

Technical Note

Project:	Havant Thicket Reservoir (HTR)		
TN Ref. No:	HTR-ATK-XX-XX-RP-Z-0075		
Subject:	Access Strategy, Rat Running and Construction Management		
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Date:	01/04/2021	Project No.:	5202641
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1. Introduction

This technical note summarises the approach that was taken to determine the best option for vehicular access to the proposed reservoir and visitor facilities and address further queries arising from the further consultation undertaken in February 2021. An Access Strategy has been developed whereby both the northern and a southern option will serve as access points, this dilutes the traffic impacts across the highway network and ensures minimal loss of ancient woodland (12 lower category/invasive trees) by halving the width of the proposed northern access route into the site. The Access Strategy is based on an appraisal of 11 potential options, discussions with Hampshire County Council (the local highway authority) and landowners, detailed assessment of the preferred options and significant stakeholder and public consultation.

The note also summarises the measures to avoid rat running between the proposed access points and the measures to minimise construction impacts.

1.1. Relevant Planning Policy Context

[Havant Borough Council Adopted Local Plan Core Strategy](#)

Policy CS18, Strategic Site Delivery, identifies the Havant Thicket Reservoir as a Strategic Site and states that Construction traffic should be minimised in Leigh Park, Rowlands Castle and other residential areas and vehicular access is expected from the B2149 outside the borough.

It also states that the natural and rural character of the site should be conserved in particular by limiting impacts on biodiversity including the creation of additional habitats, compensating for the loss of, and effects on, sites of importance for nature conservation and minimising the loss of ancient woodland and trees.

[Havant Borough Council Draft Local Plan Pre-Submission Version 2036](#)

The pre-submission Draft Local Plan was approved by Full Council on the 30th January 2019 and consulted on up to March 2019. Policy KP9 in the local plan relates to the Havant Thicket winter storage reservoir and refers to the importance of minimising construction and public visitor traffic through residential areas where possible. It also refers to establishing an appropriate means of access to the satisfaction of the Local Highway Authority. Policy KS9 seeks to minimise loss of ancient woodland and trees.

[EHDC Joint Core Strategy](#)

There is no site specific policy, however Policy CP31, Transport, seeks to encourage sustainable travel choices and reduce dependence on private cars. The policy encourages improved cycle and pedestrian links that

integrate with wider routes and seeks to ensure traffic generated from a proposal will not be harmful. Policy CP21, Biodiversity, seeks to ensure that any adverse impacts are avoided where possible or, if unavoidable, they are appropriately mitigated for, with compensatory measures only used as a last resort (i.e. avoid, mitigation, compensate).

Draft East Hampshire District Council Local Plan 2017–2036

The Draft East Hampshire District Council Local Plan covering 2017-2036 was consulted on between 5th February and 19th March 2019. Policy S31 relates to Havant Thicket Reservoir and refers to the need to minimise construction traffic through residential areas and establish an appropriate means of access to the satisfaction of the local highways authority. It also states that an existing forestry track off the B2149 could be enhanced to provide access to the reservoir perimeter.

2. Vehicular Access Options

The development of the access from the local roads will serve two main user groups: construction and operational traffic. In total 11 potential access roads were identified and subject to a comprehensive four stage evaluation process based on the following criteria:

- Environmental Assessment;
- Engineering and Safety; and
- Meeting Project Drivers.

The findings are set out in HTR-ATK-XX-XX-RP-Z-0021 Technical Note Access Route - Options Appraisal at Havant Thicket contained in Appendix C of the Transport Assessment Report (Appendix A13 of the Environmental Statement).

2.1. Southern Access Options

The southern route options which scored the highest in the Options Appraisal use Calshott Road and Swanmore Road which are residential roads. Hampshire County Council (HCC) raised concerns with regards to traffic routing through the Leigh Park area, whilst acknowledging that a southern access for *local traffic only* could be accepted. This means we would still need to have a northern access as the main access for non-local traffic. For construction traffic HCC has indicated that a southern access using only Dunsbury Park business park would be preferred (avoiding residential streets). However, the route identified (Option 1 in the Options Appraisal Report) would pose significant engineering and environmental challenges, it would need to cross two streams and associated wetland habitat, a flood zone, a Site of Importance for Nature Conservation, wet woodland (with bluebells), mature hedgerows and two Public Rights of Way.

In addition, Portsmouth City Council (PCC), who own and manage the business park, do not support a route which accommodates all construction and visitor traffic through the business park, due to the impact the route will have on their current occupants and visitors and the strategic aim to support regeneration by securing further local employment for the area.

Dunsbury Park is a key strategic employment site for the borough and the wider sub-region, with the scheme aiming to create 3,500 FTE jobs. The local area has high levels of deprivation and by developing a high quality business park to attract leading manufacturing businesses the scheme will improve local employment and address the local skills gap; a priority for the regeneration of the area.

The business park is still being developed and aims to be completed by 2026. It has already attracted international businesses to relocate to the area and the scheme aims to attract further international businesses as units continue to be built, securing more jobs for the region. To secure the strategic aims of the site, PCC has stated that it is important the quality of the site is not disrupted for current occupants and visitors and the future attractiveness of the site is not affected. PCC is in the process of reviewing their masterplan with a view to developing the land which would be crossed by two of the options (Options 1 and 1B) and have stated that it is essential the site is unencumbered.

A revised trip distribution model was provided to HCC to demonstrate that the majority of traffic would be routed via the northern access, and this has now been agreed with them. This is explained further in the Technical Note, Traffic Distribution Sensitivity Revision_V2.0, dated 25/01/2021, which was subject to further consultation in February 2021. A signage and marketing strategy will be developed during detailed design which will clearly highlight the northern access as the main access (the forecast trip distribution does not rely on the signage).

It is, therefore, considered that the proposal to include a southern access via Swanmore Road is appropriate on the basis that:

- It is a secondary access for visitors, serving local traffic only; and
- It serves only as a minor construction access, accommodating only a 6 month period of construction traffic for the northern section of the pipeline which would generate limited HGV traffic (approximately 30 HGVs a day, 15 arrivals and 15 departures).

2.2. Northern Access Options

The access options to the north and west all had potential environmental, safety or traffic impacts but the option along the existing forestry track along the western edge of Havant Thicket was the next highest scoring viable option after the Dunsbury Park/Calshott Road/Swanmore Road options, it also secured the most support from local residents as it avoids the need for traffic to pass through Leigh Park and Rowlands Castle. In addition, this route was favoured since it would not fragment the woodland or create a significant disturbance in the centre of it.

If the northern junction was relocated further north, then visibility along the B2149 would be made worse. To be compliant with standards, an access here would require major re-profiling of the carriageway and further loss of ancient woodland, which would have a significant environmental and traffic impact. This is explained in the Technical Note 'Report on Northern Access Layout' (29/01/2021) submitted as further information and subject to a further consultation period in February 2021.

2.3. Proposed North and South Access Strategy

In response to the 2020 consultation, and taking on board the findings of the options appraisal work and discussions with HCC, an access strategy has been developed whereby both the northern and a southern option will serve as access points, diluting the impacts across the highway network and reducing the loss of ancient woodland by halving the width of the proposed northern access route into the site. The northern access will be signed as the main access point on all Visitor material, ensuring the impact on the local road network is minimised, as it provides a direct link to the principle road network via the B2149. It is intended that the southern access point would serve as a secondary access for local trips.

Construction HGVs will use the northern access, to avoid the residential streets to the south of the site, with the most direct route to the A3(M) being via the B2149. There will however be a need to use the southern access for a short period of time to support setting up the site compound and to construct the northern part of the pipeline.

2.3.1. Southern Access Layout

The southern access off Swanmore Road consists of a simple priority junction and the design is compliant with the DMRB and HCC design standards. The southern access road is offset by a distance of 15 metres from the ancient woodland boundary, which may be used for SUDs drainage depending on other detailed design considerations. The southern access road is a two-way single carriageway which connects to the visitor car park and the maintenance track routeing around the crest of the reservoir.

2.3.2. Northern Access Layout

The route from the north has been designed to follow the existing forestry track for the majority of its length and loss of trees and woodland habitat has been reduced as far as reasonably practicable in preliminary design. It comprises a 3.65m single lane carriageway with passing bays to enable two-way traffic. Inclusive of verge, the overall construction width of the northern access road is typically 6.45m, with a widening on a tight bend where it is 7.45m. This means that only 12 trees, comprising invasive and lower category trees, will be lost along the whole route, with proposed passing places aligned with existing wide areas or where other forestry tracks meet. The layout has been optimised to ensure preservation of the more prominent yew trees, the removal of the Turkey oak trees along the boundary of the B2149 is seen as a benefit by Natural England. The Arboricultural Impact Assessment (Environmental Statement Volume 4, Appendix A9.14) provides more detail.

Potential impacts would largely be restricted to construction activities, such as soil compaction, changes to air quality from construction traffic and dust and would therefore be short-term habitat degradation.

Ancient woodland soil arising from loss elsewhere will be used to form the road embankment slopes. Further studies will be undertaken to assess the feasibility of further reducing the woodland take by employing a "dig down" construction rather than a "build up" approach. This would remove the need for embankment slopes.

HCC has supported the principle of providing an access from the north subject to the resolution of engineering issues related to the layout of the northern access. A Departure for Standard application has been submitted for one design parameter of the northern access junction design, specifically the forward visibility on the mainline.

2.4. Rat Running

During scoping discussions, HCC advised that the two access points should not provide opportunities for rat-running through the site. The outline design for the northern access road includes a single access track with passing places which will ensure low vehicles speeds are maintained. In addition, both access roads will meet at the visitor car park in the centre of the site, which further reduces the attractiveness of a through route.

The detailed design will include a number of pedestrian crossings located within the car park area, which can be developed as raised tables. There is also a minor priority junction between the car park and the northern access which will be developed at detailed design.

It is also pertinent to note that there are a number of existing measures that will contribute to traffic calming and discourage rat-running. Between Middle Park Way and the Swanmore Road entrance to the reservoir there are three road narrowing's for single way traffic over 750 metres.

Further consideration of additional measures, such as automatic number plate recognition access barriers and parking charges can form part of the detailed design. Portsmouth Water is also willing to commit at this outline stage to provision of a physical barrier within the car park to ensure visitors can not travel between the north and south access.

On this basis, it is not considered that the provision of two accesses and internal road layout would be conducive for through-traffic movement.

2.5. Construction Traffic

2.5.1. Construction Traffic Impact

The assessments undertaken demonstrate that the construction activities will not have any significant adverse impacts in highway terms either on their own or cumulatively with other developments. One reason for the relatively low predicted HGV movements is that the clay required for the construction of the embankment and development of a wetland is already available on-site.

Although it will take approximately 9 years for the reservoir to become operational, the reservoir and pipeline construction activities will only take place over 3-4 years with HGV traffic generation varying during this period (i.e. it will not be 3-4 years of consistent HGV traffic). The reservoir and pipeline will be constructed in phases, to reduce the amount of traffic travelling to and from the reservoir site at any one time. It is likely that the pipeline will be broken down into sections to allow multiple teams to operate at the same time.

For assessment purposes, a peak slice was taken through the outline construction programme, which assumed that the reservoir and pipeline activities were being undertaken concurrently, to determine an absolute worst case. It is anticipated that during this theoretical peak there could be a potential for 200 HGV movements a day (100 arrivals, and 100 departures) associated with the construction of the reservoir, which will be undertaken during the main embankment construction activity in 2023. It is important to highlight that this will not be the volume of trips generated across the full 3-4 year period. In addition to construction HGVs, there will also be staff trips to and from the reservoir, with up to 125 staff expected to be on site at the peak of construction.

The impact of this construction traffic on typical daily traffic (AADT) is less than 4% in all traffic, with a 1% change in the proportion of HGVs on the link. The assessment has been supported by junction modelling to identify the potential impact of construction of the Scheme in combination with the construction activities at Land East of Horndean. The junction modelling demonstrates that there would not be a significant effect on the operation of the highway network during peak hours.

The pipeline is expected to generate up to 30 HGV movements a day (15 arrivals and 15 departures), which will be phased across three sections of the pipeline. There will also be staff trips associated with the pipeline, with up to 125 staff likely to be constructing the pipeline at the peak. Pipeline construction staff will be transported to and from the pipeline using minibuses, or a comparable light goods vehicle (LGV). This will result in approximately 20 trips a day using the robust assumption that staff will be transported back to the reservoir welfare facilities for lunch and then returned to the pipeline.

HGV construction traffic will be required to use the northern access as the main access point, via the B2149 to access the A3(M) from junction 2, with the southern access only being used for construction of the top third of the pipeline. Construction traffic for the lower two thirds of the pipeline will access the pipeline corridor directly from junctions 2 and 3 of the A3(M).

The assessment has considered an unlikely worst-case scenario where all construction staff travel to and from the reservoir site during the network peak periods. This is unlikely to occur due to site operating times and the likely travel patterns of staff (i.e. staff will not all travel to the site via single occupancy vehicle trips).

2.5.2. Construction Management Measures

It would not be practical or achievable to produce a fully detailed Construction Environmental Management Plan (CEMP) or Construction Traffic Management Plan (CTMP) at this stage. However, an Outline Environmental Management Plan is included within the Environmental Statement (ES Volume 4, Appendix A2). The OEMP includes a record of environmental actions and commitments (REAC) which identifies environmental actions and commitments made during the outline design to mitigate the potential environmental effects of the Scheme (Tables 3-1 and 3-2 of the OEMP). The aim of the OEMP is to provide a framework that can be followed to inform the detailed design and the development of a detailed CEMP. A full CEMP will be prepared by the Principal Contractor(s) once appointed on the reservoir site and access routes, and pipeline contracts.

A Framework CTMP has also been prepared and is submitted as further information (April 2021) to support the planning applications. This document sets out the outline parameters for the construction traffic arrangements and mitigation measures and will form the framework for detailed CTMPs which will be submitted for approval prior to commencement of works.

3. Summary

Local Planning Policy relevant to the Havant Thicket Reservoir site seeks to minimise construction and public visitor traffic through residential areas where possible and establish an appropriate means of access to the satisfaction of the local highways authority. It also states that an existing forestry track off the B2149 could be enhanced to provide access to the reservoir perimeter. Policies also seek to minimise loss of ancient woodland and trees and that any adverse impacts are avoided where possible or, if unavoidable, they are appropriately mitigated for, with compensatory measures only used as a last resort.

In total 11 potential vehicular access options were identified and subject to a comprehensive evaluation process based on environmental, engineering and safety criteria, and project drivers. The options which scored the highest would access the site via Dunsbury Park Industrial Estate, Calshott Road and Swanmore Road which are residential roads. HCC raised concerns with regards to traffic routeing through the Leigh Park area, whilst acknowledging that a southern access for local traffic only could be accepted. This means we would still need to have a northern access as the main access for non-local traffic. For construction traffic the HCC indicated that a southern access using only Dunsbury Park Business Park would be preferred (avoiding residential streets). However, the route identified would pose significant engineering and environmental challenges. In addition, the Dunsbury Park landowner (PCC) will not support access through their site or across land which they are looking to develop.

Relocating the northern access junction further north would result in reduced visibility along the B2149 which would require major carriageway reprofiling with significant environmental and traffic impacts.

Following discussions with Hampshire County Council and landowners, further detailed assessment of the preferred options and significant stakeholder and public consultation, an access strategy was developed based on a northern and a southern access in order to dilute the traffic impacts across the highway network and ensure minimal loss of ancient woodland (12 lower category/invasive trees) by halving the width of the proposed northern access route into the site.

A comprehensive strategy for compensation and mitigation has been prepared by Portsmouth Water in conjunction with Natural England, the Environment Agency and the HCC Ecologist and they have confirmed that it is a suitable compensation strategy. The Strategy provides a framework for onsite and offsite compensation and enhancement measures to mitigate ecological impacts related to the permanent loss of irreplaceable habitats (ancient woodland, and veteran trees), as well as substantial losses of other habitats, and impacts on a range of protected species. The Strategy includes a commitment to a minimum of 110 ha of compensatory measures relating to the loss of ancient woodland.

The traffic assessment work has concluded that construction traffic impacts will not have a significant effect on the highway network. The applications include a Framework Construction Traffic Management Plan which identifies construction traffic commitments and parameters to inform detailed Construction Traffic Management Plans which will be agreed prior to construction of the reservoir and pipeline, these plans will ensure construction activities are coordinated with neighbouring developments. Portsmouth Water is committed to making good any defects caused by the reservoir construction traffic.