the suggested incentives.	The level of parking at each compound is the subject of discussion with the Local Highway Authority. Careful management of parking at the compounds is being supplemented by the use of the reservoir site as a hub for car sharing where appropriate. The contractor will also provide suitable welfare facilities at each worksite location removing the need for numerous trips during the working day. Public transport for those working in the office should be more attainable. We are also aiming to hire as locally as possible, so public transport or active travel might be more suited to these workers. The workforce number is also small, with only 65 workers at peak pipeline construction, and as a result an influx of vehicles is not expected as a result of the pipeline construction. This is compared to 125 workers in the original pipeline scheme. The Travel Plan is a live document, and will be amended and updated as the project progresses to ensure alternative means of transport are used where possible.
Maintenance	If most of the shafts are to be backfilled how will future access be achieved for maintenance of the tunnel / pipeline?	Access is being provided where elements require maintenance within the design life of the project. Shaft walls will be left in place after works so that re-excavation of shafts could be completed if required in future, although this is not anticipated to be required.

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Southern Water	1. The use of Havant Thicket by Southern Water for Water recycling is unacceptable it should be for spring water only, as outlined in the original application. 2. This application will make it easier for Southern Water to push through their recycled water scheme. Assurance is needed that the second pipe is for Portsmouth Water use only and will only be used for spring water. 3. No need for second pipeline	The proposed two pipelines would be used by Portsmouth Water to pump spring water to the reservoir and draw it out when needed, with one pipe to transport water to the reservoir, and another to allow it to be taken out again. This would give us greater flexibility to respond to more frequent, longer droughts, allowing us to add and remove water from the reservoir at the same time. It would also mean the scheme could continue to operate if maintenance was required on one of the pipelines. A completely separate planning application (for a Development Consent Order) needs to be submitted by Southern Water for the Hampshire Water Transfer and Water Recycling Project. Only if Southern Water received consent for the water recycling scheme, could recycled water be transported within the pipelines. A combined approach simply means that, if proposals for water recycling are agreed in the future, residents won't need to experience additional disruption. It would also reduce the environmental impact and it's estimated that taking this futureproofing approach could deliver significant cost savings, compared to installing separate additional new infrastructure at a later stage. This would provide better value for money for Southern Water customers, who are ultimately paying for the Havant Thicket Reservoir scheme - both in terms of the approved project which is in progress and the water recycling proposals if they go ahead.
Benefits	Portsmouth Water needs to fund a major scheme or schemes to benefit the community of Leigh Park. The form these schemes should take should be chosen by, and agreed with, community groups in Leigh Park. Possibilities might be: upgrading footpaths, upgrading play parks and/or establishing new ones, or even funding the annual Leigh Park Firework Display Fund a direct and safe link between Riders Lane Stream to Staunton Country Park and for other areas with along closures.	The Havant Thicket Reservoir scheme, including the new pipelines it involves, will deliver a host of benefits for the environment, customers and local communities. This includes helping to secure future water supplies for Hampshire, while protecting two of the county's iconic chalk-based rivers, the Test and Itchen. The scheme will also create a new green leisure hub for local people, in particular, to enjoy, including a visitor centre and a new 5km network of paths for pedestrians, cyclists and horse-riders. As a company, we also want to maximise the economic benefits of the reservoir project for the local area. For example, by using local suppliers as far as possible, and in terms of providing much needed opportunities for training, skills development and employment. We have developed our plans for Havant Thicket Reservoir over the course of many years, working closely with a wide range of community representatives via our Stakeholder Advisory Group, which was first established back in 2004. This input from contacts, such as local councillors and community groups, has been vital in shaping what we want to deliver and how we will do this, providing value for Southern Water drinking water customers who are ultimately funding the reservoir scheme through their bills. This includes minimising any impact or inconvenience for local residents and businesses during the construction of the reservoir and its associated pipelines.
Support	Support installing two pipelines now to avoid further disruption.	