Havant Thicket Reservoir Project

Environmental Statement Volume 4 - Appendices

Appendix A13 Transport

A.13.2 Transport Assessment Addendum

Part 1 of 2

Portsmouth Water Ltd.

14/05/24

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Document history

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Introduction

Background

This Technical Note forms an addendum to the original Havant Thicket Reservoir Transport Assessment (TA), part of the 2020 Environmental Statement (ES) which accompanied the Havant Thicket Reservoir hybrid planning application and outline planning application for the associated pipeline, between the reservoir and Bedhampton springs and pumping station, approved on 15th October 2021 (Approved Scheme).

Following the planning approvals, Portsmouth Water and its appointed pipeline construction contractor (Ward & Burke Construction Ltd) have been investigating ways to improve the route of the pipeline, to further reduce its impact on local communities and the environment. This is in light of alternative innovative construction techniques, which would allow the Scheme to be delivered more efficiently and effectively.

There has also recently been a change in approach to delivering additional resilience to the water network, with a dual pipeline now being proposed. The two pipelines would be used by Portsmouth Water to pump spring water to the reservoir and draw it out when needed. This would give them greater flexibility to respond to more frequent, longer droughts, allowing them to add and remove water from the reservoir at the same time. It would also mean the scheme could continue to operate if maintenance was required on one of the pipelines.

The pipelines could also potentially be used by Southern Water in the future, if it receives development consents for its water recycling scheme, Hampshire Water Transfer and Water Recycling Project (its Development Consent Order is due to be submitted in 2025).

A combined approach means that, if their proposals for water recycling are agreed in the future, residents won't need to experience additional disruption. It would also reduce the environmental impact and it's estimated that taking this futureproofing approach could save over £100 million, compared to installing separate new infrastructure at a later stage. This would provide better value for money for Southern Water customers, who are ultimately paying for the Havant Thicket Reservoir scheme - both the approved project which is in progress and the water recycling proposals if they go ahead.

The new water pipes would be installed inside two adjacent tunnels which would be constructed concurrently to ensure maximum efficiency is achieved, with construction programme durations, and subsequent disruption to local residents minimised.

The change in approach, pipeline route and design needs a new planning approval. A new full planning application is being prepared for the new pipeline route and design supported by a revised Environmental Statement (ES) and this Addendum to the Transport Assessment Report.

Chapters 1 to 6 of the ES provide more information on the context for this application, the new scheme description, the need for the scheme (which hasn't changed) and the alternatives, the methodology and the consultation undertaken.

As part of the reservoir development Portsmouth Water will create a new leisure facility including a visitor centre and a network of walking, cycling and horse-riding paths. It is also proposed to provide two vehicular access points to the reservoir, via the north off the B2149 and the south, off Swanmore Road which will serve as a secondary local access point. As assessed within the Transport Assessment Report.

The 2020 application proposed the northern access (now constructed) for use as the main construction access and the southern access for a proportion of the pipeline construction traffic.

Purpose of Addendum

This report sets out the transport considerations to act as an addendum to the Transport Assessment, presenting the updated assessment that accounts for the re-designed pipeline. For reference the report presents a summary of the assessment that supported the 2020 ES which was approved in 2021.

It should be noted that there are no operational impacts associated with the pipeline scheme, and therefore this note only presents information relating to the construction of the pipeline.

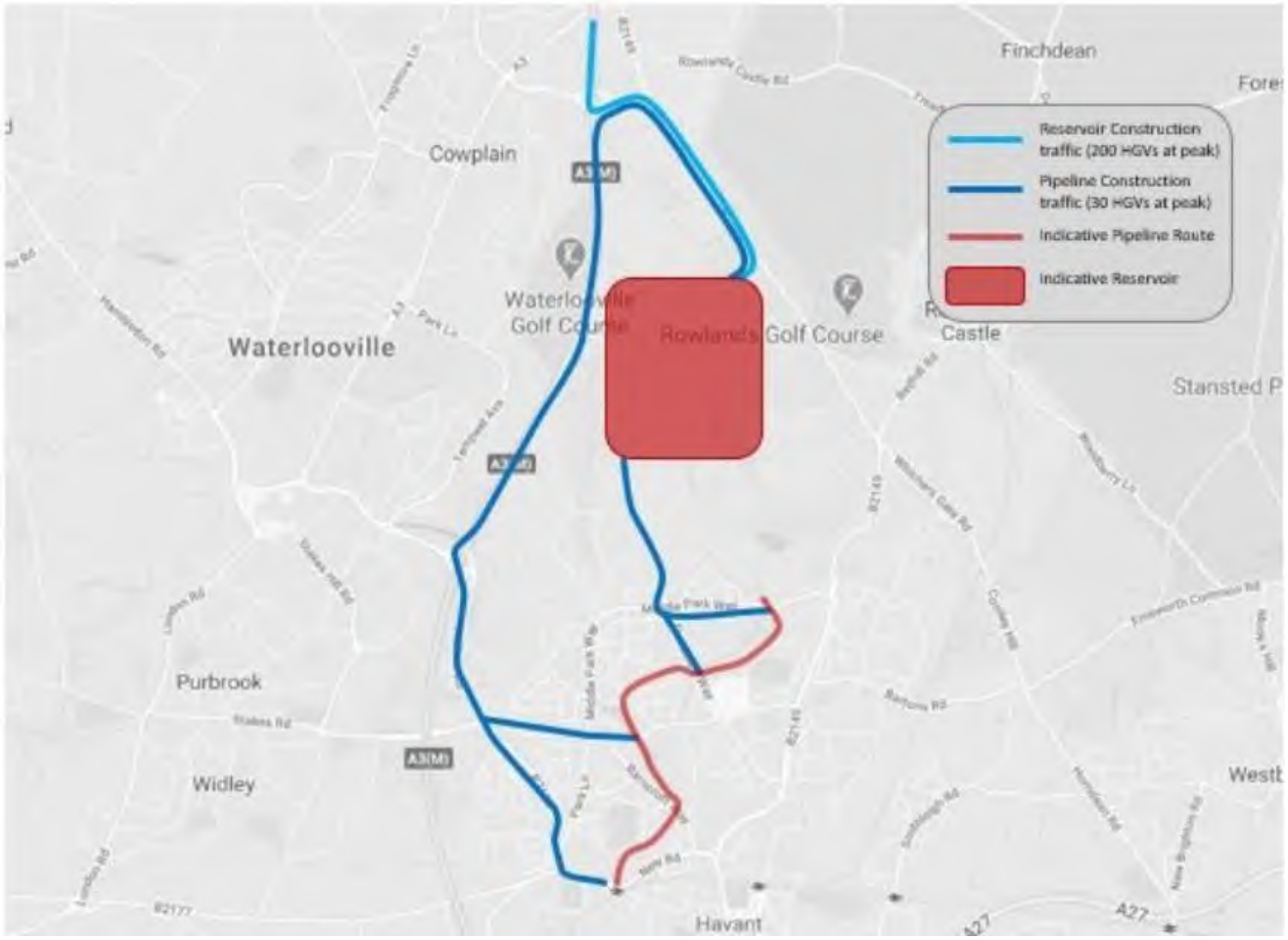
Pipeline Construction Assessment

Summary of Approved Scheme

For the 2020 ES the volume of construction traffic, for both the reservoir and the pipeline, was estimated based on the required construction activities and an assumed construction programme. The number of construction vehicles was established based on typical vehicle payloads and known material considerations and the assessment considered an indicative peak assessment, whereby there were assumed to be concurrent activities generating HGV movements for both the construction of the reservoir and of the pipeline. It was also assumed at the time of the 2020 ES that welfare facilities and the main compound for construction of the pipeline would be located within the reservoir site.

For assessment of the pipeline, it was assumed that the pipeline would generate 30 HGV movements a day (15 arrivals and 15 departures) across the full length, with construction being supported by up to 125 staff. The approved construction route for pipeline traffic is presented in Figure -1.

Figure -1 – Construction routes, 2020 ES



The approved 2020 ES concluded that there may be minor effects on roads with no existing HGVs (High sensitivity roads), acknowledging that any increase in HGVs may be perceptible to local residents in a setting in which none are currently observed; however, in the context of the expected average daily total HGV movements of 30, the number was not considered significant.

It should be noted that the threshold of 30 vehicles was not based on the level of acceptable impact for local residents, but on the likely construction vehicle requirements across the pipeline as a whole.

A further review was also undertaken of the potential temporary impacts associated with the construction of the pipeline in relation to traffic management and / or temporary road closures. The approved methodology set out that an impact would be considered significant if it is in place for more than four consecutive weeks in any 12-month period and leads to a journey length increase of more than one km.

It was concluded that there would likely be night-time only partial closures of the following roads:

- Middle Park Way;
- Dunsbury Way;
- Bedhampton Way;
- Botley Drive;
- Riders Lane;
- Barncroft Way; and
- Purbrook Way.

The duration of these closures meant that there would not be any significant effects relating to this element of the pipeline construction.

There were also expected full or partial road closures of:

- Ellisfield Road;
- Highclere Avenue;
- Dunsbury Way;
- High Lawn Way;
- Fraser Road;
- North Street; and
- Chadswell Meadow.

A summary of the assessment of road closures included within the 2020 ES is presented in Table-1 below.

Table-1 – Review of road closure impacts, 2020 ES

Road Name	Duration	Sig. of Impact	Justification
High Lawn Way	27 weeks	Minor	It is likely that the closure of High Lawn Way will be a partial road closure with no requirement for a diversion. However, consideration has been given to full road closures, and the presence of 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. 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 1km in length. Therefore overall, a minor adverse impact 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 only two weeks, however the potential diversion route using Riders Lane and Purbrook Way could be close to 1km in length, and therefore a minor adverse impact 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 1km. Therefore, whilst a adverse impact 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 will be available via Botley Drive or Eversley Crescent, Riders Lane and Purbrook Way, with the length of diversion being less than 1km. Therefore, it is considered that there would potentially be a minor adverse impact.
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 1km 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 1km, and close to an educational establishment, each single diversion will short term in duration. Therefore, the significance of the effect is considered minor.
North Street	Two weeks	Neg	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 will 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 will be retained, however due to the lack of diversion route an adverse impact 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.

In addition, there was expected to be a temporary diversion of the footpath running through Hawthorn Walk for a period of up to eight weeks, and a temporary diversion of the footpath running through the green space between Barncroft Way and Purbrook Way for a period of up to 21 weeks.

Previous agreed S.106 / Management items

It was set out in the Framework Construction Traffic Management Plan (FCTMP) (March 2021) that active traffic management would be required along the route to limit disruption as much as possible. Both fencing and traffic management was proposed as being flexible to minimise traffic delays caused by single lane operation, however as part of the revised construction methodology, open cut pipework in the highway has been eliminated and so this issue is no longer relevant.

It was set out within the mitigation as part of the FCTMP that it would be intended to limit HGV movements to 6 per hour, and 30 a day based on the assumed construction requirements at the time. Any requirement for an increase in numbers requiring approval from the Local Highway Authority.

Revision to construction methodology

Overview

The installation of two pipelines running next to each other, has resulted in a focus on resilience, minimising disruption and impact on the environment. The design and construction methodology is considered the most efficient method in terms of material excavated / imported, with 36% less excavated material than open cut and 30% less material required to be imported.

It is also pertinent to note that in terms of staff there will be a significantly lower number working on the pipeline construction than previously assessed as part of the 2020 ES, with up to 65 staff expected during the peak activities (as opposed to 125 assessed as part of the 2020 ES). This will result in a significant reduction in the number of staff movements along the pipeline.

Trip generation

The new pipeline design has resulted in a change in the main construction methodology, with the pipeline construction largely being undertaken using tunnelling via a series of shafts along the proposed route, as opposed to opencut. A programme has been developed by the contractor which details the expected duration of each trip generating activity at the construction compounds / shafts along with total HGV requirements based on the expected vehicle payloads and known material considerations.

A construction route plan has been developed to allow each of the shafts to be served by construction vehicles accessing and egressing the main compound, with routes being split in route elements for assessment purposes. The proposed route elements relevant to the new pipeline design are presented in Figure -2.A sequence of these routes combine to make up a ‘construction trip’. i.e., a construction trip from the reservoir to Shaft X may use RE1>RE2>RE3, but this is still just one trip. This allows the potential impact along each of the affected roads to be assessed within the ES.

There is expected to be an element of fluctuation across the construction programme, with day to day variations being dependent on several factors and as such the anticipated trip generation for each of the routes is presented with the average, 85th percentile and maximum trips in Table -2. The duration of the peak is an estimate of how long the ‘peak period’ may extend, based on the number of days where the number of trips is close to the maximum as stated.

Also shown in Figure -2, there is a tractor-trailer route between the northern access point on the B2149 and the pipeline construction area. The tractor-trailer route is required to transport equipment to the pipeline construction areas. A tractor is proposed to provide off-road capabilities within the compounds, to reduce additional plant requirements; management of the tractor access will be agreed through the Construction Traffic Management Plan (CTMP) process. Due to restrictions on tractors being able to travel on motorways, there is a necessity to use the B2149 south of the northern access to route towards the Route Elements indicated within Figure -2 for a period of approximately six months (until the southern access point is constructed). It is anticipated that typically there would be generally less than 10 tractor and trailer trips a day across the construction period, and due to the low volume and ad-hoc nature this has not been assessed as its own individual route; for a robust assessment these have been incorporated into the HGV trip routes for a fallback scenario.

Figure -2 - Construction Route Elements, new design

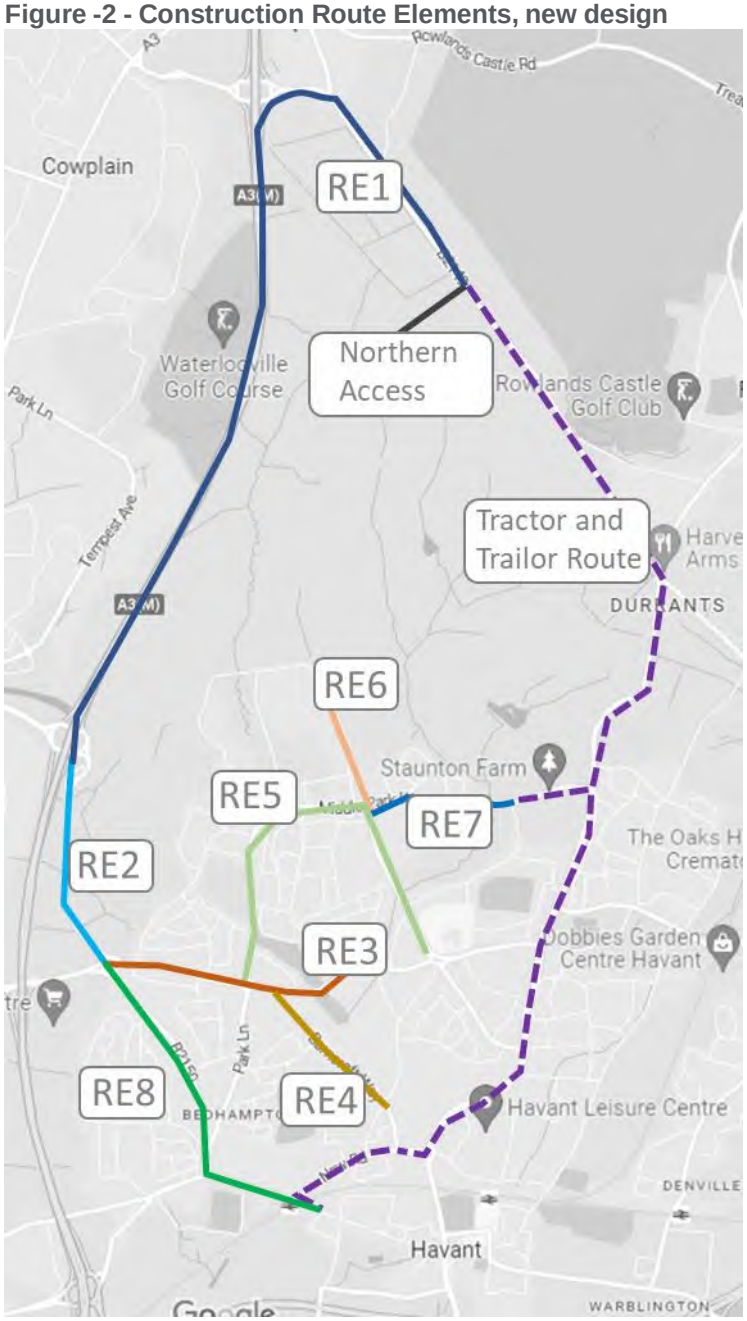


Table -2 - Pipeline construction - trip generation

Route Element	Average HGV trips (two-way)	85th Percentile HGV trips (two-way)	Maximum HGV trips (two-way)	Potential duration of peak HGV trips (number of days)
RE1	28	60	100	2
RE2	16	44	84	3
RE3	16	42	84	2
RE4	10	26	82	1
RE5	4	6	38	1
RE6	8	20	72	4
RE7	8	20	72	4
RE8	1	2	8	39

Trip impact

To review the impact of the potential trip generation, the assessment undertaken within the approved 2020 ES has been updated, with those roads relevant to the pipeline being presented in Table 3. This considers the sensitivity of the road link and the significance criteria base on the Institute of Environmental Management and Assessment (IEMA) guidelines, as set-out in the approved 2020 ES.

Table -3 - Pipeline construction – Impact on affected roads

Road Link Reference[1]	Road	Sensitivity[2]	% impact all traffic-average	% impact all traffic – 85th percentile	% impact all traffic - maximum
L8	Dell Piece East between A3(M) and roundabout with B2149	Negligible	2%	2%	3%
L17	Middle Park Way Arm of the B2149 junction	Medium	0%	1%	1%
L19	Dunsbury Way	High	0%	0%	1%
L20	Middle Park Way north of junction with Purbrook Way	High	1%	1%	1%
L21	Purbrook Way, east of roundabout with Middle Park Way / Park Lane	Medium	0%	0%	1%
L22	Purbrook Way, west of roundabout with Middle Park Way / Park Lane	Medium	0%	0%	1%
L25	B2150, south of roundabout with Purbrook Way / Hulbert Road	Low	0%	0%	0%
L27	Stockheath Lane	High	1%	1%	3%
L29	Hulbert Way, south of junction with Fitzwygram Way	Negligible	0%	0%	1%
L31	Hulbert Way, north of junction with Fitzwygram Way	Negligible	0%	0%	0%
L40	A3(M) Junction 3 north slips	Negligible	0%	0%	1%
L41	A3(M) Junction 2 south slips	Negligible	0%	0%	1%
L43	North of Northern Access B2149	Negligible	4%	4%	4%
L45	Swanmore Road	High	1%	2%	5%
L46	Middle Park Way West of Swanmore Road	Medium	0%	0%	1%
L49	Barncroft Way	Medium	1%	1%	3%
L50	High Lawn Way	High	1%	1%	2%
L53	Bedhampton Road	Medium	0%	0%	0%
L54	Hooks Farm Way	High	0%	0%	2%

The assessment presented in Table 3 illustrates that the impact on overall traffic across the construction area is not expected to result in any significant effects in ES terms, with the percentage change in all traffic expected to be below 6% within all scenarios. However, it is acknowledged that the composition of traffic is an important consideration when reviewing the potential impact, with the majority of construction traffic being made up of HGVs. Therefore, further consideration has been given to the impact of the HGV trip generation. The assessment presented in Table 4 gives consideration of the change in HGVs on roads affected.

[1] See 2020 ES
[2] See 2020 ES

Table - 4 - Pipeline construction – Impact on affected roads

Road Link Reference	Road	Sensitivity	% impact on HGVs - average	% impact on HGVs – 85th percentile	% impact on HGVs - maximum
L8	Dell Piece East between A3(M) and roundabout with B2149	Negligible	53%	61%	70%
L17	Middle Park Way Arm of the B2149 junction	Medium	3%	10%	35%
L19	Dunsbury Way	High	1%	1%	9%
L20	Middle Park Way north of junction with Purbrook Way	High	1%	3%	16%
L21	Purbrook Way, east of roundabout with Middle Park Way / Park Lane	Medium	5%	15%	30%
L22	Purbrook Way, west of roundabout with Middle Park Way / Park Lane	Medium	4%	13%	26%
L25	B2150, south of roundabout with Purbrook Way / Hulbert Road	Low	0%	1%	4%
L27	Stockheath Lane	High	13%	13%	352%
L29	Hulbert Way, south of junction with Fitzwygram Way	Negligible	7%	21%	41%
L31	Hulbert Way, north of junction with Fitzwygram Way	Negligible	6%	18%	34%
L40	A3(M) Junction 3 north slips	Negligible	4%	13%	24%
L41	A3(M) Junction 2 south slips	Negligible	5%	14%	27%
L43	North of Northern Access B2149[3]	Negligible	61%	70%	81%
L45	Swanmore Lane	High	-*	-*	-*
L46	Middle Park Way West of Swanmore Road	Medium	1%	3%	19%
L49	Barncroft Way	Medium	6%	18%	55%
L50	High Lawn Way	High	3%	9%	31%
L53	Bedhampton Road	Medium	0%	1%	2%
L54	Hooks Farm Way	High	-*	-*	-*

*There are no HGVs recorded on these road links, and therefore a magnitude of change percentage cannot be derived. A qualitative review of the HGV impact on these links has therefore been undertaken.

The assessment illustrates that across the majority of the network, the impact of the construction could be considered negligible in ES terms, with the impact of the average trip generation being less than 10%, aside from Stockheath Lane and the road links connecting the Northern Access Route (NAR) with the A3(M); the majority of the HGVs along this link are associated with the new Havant Ticket Reservoir (see approved 2020 ES and accompanying Transport Assessment for details). Traffic modelling supported the approved 2020 ES, and the change in pipeline design will not impact on the traffic model outputs as previously presented.

With regards to the impact on a short section of Stockheath Lane, the high percentage change at the peak is due to the low baseline number of HGVs, which is also the case on several other local roads including Swanmore Lane and Hooks Farm Way. Whilst there is no prescribed volume of HGVs that would be termed 'significant' in environmental assessment terms, assessments of other large infrastructure projects (such as Crossrail and HS2) generally considered that a significant impact in urban areas could arise where the increase in greater than 40 vehicles a day. Although it is acknowledged that any increase in HGVs may be perceptible to local residents in the setting where none are currently observed, the average number of HGVs and 85th percentile across the day at this location is less than 10 HGVs two-way, which is not considered to be significant. The perceptible impact of HGVs on these links will be mitigated by measures set out within the CTMP where appropriate.

[3] The number of vehicles assessed as part of the approved scheme has been retained within this assessment, resulting in a medium magnitude of change, which is not a significant effect according to the ES criteria. However, it should be noted that an addendum to the reservoir ES estimate these trips to be far lower than previously assessed, and as such the percentage change presented is expected to be low.

In considering the 85th percentile trip generation, whilst some links do change by more than 10%, the percentage change for most remains below the threshold for assessment of 30%, set out within the IEMA guidelines; it is therefore considered that the conclusion of no significant effects on these links made within the 2020 ES is still a relevant conclusion. The assessment also demonstrates that even when considering an absolute peak, which would only be expected over several days, the impact is low in terms of magnitude of change (30-60%), aside for those links described above.

The approved pipeline and reservoir application was supported by a Framework Construction Traffic Management Plan, which stated that material changes to the construction vehicle numbers will be discussed and agreed with the LHA. This assessment is intended to illustrate how the new design impacts on the trip generation compared to that originally assessed. The new pipeline application will be supported by a detailed CTMP, which sets out any mitigation deemed necessary to reduce the associated impacts such as timing of HGV trips and use of a banksman where appropriate. On the basis of the information presented above it is considered that the design of the new pipeline scheme can be considered as comparable in terms of significance of impact and managed through on-going engagement with the LHA in relation to the detailed CTMP.

Vehicular access

It is proposed to construct the pipeline by tunneling between shafts along the pipeline alignment, with appropriate compound areas being established at each shaft. A review of access arrangements has been undertaken at each compound to ensure an HGV can safely access and egress the site, with the drawings being provided in Appendix A; further detailed information such as haul road materials and traffic management requirements will be agreed through the conditioned CTMP process.

Road / PRoW Closures

With regards to road closures and parking suspensions, the proposed closures are summarised within Table-5 and Appendix B, schedule of highway impacts. As part of on-going management of the impacts, parking surveys have been undertaken, with the results summarised below, and on-going mitigation will be discussed with the LHA. Also included within Appendix B is information relating to the culvert works and where there are tunneled road crossings.

It should be noted that the review within Table-5 is based on a ‘worst-case’ assumption that includes *potential* road closures.

Table-5 - Review of road closure impacts, new design

Road Name	Duration	Sig. of Impact	Justification
Middle Park Way	Two weeks	Minor	The potential road closure at Middle Park Way is expected to be for a duration of one month, however the diversion for some residential areas could be up to 3km. Therefore overall, a minor adverse impact is reported for a short section of Middle Park Way.
Middle Park Way (lane closure)	3 months	Minor	As part of the construction of the pipeline it is envisaged that lane closures will be required along sections of Middle Park Way for a combined total of 3 months; the temporary nature and continued operation of the network mean that a minor effect is being reported.
Residential loop off High Lawn Way at one end	20 months	Neg	The potential road closure at one end of the residential loop off High Lawn Way is expected to be for a duration of 20 months to facilitate site access, however no diversion is considered necessary as there is an adjacent access point available for residential properties. Therefore, a negligible effect is being reported.
High Lawn Way (parking suspension	20 months	Minor	As part of the construction of the pipeline it is envisaged that parking suspensions will be required along a section of High Lawn Way on a single side of the carriageway for up to 20 months. There are no formal parking bays on High Lawn Way and parking surveys have indicated sufficient capacity to accommodate the suspension, and therefore a minor adverse impact is being reported.
Hooks Farm Way (parking suspension)	20 months	Minor	As part of the construction of the pipeline it is envisaged that parking suspensions will be required along a section of Hooks Farm Way on a single side of the carriageway for up to 20 months. Parking surveys have indicated sufficient capacity to accommodate the suspension, and therefore a minor adverse impact is being reported.
Meyrick Road (parking suspension)	15 months	Minor	As part of the construction of the pipeline it is envisaged that parking suspensions will be required along a section of Meyrick Road on a single side of the carriageway for up to 15 months. Alternative parking arrangements are considered to be available, and therefore a minor adverse impact is being reported with alternative on-street parking to be used.
West Street (parking suspension)	15 months	Minor	As part of the construction of the pipeline it is envisaged that parking suspensions will be required along a section of West Street on a single side of the carriageway for up to 15 months. Alternative parking arrangements are considered to be available, therefore a minor adverse impact is being reported with alternative on-street parking to be used.
Riders Lane (Road closure)	19 months	Minor	The potential road closure at Riders Lane is expected to be for a duration of 19 months, with alternative routes available with a diversion of less than 1km. Therefore overall, a minor adverse impact is reported for a short section of Riders Lane.

Road Name	Duration	Sig. of Impact	Justification
Purbrook Way	Two weeks	Minor	The potential road closure at Purbrook Way is expected to be for a duration of only two weeks, however the diversion for some residential areas could be up to 3km. Therefore overall, a minor adverse impact is reported for a short section of Purbrook Way.
Purbrook Way (lane closure)	14 months	Minor	As part of the construction of the pipeline it is envisaged that a lane closure for a short section of Purbrook Way will be required for 14 months; the short section will allow traffic to shuttle run, continuing the operation of the network, meaning that a minor effect is being reported. There would also need to be the temporary relocation of a bus stop for this duration.
Dunsbury Way	Two weeks	Minor	The potential road closure at Dunsbury Way is expected to be for a duration of only two weeks, however the diversion for some residential areas could be up to 3km. Therefore overall, a minor adverse impact is reported for a short section of Dunsbury Way.
Dunsbury Way (lane closure)	10 weeks	Minor	As part of the construction of the pipeline it is envisaged that lane closures will be required along sections of Purbrook Way for a combined total of 10 weeks; the temporary nature and continued operation of the network mean that a minor effect is being reported.
Stockheath Lane (parking suspension)	20 months	Minor	As part of the construction of the pipeline it is envisaged that parking suspensions will be required along a section of Stockheath Lane for up to 20 months. There are no formal parking bays along Stockheath Lane and parking surveys have indicated sufficient capacity to accommodate the suspension, therefore a minor adverse impact is being reported with alternative on-street parking to be used.

On the basis of the above assessment, it is considered that the impact of the new pipeline design is consistent with the 2020 ES, with traffic management and mitigation to be agreed by condition as part of the detailed CTMP.

The proposed PRoW closures are presented in Appendix C, which outlines that reasonable temporary alternative routes have been identified to mitigate the temporary PRoW / footpath closures. A summary of the temporary closures are presented below:

- High Lawn Way, with a diversion of less than 400m;
- A short section of Middle Park Way, with an alternative route of approximately 200m;
- A short section of Dunsbury Way, with an alternative route of less than 100m;
- A short section of Purbrook Way, with an alternative route of less than 100m;
- A short section adjacent to Stockheath Lane, with an alternative route of less than 100m; and
- Hooks Farm Way, with a diversion of less than 100m.

There would also be PRoW diversions at:

- Havant 505 (two sections) with an alternative route of less than 200m;
- Havant 506a and 506b with an alternative route of less than 100m;
- Havant 506b at Corhampton Crescent, with an alternative route of approximately 400m
- Havant 32 with an alternative route less than 100m;
- Havant 506b at Hermitage Stream with an alternative route of less than 100m;
- Havant 44 at Hooks Lane with an alternative route of less than 100m; and
- Havant 34 with an alternative route of less than 100m (which will become a permanent diversion following construction).

A review of the temporary footpath and PRoW closures indicates that suitable alternative routes can be identified without a significant increase in distance for users, and therefore the impact on PRoW and footpaths from the pipeline is not considered to be a significant effect relating to traffic and transport.

It is considered that the impact resulting from the new pipeline design is consistent with the 2020 ES.

Parking Assessment

As part of the pipeline, parking suspensions will be implemented to ensure ease of access for the deliveries and plant to sites. A parking survey was conducted to measure the disruption that will be caused by these parking suspensions. The parking surveys were conducted on typical weekdays (Tuesday, Wednesday and Thursday) in February and April 2024. Surveys were conducted three times a day, at 9:00am, 13:00pm and 17:00pm. Table 6 shows the capacity and average occupancy of each parking location with a relevant suspension.

Table-6 - Review of typical parking capacity and occupancy

Shaft	Location	Parking capacity	Average weekday occupancy
1	Meyrick Road	11	70%
	West Street (West)	6	70%
	Ranelagh Road	10	67%
	Brockhampton Road	20	60%
	Knox Road	26	64%
	West Street (East)	10	72%
2 & 3	Hooks Farm Way (North Side)	30	4%
	Hooks Farm Way (South Side)	24	23%
4	Stockheath Lane	6	24%
7	High Lawn Way North	36	46%
	High Lawn Way South	36	44%
	High Lawn Way (1st pull in)	8	65%
	Foxcott Grove	36	79%
	Somborne Drive	28	69%
	High Lawn Way (pull in by Shaft 7)	12	55%
	High Lawn Way (between 2nd and 3rd pull in)	36	61%
8	High Lawn Way (Shaft 8) East	10	6%
	High Lawn Way (Shaft 8) West	10	12%

A number of parking areas located around Shaft 1 and Shaft 7 average over 50% occupancy of their capacity. It should be noted that not all of these parking locations are considered for suspension and therefore have the potential to accommodate capacity lost from suspensions nearby. It is considered that single side parking suspensions can be accommodated where the occupancy level is below 50%. Where it is above 50% alternative locations have been explored, with appropriate locations to be discussed with the LHA through the CTMP process.

Table 7 combines the capacity of parking surrounding each Shaft, outlining how many spaces would need to be suspended at each location, before calculating the average available spaces at each Shaft location during the proposed suspensions.

Table -7 – Review of parking capacity at each shaft area, average occupancy, and impact of suspension

Shaft	Surveyed area total parking capacity	Surveyed area total average weekday occupancy	Remaining spaces given average occupancy	Number of spaces suspended	Average residual capacity
1	83	65%	29	9	20
2 & 3	54	13%	47	29	18
4	6	24%	6	6	N/A
7	192	59%	78	42	36

Shaft	Surveyed area total parking capacity	Surveyed area total average weekday occupancy	Remaining spaces given average occupancy	Number of spaces suspended	Average residual capacity
8	20	9%	18	12	6

Table 8 presents a summary of the proposed parking suspensions and provides a recommendation on potential mitigation requirements.

Table-8 - Review of parking suspension impacts and recommendations

Location	Closure date	Closure description	Recommendation
Meyrick Road	May 2025 to May 2026	Along north side of street at both side at top end	Potential for relocation of on-street parking to neighboring streets.
West Street	May 2025 to May 2026	Along west side of street adjacent to Meyrick Road	Potential for relocation of on-street parking to neighboring streets.
Ranelagh Road, Brockhampton Road, Knox Road	N/A	N/A	Average occupancy of 67% or below and total capacity of over 50 spaces can accommodate the offset parking.
Hooks Farm Way (North Side)	Feb 2025 to Aug 2026	Along north side of street	Low occupancy of parking on south side of Hooks Farm Way opposite (23%). It is considered that there is sufficient capacity on the northern side (4% occupancy) to absorb the displaced parking.
Hooks Farm Way (South Side)	N/A	N/A	Remain open to accommodate relocated north parking.
Stockheath Lane	Apr 2025 to Nov 2026	Near footpath to west of Stockheath Lane	Three vehicles typically being displaced from the suspended parking. Available on street parking in neighboring streets likely available.
High Lawn Way North	Feb 2026 to Oct 2027	Suspension to bays on one side of street on southern end	South has capacity of 36 spaces which can accommodate the offset parking from the north due to both typically averaging ~50% capacity.
High Lawn Way South	N/A	N/A	Capacity of 36 spaces can accommodate north side alternative.
High Lawn Way (Shaft 8) East	N/A	N/A	Low occupancy (6%) can accommodate offset parking from suspension near Shaft 6 if needed.
High Lawn Way (Shaft 8) West	N/A	N/A	Low occupancy (12%) can also accommodate offset parking from suspension near Shaft 6 if needed.

Conclusion

It is considered that the new design, whilst resulting in a change in the construction methodology and including a second pipeline, does not change the significance of any impacts from a traffic and transport perspective. The impact of the construction traffic has been reviewed, and no new significant impacts have been identified that cannot be mitigated by the CTMP. It is acknowledged that there will be fluctuations in traffic across the construction period, and consideration has been given to the absolute maximum trip generation, which may only last for several days across a substantive construction programme.

The new design allows the pipeline construction to be undertaken with a significantly smaller workforce, with up

to 65 staff required at the peak as opposed to the 125 staff assessed as part of the 2020 ES. This has a reduced impact on the local road network during construction compared to the 2020 ES, with fewer worker trips being generated to / from the site each day.

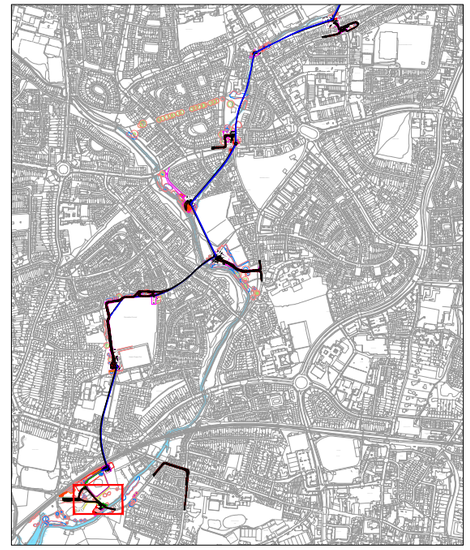
There has been a change in the proposed road / footpath closures, however the order of magnitude of impact is considered to be consistent with the 2020 ES, with detailed mitigation and traffic management to be agreed by condition as part of the full CTMP.

Appendices



Appendix A. Vehicular access assessment

DO NOT SCALE



LOCATION PLAN
Scale 1:25000

Millimetres 0 10 100

Water Treatment Works

6.4m

Springs

Hermitage Stream

Spring

6.1m

Bedhampton Springs

FB

PARKING (6 m x 2.5 m)

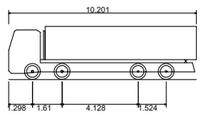
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CLIENT NAME: Portsmouth Water LICENCE NUMBER: 100018036

Notes:

1. Preliminary design only - based on Ordnance Survey data.

Key:

- Construction Site Hoarding
- Site Internal Fencing
- Existing Solar Array
- Redline Boundary
- Public Right of Way
- Pedestrian Footpath
- Stoned Up Areas
- Spring Chamber Exclusion Zone



Large Tipper

Overall Length	10.201m
Overall Width	2.495m
Overall Body Height	2.890m
Min Body Ground Clearance	0.341m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.550m

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION

NONE

MAINTENANCE/CLEANING

NONE

DECOMMISSIONING/DEMOLITION

NONE

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Rev.	Date	Description	By	Chk'd	App'd
P1	28/02/24	DRAWING CREATED	PM	PDE	CW

Drawing Status: FOR INFORMATION
Suitability: S2

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Client: PORTSMOUTH WATER

Project Title: HAVANT THICKET RESERVOIR

Drawing Title: SHAFT COMPOUND LAYOUT
SHAFT 1
SWEPT PATH ANALYSIS
LARGE TIPPER

Scale	Designed	Drawn	Checked	Authorised
1:500	PM	PM	PDE	CW
Original Size	**Date**	**Date**	**Date**	**Date**
A3	28/02/24	28/02/24	29/02/24	29/02/24

Drawing Number: HA PIN HTR - ATK - HGN - 01 - DR - D - 0001A
(Location - Originator - Volume - Type - Role - Number)

Project Ref. No.: 5218618

Revision: P1

DO NOT SCALE

Millimetres 0 10 100

WEST STREET

7.0m

Cromwell Terr

Brook Villas

Temporary suspension of on-street parking.

Hermitage Bridge

Sinks

178a

178

168c

168a

168

ROMAN ROAD

WEST STREET

Ward Bdy

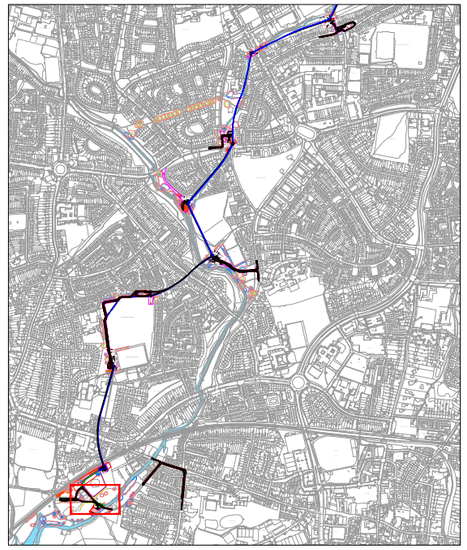
CR

20

MEYRICK ROAD

Sta

Electricity Distribution Site



LOCATION PLAN
Scale 1:25000

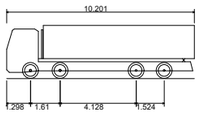
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CLIENT NAME: Portsmouth Water LICENCE NUMBER: 100018036

Notes:

1. Preliminary design only - based on Ordnance Survey data.

Key:

- Construction Site Hoarding
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- Existing Solar Array
- Redline Boundary
- Public Right of Way
- Pedestrian Footpath
- Stoned Up Areas
- Spring Chamber Exclusion Zone



Large Tipper

Overall Length	10.201m
Overall Width	2.495m
Overall Body Height	2.890m
Min Body Ground Clearance	0.341m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.550m

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION

NONE

MAINTENANCE/CLEANING

NONE

DECOMMISSIONING/DEMOLITION

NONE

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

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P1	29/05/24	DRAWING CREATED	PM	CW	CW

Drawing Status: FOR INFORMATION

Suitability: S2

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Client: PORTSMOUTH WATER

Project Title: HAVANT THICKET RESERVOIR

Drawing Title: WEST STREET JUNCTION WITH MEYRICK ROAD SHAFT 1 SWEPT PATH ANALYSIS LARGE TIPPER

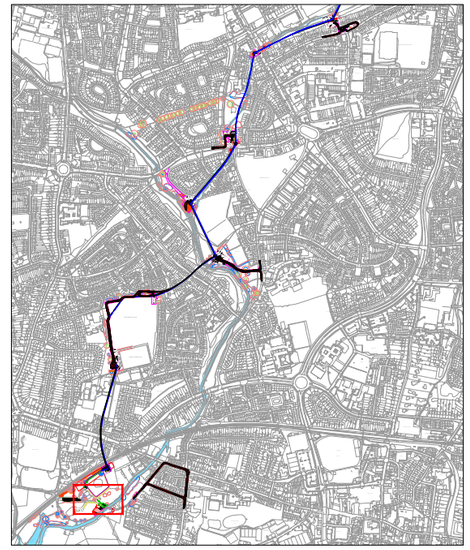
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1:500	PM	PM	CW	CW
Original Size	**Date**	**Date**	**Date**	**Date**
A3	29/05/24	29/05/24	29/05/24	29/05/24

Drawing Number: HA PIN HTR - ATK - HGN - 01 - DR - D - 0001C
(Location | Originator | Volume | Type | Role | Number)

Project Ref. No.: 5218618

Revision: P1

DO NOT SCALE



LOCATION PLAN
Scale 1:25000

Millimetres 0 10 100

Water Treatment Works

6.4m

Springs

Hermitage Stream

Spring

Bedhampton Springs

FB

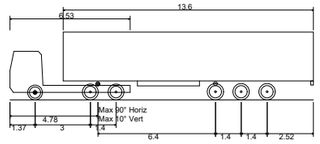
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CLIENT NAME: Portsmouth Water LICENCE NUMBER: 100018036

Notes:

1. Preliminary design only - based on Ordnance Survey data.

Key:

- Construction Site Hoarding
- Site Internal Fencing
- Existing Solar Array
- Redline Boundary
- Public Right of Way
- Pedestrian Footpath
- Stoned Up Areas
- Spring Chamber Exclusion Zone



Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION

NONE

MAINTENANCE/CLEANING

NONE

DECOMMISSIONING/DEMOLITION

NONE

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

Rev.	Date	Description	By	Chk'd	App'd
P2	07/03/24	VEHICLE TRACKING REVISED	PM	PDE	CW
P1	28/02/24	DRAWING CREATED	PM	PDE	CW

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Suitability: S2

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Client: PORTSMOUTH WATER

Project Title: HAVANT THICKET RESERVOIR

Drawing Title: SHAFT COMPOUND LAYOUT
SHAFT 1
SWEPT PATH ANALYSIS
ARTICULATED VEHICLE

Scale	Designed	Drawn	Checked	Authorised
1:500	PM	PM	PDE	CW
Original Size	**Date**	**Date**	**Date**	**Date**
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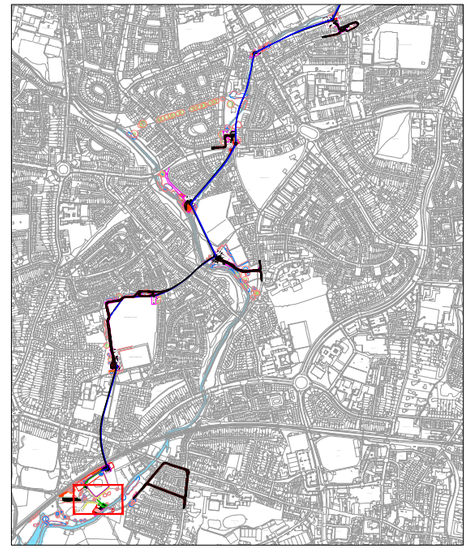
Drawing Number: HTR - ATK - HGN - 01 - DR - D - 0002A
(Location - Originator - Volume - Type - Role - Number)

Project Ref. No.: 5218618
Revision: P2

DO NOT SCALE

Temporary suspension of on-street parking.

Minor overrun of low-level kerb to be managed by condition review.



LOCATION PLAN
Scale 1:25000

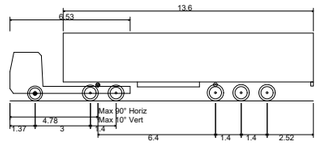
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CLIENT NAME: Portsmouth Water LICENCE NUMBER: 100018036

Notes:

1. Preliminary design only - based on Ordnance Survey data.

Key:

- Construction Site Hoarding
- Site Internal Fencing
- Existing Solar Array
- Redline Boundary
- Public Right of Way
- Pedestrian Footpath
- Stoned Up Areas
- Spring Chamber Exclusion Zone



Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION

NONE

MAINTENANCE/CLEANING

NONE

DECOMMISSIONING/DEMOLITION

NONE

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P1	29/05/24	DRAWING CREATED	PM	CW	CW

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Client: PORTSMOUTH WATER

Project Title: HAVANT THICKET RESERVOIR

Drawing Title: WEST STREET JUNCTION WITH MEYRICK ROAD SHAFT 1 SWEPT PATH ANALYSIS ARTICULATED VEHICLE

Scale	Designed	Drawn	Checked	Authorised
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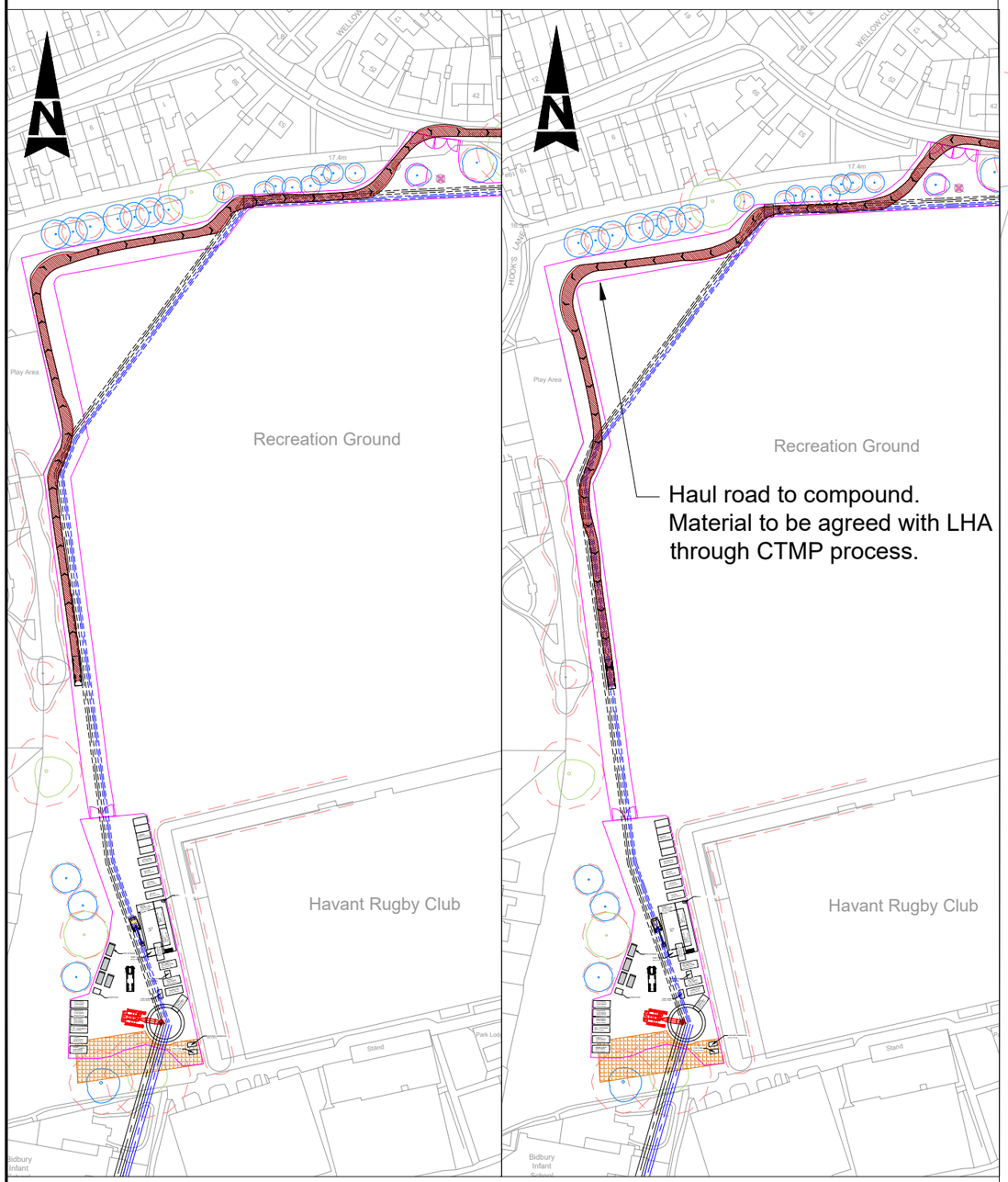
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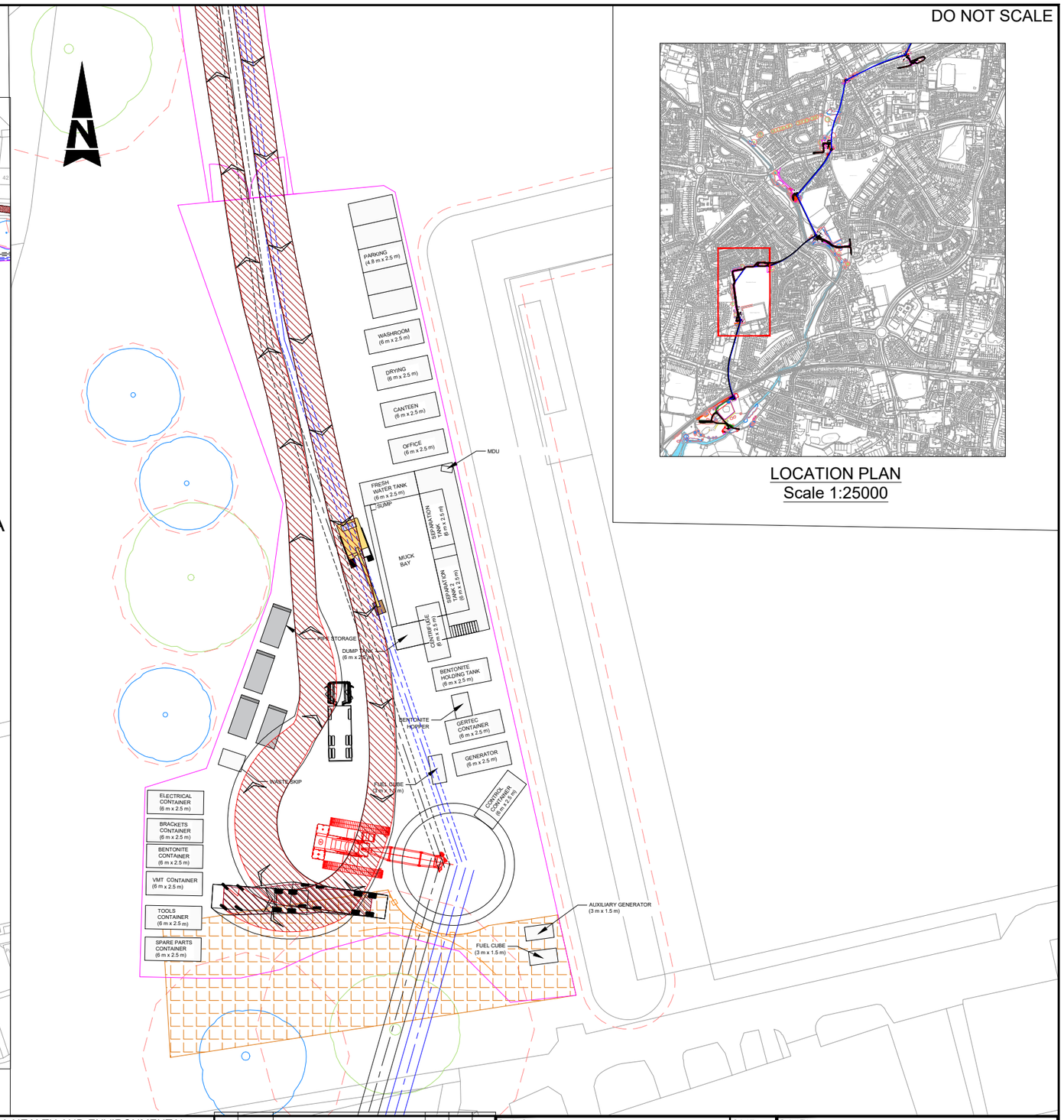
Project Ref. No.: 5218618

Revision: P1

DO NOT SCALE

SHAFT 2 SITE ACCESS
NTS





LOCATION PLAN
Scale 1:25000

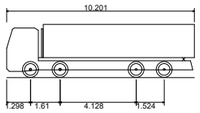
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CLIENT NAME: Portsmouth Water LICENCE NUMBER: 100018036

Notes:

1. Preliminary design only - based on Ordnance Survey data.

Key:

- Construction Site Hoarding
- Fill Pipeline
- Return Pipeline



Large Tipper

Overall Length	10.201m
Overall Width	2.495m
Overall Body Height	2.890m
Min Body Ground Clearance	0.341m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.550m

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION
NONE

MAINTENANCE/CLEANING
NONE

DECOMMISSIONING/DEMOLITION
NONE

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

Rev.	Date	Description	By	Chk'd	App'd
P2	29/05/24	ANNOTATION ON HAUL ROAD ADDED	PM	CW	CW
P1	28/02/24	DRAWING CREATED	PM	PDE	CW

Drawing Status: FOR INFORMATION
Suitability: S2

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Client: PORTSMOUTH WATER

Project Title: HAVANT THICKET RESERVOIR

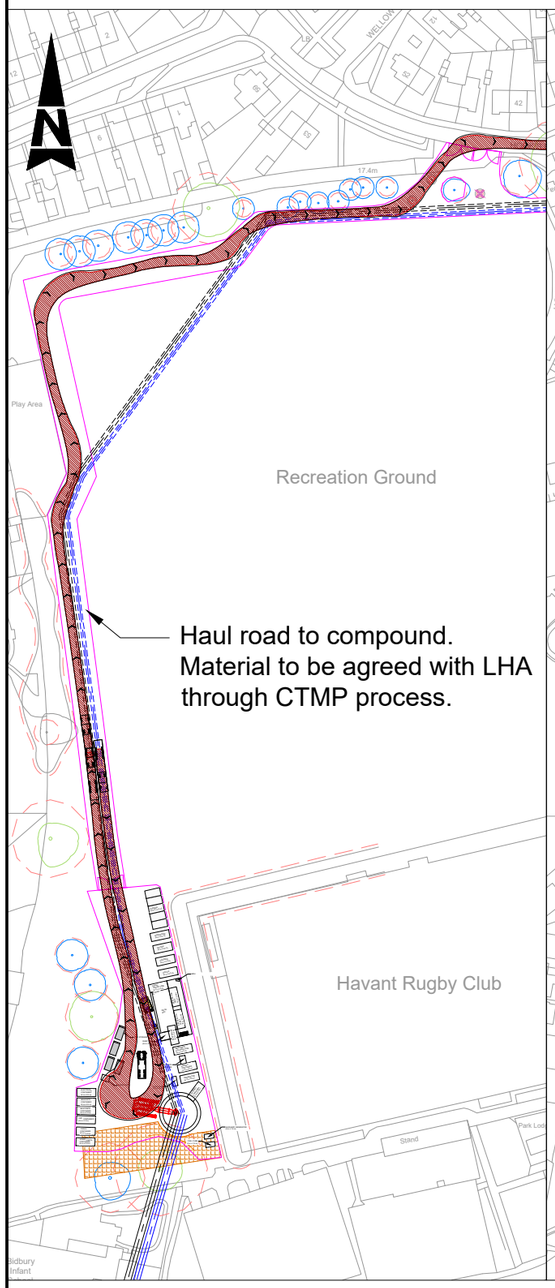
Drawing Title: SHAFT COMPOUND LAYOUT
SHAFT 2
SWEPT PATH ANALYSIS
LARGE TIPPER

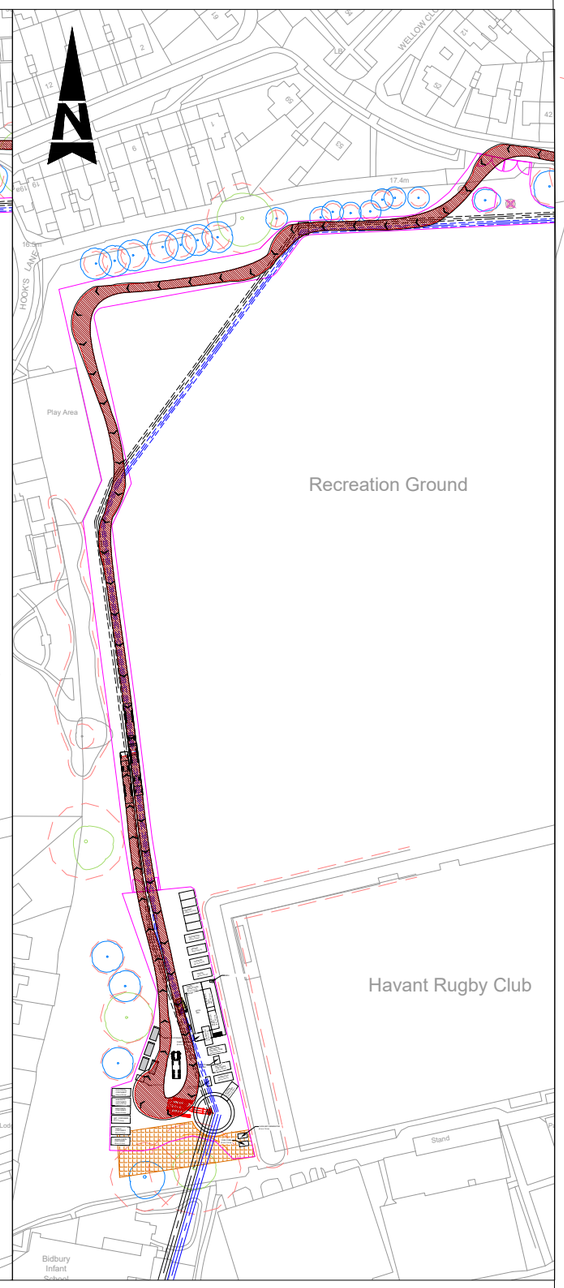
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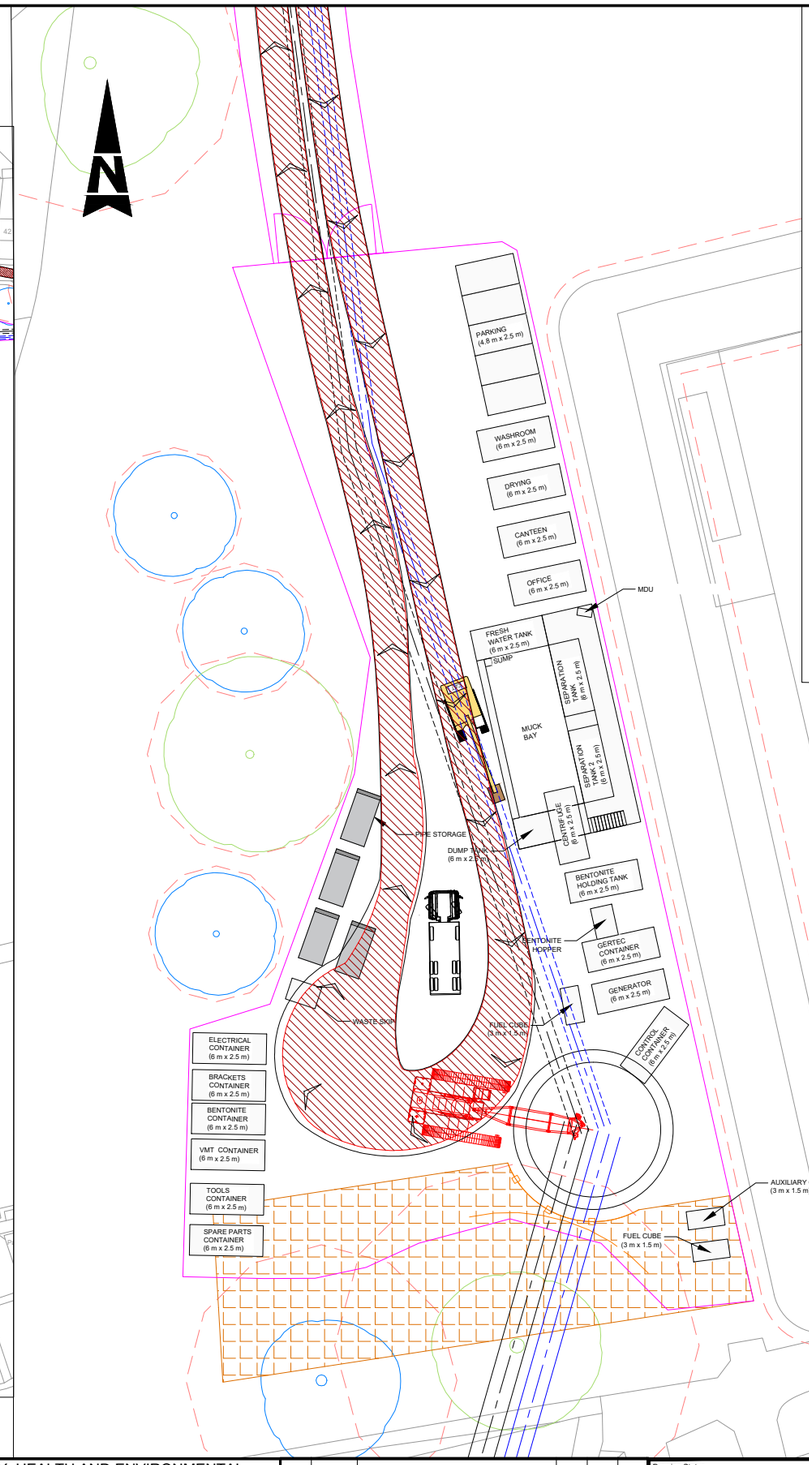
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(Originator | Volume | Location | Type | Role | Number)
Project Ref. No.: 5218618
Revision: P2

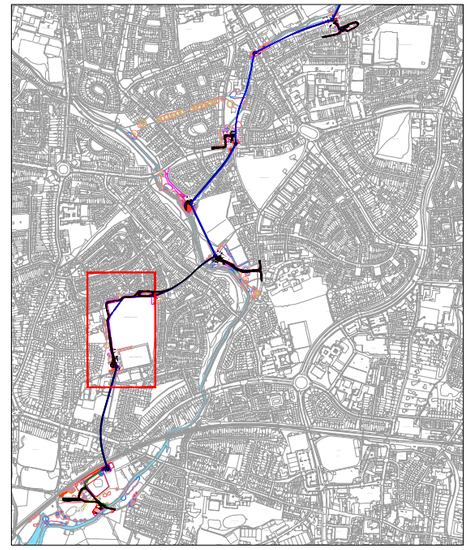
DO NOT SCALE

SHAFT 2 SITE ACCESS
NTS









LOCATION PLAN
Scale 1:25000

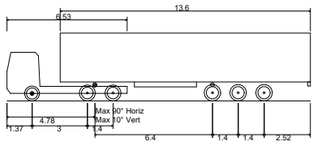
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CLIENT NAME: Portsmouth Water LICENCE NUMBER: 100018036

Notes:

1. Preliminary design only - based on Ordnance Survey data.

Key:

- Construction Site Hoarding
- Fill Pipeline
- Return Pipeline



Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION
NONE

MAINTENANCE/CLEANING
NONE

DECOMMISSIONING/DEMOLITION
NONE

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

Rev.	Date	Description	By	Chk'd	App'd
P2	29/05/24	ANNOTATION ADDED ON HAUL ROAD	PM	CW	CW
P1	28/02/24	DRAWING CREATED	PM	PDE	CW

Drawing Status: FOR INFORMATION
Suitability: S2

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Client: PORTSMOUTH WATER

Project Title: HAVANT THICKET RESERVOIR

Drawing Title: SHAFT COMPOUND LAYOUT
SHAFT 2
SWEPT PATH ANALYSIS
ARTICULATED TRUCK

Scale	Designed	Drawn	Checked	Authorised
1:500	PM	PM	PDE	CW
Original Size	Date	Date	Date	Date
A3	28/02/24	28/02/24	29/02/24	29/02/24

Drawing Number: HA PIN HTR - ATK - HGN - 02 - DR - D - 0002
(Originator | Volume | Location | Type | Role | Number)

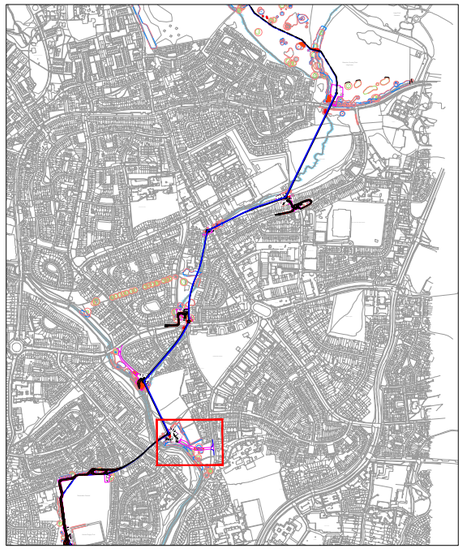
Project Ref. No.: 5218618
Revision: P2

DO NOT SCALE

Millimetres 100 0 10

Temporary suspension of on-street parking.

Indicative location of haul road gates.



LOCATION PLAN
Scale 1:25000

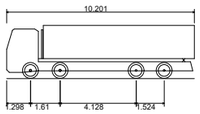
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CLIENT NAME: Portsmouth Water LICENCE NUMBER: 100018036

Notes:

1. Preliminary design only - based on Ordnance Survey data.

Key:

- Construction Site Hoarding
- Fill Pipeline
- Return Pipeline
- 2.4 x 43m Junction Visibility Splay
- Indicative Junction Form



Large Tipper

Overall Length	10.201m
Overall Width	2.495m
Overall Body Height	2.890m
Min Body Ground Clearance	0.341m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.550m

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION

NONE

MAINTENANCE/CLEANING

NONE

DECOMMISSIONING/DEMOLITION

NONE

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

Rev.	Date	Description	By	Chk'd	App'd
P4	29/05/24	KERB ADDED	PM	CW	CW
P3	28/02/24	PIPELINE SHAFT PLAN AMENDED	PM	PDE	CW
P2	06/12/23	PIPELINE SHAFT PLAN AMENDED	JA	PDE	CW
P1	07/07/23	DRAWING CREATED	AE	PDE	CW

Drawing Status: FOR INFORMATION
Suitability: S2

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Client: PORTSMOUTH WATER

Project Title: HAVANT THICKET RESERVOIR

Drawing Title: SHAFT COMPOUND LAYOUT
SHAFT 3
SWEPT PATH ANALYSIS
LARGE TIPPER

Scale	Designed	Drawn	Checked	Authorised
1:500	AE	AE	PDE	CW
Original Size: A3	Date: 07/07/23	Date: 07/07/23	Date: 07/07/23	Date: 07/07/23

Drawing Number: HA PIN HTR 04 - Originator ATK - Volume HGN - Location - Type DR - Role D - Number 0002
Project Ref. No.: 5218618
Revision: P4

DO NOT SCALE

Millimetres 100 10 0

N

SM

CS

SM

Hermitage Stream

STOCKHEATH LANE

34

32

30

1

WASTE SKIP

FUEL CUBE (3 m x 1.5 m)

AUXILIARY GENERATOR (3 m x 1.5 m)

OFFICE (6m x 2.5m)

CANTEEN (6 m x 2.5 m)

DRYING (6 m x 2.5 m)

WASHROOM (6 m x 2.5 m)

PARKING (6 m x 2.5 m)

ELECTRICAL CONTAINER (6m x 2.5m)

BRAGGETS CONTAINER (6m x 2.5m)

BENTONAIRE CONTAINER (6m x 2.5m)

TMT CONTAINER (6 m x 2.5 m)

TOOLS CONTAINER (6m x 2.5m)

MUCK BAY

SEGMENTATION TANK 1 (6 m x 2.5 m)

SEGMENTATION TANK 2 (6 m x 2.5 m)

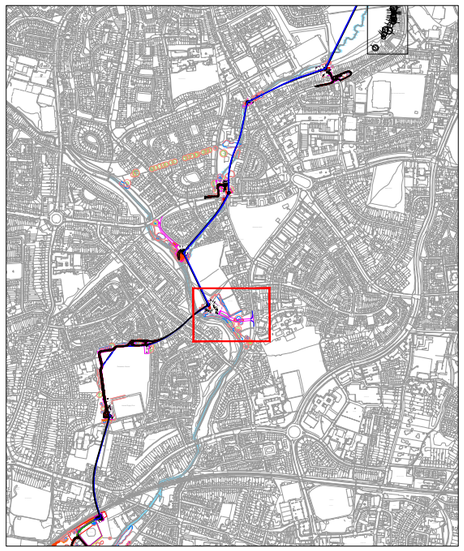
CUTTINGS TANK (6 m x 2.5 m)

SLURRY SEPARATION TANK (6 m x 2.5 m)

SLURRY TANK (12 m x 2.5 m)

Temporary suspension of on-street parking.

Indicative location of haul road gates.



LOCATION PLAN
Scale 1:25000

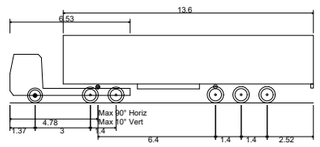
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CLIENT NAME: Portsmouth Water LICENCE NUMBER: 100018036

Notes:

1. Preliminary design only - based on Ordnance Survey data.

Key:

- Construction Site Hoarding
- Fill Pipeline
- Return Pipeline
- 2.4 x 43m Junction Visibility Splay
- Indicative Junction Form



Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16,500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION

NONE

MAINTENANCE/CLEANING

NONE

DECOMMISSIONING/DEMOLITION

NONE

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

Rev.	Date	Description	By	Chk'd	App'd
P4	29/05/24	KERB ADDED	PM	CW	CW
P3	28/02/24	PIPELINE SHAFT PLAN AMENDED	PM	PDE	CW
P2	06/12/23	PIPELINE SHAFT PLAN AMENDED	JA	PDE	CW
P1	07/07/23	DRAWING CREATED	AE	PDE	CW

Drawing Status: FOR INFORMATION
Suitability: S2

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Client: PORTSMOUTH WATER

Project Title: HAVANT THICKET RESERVOIR

Drawing Title: SHAFT COMPOUND LAYOUT
SHAFT 4
SWEPT PATH ANALYSIS
16.5m ARTICULATED TRUCK

Scale	Designed	Drawn	Checked	Authorised
1:500	AE	AE	PDE	CW
Original Size: A3	Date: 07/07/23	Date: 07/07/23	Date: 07/07/23	Date: 07/07/23

Drawing Number: HA PIN HTR - ATK - HGN - 04 - DR - D - 0001
(Location - Originator - Volume - Type - Role - Number)

Project Ref. No.: 5218618
Revision: P4

DO NOT SCALE

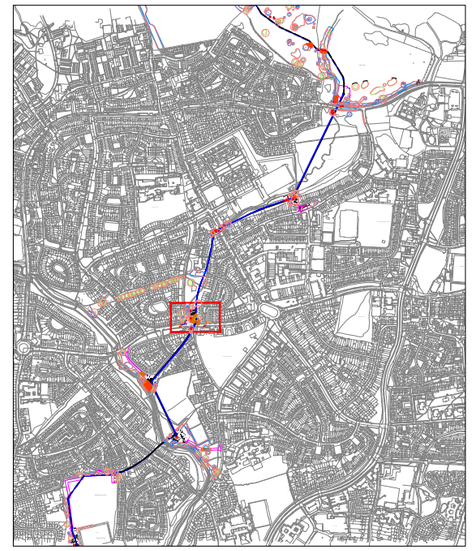
Millimetres 0 10 100

Proposed vehicle access likely to require temporary widening of existing junction bellmouth.

Temporary kerbed build-out with loss of 1 no. parking space to facilitate footway diversion.

Relocation of existing bus stop (to be discussed with bus operators).

Temporary kerbed build-out with loss of 1 no. parking space to facilitate footway diversion.



LOCATION PLAN
Scale 1:25000

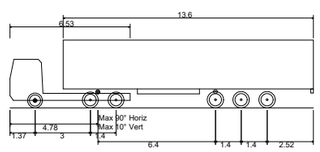
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CLIENT NAME: Portsmouth Water LICENCE NUMBER: 100018036

Notes:

1. Preliminary design only - based on Ordnance Survey data.

Key:

- Construction Site Hoarding
- Fill Pipeline
- Return Pipeline
- Temporary Footway diversion
- Kerb



Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION
NONE

MAINTENANCE/CLEANING
NONE

DECOMMISSIONING/DEMOLITION
NONE

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

Rev.	Date	Description	By	Chk'd	App'd
P4	29/05/24	VEHICLE TRACKING UPDATED	PM	CW	CW
P3	28/02/24	PIPELINE SHAFT PLAN AMENDED	PM	PDE	CW
P2	06/12/23	PIPELINE SHAFT PLAN AMENDED	JA	PDE	CW
P1	07/07/23	DRAWING CREATED	AE	PDE	CW

Drawing Status: FOR INFORMATION
Suitability: S2

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Client: PORTSMOUTH WATER

Project Title: HAVANT THICKET RESERVOIR

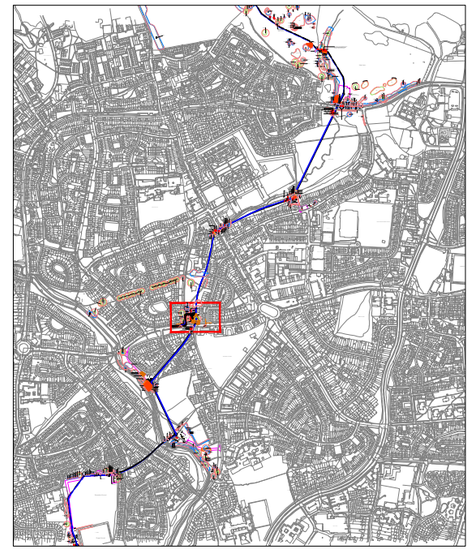
Drawing Title: SHAFT COMPOUND LAYOUT
SHAFT 5
SWEPT PATH ANALYSIS
16.5m ARTICULATED VEHICLE

Scale	Designed	Drawn	Checked	Authorised
1:500	AE	AE	PDE	CW
Original Size: A3	Date: 07/07/23	Date: 07/07/23	Date: 07/07/23	Date: 07/07/23

Drawing Number: HA PIN HTR - ATK - HGN - 05 - DR - D - 0001
(Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 5218618
Revision: P4

DO NOT SCALE



LOCATION PLAN
Scale 1:25000

Proposed vehicle access likely to require temporary widening of existing junction bellmouth.

Temporary kerbed build-out with loss of 1 no. parking space to facilitate footway diversion.

Relocation of existing bus stop (to be discussed with bus operators).

Temporary kerbed build-out with loss of 1 no. parking space to facilitate footway diversion.

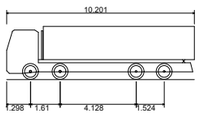
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CLIENT NAME: Portsmouth Water LICENCE NUMBER: 100018036

Notes:

1. Preliminary design only - based on Ordnance Survey data.

Key:

- Construction Site Hoarding
- Fill Pipeline
- Return Pipeline
- Temporary Footway diversion
- 2.4 x 43m Junction Visibility Splay
- Kerb



Large Tipper

Overall Length	10.201m
Overall Width	2.495m
Overall Body Height	2.890m
Min Body Ground Clearance	0.341m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.550m

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION
NONE

MAINTENANCE/CLEANING
NONE

DECOMMISSIONING/DEMOLITION
NONE

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

Rev.	Date	Description	By	Chk'd	App'd
P4	29/05/24	ANNOTATION ON BUS STOP ADDED	PM	CW	CW
P3	28/02/24	PIPELINE SHAFT PLAN AMENDED	PM	PDE	CW
P2	06/12/23	PIPELINE SHAFT PLAN AMENDED	JA	PDE	CW
P1	07/07/23	DRAWING CREATED	AE	PDE	CW

Drawing Status: FOR INFORMATION
Suitability: S2

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Client: PORTSMOUTH WATER

Project Title: HAVANT THICKET RESERVOIR

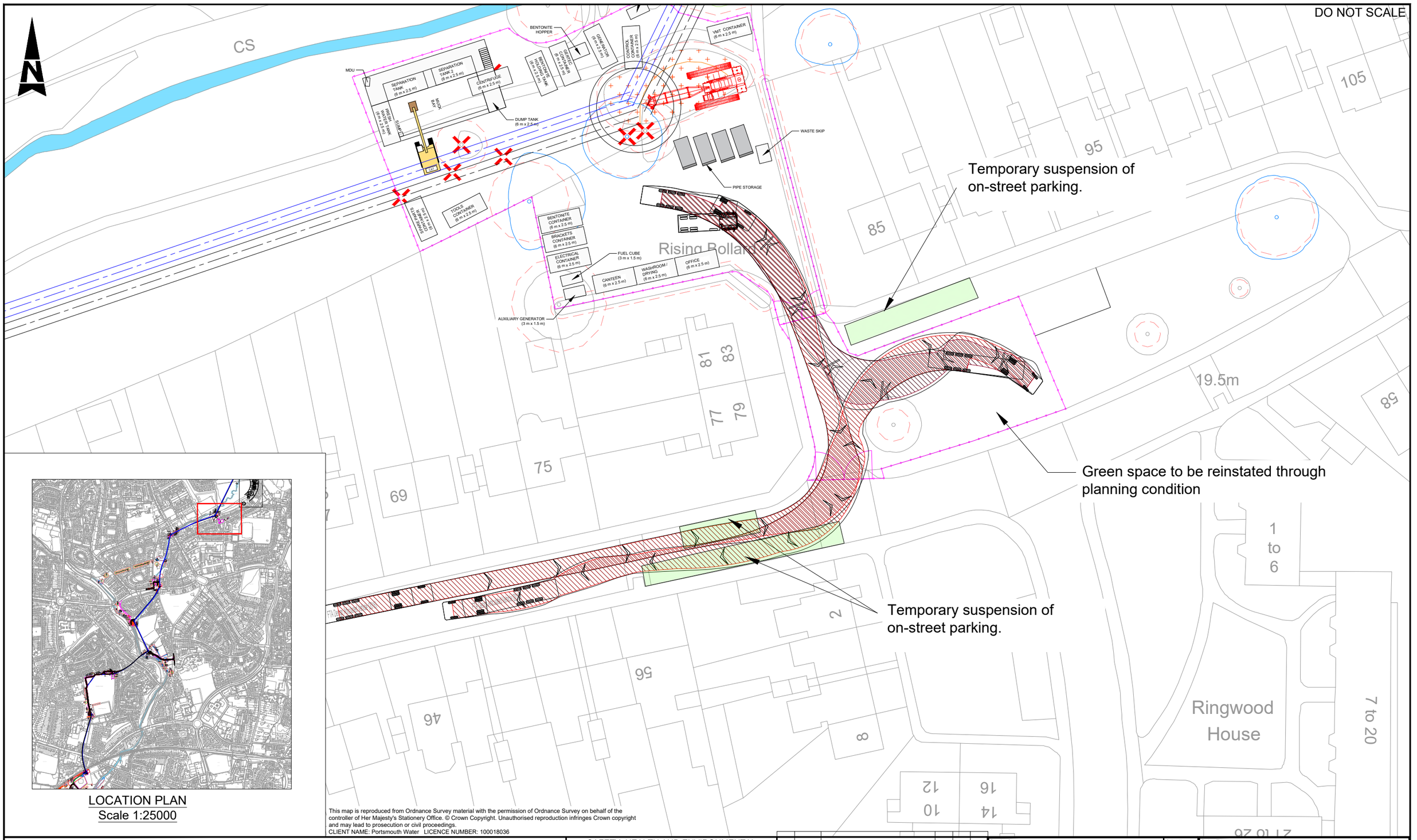
Drawing Title: SHAFT COMPOUND LAYOUT
SHAFT 5
SWEPT PATH ANALYSIS
LARGE TIPPER - EXIT

Scale	Designed	Drawn	Checked	Authorised
1:500	AE	AE	PDE	CW
Original Size	Date	Date	Date	Date
A3	07/07/23	07/07/23	07/07/23	07/07/23

Drawing Number: HA PIN HTR 05 | Originator ATK | Volume HGN | Location - | Type DR | Role D | Number 0002B
Project Ref. No.: 5218618
Revision: P4

DO NOT SCALE

Millimetres 0 10 100



LOCATION PLAN
Scale 1:25000

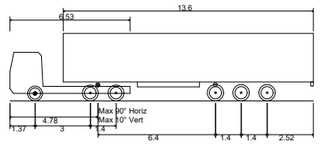
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CLIENT NAME: Portsmouth Water LICENCE NUMBER: 100018036

Notes:

1. Preliminary design only - based on Ordnance Survey data.

Key:

- Construction Site Hoarding
- Fill Pipeline
- Return Pipeline



Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION

NONE

MAINTENANCE/CLEANING

NONE

DECOMMISSIONING/DEMOLITION

NONE

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

Rev.	Date	Description	By	Chk'd	App'd
P3	29/05/24	VEHICLE TRACKING REVISED	PM	CW	CW
P2	28/02/24	SHAFT PLAN AMENDED	PM	PDE	CW
P1	07/07/23	DRAWING CREATED	AE	PDE	CW

Drawing Status: FOR INFORMATION
Suitability: S2

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Client: PORTSMOUTH WATER

Project Title: HAVANT THICKET RESERVOIR

Drawing Title: SHAFT COMPOUND LAYOUT
SHAFT 7
SWEPT PATH ANALYSIS
16.5m ARTICULATED TRUCK

Scale	Designed	Drawn	Checked	Authorised
1:500	AE	AE	PDE	CW
Original Size: A3	Date: 07/07/23	Date: 07/07/23	Date: 07/07/23	Date: 07/07/23

Drawing Number: HA PIN HTR - ATK - HGN - 07 - DR - D - 0001
(Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 5218618
Revision: P3

DO NOT SCALE

Millimetres 0 10 100

CS

MDU
SEPARATION TANK (6 m x 2.5 m)
SEPARATION TANK 2 (6 m x 2.5 m)
CENTRIFUGE (6 m x 2.5 m)
MUCK BAY
RAISED WATER TANK (6 m x 2.5 m)
SUMP
DUMP TANK (6 m x 2.5 m)
BENTONITE HOPPER
BENTONITE HOPPER 2 (6 m x 2.5 m)
GENERATOR (6 m x 2.5 m)
GENERATOR (6 m x 2.5 m)
CONTROL CONTAINER (6 m x 2.5 m)
FUEL CUBE (3 m x 1.5 m)
VMT CONTAINER (6 m x 2.5 m)
WASTE SKIP
PIPE STORAGE
SPARE PARTS CONTAINER (6 m x 2.5 m)
TOOLS CONTAINER (6 m x 2.5 m)
BENTONITE CONTAINER (6 m x 2.5 m)
BRACKETS CONTAINER (6 m x 2.5 m)
ELECTRICAL CONTAINER (6 m x 2.5 m)
FUEL CUBE (3 m x 1.5 m)
CANTEEN (6 m x 2.5 m)
WASHROOM / DRYING (6 m x 2.5 m)
OFFICE (6 m x 2.5 m)
AUXILIARY GENERATOR (3 m x 1.5 m)

Rising Bollard

Temporary suspension of on-street parking.

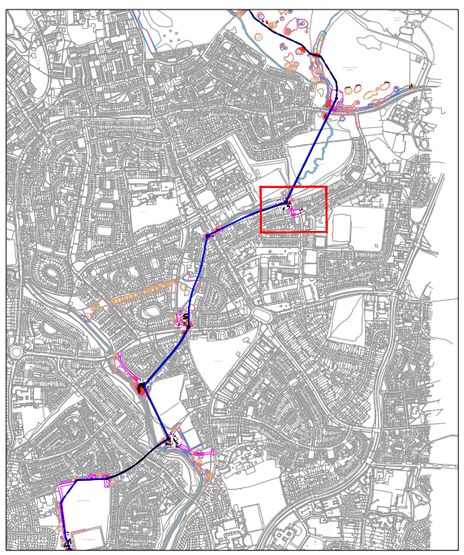
Green space to be reinstated through planning condition

Temporary suspension of on-street parking.

19.5m

Ringwood House

105 95 85 81 83 77 79 75 69 65 67 56 46 2 8 12 16 1 to 6 7 to 20



LOCATION PLAN
Scale 1:25000

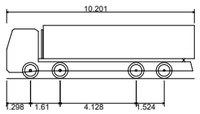
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CLIENT NAME: Portsmouth Water LICENCE NUMBER: 100018036

Notes:

1. Preliminary design only - based on Ordnance Survey data.

Key:

- Construction Site Hoarding
- Fill Pipeline
- Return Pipeline



Large Tipper

Overall Length	10.201m
Overall Width	2.495m
Overall Body Height	2.890m
Min Body Ground Clearance	0.341m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.550m

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION
NONE

MAINTENANCE/CLEANING
NONE

DECOMMISSIONING/DEMOLITION
NONE

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

Rev.	Date	Description	By	Chk'd	App'd
P3	29/05/24	VEHICLE TRACKING REVISED	PM	CW	CW
P2	28/02/24	SHAFT PLAN AMENDED	PM	PDE	CW
P1	07/07/23	DRAWING CREATED	AE	PDE	CW

Drawing Status: FOR INFORMATION
Suitability: S2

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Client: PORTSMOUTH WATER

Project Title: HAVANT THICKET RESERVOIR

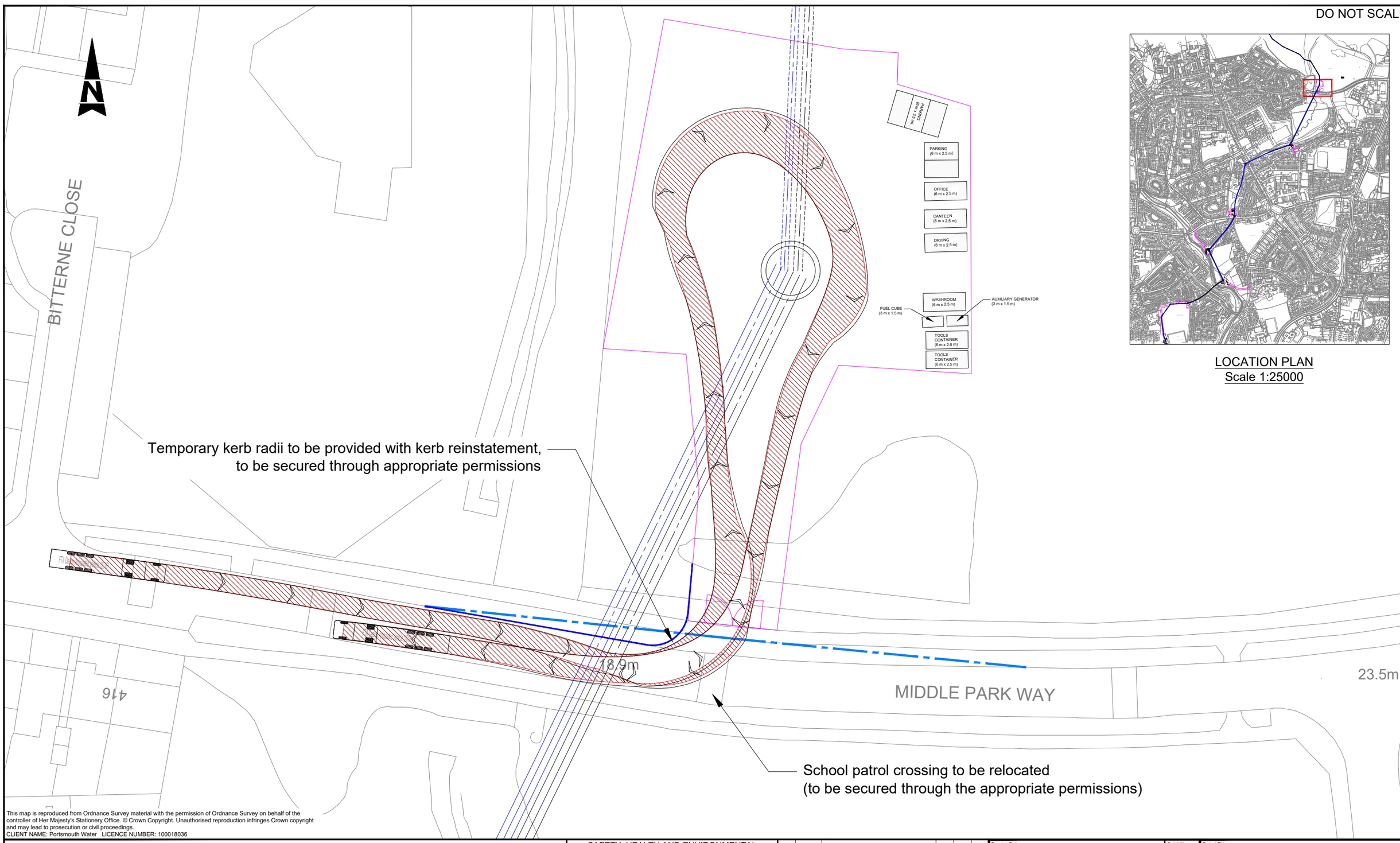
Drawing Title: SHAFT COMPOUND LAYOUT
SHAFT 7
SWEPT PATH ANALYSIS
LARGE TIPPER

Scale	Designed	Drawn	Checked	Authorised
1:500	AE	AE	PDE	CW
Original Size: A3	Date: 07/07/23	Date: 07/07/23	Date: 07/07/23	Date: 07/07/23

Drawing Number: HA PIN HTR - ATK - HGN - 07 - DR - D - 0002
(Originator | Volume | Location | Type | Role | Number)

Project Ref. No.: 5218618
Revision: P3

DO NOT SCALE



LOCATION PLAN
Scale 1:25000

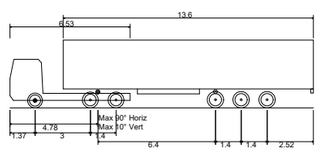
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CLIENT NAME: Portsmouth Water LICENCE NUMBER: 100018036

Notes:

1. Preliminary design only - based on Ordnance Survey data.

Key:

- 2.4 x 43m Junction Visibility Splay
- Public Right of Way
- Site Hoarding
- Red Line Boundary
- Indicative Junction Form



Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION

NONE

MAINTENANCE/CLEANING

NONE

DECOMMISSIONING/DEMOLITION

NONE

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

Rev.	Date	Description	By	Chk'd	App'd
P4	29/05/24	VEHICLE TRACKING AND ANNOTATION AMENDED	PM	CW	CW
P3	07/03/24	PIPELINE SHAFT PLAN AMENDED	PM	PDE	CW
P2	06/12/23	PIPELINE SHAFT PLAN AMENDED	JA	PDE	CW
P1	07/07/23	DRAWING CREATED	AE	PDE	CW

Drawing Status: FOR INFORMATION
Suitability: S2

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Client: PORTSMOUTH WATER

Project Title: HAVANT THICKET RESERVOIR

Drawing Title: SHAFT COMPOUND LAYOUT
SHAFT 8
SWEPT PATH ANALYSIS
16.5m ARTICULATED VEHICLE

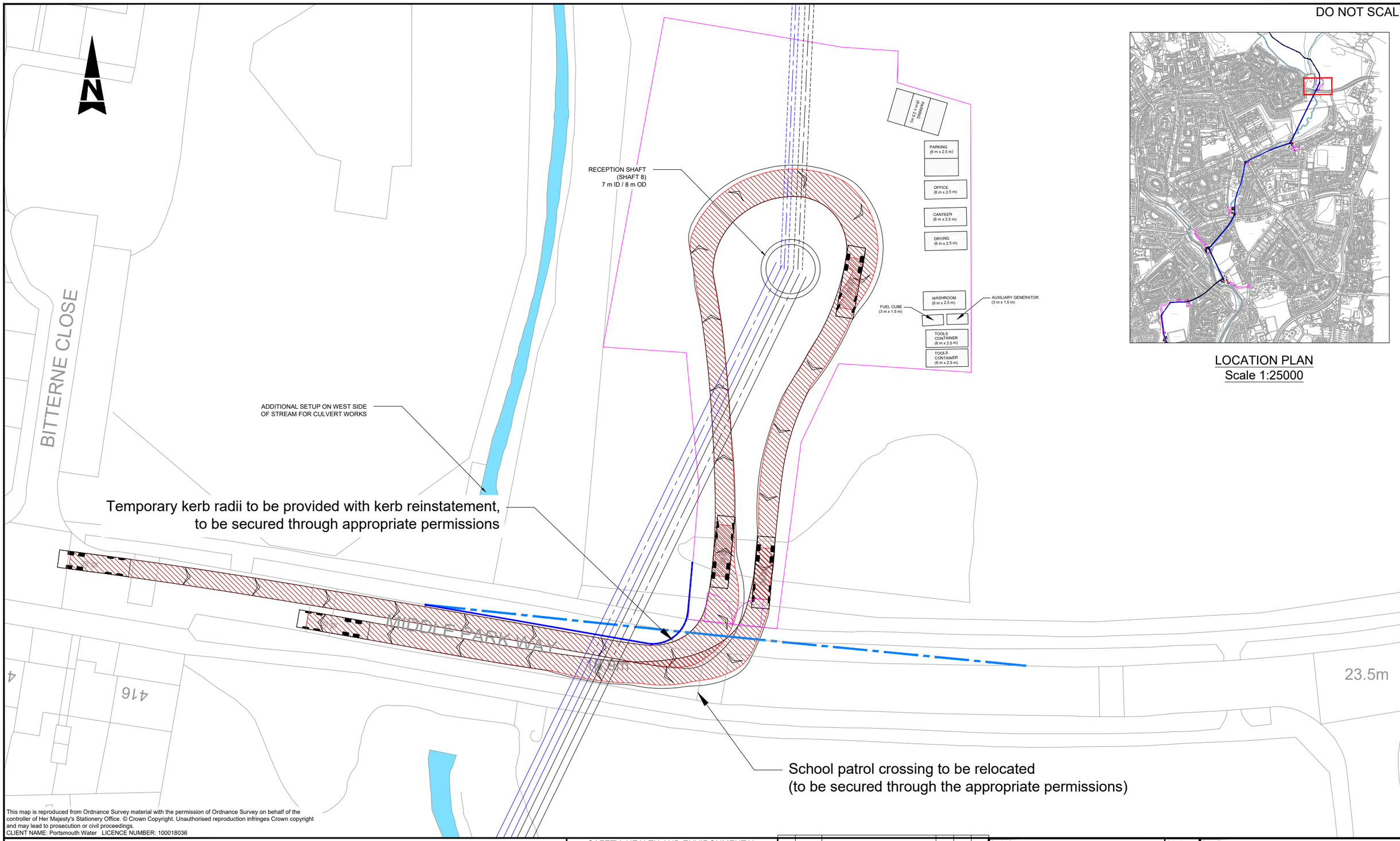
Scale	Designed	Drawn	Checked	Authorised
1:500	AE	AE	PDE	CW
Original Size: A3	Date: 07/07/23	Date: 07/07/23	Date: 07/07/23	Date: 07/07/23

Drawing Number: HA PIN HTR - ATK - HGN - 08 - DR - D - 0001
(Location | Originator | Volume | Type | Role | Number)

Project Ref. No.: 5218618
Revision: P4

DO NOT SCALE

Millimetres 100 0 10



LOCATION PLAN
Scale 1:25000

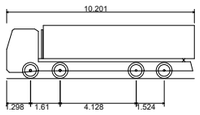
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CLIENT NAME: Portsmouth Water LICENCE NUMBER: 100018036

Notes:

1. Preliminary design only - based on Ordnance Survey data.

Key:

- 2.4 x 43m Junction Visibility Splay
- Public Right of Way
- Site Hoarding
- Red Line Boundary
- Indicative Junction Form



Large Tipper

Overall Length	10.201m
Overall Width	2.495m
Overall Body Height	2.890m
Min Body Ground Clearance	0.341m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.550m

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION

NONE

MAINTENANCE/CLEANING

NONE

DECOMMISSIONING/DEMOLITION

NONE

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

Rev.	Date	Description	By	Chk'd	App'd
P4	29/04/24	ANNOTATION ON CROSSING ADDED	PM	CW	CW
P3	07/03/24	PIPELINE SHAFT PLAN AMENDED	PM	PDE	CW
P2	07/07/23	PIPELINE SHAFT PLAN AMENDED	JA	PDE	CW
P1	07/07/23	DRAWING CREATED	AE	PDE	CW

Drawing Status: FOR INFORMATION
Suitability: S2

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Fax: +44 (0)1372 740055
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Client: PORTSMOUTH WATER

Project Title: HAVANT THICKET RESERVOIR

Drawing Title: SHAFT COMPOUND LAYOUT
SHAFT 8
SWEPT PATH ANALYSIS
LARGE TIPPER

Scale	Designed	Drawn	Checked	Authorised
1:500	AE	AE	PDE	CW
Original Size: A3	Date: 07/07/23	Date: 07/07/23	Date: 07/07/23	Date: 07/07/23

Drawing Number: HA PIN HTR 08 - Originator ATK - Volume HGN - Location - Type DR - Role D - Number 0002
Project Ref. No.: 5218618
Revision: P4

DO NOT SCALE

Temporary overrun of mini-roundabout required. To be managed through condition review.

Parking restrictions on both sides of road

23.5m

Temporary overrun of mini-roundabout required. To be managed through condition review.

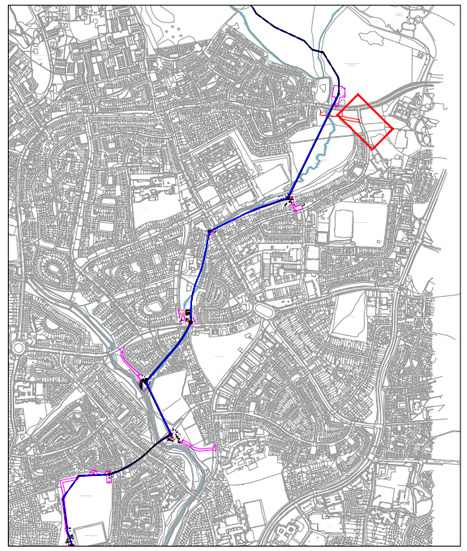
23.5m

Probable hedge trimming/removal required

Parking restrictions on both sides of road

Probable hedge trimming/removal required

HIGH LAWN WAY



LOCATION PLAN
Scale 1:25000

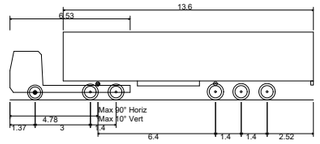
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CLIENT NAME: Portsmouth Water LICENCE NUMBER: 100018036

Notes:

1. Preliminary design only - based on Ordnance Survey data.

Key:

- 2.4 x 43m Junction Visibility Splay
- Public Right of Way
- Site Hoarding
- Red Line Boundary



Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION
NONE

MAINTENANCE/CLEANING
NONE

DECOMMISSIONING/DEMOLITION
NONE

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

Rev.	Date	Description	By	Chk'd	App'd
P4	29/05/24	ANNOTATION ON MINI-ROUNDABOUT ADDED	PM	CW	CW
P3	07/03/24	VEHICLE TRACKING AMENDED	PM	PDE	CW
P2	12/12/23	NOTES AMENDED	JA	PDE	CW
P1	07/07/23	DRAWING CREATED	AE	PDE	CW

Drawing Status: FOR INFORMATION
Suitability: S2

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Client: PORTSMOUTH WATER

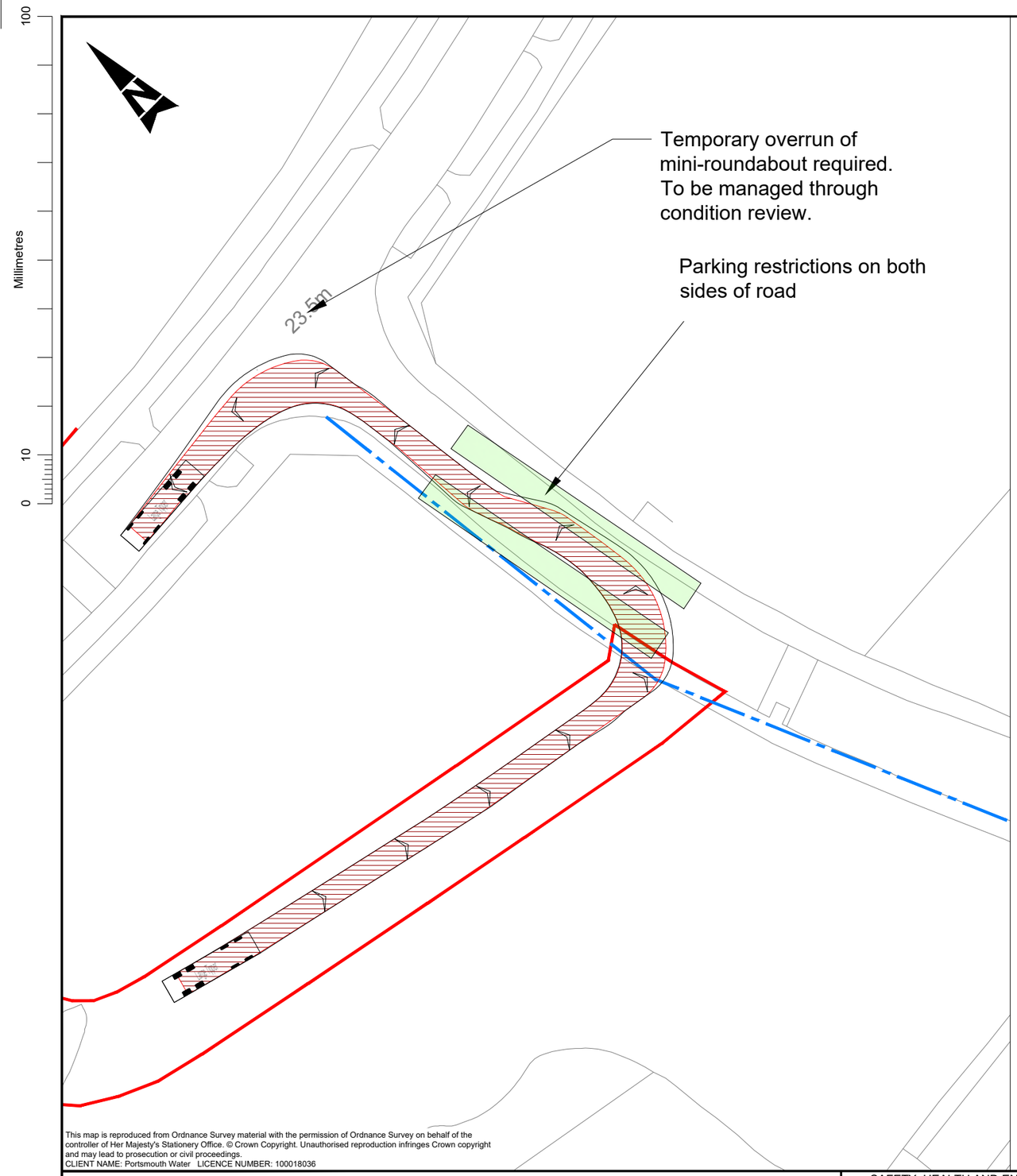
Project Title: HAVANT THICKET RESERVOIR

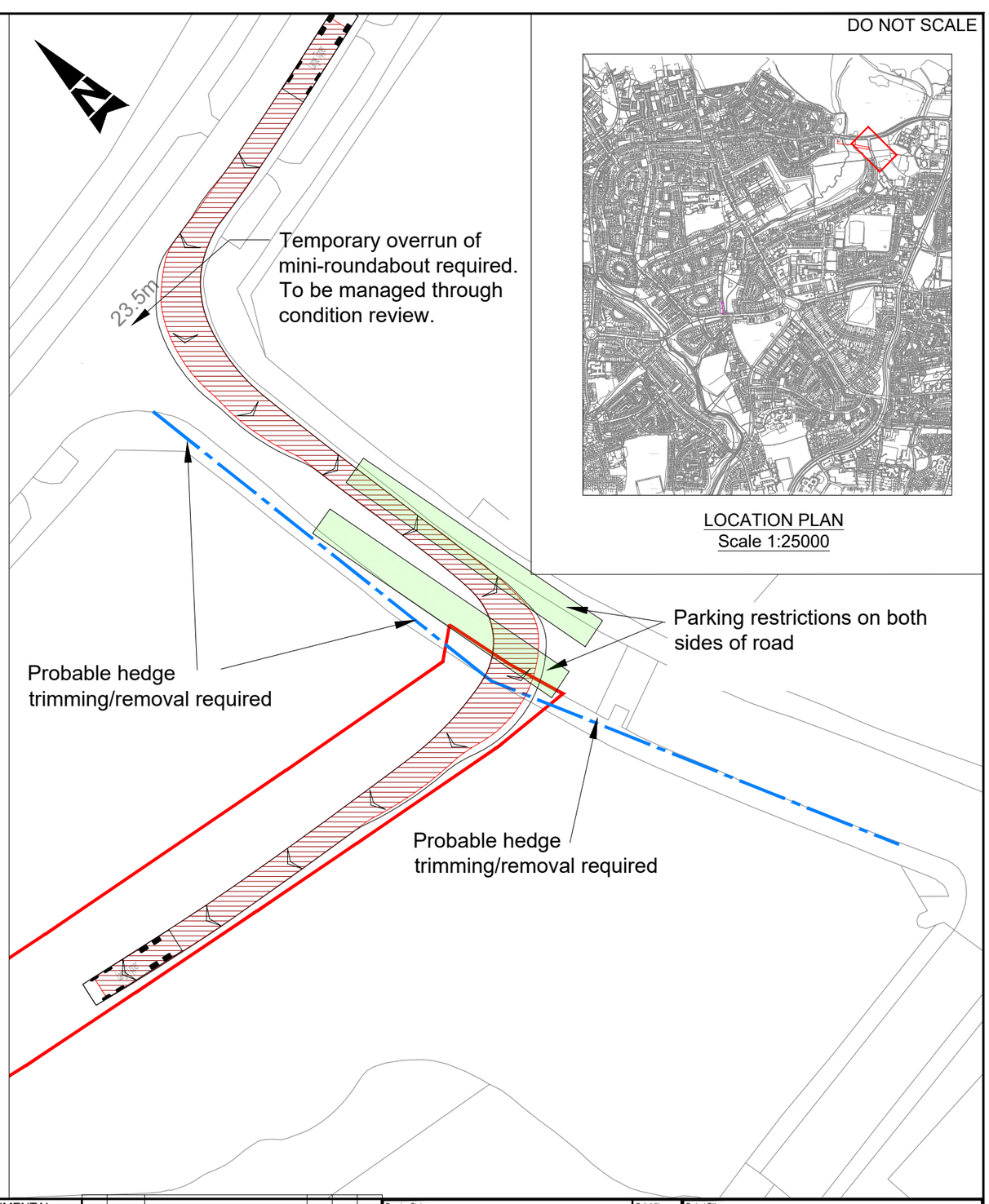
Drawing Title: SHAFT COMPOUND LAYOUT
CULVERT ACCESS
SWEPT PATH ANALYSIS
16.5m ARTICULATED VEHICLE

Scale	Designed	Drawn	Checked	Authorised
1:500	AE	AE	PDE	CW
Original Size	Date	Date	Date	Date
A3	07/07/23	07/07/23	07/07/23	07/07/23

Drawing Number: HA PIN HTR - ATK - HGN - CU - DR - D - 0001
Location | Originator | Volume | Type | Role | Number
Project Ref. No.: 5218618
Revision: P4

DO NOT SCALE





LOCATION PLAN
Scale 1:25000

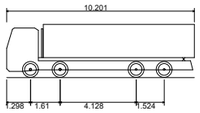
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CLIENT NAME: Portsmouth Water LICENCE NUMBER: 100018036

Notes:

1. Preliminary design only - based on Ordnance Survey data.

Key:

- 2.4 x 43m Junction Visibility Splay
- Public Right of Way
- Site Hoarding
- Red Line Boundary



Large Tipper

Overall Length	10.201m
Overall Width	2.495m
Overall Body Height	2.890m
Min Body Ground Clearance	0.341m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.550m

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION

NONE

MAINTENANCE/CLEANING

NONE

DECOMMISSIONING/DEMOLITION

NONE

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

Rev.	Date	Description	By	Chk'd	App'd
P4	29/05/24	ANNOTATION ON MINI-ROUNDABOUT ADDED	PM	CW	CW
P3	07/03/24	VEHICLE TRACKING AMENDED	PM	PDE	CW
P2	12/12/23	NOTES AMENDED	JA	PDE	CW
P1	07/07/23	DRAWING CREATED	AE	PDE	CW

Drawing Status: FOR INFORMATION

Suitability: S2

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Client: PORTSMOUTH WATER

Project Title: HAVANT THICKET RESERVOIR

Drawing Title: SHAFT COMPOUND LAYOUT
CULVERT ACCESS
SWEPT PATH ANALYSIS
LARGE TIPPER

Scale	Designed	Drawn	Checked	Authorised
1:500	AE	AE	PDE	CW
Original Size: A3	Date: 07/07/23	Date: 07/07/23	Date: 07/07/23	Date: 07/07/23

Drawing Number: HA PIN HTR - ATK - HGN - CU - DR - D - 0002
(Location | Originator | Volume | Type | Role | Number)

Project Ref. No.: 5218618

Revision: P4

DO NOT SCALE

Millimetres 0 10 100

Potential relocation of crossing dependent on usage.

Existing parking restrictions

Existing parking restrictions

Proposed crownlifting to improve visibility

2 No. existing mature oak trees

Relocation of existing street lighting to be agreed through appropriate conditions.

Hoarding to be amended within red line boundary

CR
SM
SM
SM
SM
Pit
FB
CS
Shelter
10.4m
9.85m
CORHAMPTON CRESCENT
19
6
29
41
49
39
OFFICE (6 m x 2.5 m)
DRYING (6 m x 2.5 m)
CANTEEN (6 m x 2.5 m)
DISPENSARY (6 m x 2.5 m)
AUXILIARY GENERATOR (3 m x 1.5 m)
FUEL CUBE (3 m x 1.5 m)
TOOLS CONTAINER (6 m x 2.5 m)
TOOLS CONTAINER (6 m x 2.5 m)
LAYDOWN

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CLIENT NAME: Portsmouth Water LICENCE NUMBER: 100018036

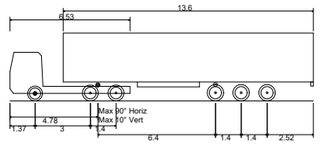
LOCATION PLAN
Scale 1:25000

Notes:

1. Preliminary design only - based on Ordnance Survey data.

Key:

- 2.4 x 43m Junction Visibility Splay
- Public Right of Way
- Site Hoarding
- Red Line Boundary
- Indicative Junction Form



Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION
NONE

MAINTENANCE/CLEANING
NONE

DECOMMISSIONING/DEMOLITION
NONE

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

Rev.	Date	Description	By	Chk'd	App'd
P4	22/05/24	VEHICLE TRACKING AMENDED	PM	CW	CW
P3	07/03/24	PIPELINE SHAFT PLAN AMENDED	PM	PDE	CW
P2	06/12/23	PIPELINE SHAFT PLAN AMENDED	JA	PDE	CW
P1	07/07/23	DRAWING CREATED	AE	PDE	CW

Drawing Status: FOR INFORMATION
Suitability: S2

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Client: PORTSMOUTH WATER

Project Title: HAVANT THICKET RESERVOIR

Drawing Title: SHAFT COMPOUND LAYOUT
EMERGENCY DISCHARGE CHAMBER
SWEPT PATH ANALYSIS
16.5m ARTICULATED VEHICLE

Scale	Designed	Drawn	Checked	Authorised
NTS	AE	AE	PDE	CW
Original Size: A3	Date: 07/07/23	Date: 07/07/23	Date: 07/07/23	Date: 07/07/23

Drawing Number: HA PIN HTR - ATK - HGN - ED - DR - D - 0001
(Location | Type | Role | Number)
Originator | Volume

Project Ref. No.: 5218618
Revision: P4

DO NOT SCALE

Millimetres 0 10 100

Existing parking restrictions

Potential relocation of crossing dependent on usage.

Existing parking restrictions

Potential crownlifting to improve visibility

2 No. existing mature oak trees

Relocation of existing street lighting to be agreed through appropriate conditions.

Hoarding to be amended within red line boundary

PARKING (6 m x 2.5 m)
OFFICE (6 m x 2.5 m)
DRYING (6 m x 2.5 m)
CANTEEN (6 m x 2.5 m)
STORE/GYM (6m x 2.5m)
AUXILIARY GENERATOR (3 m x 1.5 m)
FUEL CUBE (3 m x 1.5 m)
TOOLS CONTAINER (6 m x 2.5 m)
TOOLS CONTAINER (6 m x 2.5 m)
LAYDOWN

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CLIENT NAME: Portsmouth Water LICENCE NUMBER: 100018036

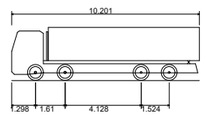
LOCATION PLAN
Scale 1:25000

Notes:

1. Preliminary design only - based on Ordnance Survey data.

Key:

- 2.4 x 43m Junction Visibility Splay
- Public Right of Way
- Site Hoarding
- Red Line Boundary
- Indicative Junction Form



Large Tipper

Overall Length	10.201m
Overall Width	2.495m
Overall Body Height	2.890m
Min Body Ground Clearance	0.341m
Track Width	2.471m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	11.550m

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following:

CONSTRUCTION
NONE

MAINTENANCE/CLEANING
NONE

DECOMMISSIONING/DEMOLITION
NONE

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

Rev.	Date	Description	By	Chk'd	App'd
P4	29/05/24	KERB ADDED	PM	CW	CW
P3	07/03/24	PIPELINE SHAFT PLAN AMENDED	PM	PDE	CW
P2	06/12/23	PIPELINE SHAFT PLAN AMENDED	JA	PDE	CW
P1	07/07/23	DRAWING CREATED	AE	PDE	CW

Drawing Status: FOR INFORMATION
Suitability: S2

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Client: PORTSMOUTH WATER

Project Title: HAVANT THICKET RESERVOIR

Drawing Title: SHAFT COMPOUND LAYOUT
EMERGENCY DISCHARGE CHAMBER
SWEPT PATH ANALYSIS
LARGE TIPPER

Scale	Designed	Drawn	Checked	Authorised
NTS	AE	AE	PDE	CW
Original Size	Date	Date	Date	Date
A3	07/07/23	07/07/23	07/07/23	07/07/23

Drawing Number: HA PIN HTR - ATK - HGN - ED - DR - D - 0002
Location | Originator | Volume | Type | Role | Number

Project Ref. No.: 5218618
Revision: P4