

Havant Thicket Reservoir Project

Framework Construction Traffic Management Plan

Portsmouth Water Ltd.

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1. Introduction

1.1. Purpose of Document

This document sets out the outline parameters for the construction traffic arrangements and mitigation measures associated with the Havant Thicket Reservoir (Application refs: APP/20/00990, 51680/001) and Pipeline (APP/20/00991).

1.2. The Scheme

The reservoir, when constructed, will be filled with surplus water drawn from the springs at the Bedhampton works when flows are at their highest in winter via a new combined inlet/outlet pipeline, and will provide water supplies to Portsmouth Water customers in the summer months as required.

Building the reservoir will allow Portsmouth Water to transfer water to east Hampshire to supply Southern Water's customers, even in a severe drought. The site will also provide a new recreational facility next door to one of the more deprived areas in south east Hampshire, readily accessible on foot, by bicycle, or through existing bus routes. It offers further opportunities to improve the area's footpath, cycleway and bridleway networks. More than 29,500 people live within reasonable walking distance of the site (1.5km) and 120,000 people live within reasonable cycling distance of the site (4.5km).

The reservoir and pipeline (the Scheme) will incorporate a new wetland habitat and significant new associated areas for nature conservation both on and off site.

1.2.1. Indicative Programme

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 also 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.

The planning permission will be conditional on a pre-commencement phasing strategy which will inform the timing and content of the planning conditions and reserved matters applications.

The Principal Contractor must have early engagement with the Highway Authority on programming and phasing of the works to ensure impacts of both areas of work are minimised.

1.3. Construction Management Measures

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). It provides a framework that can be followed to inform the detailed design and the development of a detailed CEMP. A full Construction Environment Management Plan (CEMP) will be prepared by the Principal Contractor(s) once appointed on the reservoir site and access routes, and pipeline contracts.

The purpose of this document is to bring together the proposed construction traffic mitigation measures into a schedule of commitments, this will form the framework for the detailed CTMP which will be the subject of a planning condition and submitted prior to commencement of works.

There will be one overarching CTMP for the reservoir and pipeline, with subsequent addendums for different phases where appropriate.

1.4. Scope and Objectives of the CTMP

A Construction Traffic Management Plan (CTMP) provides an overarching plan as to how the construction traffic and site operations will be managed. It sets out the parameters within which contractors will be required to work, including hours of operation, traffic routing, safe vehicular access and manoeuvring and minimising traffic impacts.

It will be prepared by the contractor and agreed with the Local Highway Authority ahead of works commencing. The Scheme passes through Havant Borough Council and East Hampshire District Council and the Local Highway Authority is Hampshire County Council (HCC).

The CTMP will contain details of:

- Vehicle routing plans;
- Proposed programme and duration;
- Number of construction personnel including travel arrangements and mitigation where necessary;
- Alterations to the highway, including temporary and / or permanent, to enable construction;
- Details of the number of construction and delivery vehicles using the public highway (no abnormal loads are anticipated at this stage);
- Traffic management details;
- Compounds and laydown area details;
- Highway condition surveys;
- Methods for managing the site to prevent mud onto the highway; and
- Details of onsite contractor parking.

The CTMP sets out the detailed measures that can be implemented to provide mitigation for the construction traffic associated with the Scheme. The CTMP has the primary objective of minimising impact and disruption to existing users of the public highway network and the surrounding community, forming the framework within which all contractors are expected to work. This can be achieved by:

- Minimising the number of vehicular trips required for the movement of material and people;
- Ensuring construction traffic trips and routes used are planned to be safe, efficient and timely;
- Ensuring the impact to residents, local sensitive receptors and the travelling public are minimised; and
- That the CTMP is continually monitored, reviewed and updated as necessary and improvements incorporated.

1.5. CTMP Structure

The CTMP will be structured as follows:

- Section 1 – Introduction – including scope and objectives;
- Section 2 – The Proposed Development – including site compounds and laydown areas, typical construction vehicles and construction activities;
- Section 3 – Vehicular Movement Management – vehicle routing strategy, timing of movements, sensitive receptors, reducing impacts of Heavy Goods Vehicle ('HGVs'), local highway issues and constraints and section specific constraints, management of abnormal loads and construction HGV routes;
- Section 4 – Construction Workforce – descriptions of controls to mitigate the impact of construction staff traffic;
- Section 5 – Site Accesses/Haul Road – design, management and mitigation of access points;
- Section 6 – Highway Crossings – agreement, management and advance notification of diversions and public rights of way;
- Section 7 – Required Highway Interventions – Interventions identified.
- Section 8 – Management of Road Safety – Existing collision records, highway condition and construction traffic assumptions; and
- Section 9 – Implementation and Monitoring – Implementation of the final CTMP and Compliance and monitoring.

2. Construction Activities

2.1. Overview

The Havant Thicket project intends to provide the already water-stressed South East of England with a new drinking water supply, whilst also providing additional community and environmental benefits of a new raw water reservoir.

The key elements of the Scheme include:

- Havant Thicket Reservoir – providing raw water storage complete with control house, visitor centre and recreational facilities.
- Pipeline – pumping spring water from the Bedhampton and Havant Springs system to the Havant Thicket Reservoir.

Construction activities are likely to be phased as follows:

- The north and south vehicular access and access routes and site compound;
- Enabling works including trial embankment;
- The reservoir embankment, wetland and associated development;
- Pipeline (in parallel with enabling works and embankment construction);
- The visitor centre and facilities.

During construction of the Scheme a Construction Support Site (CSS) will be located on the North West corner of the site, following construction of the reservoir this will be the location of the new visitor centre. This compound will be accessed from the B2149 via a new junction to an access route which will also serve as a haul road during construction but becomes a permanent access to the visitor car park once construction is complete.

Construction activities discussed in the following sections set the parameters which the Contractor must adhere to during the subsequent detailed design and construction phases.

Construction activities will take place on site between the hours of 0600hrs – 1800hrs Mon-Friday and 0600hrs – 1300hrs Saturday with no Sunday working. This means construction staff travel will mainly be outside peak hours.

An assumed workforce of up to 125 people for the construction of the main reservoir site and 125 people for the pipeline has been derived and used as a basis of spatial pre-construction planning, they will all use the main reservoir site as the principal construction support site (CCS), thereby having one principal welfare facility.

The Environmental Statement assumed an absolute worst case of all staff trips travelling on the highway network in single occupancy vehicles during the network peak hours. However, as the site will be in operation prior to the AM peak hour and ceasing operations after the PM peak hour, staff trips will occur outside of the network peak periods.

2.2. Reservoir Construction Setup

Access Roads

As part of the enabling works access roads, suitable for taking the construction traffic, will be required from the site joining up to the public highway network. These access roads will be the main route for vehicles entering the site including deliveries and arrival and departure of the workforce. The intention is that all the heavy earthwork machinery stays on the site and does not travel on the network during the earthworks operation.

A north and south access road has been proposed, however reservoir construction traffic, including staff traffic, will use the northern access road only. The northern access road provides direct access to the main trunk road, the A3(M) via the B2149, therefore limiting the impact of HGVs on the local road network.

Construction Support Site

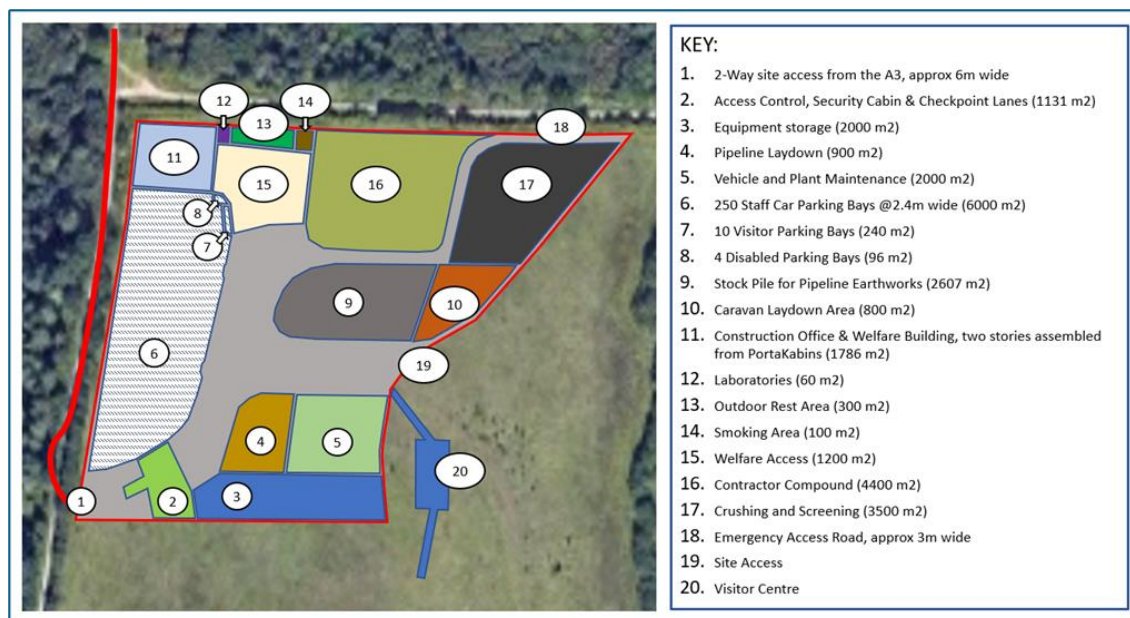
A Construction Support Site (CSS) and welfare facility will be required to support the construction of the new reservoir and the pipeline. This CSS compound will be located within the redline boundary and will provide an area for the management of the construction works, the workforce and any

subsequent subcontractors. The construction of this compound will begin when the construction works for the access routes are due to commence. Office and welfare facilities will be appropriately sized for the combined Reservoir and Pipeline workforce, circa 250 people.

The CSS will include areas for welfare, car parking, plant and maintenance operations, storage of construction equipment as well as areas for laydown for materials. Figure 1 below provides an indicative layout for the CSS which was developed to test space requirements.

Consideration as to the location of the footprint of the Contractor's office, the welfare office and his laydown area will need to allow for the construction of the visitor centre to take place on the same footprint.

Figure 1 – Indicative Construction Support Site Layout



2.2.1. Construction Traffic Activities

Materials movement

Movement of materials to and from site will use the designated access routes all vehicles engaged on the reservoir site will need to pass through wheel washing facilities, in order to remove excess mud off the tyres and underside of the equipment – such as a low loader or delivery truck. Under statutory requirements for road safety the public highway must be kept clean.

Filling the reservoir

When construction of the embankment, wetland and other features within the reservoir footprint is completed, filling of the reservoir can begin. Filling of the reservoir is estimated to take 3 years and no reservoir construction traffic will be generated during this period.

2.3. Pipeline

As above, the construction activities discussed here set the parameters which the Contractor must adhere to during the subsequent detailed design and construction phases.

2.3.1. Construction set up

As the pipeline is a 4km linear asset, running through residential areas, there is insufficient space for a dedicated construction compound and laydown area to support these activities. Therefore, the main construction support site and laydown areas at the reservoir will be used throughout the construction of the pipeline (see above). Small scale, portable, welfare facilities will be provided for the pipeline workforce along the construction route at appropriate locations.

2.3.2. Pipeline Construction Activities

A worst-case methodology of open trench construction has been assumed for the whole pipeline length, except for at the southern end where the pipeline must cross under the railway, which will be

trenchless. The estimated period of construction is approximately 670 working days. This programme was based on open cut type of installation of the pipeline, however depending on the contractor's method of pipe installation and number of resources allocated to each section, the period of construction will vary. Construction methods which reduce the impact of construction on the highway should be optimised.

For the construction of the main pipeline from the reservoir to the Bedhampton site it is likely that the route will be broken down into sections.

Where constraints allow, single lane traffic will aim to be provided, however noting that even where this is achieved there may be certain construction operations that require temporary full road closures to facilitate these activities safely, such as placing pipework into the excavation. Night-time closures will be operated where possible to minimise traffic impact. If the queue length standard is exceeded the contractor will need to employ a different method of construction in order to reduce length of open trench so closures are minimised.

Active traffic management will be required along much of the route to limit disruption as much as possible. Both fencing and traffic management will be flexible in order to ensure there are no undue restrictions preventing residents accessing their homes, but also to minimise traffic delays cause by single lane operation.

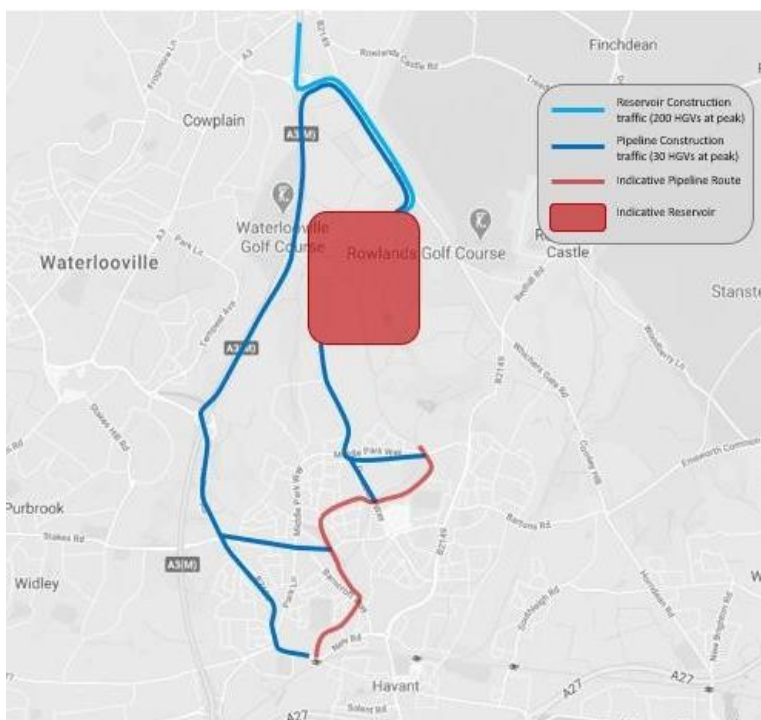
2.3.3. Construction Traffic Management

The number of traffic movements will be in line with the progress of the pipeline and size of work force. An initial high-level assessment has assumed 30 HGV round trip journeys throughout the day, to the reservoir and back plus the number of light goods vehicles required to transport the workers.

In order to mitigate the impact that the construction traffic has on residential areas the pipeline has been split up into sections (thirds). The northern third adjacent to the reservoir site will be accessed via the southern access to the reservoir. The middle and southern thirds will be accessed with construction traffic leaving/returning to the reservoir site via the northern access and then access by A3(M) / Huilbert Road. This will in effect dilute and disperse the impact of the pipeline traffic rather than funnelling it all through Swanmore Road. Construction traffic will not be allowed on feeder roads or residential streets unless directly accessing the works. Figure 2 illustrates this construction traffic arrangement and peak activity HGV movements.

When transporting materials to/from the workface along the pipeline vehicular weight limits and routes will need to be in place to ensure the site vehicles are not 'rat running'. Additionally, a.m. and p.m. peak traffic such as rush hour will be avoided. The main aim is to minimise construction impact on the local residents and to have designated routes that utilise the main truck route such as the A3(M).

Figure 2 - Construction HGV Routes and Peak Activity Traffic Movements



2.3.4. Highway Reinstatement

The Highway will be reinstated in accordance with the Specification for the Reinstatement of Opening in Highways (May 2020) or any future updated standard. Where the pipeline is located along a road corridor, condition surveys will be required and the Highway Authority will reserve the right to request additional reinstatement requirements where considered necessary.

2.4. Construction Traffic Management Commitments

2.4.1. Reservoir

The following CTM commitments are proposed in relation to construction at the reservoir site.

Table 2.1 – Construction Traffic Management Commitments: Reservoir Site

Commitment	Explanation
Prepare an overarching CTMP (covering reservoir and pipeline) for approval by the Highway Authority prior to commencement of any phase or works area.	To manage the impact of HGV traffic on the highway, the reservoir and pipeline contractor(s) will prepare one overarching CTMP for approval. CTMP addendums will then be approved prior to commencement of each phase of work where appropriate (e.g. Access Routes, Embankment, Pipeline, Visitor Centre).
Construction access will be from northern access only via the Strategic Road Network.	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.
The number of site workers at the reservoir site will be restricted to 125. Staff travel will be restricted to off-peak periods.	The environmental and transport assessments were based on 250 site workers travelling to the site at peak hour (125 for reservoir and 125 for pipeline), this showed no significant impact. In order to minimise impacts Portsmouth Water commits to restricting workers on the reservoir site to 125. Any requirement for an increase in numbers (for specific ad hoc activities) will require approval from the Local Highway Authority.
HGV movements will be restricted to 32 (16 arrivals and 16 departures) per hour with no more than 200 in a day (100 arrivals and 100 departures). With a day being defined as the 6 hour interpeak period. On Saturdays HGV movements will be restricted to 32 per hour (16 arrivals and 16 departures) between 9am and 1pm.	It is predicted that there will be 200 HGV movements (100 arrivals and 100 departures) across the day not including peak hours. The commitment is to spread these movements across a 6 hour day (outside of peak hours). Approval will be sought for an increase in movements for any specific ad hoc activities.
Contractor parking area will be provided within the Construction Support Site.	Parking for all contractor staff will be provided within the Construction Support Site in the north west corner of the reservoir.
Portsmouth Water is committed to making good any defects caused by HGV traffic as a proportion of change in HGV traffic.	As part of the detailed CTMP a programme for periodical condition surveys, and the triggers for any remedial or interim remedial works that are needed, will be agreed with the LHA.
The contractor will phase work around already committed schemes including Aquind Interconnector and Land East of Horndean to ensure construction is managed and does not prevent these committed schemes and associated offsite highway works from coming forward.	The detailed CTMP will include further detail to ensure coordination with neighbouring developments, i.e. Land East of Horndean and the Aquind Connector, as their detailed construction plans emerge.

The contractor will ensure the proposed temporary diversion is in place and appropriately signposted and accessible prior to stopping up Bridleway 120.	During construction of the reservoir site it will be necessary to divert a PRoW (Bridleway Havant 120).
The contractor will include measures within the CTMP to mitigate impact of HGV traffic on school drop off and pick up movements. This will include appropriate supervision in these areas and works will be stopped if appropriate.	If the proposed school at the LEOH development to the north will be operational during construction of the Scheme, the contractor will agree appropriate measures with the LHA to ensure safety around the school at drop off and pick up times is not compromised.

2.4.2. Pipeline

The following CTM commitments are proposed in relation to construction along the pipeline route.

Table 2.1 – Construction Traffic Management Commitments: Pipeline Route

Commitment	Explanation
Prepare an overarching CTMP (covering reservoir and pipeline) for approval by the Highway Authority prior to commencement of any phase or works area.	To manage the impact of HGV traffic on the highway the reservoir and pipeline contractor(s) will prepare one overarching CTMP for approval. CTMP addendums will then be approved prior to commencement of each phase of work if appropriate (e.g. Access Routes, Embankment, Pipeline, Visitor Centre).
The southern access will only be used for construction of the top third of the pipeline and to connect to utilities on Swanmore Road to the south.	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). As part of the site set up there will be a need to connect to utilities on Swanmore Road which will require some minimal construction traffic movements through the southern access.
The number of site workers along the Pipeline route will be restricted to 125. Staff travel will be restricted to off-peak periods.	The environmental and transport assessments were based on 250 site workers travelling in peak hour (125 for reservoir and 125 for pipeline), this showed no significant impact. In order to minimise impacts Portsmouth Water commits to restricting pipeline workers on site to 125. Any requirement for an increase in numbers (for specific ad hoc activities) will require approval from the Local Highway Authority.
Restrict HGV movements to up to 6 per hour (3 arrivals and 3 departures) with no more than 30 in a day (15 arrivals and 15 departures). With a day being defined as the 6 hour interpeak period. On Saturdays HGV movements will be restricted to 6 per hour (3 arrivals and 3 departures) between 9am and 1pm.	For assessment purposes, it has been assumed that the pipeline construction would be undertaken concurrently with the embankment section of the reservoir, which is expected to generate up to 30 HGV movements a day (15 arrivals and 15 departures). The commitment is to spread these movements across a 6 hour day (outside of peak hours). Any requirement for an increase in numbers (for specific ad hoc activities) will require approval from the Local Highway Authority.
Contractor parking area will be provided within the Construction Support Site.	Parking for all contractor staff will be provided within the Construction Support Site in the north west corner of the reservoir to ensure no parking on local residential streets.
A mini bus will shuttle staff to and from the CSS welfare facilities.	To minimise the impact of staff travel on the local highway network.
Develop alternative routeing strategy for PRoWs.	There will be a need to temporarily divert footpaths and public rights of way. Diversions should not add a

	material distance onto the footpath and timeframes for any diversions will be kept to a minimum.
The contractor will review construction sequencing to reduce impact of closures.	Proposed full, partial and night-time only road closures are identified in Environmental Statement Chapter 13 (p30). Further development of the construction sequencing may allow partial lane closures within a section of road removing the need for a full closure. Traffic management measures identified in Table 13-11 (and included as Appendix A to this document) will provide a framework for anticipated road closures.
Routing through Leigh Park for HGV's will be minimised unless necessary to reach a section of Pipeline within this area and is to be agreed with the Highway Authority.	To ensure the principal road network is used where possible in the interest of road safety and to reduce the time period an impact may be experienced by the local population. A routing plan will be agreed with the LHA which specifies set routes the contractor must follow.
School term times will be avoided where the pipeline route runs close to schools. Where HGV routing passes a school site, the contractor will include measures within the CTMP to mitigate impact of HGV traffic on school drop off and pick up movements. This will include appropriate supervision in these areas and works will be stopped if appropriate.	Where school term times along the pipeline route cannot be accommodated there will be appropriate supervision in these areas and works will be stopped if appropriate. The full CTMP must include plans identifying all schools along HGV and pipeline route.

The CTMP will feature specific details including further mitigation that will be agreed with the highway authorities.

2.4.3. Construction Traffic Management Strategy

The contractors will work within the following high-level parameters, appropriate for both reservoir site and pipeline route, to further minimise impacts on the local highway network and road users:

- The contractor(s) will submit one programme of works prior to commencement to the highway authority for agreement for how the works are to be built out and detailing how impacts have been actively minimised for the works to reduce delay and disruption to road users;
- The programme should aim to minimise the overall impact on the road network, by taking account of seasonal peak traffic, events, the impact of reassigned traffic as a result of concurrent works as far as is practicable;
- Traffic management interventions will be agreed with the local highway authority. Full road closures will be minimised as far as practicable with night-time closures in operation where practicable to minimise traffic impacts;
- The contractor will commit to manual control of temporary traffic signals at peak times;
- There will be no active traffic management changes during peak hours;
- Construction traffic will be managed and enforced by provision of route planning information by the contractor;
- The CTMP will include Construction Worker Travel Plans (CWTP) to mitigate the number of vehicular trips generated by construction staff travelling to and from their place of work and between work site locations; A Travel Plan Co-ordinator will be responsible for implementing and promoting the CWTP.
- Potential safety impacts of diverted traffic will be minimised with additional mitigation measures proposed where required;
- HGVs will avoid the AM and PM peaks of 08:00-09:00 and 17:00-18:00;
- All vehicles will have engines with the minimum standard of Euro 6 for diesel and Euro 4 for petrol. This will ensure that vehicular emissions are minimised as much as possible during construction;

- Vehicles such as cars, vans and Light Goods Vehicles ('LGVs') under 7.5 tonne in gross weight will be used during the construction process for the movement of staff, equipment and deliveries. The CTMPs will propose measures to reduce the number of movements as much as possible;
- The contractors will be required to minimise the impact of HGV construction traffic on the local community. Mitigation should include, where practicable, maximising loads to reduce vehicular trips, using local suppliers to reduce vehicular mileage, reusing bulk aggregate deliveries HGVs for waste spoil removal, consolidation of deliveries, smaller plant to minimise working widths;
- If sections of the highway along the Pipeline have an insufficient width for construction, HGVs should pass without reversing or overrunning the verge or footways especially on residential roads. HGV movements will be controlled appropriately through methods agreed within the full CTMP (e.g. one-way traffic routing) to ensure conflicts do not arise or are minimised wherever possible.
- Special measures will be detailed in the CTMPs to mitigate the impact to pedestrians on roads that do not have footways if applicable;
- Wheel washing facilities will be provided where appropriate and the contractors will be required to ensure the public roads in the vicinity are monitored to ensure that they are not contaminated with debris that could become a hazard, and will be required to have road sweeping arrangements on site. Contractors will also be required to provide dust suppression from the works and movement of vehicles;
- A works signage strategy (including wayfinding across the project for staff) will be agreed by the construction contractors and the relevant authorities to communicate the construction vehicle routes to access the temporary accesses, laydown areas and compounds. The use of communications technology to ensure efficient staff movements will be explored;
- A targeted strategy will be developed to inform the community and road users of up and coming works through newsletters, road signage and websites (including providing updates to various travel apps/websites). Information could include:
 - Duration of works;
 - Timing of the works;
 - Number of construction movements; and
 - Complaint procedure.
- The contractor will employ a coordinator to engage with HCC's Streetworks, Highways and Development Planning team to ensure there is a key point of contact for HCC for these works;
- The Principal Contractor will agree to work within any permit restrictions which are set by HCC's Streetworks team.

3. Summary

This Framework CTMP has been prepared by Atkins on behalf of Portsmouth Water in support of planning applications to construct and operate a new reservoir at Havant Thicket. The Framework CTMP relates to the construction stage of the Scheme and sets out the outline parameters for the construction traffic arrangements and mitigation measures.

Once appointed, the contractor(s) will prepare one overarching CTMP (for the reservoir and pipeline) for approval by the Local Highway Authority (HCC) prior to the commencement of construction activity. Addendums for different phases will be submitted for approval where appropriate. The construction activity is likely to be phased as follows:

- The north and south vehicular access and access routes and site compound;
- Enabling works including trial embankment;
- The reservoir embankment, wetland and associated development;
- Pipeline (in parallel with enabling works and embankment construction);
- The visitor centre and facilities.

Construction activity for all phases will be managed to minimise the overall impact on the road network.

The CTMPs will provide details of:

- Vehicle routing plans;
- Proposed programme and duration;
- Number of construction personnel including travel arrangements and mitigation where necessary;
- Alterations to the highway, including temporary and / or permanent, to enable construction;
- Details of the number of construction and delivery vehicles using the public highway (no abnormal loads are anticipated at this stage);
- Traffic management details;
- Compounds and laydown area details;
- Highway condition surveys;
- Methods for managing the site to prevent mud onto the highway; and
- Details of onsite contractor parking.

Construction Worker Travel Plans will apply to the construction workforce, noting that the main compound for all construction works will be at the Construction Support Site reservoir site.

Responsibility for monitoring and compliance will lie with the applicant. They will ensure that the construction contractor(s) produce a CTMP that is compliant and ensure their obligation to monitor is understood.

Several key points of contact will be made for the project who will liaise with the Local Highway Authority and ensure coordination between contractors for all the section of works during the entire construction programme. This will facilitate a clear communication channel to ensure compliance.

The CTMP will provide details of the monitoring process and who is responsible with contact details. These will be developed and agreed with the Local Highway Authority.

Appendix A. Mitigation for Road Closures (Pipeline)

Table A1: Review of Road Closures Including Proposed Mitigation (Table 13.11 from Environmental Statement, Chapter 13)

Road name	Duration	Significance of effect	Justification
High Lawn Way	27 weeks	Minor	It is likely that the closure of High Lawn Way would be a partial road closure with no requirement for a diversion. However, consideration has been given to full road closures, and the presence of a key receptor (i.e. an education establishment) along its route. It is anticipated that a full closure would be undertaken in a number of tranches to be coordinated as part of the overarching traffic management plan. It is expected that each tranche would be for a period of less than four consecutive weeks, with diversions being available on roads such as Foxcott Grove, Somborn Drive, Broadmere Avenue and Stockheath Road, all being less than one km in length. Therefore overall, a minor significant effect is reported for the full length of High Lawn Way.
Dunsbury Way	Two weeks	Minor	The potential road closure at Dunsbury Way is expected to be for a duration of two weeks, however the potential diversion route using Riders Lane and Purbrook Way could be close to one km in length, and therefore a minor significant effect is being reported.
Ellisfield Road	Combined six weeks	Minor	The potential road closure at Ellisfield Road is anticipated to be undertaken in three tranches, with a combined duration of up to six weeks. However, each individual closure is expected to be less than four consecutive weeks in duration, and a diversion via Blackdown Crescent, Purbrook Way or Dunsbury Way, with the length of diversion being less than one km. Therefore, whilst a significant effect is noted, it is considered that it would be minor in its significance.
Highclere Avenue	Combined 10 weeks	Minor	The potential road closure Highclere Avenue is anticipated to be undertaken over the course of 10 weeks. However, a diversion route would be available via Botley Drive or Eversley Crescent, Riders lane and Purbrook Way, with the length of diversion being less than one km. Therefore, it is considered that there would potentially be a minor significant effect.

Road name	Duration	Significance of effect	Justification
Fraser Road	Combined 11 weeks	Minor	The potential road closure at Fraser Road is anticipated to be undertaken in three tranches, with a combined duration of up to 11 weeks. However, two individual closures are expected to be less than four consecutive weeks in duration, with one being for five weeks. Fraser Road does not form a through route, with it forming a local access road to residential properties, with a turning head provided at the eastern end. Diversions are available via James Road, Stockheath Lane, Barncroft Way and Woodgreen Avenue, which would be just over one km in length. There could also be potential to use Hook's Lane and Hook's Farm Way to access Barncroft Way. Whilst the diversion may be just beyond one km, and close to an educational establishment, each single diversion would be short term in duration. Therefore, the significance of the effect is considered minor.
North Street	Two weeks	Negligible	North Street forms a small cul-de-sac, with access to residential properties. The closure of North Street is expected to be for a duration of two weeks, with no diversion necessary for vehicular traffic. Access for pedestrians to residential properties would be retained.
Chadswell Meadow	Six weeks	Minor	Chadswell Meadow forms a local access route to residential properties. The closure of Chadswell Meadow is expected to be for a duration of six weeks, with no diversion available for vehicular traffic. Access for pedestrians to residential properties would be retained, however due to the lack of diversion route a significant effect is expected for a short period of time. Due to the number of vehicles likely using this route, and the short duration, the significance of the effect is considered minor.

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