

HAVE YOUR SAY ON HAVANT THICKET RESERVOIR

Consultation brochure 2020



WELCOME

Welcome to our consultation on Portsmouth Water's plans to build Havant Thicket Reservoir and thank you for your time and interest.

We're delighted to be sharing our latest plans for this vital strategic water resource for the South East, which we're developing in partnership with Southern Water. It's also a great opportunity for us to create a new community hub and green leisure space in our local communities, including a wetland conservation area for wildlife.

We've been working hard to review and update our plans and we've made some changes, so we'd really like to hear your views before we submit a planning application later this year. We've been reviewing our route for a road to get to and from the reservoir and the route of the pipeline which will fill and empty it.

We've thought carefully about going ahead with this consultation in the current coronavirus situation but after talking to a number of people we decided it was important to continue our work to secure your water supplies, as well as give communities

something to look forward to when life returns to 'normal' and we are out and about again.

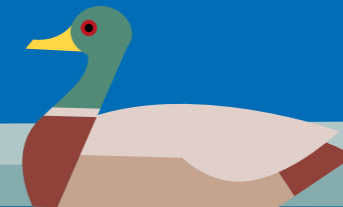
So, to make it easier we're sharing lots of information online where you can comment, ask questions and share feedback, as well as holding live Q&A sessions and printing this brochure and feedback forms for people who are not online.

I really look forward to hearing from you.



Bob Taylor

Chief Executive Officer,
Portsmouth Water



A NEW RESERVOIR IN HAMPSHIRE

Portsmouth Water is planning to create a new reservoir in Hampshire to secure reliable drinking water supplies for decades to come.

The reservoir would be the first to be built in the South East since the 1970s and be able to supply about 160,000 people. It will be built on our grassland site next to Havant Thicket, which sits between Rowlands Castle, Leigh Park and Staunton Country Park, to the north of Havant.

As well as providing vital supplies for the water-stressed South East, the reservoir will create an exciting new leisure facility and wildlife conservation area for our local communities. It is being developed in partnership with Southern Water.

We've been working closely with the local community and representatives from environmental and other groups since 2004 to develop our proposals, so our plans reflect the views of those of you who live near the reservoir or are interested in its creation.



During the past year we've been carrying out more studies, listening to your thoughts about our plans and changing our proposals to take account of changes in the area over the last 12 years.

We've updated the plans and would now really like to hear your thoughts on our latest proposals, before we submit a planning application later this year.

HAVE YOUR SAY

We're holding a public consultation between **Monday 11 May, and Monday 8 June, 2020**. During this time, you'll be able to find out more and share feedback:

- By a dedicated consultation area on our website: portsmouthwater.co.uk/havant-thicket-reservoir
- A series of **webinars** with the project team
- Facebook: [@havantreservoir](https://www.facebook.com/havantreservoir)
- Phone: **02392 449084** (leave a message)
- Email: head.office@portsmouthwater.co.uk
- Write to: **Portsmouth Water, PO Box 99, West Street, Havant, Hampshire, PO9 1LG**

We'll review and consider all the feedback we receive in detail and use it to inform the planning application we plan to submit later this year.

This booklet shares all our proposals, but you can also visit our website at portsmouthwater.co.uk/havant-thicket-reservoir to hear interviews with the project team, see how the reservoir may look and sign up for a webinar.



2004

- Reservoir Stakeholder Group established, including local councillors and community and environmental organisations



2008

- Public consultation and community workshops



2019

- Public drop-in exhibitions, workshops and surveys with local communities



2020

- **Public consultation**
- Planning application submitted

WHY WE NEED THE RESERVOIR

The South East is under 'serious water stress' and water companies are being asked to take less water from some of their sources, particularly rivers, to keep them healthy and protect wildlife.

At the same time, we need to find more water to cater for the effects of climate change and supply a growing population.

Southern Water, in particular, needs to find new water resources to supply its customers and replace water it takes from two internationally protected chalk streams, the rivers Test and Itchen in Hampshire.

We're in a slightly better position, because we have underground springs which provide plentiful, clean water, so our supply area is only under 'moderate water stress'.


In winter much of this spring water flows out to sea because it's more than we need to supply our customers, so together we can make better use of some of it by capturing it and storing it in the reservoir until it's needed. We can then use this water to supply our customers and share the surplus with Southern Water's customers in west Hampshire.

We already share up to 30 million litres of water each day with Southern Water. By 2029 when the reservoir is built and filled, we'd be able to supply another 30 million litres from our other water sources.

The need for the reservoir was identified in a regional plan for the South East by the Water Resources in the South East group – which is made up of six water companies and regulators like the Environment Agency. It's one of eight 'big ticket' schemes which could deliver more than 15 million litres of water each day.

...we need to find more water to cater for the effects of climate change and supply a growing population.





In winter much of this spring water flows out to sea because it's more than we need to supply our customers, so together we can make better use of some of it by capturing it...

PUTTING THE ENVIRONMENT AT THE HEART OF OUR PLANS

Our approach to designing the reservoir has been led by consideration for the environment and the community – how we can support, improve and mitigate activities which might affect them.

At the heart of our design is our care for and consideration of the environment.

Our masterplan takes all the environmental and community factors we explore throughout this booklet into account.

This means we've considered the environment as we've designed every part of the reservoir, the access road and pipeline and we'll continue to do so.

It has included taking into account the site's sensitive rural location next to Warren Park, Leigh Park and Rowlands Castle and the South Downs National Park.

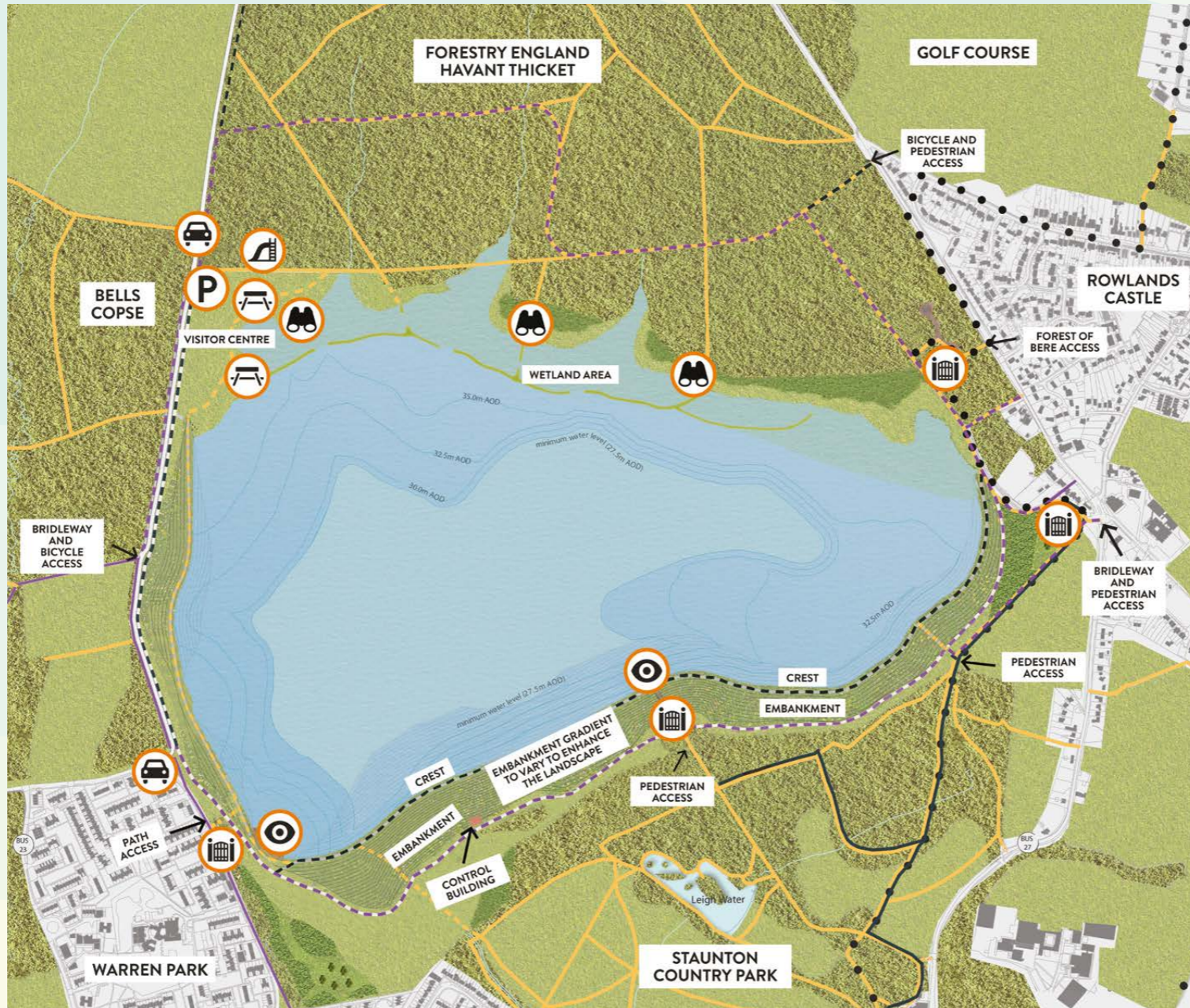
We're also working closely with Forestry England, who own and look after the neighbouring Havant Thicket woodland, and Staunton Country Park (which is owned and run by Hampshire County Council) to see how we can manage the sites together in the future.

This approach, along with lots of feedback from local communities and environment organisations, has helped us choose the facilities we're proposing:

- A wetland habitat to support threatened bird species and provide areas for endangered bat species to forage for food
- A visitor centre with a café and facilities for communities and schools
- A network of trails and paths for walking, cycling and horse riding, linking to others in the wider area
- New woodland, hedgerows and wildflower planting
- A landscaped parking area for vehicles and bicycles

You can find out much more about these over the next pages and we'd love to hear if you think we've got it right.





Key

- Path - pedestrian use (existing)
- - - Path - pedestrian use (proposed)
- Bridleway - pedestrian, cycle and equestrian use (existing)
- - - Bridleway - pedestrian, cycle and equestrian use (proposed)
- - - Path - pedestrian and cycle use (proposed)
- ● ● Long distance path
- Bird watching
- Children's playground
- Picnic area
- Viewing point
- Car Park
- Possible vehicle access point
- Gateway feature
- Existing woodland
- New woodland

A NEW LEISURE FACILITY AND WILDLIFE CONSERVATION AREA ON YOUR DOORSTEP

The reservoir gives us a great opportunity to create an exciting new leisure facility and wildlife conservation area for local communities.

We want to create a place for people of all ages to stay active and healthy, learn more about water and wildlife and get together as a community.

We've been working closely with you to hear your views as we've developed our proposals and based on this, we've included a wetland habitat; a visitor centre with café and educational areas; picnic and play areas; a network of trails for walking, cycling and horse riding; and car parking. We will of course be encouraging people to leave their cars at home and visit the site by public transport, bicycle or foot.

A wetland for wildlife

Wetlands are a vital habitat for wildlife, but they are coming under increasing pressure from pollution and droughts. We want to create a sustainable wetland along the northern shore of the reservoir to offer a new home for a wide range of water plants, wetland birds and other wildlife.

We've been working closely with a dedicated wetland group, including the Environment Agency, Natural England, Hampshire County Council and the Hampshire and Isle of Wight Wildlife Trust, to develop our plans for the wetland, so we can create the best habitat for wildlife and experience for visitors. This includes building a clay structure to make sure water can stay in the wetland all year-round, even in a dry summer, and protect it from droughts, which are likely to happen more often because of climate change.

The clay divider would hold water inside the wetland area and keep it separate from the main body of the reservoir, with low points where the water can move in and out when the reservoir levels are normal.

We plan to split the wetland into four areas to allow for a wider variety of plants and wildlife and to help us manage and maintain the different sections. There will also be islands which will appear when the water is lower to provide temporary nesting sites for birds.

And we'll create another wetland area connected to the main reservoir water, with shallow pools where the water levels will go up and down, to create more temporary homes for wildlife.

Let us know what you think about our plans to include this wetland.

The Visitor Centre

A visitor centre, car park, play and picnic areas and bird hide will be grouped together to create an attractive and accessible hub for local communities. The visitor centre will have a café, shop, and education and community space and will be open to everyone.

Our plan is to locate the centre on the waterfront in the north western corner of the reservoir site, with access to the car park and the wetland. It'll be surrounded by nature, with direct views across the wetland and reservoir and designed so we can adapt it for different uses.

We plan to include:

- A reception area with information about water, wildlife and the activities for visitors
- A large open plan café with large windows to give views over the wetland, with seating for up to 50 people
- A waterside terrace, with wildlife viewing facilities and space for additional visitors
- A small space where locally grown food, art and other produce could be sold.
- A flexible education and community space, with a separate outdoor area, cloakroom, toilets and storage
- A staff area with office, break room, store and toilet.

Further detail on the scale and nature of the centre will be developed for the planning application, with a more detailed design emerging once outline planning permission has been granted.

**It'll be surrounded by nature,
with direct views across the wetland
and reservoir and designed so we
can adapt it for different uses.**



The visitor centre is being designed with a rural character to fit in with the natural environment and will be made with natural materials such as wood. It'll be designed to serve a wide range of people in a variety of ways.



Accessible users



Older users



Bird watchers



Families



Cyclists



School groups



Runners



Walkers



Dog walkers

Play areas, picnic sites and trails

The visitor centre will be set in a landscaped area, with parking, play areas and picnic sites connecting visitors with the wetland and surrounding woodland.

A wetland boardwalk would run from outside the visitor centre to a bird hide among the reeds next to the water, encouraging visitors to get closer to the wildlife on the site and learn more about it.

A network of natural trails will lead from the centre for walkers, joggers, cyclists and horse riders. The plan is to replace the existing bridleway with a 5km circuit around the site with access points for people living nearby.

A shorter 1km trail through the woodland will provide an alternative, for visitors who want to stay closer to the café and car park. Benches, bins, viewing areas and information boards will also be located around the reservoir.

We've been working closely with the local authorities, environmental groups and other companies who manage similar sites to explore ways to create a great place for visitors as well as a peaceful home for wildlife. We've also been talking to local communities, walking groups like the Ramblers and cycling and horse-riding representatives to understand your needs.

We plan to provide parking for nearly 200 cars in the northwest corner of the site next to the visitor centre, with an extra 75 spaces in an occasional overflow car park.

We're often asked if there could be other activities at the reservoir, like fishing, swimming and water sports.

We've considered these carefully and these are our thoughts at the moment:

Fishing: the reservoir water wouldn't be suitable for coarse fishing but we're talking to the Angling Trust to see if other types of fishing would be possible.

Swimming: we don't think it would be safe to allow swimming in a cold, deep and unsupervised reservoir where water can be pumped in or out at short notice.

Water sports: we've talked to many people about water sports, such as sailing and canoeing, and many people think this would change the nature of the reservoir to a much busier place with many more visitors and cars. We're not currently planning to offer use of the reservoir for public water sports at this stage.

Do you think we've got this right? We'd really like to hear your thoughts.



Parking and travel to the reservoir

We plan to provide parking for nearly 200 cars in the northwest corner of the site next to the visitor centre, with an extra 75 spaces in an occasional overflow car park. The car park will also include spaces for staff, disabled visitors and coaches, as well as cycle racks, and nearer the time we'll work out how many electric charging points we'll need.

These numbers are based on the amount of people we expect to drive to the site. They were worked out in a review carried out last year by a company which specialises in public attractions – based on the 'medium' level of activities we plan to offer.

We want the car park to have a natural feel, with native trees and shrubs and paths leading to the woodland. This will also make it easier for wildlife to travel through the car park area.



There will be charges for car parking and these will be set in consultation with Hampshire County Council, to make sure they align with charges at other nearby sites such as Staunton Country Park and Forestry England's Havant Thicket woodland, so the car parks can support each other.

We'll be encouraging as many visitors as possible to leave their cars at home and walk and cycle to the reservoir, as well as make use of local transport like buses and trains. We want to work with the local authorities and travel companies to integrate the reservoir into the local public transport network.

Do you support our plans for parking and travel? Let us know if you have other ideas to share.



GETTING TO AND FROM THE RESERVOIR

We'll need to create a new public road for vehicles to get in and out of the site, both while the reservoir is being built and when it opens to the public.

A fresh look at the options

Options for the access road were last looked at back in 2006-08. Since then the local area has changed so we think it's important to look at all the options again.

There is more development to the south west of the site and there is planning permission for a residential and mixed-use development just to the north of the site (Land East of Horndean).

These and other plans for development in the area mean there are new challenges and opportunities to consider so we've carried out another review of the all the old options and we're continuing to review new ones.

Each option was assessed in terms of the impact on the environment, the engineering and construction and how it fits into the overall project.

Our review has shown there are now two potential access points to the reservoir – from the north and from the south.

The northern access option

A number of routes from the north were considered during the public consultation in 2008 and the preferred one came from the A3(M) Junction 2 (J2) via the B2149. At the time this was supported by a majority of people because it was close to the A3 (M) and avoided residential areas in Warren Park and Rowlands Castle.

From the B2149, 200 metres of new track would be needed through woodland, then the road could join an existing Forestry England track in Havant Thicket to reach the reservoir. There were, and still are, concerns about the impact of more traffic on the B2149.

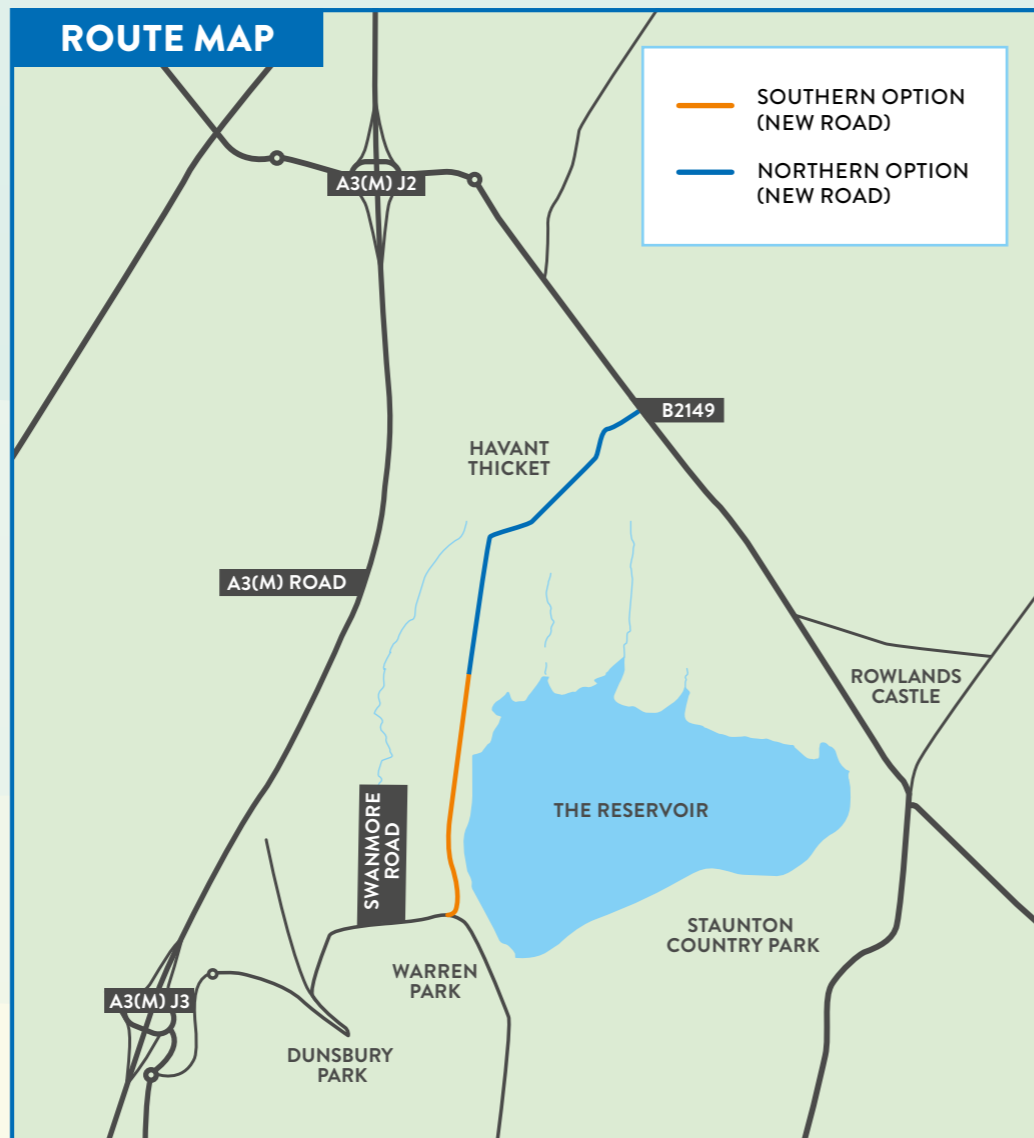
We'll need to create a new public road for vehicles to get in and out of the site...

A southern access option

As we have studied the reservoir site in more detail over the last few months, we've been able to make changes to the design of the embankment, and this has created more space on the south west side of the site. This means there is enough space there now to build the embankment, an access road and a separate path for walkers, cyclists and others. So we could create an access point from the south, either instead of or as well as a northern one.

This access point would come off Swanmore Road and follow a new road on the site along the side of the reservoir and up to the car park and visitor centre.

We're considering what routes may be available for construction vehicles and visitors to reach this access point, while creating as little impact on local roads as possible.



What happens next

We're continuing to develop and assess these two access options and are having on-going conversations with landowners on the routes and the highways authorities to see what is possible.

We think this is an important time to hear your views and those of local councillors, environmental groups and other interested organisations, so please let us know what you think.

We could even consider developing two access points – from the north and the south.

We're continuing to develop and assess these two access options and are having on-going conversations with landowners on the routes and the highways authorities.

This table shows the benefits and drawbacks of the two access points:

NORTHERN ACCESS OPTION - B2149		SOUTHERN ACCESS OPTION - SWANMORE ROAD	
Strengths	Weaknesses	Strengths	Weaknesses
<ul style="list-style-type: none"> Most of this access route would be built on an existing Forestry England track after it leaves the B2149. This would be upgraded and only 200m of new track is needed through woodland. 	<ul style="list-style-type: none"> The route passes through woodland and would result in the loss of, and impact on, ancient woodland, which is designated as part of Idsworth Common and Havant Thicket Sites of Importance for Nature Conservation. This woodland also supports European Protected Species, including dormice and bats. 	<ul style="list-style-type: none"> Using this access route could avoid the loss of, and impact on, some ancient woodland on the northern side. It could also avoid significant impacts on woodland and grassland Sites of Importance for Nature Conservation, deciduous woodland priority habitat, and habitat likely to support important and legally protected species. 	<ul style="list-style-type: none"> We need to work out what routes we could use to get to this access point, trying to have as little traffic impact on local roads as possible.
<ul style="list-style-type: none"> Construction traffic could come off the A3(M) without passing through residential areas. 	<ul style="list-style-type: none"> Construction would take longer, cost more and be more complex as the route is longer and we would need to work in a tighter, more constrained space. 		
<ul style="list-style-type: none"> Existing trees within the woodland would screen the road and add to the experience of visitors using the route, at the same time as minimising impacts on the wider area. 	<ul style="list-style-type: none"> The B2149 junction could impact on the setting of the South Downs National Park. 	<ul style="list-style-type: none"> This access road would be quicker and easier to build, with fewer trees to work around and easier access. Mitigation measures during construction could limit the effects of noise, air and water pollution on Sites of Importance for Nature Conservation and ancient woodland. 	<ul style="list-style-type: none"> The access road could affect the setting and views from Staunton Country Park, although this could be mitigated through our design. For example, thinking carefully about how we shape and position the embankment.
<ul style="list-style-type: none"> The northern access route avoids existing watercourses. 	<ul style="list-style-type: none"> The Forestry England track is currently used by walkers and cyclists, so safe alternatives would need to be provided for them. The route would also affect views and the enjoyment of people visiting neighbouring Havant Thicket woodland. 	<ul style="list-style-type: none"> This route would maintain access to and around Forestry England's woodland at Havant Thicket on the northern side for walkers, joggers, cyclists and horse riders. 	<ul style="list-style-type: none"> Changes may be needed to cross watercourses, such as streams.
	<ul style="list-style-type: none"> Local traffic travelling to the reservoir could come from any direction, not just from the A3. 	<ul style="list-style-type: none"> An access point from the south would make it easier for residents from Leigh Park and Warren Park to visit the reservoir. 	<ul style="list-style-type: none"> This access road could bring visitor traffic through Warren Park and Leigh Park, so we are considering impacts on noise, air quality and safety.
	<ul style="list-style-type: none"> Because the northern access route crosses a sensitive site, with underground tree roots, the foundations for the road wouldn't be as robust as those on the southern side. So, more frequent maintenance would be needed, which could cause disruption. 	<ul style="list-style-type: none"> The southern access road would need less maintenance as the road constructed should last longer. 	

RESERVOIR DESIGN

The reservoir will sit within a valley mostly lined with clay, which acts as a natural seal for water. So, we'll be able to dig and shape the reservoir, using the existing material on the site.

The reservoir will be about one mile (1.6 km) long from east to west and 0.5 miles (0.8 km) wide from north to south and be able to hold about 8.7 billion litres of useable water.

It will fill the majority of the 160-hectare site and be up to 18 metres deep. The water will be contained by a sloping embankment up to 20 metres high, running 3km along all but the northern edge of the reservoir (near Rowlands Castle), where the proposed wetland habitat will be.

The diagram on the next page shows how this would work, with the sloping embankment constructed from excavated soil and clay; grass covering the outer slope; and a rocky or stony surface lining the embankment at the water's edge, to protect it from erosion by waves.

We've been improving the position and design of the embankment so we can avoid the hedges along the bridleway (at the western boundary near Swanmore Road) and reduce the loss of trees on the site, from two wooded areas called Round Wood and The Avenue (which are both designated as ancient woodland).

The reservoir will fill the majority of the 160-hectare site and be up to 18 metres deep.

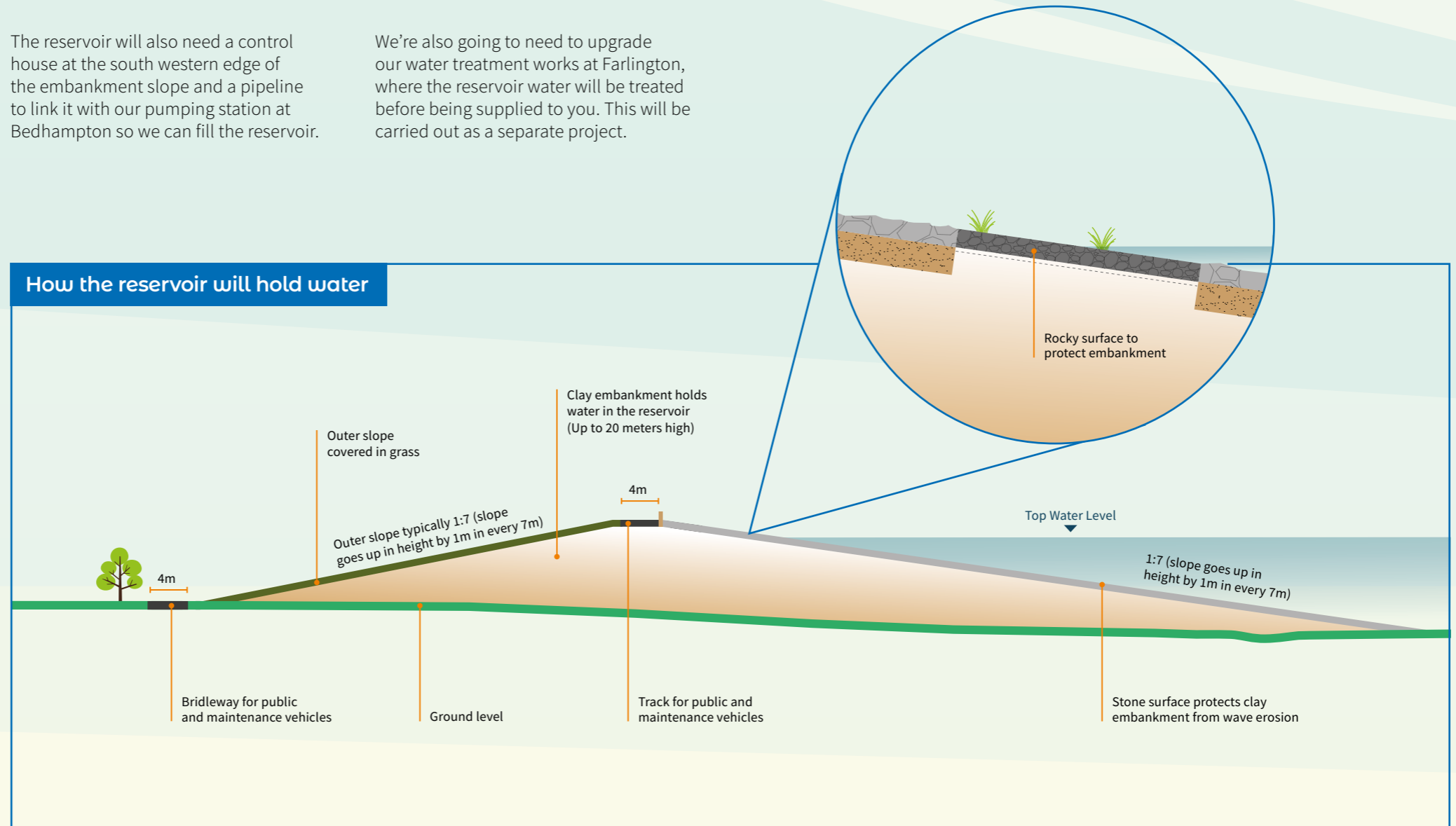
We've also been working on ways to reduce the length of the embankment to reduce construction time and the amount of materials we'd need, while still making sure the reservoir can store as much water as it needs to. We have done this in two ways, by making the south western embankment route slightly straighter; and by changing the end position of the eastern bank to make the whole embankment shorter.

We're also going to explore if it's possible to make parts of the embankment slightly steeper, to reduce the amount of land we need to build the embankment and reduce the number of trees we need to remove. However, we will need to carefully consider if this will affect views from Staunton Country Park.



The reservoir will also need a control house at the south western edge of the embankment slope and a pipeline to link it with our pumping station at Bedhampton so we can fill the reservoir.

We're also going to need to upgrade our water treatment works at Farlington, where the reservoir water will be treated before being supplied to you. This will be carried out as a separate project.



GETTING WATER TO AND FROM THE RESERVOIR

A new pipeline is needed to transfer water from the Bedhampton Springs to fill the reservoir in the winter and draw it off to treat and supply when needed in the summer.

The pipeline could also be used to steadily draw off water into the Hermitage stream in the rare event that we needed to empty the reservoir.

During the 2008 consultation, there was support for a pipeline route that followed the Riders Lane and Hermitage Stream corridors (the orange route on the map).

This would be installed by digging trenches, with short sections of underground pipes to pass under the railway, stream, gas pipes, and electricity and phone cables.

We're now looking in more detail at how we would build along this route and the disruption that might be caused while we do it. We've also taken the opportunity to consider new construction techniques that weren't in common use in 2008.

So, to make sure we choose the right approach, we're looking at our options again in more detail. These include different routes and construction techniques and we're carefully considering each one in relation to:

- The engineering and how difficult it would be to build
- Disruption to the local community and traffic
- The health, safety and wellbeing of the people building the pipeline and maintaining it in the future
- Environmental effects and sustainability
- Overall cost

During the 2008 consultation, there was support for a pipeline route that followed the Riders Lane and Hermitage Stream corridors.

What happens next

We've nearly finished our assessment and you'll be able to see our proposals for the pipeline and let us hear your views on our website at portsmouthwater.reservoirconsultation.uk/engagementhq.com/getting-water-to-and-from-the-reservoir.

Or you can call us on **023 9244 9084** and leave a message on our project answerphone, to ask for information to be posted to you.

LOOKING AFTER THE ENVIRONMENT

The reservoir project will improve existing woodland and create valuable new wetland, woodland and parkland. A grant scheme will also support wildlife across Hampshire and West Sussex.

It will also help protect the River Test and River Itchen in Hampshire. By using the reservoir to supply our own customers, we can share supplies from our other water sources with Southern Water. So, they will be able to reduce the amount of water that they take from these sensitive chalk streams.

Creating the new wetland is a very important part of our plans to support wildlife and birds and create a positive legacy in the environment. (See page 8 for more details).

How we're considering the environment

We want to make sure our plans have a positive impact on the environment overall, however, the work to build the reservoir will change the grassland and woodland which is already there so it's vital we take steps to mitigate this.

We're undertaking an 'Environmental Impact Assessment' to identify the effect our work will have and the ways we can mitigate or compensate for this.

We've agreed our approach to this assessment with the local planning authorities, East Hampshire District Council and Havant Borough Council and we'll be looking at the topics listed in the following table, as well as the total impact of our development in combination with others in the area; and the risks to the reservoir from major disasters, such as a very long drought.

We're in the early stages of this assessment, but it will be included in our planning application in the autumn, which you'll be able to see and comment on.



The following tables show the key areas we'll be looking at, our approach and the steps we could consider:

TOPIC	KEY CONSIDERATIONS	OUR APPROACH	POTENTIAL MITIGATION AND COMPENSATION
Air quality	<ul style="list-style-type: none"> Potential impacts of emissions, dust and traffic on the environment and people in sensitive places such as residential areas during construction. Changes to local traffic with more vehicles travelling to and from the site during construction and when the reservoir is open. 	<ul style="list-style-type: none"> We're looking at existing levels of air pollutants and comparing them to the Government's Air Quality Strategy objectives. We'll assess the effect of changes in traffic on local roads and sensitive places like residential areas, to identify the risk from dust and emissions during construction and the effect on air quality, from changes in traffic once the reservoir opens. 	<ul style="list-style-type: none"> We expect changes in air quality to be temporary, within safe levels, and not significant. We'll develop an Environmental Management Plan, that includes measures to reduce our impact while we're building the reservoir e.g. restricting construction traffic to certain routes and times of day.
People and health	<ul style="list-style-type: none"> Homes, businesses, schools and development land near the reservoir site and along the pipeline could be affected by issues such as noise or changes to views during construction. Visitors to the reservoir, may use local transport. 	<ul style="list-style-type: none"> We're studying the potential impact of the reservoir and its visitors on local communities, alongside our other studies on noise, vibration, water, views and the surrounding landscape. 	<ul style="list-style-type: none"> We'll include measures to protect local communities from things like noise and traffic during construction in our Environmental Management Plan. We'll identify opportunities to improve the health and well-being of local communities, reduce inequality and encourage access to the facilities the site will offer. The reservoir could benefit local communities with job opportunities and better public rights of way for walking, cycling and horse riding. Visitors to the reservoir may also visit local shops and other places of interest.
Biodiversity	<ul style="list-style-type: none"> Building the reservoir will mean the loss of some woodland, including ancient woodland and woodland designated as a Site of Importance for Nature Conservation (SINC). Other habitats, including grassland and watercourses like streams, will be lost. Impacts on notable and protected species such as dormice and bats, including Bechstein's bat, and reptiles from habitat disturbance and loss. We'll also consider any risks of visitors disturbing wildlife when the reservoir opens. 	<ul style="list-style-type: none"> We're continuing to gather information on designated sites and key habitats, from studies and our surveys. These have included surveys for bats, dormice, Great Crested Newts, reptiles, breeding and wintering birds, badgers and invertebrates. A preliminary ecological study of the pipeline route options has already been done. 	<ul style="list-style-type: none"> We're working closely with organisations including local authorities, Natural England, Forestry England, Hampshire County Council and the Environment Agency, to develop a comprehensive ecological mitigation and compensation strategy. This includes planting new woodland, and significantly improving the quality of existing woodland habitats near the reservoir site; mitigation for protected and notable species; the creation of new and good quality habitats (such as the wetland); and the creation of a grant scheme to support other nature conservation projects in Hampshire.
Transport	<ul style="list-style-type: none"> Construction traffic and visitors travelling to and from the reservoir could affect local traffic. Changes to the road network could affect local traffic flow (when considered with increased traffic from new housing developments). Changes to the public rights of way could affect walkers, cyclists and horse riders. 	<ul style="list-style-type: none"> We're undertaking a transport assessment – gathering information on existing traffic at key junctions and using models to predict the impact our proposals may have on local traffic. The number of visitors we're planning for is based on a recent study of similar local attractions. We'll take into account an increase in traffic from new housing planned for the area. We're also reviewing options in the area for other types of travel, such as buses or cycling. 	<ul style="list-style-type: none"> We'll develop an Environmental Management Plan to follow while we're building the reservoir, which could include measures like restricting construction traffic to certain routes and times of day. If we think there'll be an impact from traffic when the reservoir opens to the public, we'll look at traffic calming measures or speed limits. These would be developed with the Local Highway Authority, to make sure they'd fit in with the surrounding area.

TOPIC	KEY CONSIDERATIONS	ASSESSMENT APPROACH	POTENTIAL MITIGATION AND COMPENSATION
<p>Noise and vibration</p>	<ul style="list-style-type: none"> • Sensitive locations like residential areas could be affected by noise and vibration while the reservoir is being built, although the work will be quite a distance away. • A possible increase in traffic, with more vehicles travelling to and from the site during construction and once the reservoir is open, could create more noise. 	<ul style="list-style-type: none"> • We're assessing the potential for noise and vibration during construction. • We're considering existing noise levels and what could cause a change in these: the distances noise could travel and how it would be affected by the land in between, and what is on it. • This assessment will give us a worst-case scenario for the highest levels of noise during the day and at night during construction. 	<ul style="list-style-type: none"> • We'll identify measures to reduce noise, such as limits on working hours, in our Environmental Management Plan. • Most of the construction will take place on the site and will be screened to some extent by the embankments and existing woodlands.
<p>Effects on the climate and vulnerability to climate change</p>	<ul style="list-style-type: none"> • Building the reservoir could increase Green House Gases (GHG) emissions – during construction and when it's being used. • The reservoir's operation could be affected by the changing climate (UK Climate Projections 2018). • Climate change and climate variability present challenges and opportunities. 	<ul style="list-style-type: none"> • We're using information from our design team, environment studies, construction experts and industry standards, to calculate the GHG emissions. • We'll compare these to an average number and show what that means in terms of carbon emissions (CO₂e). • We'll consider how the reservoir might be vulnerable to climate change in any way, for example during a very long drought. We'll draw from the findings of our other assessments like water and biodiversity to do this. 	<ul style="list-style-type: none"> • We'll continue to explore ways to reduce carbon emissions by reducing waste, using low carbon materials, designing for energy efficiency and managing climate vulnerability risks. • Our Environmental Management Plan will also consider ways to reduce the amount of energy we'll use and how it will be generated. • Public access to the visitor centre will be carefully managed and will not be available 24 hours a day.
<p>Landscape and changes in views</p>	<ul style="list-style-type: none"> • Changes to the views from Staunton Country Park (Leigh Park Grade II* registered Historic Park and Garden) and the South Downs National Park, an Area of Outstanding Natural Beauty. • Changes to the views from homes in Warren Park, Leigh Park and Rowlands Castle, public rights of way and open space. 	<ul style="list-style-type: none"> • We'll assess how much the landscape, views from homes in Warren Park, Leigh Park and Rowlands Castle, public rights of way, open space and viewpoints agreed with the local authority will be affected. • We'll use computerised tools to visualise the changes and study published 'Landscape Character Assessments'. 	<ul style="list-style-type: none"> • We're already considering how we can limit landscape and visual impacts as we design the reservoir, its location and the materials we'll use to build it.
<p>Historic environment</p>	<ul style="list-style-type: none"> • Building the reservoir will result in the removal of existing woodland, 'The Avenue', Round Wood and Middle Clearing; and impact on the Sir George Staunton Conservation Area and the Grade II* registered Leigh Park. • The reservoir may result in changes to the setting of historic structures and views from the Grade II* registered Leigh Park. • There could be buried archaeological remains on the reservoir site and along the pipeline corridor. 	<ul style="list-style-type: none"> • We're identifying all designated and non-designated heritage sites in and around the reservoir site. • We're gathering information from organisations, such as Historic England, to assess any impacts on the historic landscape and the potential for any archaeological remains to be found. 	<ul style="list-style-type: none"> • We'll undertake archaeological surveys, evaluation and recording during construction, when they are needed, to mitigate the impact on archaeological remains which may be found.

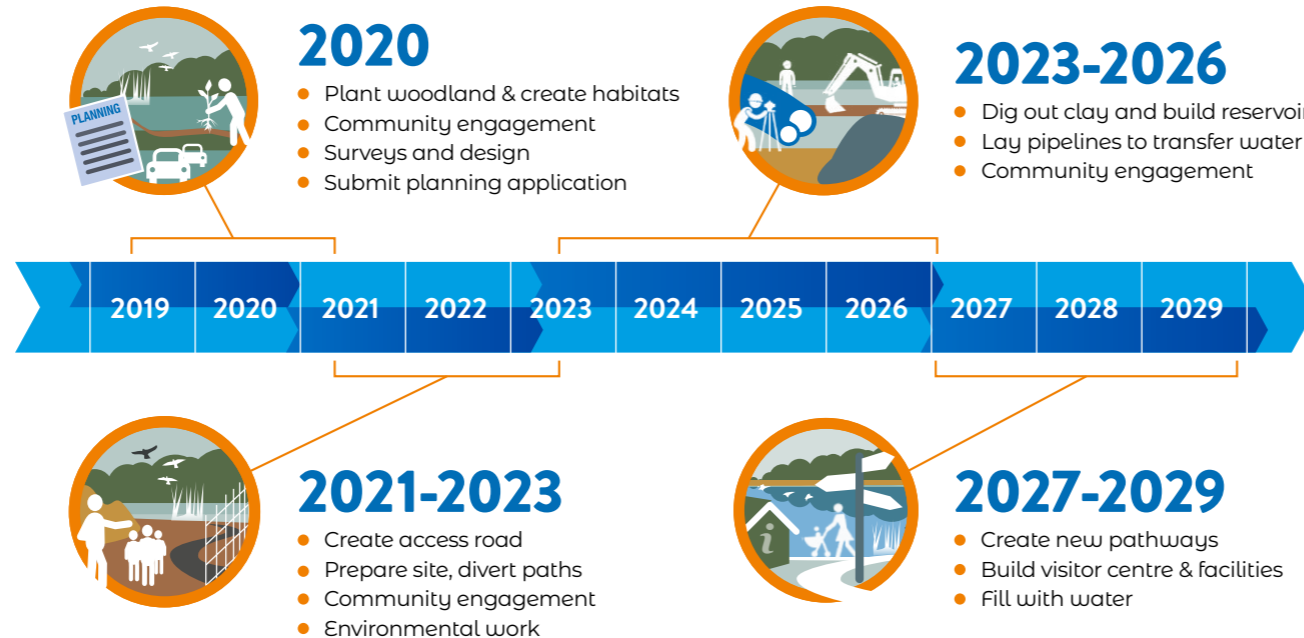
TOPIC	KEY CONSIDERATIONS	OUR APPROACH	POTENTIAL MITIGATION AND COMPENSATION
Ground conditions	<ul style="list-style-type: none"> • Possible impacts from construction could include soil erosion, compaction of the ground and changes in its stability. • We may generate waste soil - particularly from the pipeline route. 	<ul style="list-style-type: none"> • We'll consider the effect of our work on geology and explore the potential for ground contamination and the re-use of mineral resources, soils and waste. • We're analysing soil samples and water monitoring taken during ground investigations on the site last year. 	<ul style="list-style-type: none"> • We'll include guidelines to prevent pollution in our Environmental Management Plan, which will set standards for how the reservoir is built. • We'll try to reuse as much of the soil as possible on site to avoid creating waste.
Materials and waste	<ul style="list-style-type: none"> • Local traffic may be disrupted as materials are transported to and from the site. • Some waste materials may not be able to be re-used. • Buying materials and disposing of waste may affect the availability of local supplies and waste sites. 	<ul style="list-style-type: none"> • We're studying how much material we may need, how available it is and how much waste we may need to dispose of both during construction and when it's open to the public. • We're using information from ground investigations we carried out last year. 	<ul style="list-style-type: none"> • We'll develop a plan to manage materials, working with the Environment Agency and Hampshire County Council. • Our aim is to re-use material produced during construction as much as possible (e.g. using material we dig out to build the embankments). • When we can't re-use material, we'll recycle it as much as possible.
Water (including flows, quality and ground-water)	<ul style="list-style-type: none"> • Potential risks to the water quality and flow in streams and other water bodies south of the reservoir, and Langstone Harbour. • There is potential to improve water quality and flows downstream and reduce the risk of flooding. 	<ul style="list-style-type: none"> • We're investigating the risks of flooding, low water flows in streams etc below the reservoir and water quality – using samples and computer models. • We're also studying groundwater (water levels underground), using samples to explore any effects on the Hermitage Stream area. • Our work is guided by UK legislation – the Water Framework Directive. 	<ul style="list-style-type: none"> • We'll produce a plan to manage the water which usually runs off to streams etc during construction. • When the reservoir is up and running, we expect it to reduce the risk of floods because it will hold water, particularly when flows are high in the Riders Lane stream. • We'll develop a plan to 'top up' flows in streams etc south of the reservoir when they're low in agreement with the Environment Agency.



We've recently planted hundreds of trees and created new ponds and hedgerows on the edge of the reservoir site to improve habitats for wildlife. This has included a mixture of more than 3,000 trees to create a memorial woodland in partnership with Havant Borough Council as a place for quiet reflection and a valuable new habitat to connect other areas of woodland nearby so birds and mammals can move around and feed more easily.

BUILDING THE RESERVOIR

The reservoir will take nine years to plan for, build and fill, and is scheduled to be complete, full of water and open to the public by 2029.



During the construction we will do everything we can to maintain public access while it's safe to do so. We'll keep you informed of our progress and involve you as much as possible.

This will include education visits for schools and universities and creating apprenticeships and employment for local communities and businesses whenever we can. The diagram opposite sets out our timeline and the major steps for each phase.

We want to be a good neighbour and as we finalise our plans for the reservoir, we'll prepare a Construction Environmental Management Plan (CEMP) to make sure we reduce our impact on the environment and local communities as much as possible. We'll agree this with the local authorities and the measures will stay in place from the beginning to the end of the reservoir project. It will also include a plan to manage traffic, with measures such as restricting the times construction traffic can arrive and leave and the routes it can take.

The work will need construction compounds which are likely to be in the north western area of the site, where the visitor centre will be built as there's a large area of open grassland, so we can avoid trees and local communities as much as possible.

SAFETY

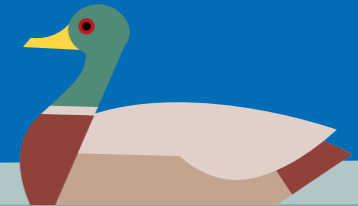
The health and safety of everyone involved in the reservoir project and everyone living and working near the site is our number one priority. This includes the safety of people who will visit the site once the reservoir is open.

We'll undertake a 'Public Safety Risk Assessment' to identify hazards and risks and how we can reduce them in the design of the reservoir and its facilities and in our approach to how we build and run the site. We'll follow best practice and learn the latest lessons on safety and security from other reservoirs.

Under the Reservoirs Act 1975, the design of reservoirs is supervised by an independent engineer, selected from a panel approved by the Government. This Government-appointed engineer will approve the design of the embankments and other structures and inspect the work during construction. We will need a certificate from the engineer saying the work meets the correct standard before we'll be able to start filling the reservoir.

We'll give careful thought to the phasing of the work so we can maintain safe access for the public whenever possible and identify which areas need to be closed off to keep everyone safe. We'll keep you updated on which areas are safe to access and put up signs to clearly show any diversions.

We'll give careful thought to the phasing of the work so we can maintain safe access for the public whenever possible and identify which areas need to be closed off to keep everyone safe.



HAVE YOUR SAY ON HAVANT THICKET RESERVOIR

We hope you've enjoyed finding out more about our plans for Havant Thicket Reservoir.

**WE'RE HOLDING A PUBLIC CONSULTATION
BETWEEN MONDAY 11 MAY, AND MONDAY
8 JUNE, 2020**

**PLEASE GET IN TOUCH TO
SHARE YOUR FEEDBACK
AND ASK QUESTIONS.**



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PO9 1LG



023 9244 9084 (please leave a
message and we'll get back to you)

