

Havant Thicket Reservoir

Valve Tower Public Safety Measures

Main Reservoir Works Phase

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1. Introduction

1.1 Purpose of document

This Valve Tower Public Safety Measures document has been developed and prepared for submission to East Hampshire District Council (EHDC) and Havant Borough Council (HBC) to secure the discharge of planning condition 1 of the Phase 3 Reserved Matters permission 51680/011 and condition 2 of permission 24/00311 respectively. The condition is worded as follows:

“Prior to the construction of the embankment valve tower, a scheme and risk assessment setting out measures (which shall include but not be limited to, construction or installation of signage, fencing, security measures, warnings, and lifesaving equipment) to minimise opportunities for unauthorised access to the valve tower in order to reduce the risk of drowning, shall be submitted to and approved by the Local Planning Authority. The development shall be carried out in accordance with the approved details and retained thereafter.

Reason: *In the interests of safety for the general public and in order to minimise the risks of drowning associated with the valve tower.”*

1.2 Scope of document

The document has been prepared in relation to the offshore valve tower at Havant Thicket Reservoir, a critical structure for water intake and discharge operations, however, the valve tower’s siting, scale and external appearance are approved via the related Phase 3 Reserved Matters permission as detailed in Section 1.3 below.

This document aims to comprehensively detail the measures to be implemented in relation to public safety in direct association with the valve tower, specifically those which:

- Minimise opportunities for unauthorised access to the valve tower
- Minimise risk of drowning in association with the valve tower

For site-wide risks relating to drowning and safety measures, the approved Condition 26 - Main Reservoir Drowning Risk Review and Control Measures document (ref. HTR-FUW-ZZ-ZZ-PL-Z-1501) should be consulted.

1.3 Planning context

In 2021, planning permission (ref APP/20/00990 and 51680/001) was granted by Havant Borough Council (HBC) and East Hampshire District Council (EHDC) for development of a reservoir for raw water storage, subject to further planning conditions. Subsequently, a Section 73 application proposing a number of amendments to the design of the main embankment and related infrastructure was approved by both authorities in December 2024 (ref APP/24/00312 and 51680/012).

The Phase 3 Reserved Matters approval from Havant Borough Council and East Hampshire District Council in December 2024. This approved the siting, scale, external appearance and landscaping of the main embankment, culvert and valve tower.

This document is submitted for discharge of planning condition 1 of the EHDC Phase 3 Reserved Matters approval (reference 51680/011) and condition 2 of the HBC Phase 3 Reserved Matters approval (reference APP/24/00311).

2. Summary of reservoir operation, access and recreation

2.1 Operation

Following completion of construction, the reservoir will be filled up over 3 winter seasons with water from the Bedhampton Springs. Wet Commissioning of the mechanical components will commence once the second filling season (winter) is complete.

Following this commissioning and filling process, during normal operating periods, the water level within the reservoir will largely remain around the Top Water Level (TWL) of 39.5m AOD, with some seasonal fluctuations up to circa 1m. In a serious drought or emergency scenario, the water level could be drawn down to the reservoir's Minimum Operational Level (MOL) of 28.6m AOD.

In relation to the valve tower specifically, this results in the following fluctuations in measurements:

	Top Water Level - 39.5m AOD	Seasonal variation level - ~ 38.5m AOD	Minimum Operational Level - 28.6m AOD
Height of valve tower exposed above water level (<i>measured to top of structure</i>)	1.6m	2.6m	N/a – water level will be lower than valve tower
Distance from valve tower to shoreline (<i>edge of the water</i>)	19.5m	16.3m	
Depth of water on south side of valve tower (<i>closest point to shoreline</i>)	2.6m	1.6m	
Depth of water on north side of valve tower (<i>furthest point from shoreline</i>)	3.7m	2.7m	

Figure 1a. - Valve tower measurements with water fluctuations

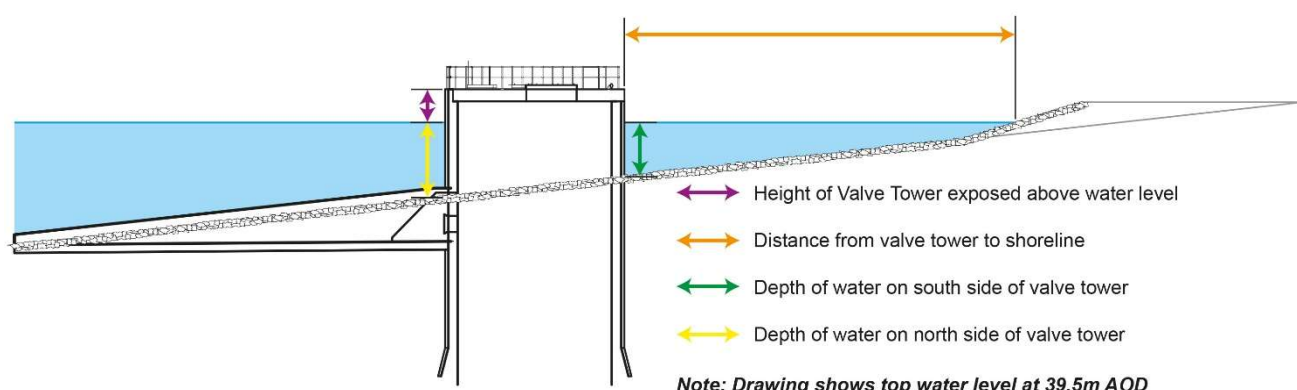


Figure 1b. – Diagram showing locations for measurements in Figure 1a

Measures and processes to be used across the entire reservoir site the event of an emergency discharge situation are detailed in the approved On-site emergency flood plan (ref. HTR-FUW-XX-00-PL-W-0541). These include contacting the local authority and, in the case of unplanned draw down, notification to the local resilience forum.

2.2 Access

As per the approved outline masterplan (ref. HTR-GHD-ZZ-ZZ-DR-T-0001 P04), there are two vehicular accesses and eight non-motorised user accesses to the reservoir site.

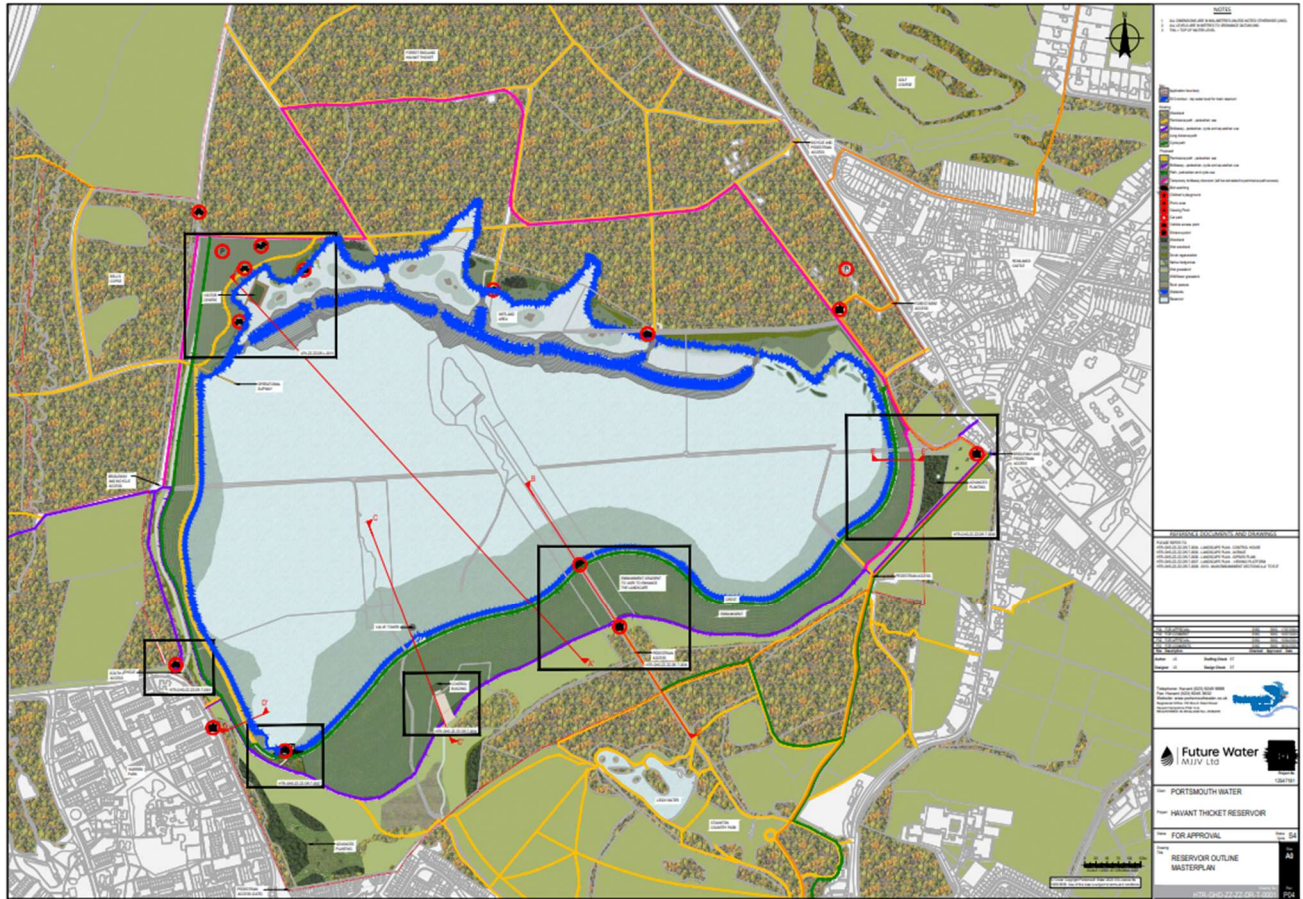


Figure 2. - Screenshot of approved outline masterplan

2.2.1 Visitor site access

Havant Thicket Reservoir has vehicular access onto the site via the Northern and Southern Access Roads, with both leading to the proposed visitor centre and car park in the North West corner of the site.

These roads will be accessible during fixed opening hours for both visitors, staff (including those working in recreation, operation and maintenance) and deliveries. Outside these hours, vehicular access to the reservoir site will be prohibited using locked access gates as detailed in Section 3.2.1.

Operational tracks suitable for authorised vehicles will be present at the reservoir site, including the embankment crest path and path around the embankment toe, however these will be secured against access from unauthorised vehicles via the use of locked vehicle gates. Further detail on these is available in Section 3.2.2 below.

2.2.2 Emergency services site access

Measures relating to emergency access to the site in response to a serious or catastrophic incident, are detailed in the Main Reservoir Drowning Risk Review and Control Measures document (ref. HTR-FUW-ZZ-ZZ-PL-Z-1501). These include access being obtained in exceptional circumstances via the Forestry England track to the north of the site, via a small private road opposite Whichers Gate Rd or via Staunton Country Park, although a local emergency planner review will be undertaken prior to the commencement of filling.

2.2.4 Valve tower access

Access to the valve tower will be for authorised personnel only.

As shown in Figure 3 below, the primary access to the valve tower will be by foot via the control house and the culvert, which will also be restricted to authorised access.

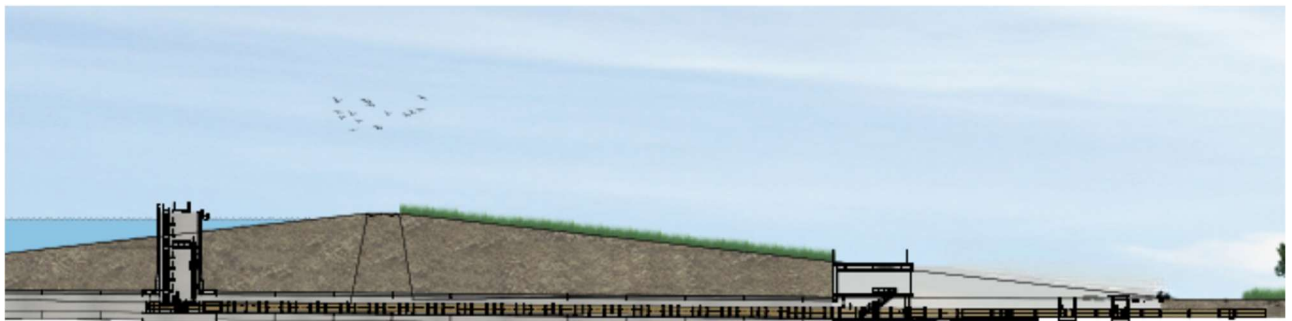


Figure 3. - Embankment cross section showing connection between control house, culvert and valve tower

Access to the control house and its courtyard area will be for authorised personnel only for reservoir operation, maintenance and monitoring. The control house courtyard is secured with 3m high perimeter fencing, with the access gate from the embankment toe path secured with a keypad. The access gate will be kept closed at all times when not in use for access or egress to prevent entry into the courtyard by any unauthorised persons.

Entry to the control house building will also be secured with a keypad. The façade of the building features two steel doors and a steel roller-shutter door, which will all be secured, and no additional external facing windows/doors which could be used to obtain access.

Once staff are inside the control house, an internal stairwell will provided access between the main building and culvert, with staff then able to walk through the culvert to access the valve tower and its internal stairwells. The high level draw off valves and other equipment are accessible from these stairwells, which also provide access to roof of the valve tower via a locked access cover for maintenance or emergency exit. Detail relating to covers on the top of the valve tower is shown below in Figure 4 which is an extract from drawing HTR-GHD-ZZ-ZZ-DR-T-0015 approved as part of the Phase 3 Reserved Matters Application.

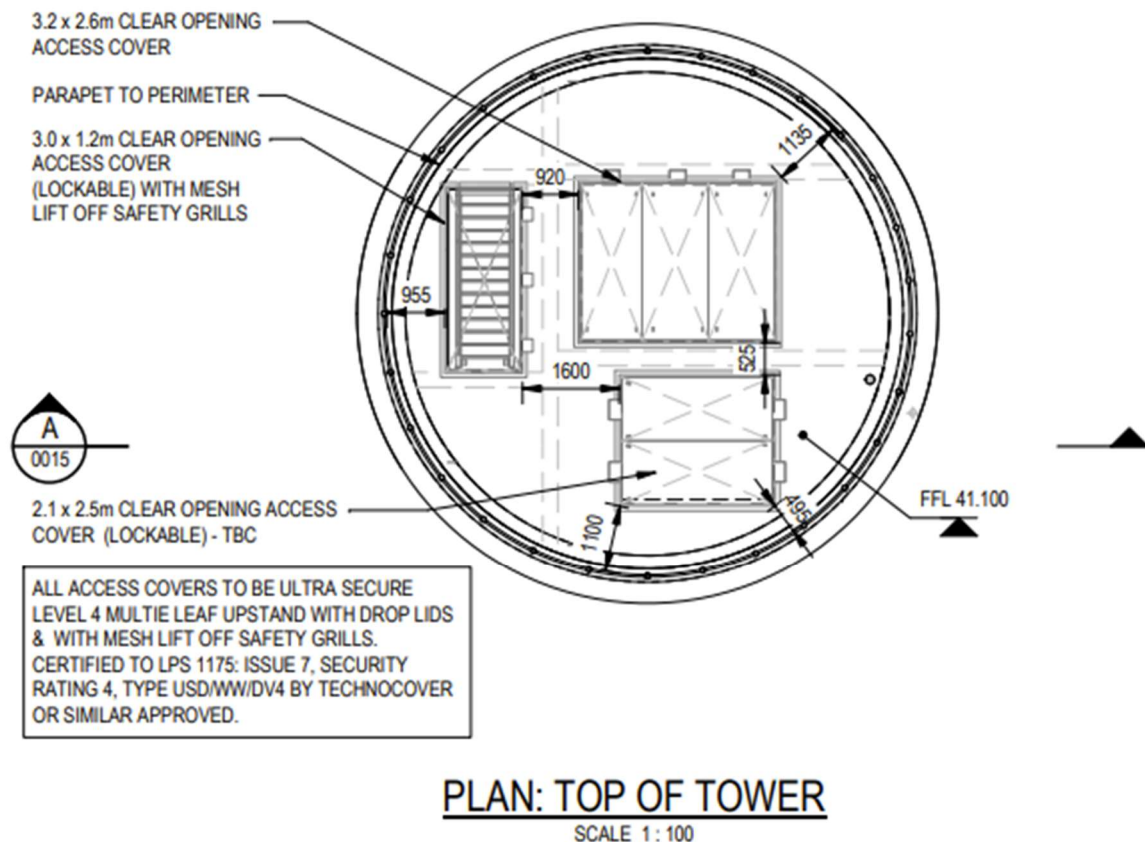


Figure 4. - Extract of HTR-GHD-ZZ-ZZ-DR-T-0015 P04

2.3 Recreation

In line with community preference regarding recreational use of the reservoir prior to submission of the hybrid planning application, swimming, along with water sports and watercraft, will not be permitted at Havant Thicket Reservoir. This will be enforced through the deterrent and preventative measures detailed in Sections 3.1 and 3.2 below.

This decision was made following discussions with the long-established Havant Thicket Reservoir Stakeholder Advisory Group and informed by surveys with local communities and learning from other reservoir sites and public parks. The consultation feedback was that large-scale water sports, including sailing, should not be allowed, as this would create additional traffic and activity at the site, impacting nearby communities and wildlife. There is also already plenty of provision for sailing in the local area, including at Chichester and Langstone Harbour. Instead, the reservoir should be a place for quiet enjoyment, with a visitor centre, as well as a new network of paths for leisure, facilities for bird watching and a play and picnic area.

As a result of the exclusion of swimming, water sports and watercraft, no visitors will be permitted to enter the water at any time and barriers will be in place between all footpaths and the water's edge. Further detail on these is provided in Section 3.2.2.

3. Control Measures

To reduce or mitigate risk of unauthorised valve tower access and/or risk of drowning, the following sections detail control measures that shall be implemented during the design, construction, and operation of the reservoir in relation to the valve tower.

Control measures are focused on three interrelated areas, which are as follows:

- 1) **Deterrent measures** – those discouraging actions or behaviours before they occur.
- 2) **Preventative measures** – those stopping actions or behaviours from taking place.
- 3) **Life-saving measures** – measures to aid in rescue and life-saving.

Where these measures apply across the whole reservoir site, or in additional specific areas, they have also been detailed in the Main Reservoir Drowning Risk Review and Control Measures document (henceforth referred to as the ‘Main Reservoir Risk Review’ or ‘MRRR’).

3.1 Deterrent measures

Deterrent measures are those designed to discourage actions or behaviours related to entering the water at the reservoir site where this is prohibited as explained in Section 2.

These measures are primarily operational and educational measures to be undertaken by Portsmouth Water as operator of the reservoir. They focus on discouraging potential violation of site rules through visible and psychological deterrents.

3.1.1 Signage

- Comprehensive, ISO 7010-compliant water safety signage will be present throughout the reservoir and the valve tower area will feature additional signage including “Warning, submerged objects”.
- In the valve tower area, signage will be installed on the shoreline and valve tower itself. A signage plan for the valve tower is provided as Appendix A.

Outcomes of implementation

- Well-advertised site rules regarding entering the water will prevent the majority of members of the public from engaging in related actions.
- Clearly displayed safety and danger warnings can deter unsafe behaviours which could result in injury or death.
- Increased public understanding of the presence of submerged structures and other hazards unable to be seen from the shoreline will inform decision-making from potential violation of site rules.

3.1.2 Site Monitoring

CCTV Surveillance:

- As per page 14 of the approved MRRR, a networked video surveillance system (NVSS) will be established across the whole reservoir site. NVSS will aid with security and act as a deterrent towards

entering the water in violation of site rules whilst also being able to establish trends with any incidents occurring.

- Video surveillance cameras joined up to the wider site NVSS system will be located close to the valve tower area and control house courtyard, covering both authorised access points to the valve tower structure.

Outcome of implementation:

- Visible security cameras and signage indicating security measures will act to deter potential violators of site rules by making them aware that their actions are being monitored.

3.1.3 Community Education

- The Havant Thicket Reservoir Stakeholder Advisory Groups includes over 70 community representatives who are updated and consulted on matters related to the project, including site security, management and operation. Members of the stakeholder group also meet regularly at the Access and Recreation Sub-groups to provide a voice for the local community and inform design and management of these areas of the project.
- A programme of education in schools local to the reservoir is ongoing via the Education Sub-group and will continue upon completion of construction and commissioning of the reservoir. This includes a focus on both site and water safety as well as discussion around the planned recreation offerings for the site, including prohibition of entering the water, as detailed in Section 2.3.
- Portsmouth Water also intend to routinely offer public drop-in events and host pop-ups in public spaces throughout reservoir construction to promote the project. These provide an opportunity to educate the community local the site about site recreation and security in advance of the reservoir site opening to the public.

Outcomes of implementation

- Educating the public about security measures and the potential risks of certain behaviours will foster a community-wide awareness of dangers and help deter potential violation of site rules.
- Starting education of children on site rules and the consequences of violating these rules before the reservoir opens to the public will mean teens and young adults will grow up with an understanding that certain actions are both dangerous and prohibited once the reservoir is filled and opened.
- Involvement of community representatives via the relevant Sub-groups ensures the views of the local community have been considered and therefore increases likelihood of compliance with site rules.

3.2 Preventative measures

Preventative measures aim to impede actions or behaviours taking place by potential violators of site rules who have chosen to disregard deterrent measures in place as detailed above, or who are unable to be prevented by some or all of the measures due to reasons which may include (but not be limited to) their age, their reading/language ability or visiting the reservoir from another area.

These measures focus on obstructing access to enter the water or ability to access the valve tower through design and landscaping/infrastructure implementation.

3.2.1 Site Access Control

- Per requirements of Condition 18, there will be vehicle barriers at both access points to the reservoir (the Northern and Southern Access Roads). These will be locked for unauthorised personnel outside of the reservoir's opening hours – these are to be determined by Portsmouth Water as operator of the reservoir upon completion of construction and commissioning.

Outcome of implementation

- Vehicular access to the reservoir site will not be possible when Portsmouth Water staff are not present at the site, specifically preventing the arrival of restricted watercraft via vehicle/trailer.

3.2.2 Shoreline Access Control

Locked authorised vehicle access points:

- Site access tracks for authorised vehicles will be secured using vehicle access gates. Operation of these will be restricted to Portsmouth Water staff with the relevant authorisation.
- To enable access by emergency vehicles, these gates are to be secured with a combination lock and a 24/7 manned contact number provided on nearby signage to enable gate combination to be shared with emergency services without delay.

Outcomes of implementation

- Vehicular access to routes within the reservoir site, including the embankment crest path, will be restricted to authorised vehicles only – namely operational and maintenance vehicles with the exception of events which require emergency services access.
- Launching of unauthorised watercraft arriving by vehicle/trailer will be prevented due to lack of access/proximity to the water's edge.

Hostile architecture:

- As detailed on page 7 of the approved MRRR, riprap (an aggregate with stone ranging from 64mm to 256mm diameter) will be used as erosion protection within the valve tower area.
- This is an example of hostile architecture, an urban design strategy deployed using built elements to purposefully guide behaviour and often utilised in near water, including along riverbanks and coastlines and near bridge structures and culverts.



Figure 5. - Example of riprap on a riverbank [1]

Outcomes of implementation

- The angular and irregularly shaped nature of the stones creates a surface which is difficult to walk on, making accessing the water's edge very challenging.
- Visually riprap offers no clear route to access the water's edge as the surface is inconsistent and uneven, having no patterns or paths to follow.

Segregation from the water's edge:

- As detailed on page 8 of the approved MRRR, physical barriers in the form of a 1.10m high livestock proof fence will be in place between the embankment crest path and the water's edge. The use of fencing implements a clear separation between the publicly accessible area on the crest path and the restricted area at water's edge.
- The mesh panels on the stockproof fencing will be located on the path side to prevent climbing of the rails on the fencing by younger visitors to the reservoir.



Figure 6. - Typical livestock proof post and rail fence [2]

Outcomes of implementation

- Represents a physical barrier between the members of the public and the water/valve tower.
- Infilled panels restrict small children/animals from straying from the embankment crest path toward the riprap or water and prevents climbing of the fencing.
- Fencing also acts as a psychological deterrent by indicating the water is not accessible.

3.2.3 Valve Tower Design

Smooth concrete finish to structure:

- External walls of the valve tower are to be a smooth concrete finish with no cavities, protrusions or covers which could be used to aid in ascending the structure. Grab chains are present as a life-saving measure, more detail on these is available in Section 3.3.3.
- At Top Water Level (TWL) the vertical walls of the valve tower will extend 1.6m above the water, with this distance increasing to 12.5m at Minimum Operational Level (MOL). The anti-climb fencing, as detailed below, extends a further 1.1m above the top of the valve tower, resulting in a total vertical height of 2.7m from TWL to the top of the fencing.

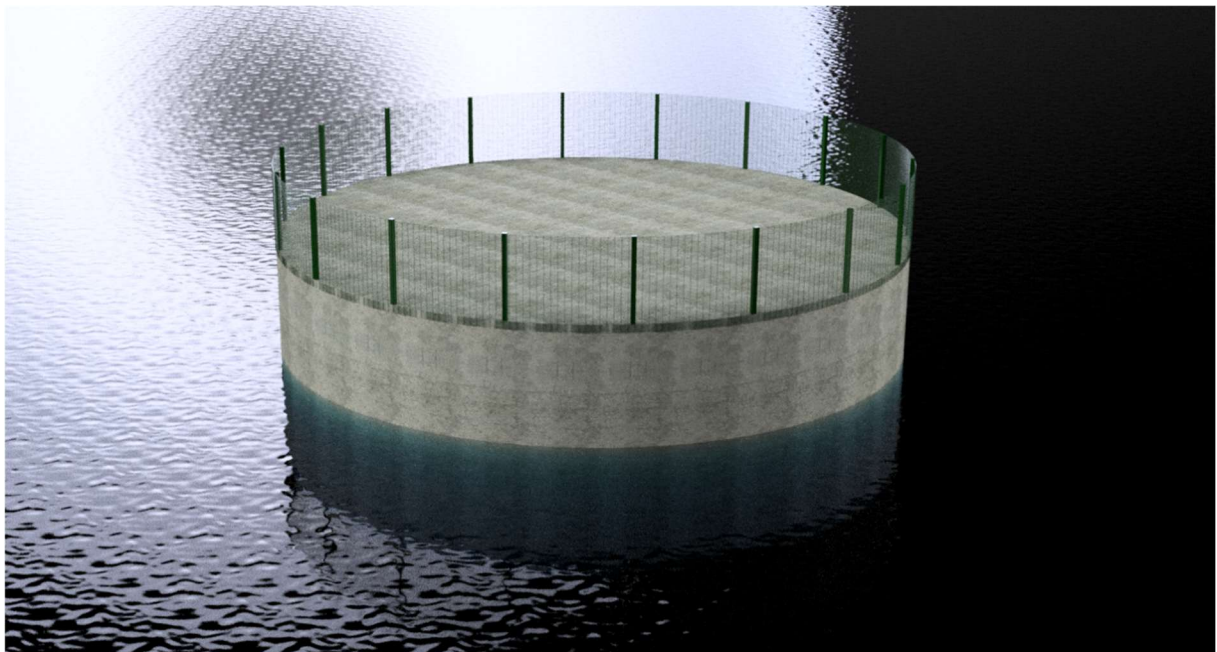


Figure 7. - Valve tower concrete finish detail

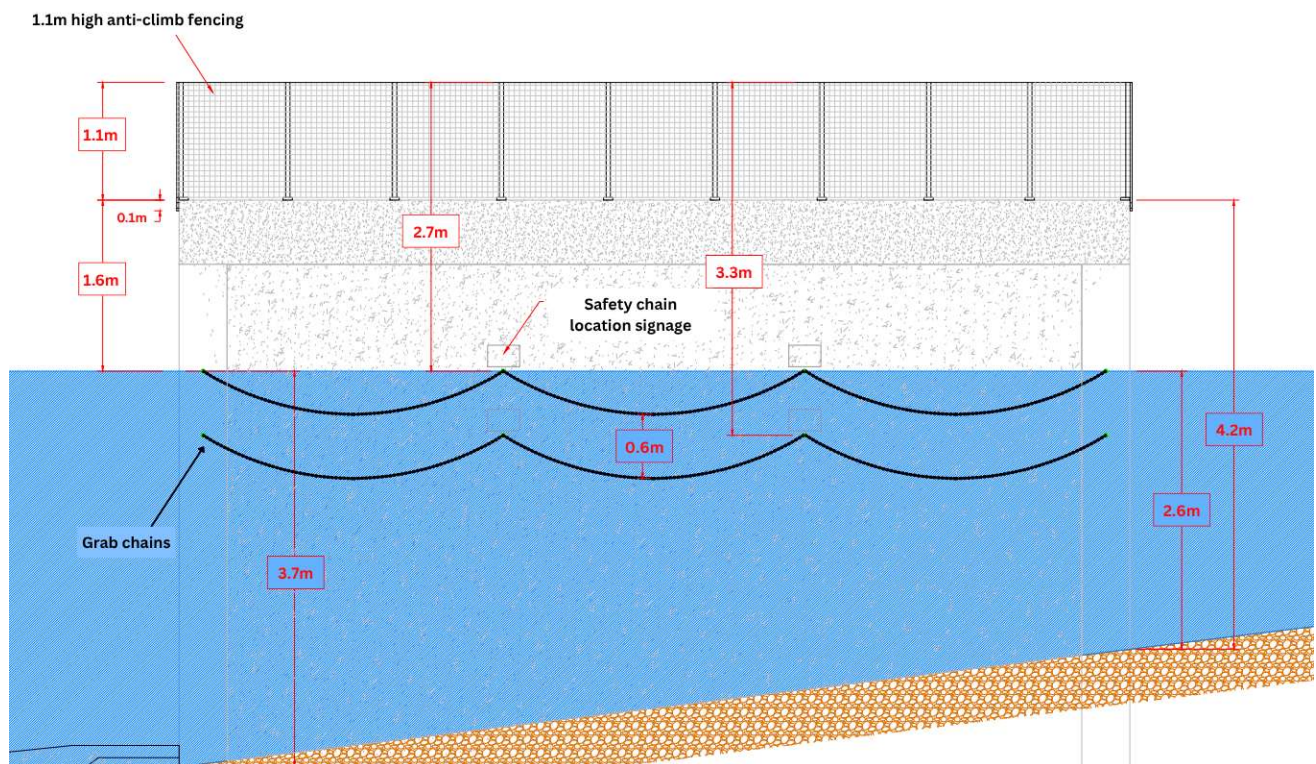


Figure 8. - Valve tower top of structure detail

Outcomes of implementation

- It will not be possible to scale and access the valve tower from the water as no foot or hand holds will be present at a height which would enable them to be used for ascending.
- It will not be possible to scale and access the valve tower from the water as there will not be the ability to obtain a secure grip on the top surface.

Anti-climb fencing:

- As shown in Figure 7 above, the design for the fencing around the top of valve tower has evolved, with the post and rail fencing being substituted for anti-climb barriers to implement extra prevention for climbing of the valve tower. This change has been made as the post and rail fencing could, in limited circumstances, have provided the opportunity for any person who has entered the water in violation of site rules (and managed to raise themselves over 1.6m from TWL) to grab the posts and utilise them as a means to pull themselves onto the valve tower.
- Anti-climb fencing has a flat outward face with all supporting posts fixed inside the fence, eliminating the risk of a person being able to grab hold of the posts. The mesh face also provides no hand or footholds, meaning when at the edge of the valve tower there is a 2.7m vertical height above TWL which would need to be scaled in order to access the top of the valve tower.
- The mesh face panels of the anti-climb fencing will be attached with a 10cm overlap to the vertical walls, ensuring there are no gaps between bottom of the fencing and valve tower surface – this detail is shown on the visualisation in Figure 7 and replicates that shown in example Figures 9a and 9b below. The height of the fencing above the top of the valve tower will remain at 1.1m.

- Fencing of this nature is commonly used in high-security areas such as utility sites, schools, and commercial properties where access needs to be restricted and will be used in other locations around the reservoir site including at the nearby Control House.
- Examples of the anti-climb fencing to be used are shown In Figures 9a & 9b.



Figures 9a & 9b. - Example anti-climb fencing [3]

Outcomes of implementation

- It will not be possible to scale and access the valve tower from the water as the narrow mesh of the fencing and internal posts will not provide a grip to which could be used for ascending.
- Without any hand or footholds, anyone trying to scale the valve tower would be required to reach over 2.7m upwards whilst floating on or within the water. As a result, it will not be possible to scale and access the valve tower from the water.
- Mounting the fencing at the edge of the valve tower ensures no ledges are available for use to scale or access the valve tower.

3.3 Life-saving measures

Life-saving measures are in place to aid with rescue and/or lifesaving of any person who may have got into difficulty upon entering the water. As per UK National Water Safety Forum guidance, “rescue equipment should play only a minor role in a water safety strategy, with greater emphasis on prevention” [4] and this emphasis has been clearly demonstrated through the deterrent and preventative measures detailed in Sections 3.1 and 3.2.

3.3.1 Rescue equipment

Public Rescue Equipment (PRE):

- In addition to that detailed in the approved MRRR, a lockable throwline cabinet is to be installed on the crest path within close proximity to the valve tower. It is anticipated this throwline will be maintained in coordination with local emergency services.
- When the throwline is caught/retrieved the person who has got into difficulty upon entering the water can be pulled to safety, or the throwline can be reeled in and re-thrown without significant delay.



Figure 10. - Emergency throwline safety board at Hurleston Reservoir [5]

Outcomes of implementation

- Presence of PRE allows by-standers the opportunity to aid in the rescue of any person who may have got into difficulty upon entering the water in violation of site rules. Use of a throwline specifically helps ensure safety for the rescuer due to deployment from the crest path.
- A lockable cabinet ensures the throwline cannot be tampered with or removed when not required. It also provides a location for access and usage directions to be clearly displayed.

Emergency first aid equipment & Automated External Defibrillators (AEDs):

- Equipment for emergency first aid, including AEDs, is to be available at the Visitor Centre and control house (accessible via authorised personnel).
- Both AED units will be added to the British Heart Foundation National Defibrillator Network 'The Circuit' which equips the emergency services with knowledge about their locations and how to access them, as well as ensuring Portsmouth Water as the reservoir operator is notified when it requires regular upkeep.

Outcomes of implementation

- Close proximity of first aid, including AEDs, ensures a swift medical response should it be required.
- Presence of registered AEDs at the reservoir site enables delivery of defibrillation alongside CPR during a cardiac arrest.

3.3.2 Emergency response

- Any emergency response required at Havant Thicket Reservoir will involve Hampshire and Isle of Wight Fire & Rescue Service (HIWFRS) and South Central Ambulance Service (SCAS) units. At the time of this documents publication and submission to planning, the following could be deployed to the reservoir site:
 - i. Cosham Fire Station can deploy a Response Support Vehicle, with water rescue capabilities [6].
 - ii. Fareham Fire Station are a DEFRA National Resource Station and able to deploy advance water rescue teams nationwide [7]
 - iii. Hampshire have a Volunteer Urban Search & Rescue team with Flood & Water Rescue capabilities [8].
- HIWFRS and SCAS have been engaged during reservoir construction to enable them to visit the site in order to be aware its current layout and understand the construction/design detail relating to features such as the valve tower which will be partially submerged and no longer visible upon filling of the reservoir.
- Both agencies have also been involved in training scenarios at the reservoir site during construction, including rescue from water, and it is the intention that these will continue once the reservoir is filled and open to the public.

Outcomes of implementation

- Clear understanding of access, rescue points and hazards from emergency services involved in any emergency response to the reservoir.
- Regular visits by emergency services may act as a deterrent to potential violators of site rules.

3.3.3 In-water safety

Grab Chains/Lines:

- As shown in Figure 8 above, grab chains have been added to the valve tower as an additional safety feature to prevent drowning by any persons who do enter the water. These have been incorporated into the valve tower design following engagement with water safety specialists and a review of other high pedestrian traffic locations, such as along the Thames embankments and bridge piers in London (where they are deployed as part of the Port of London Authority's "Safer Riverside" initiative).
- Grab chains are metal chains attached against or around a structure enabling any person who may have got into difficulty upon entering the water to:
 - i. Grab onto them to stay afloat, in order to either:
 - Rest and regain energy to swim to shore
 - Wait for rescue
 - ii. Move along them to reach a safer location or rescue point
- Around the external circumference of the valve tower, two sets of grab chains are to be provided with a 60cm interval to allow for fluctuation in water level. The height of these in relation to the top of the valve tower and the top of the fencing is shown in Figure 8 above.

Outcomes of implementation

- Grab chains prevent drowning by offering support for any person who may have got into difficulty upon entering the water to stay afloat whilst waiting for rescue or to regain energy to swim to shore.
- The presence of grab chains around the full circumference of the valve tower assists with self-rescue as they allow transfer around the valve tower towards its closest point to the shoreline (on the south side) whilst holding onto the chain to stay afloat.

4. Risk Assessment

A Risk Assessment Matrix relating specifically to public safety in relation to the valve tower is included as Appendix B. This has been completed in accordance with Risk Assessment Scoring detailed in Appendix C and in accordance with the Construction (Design and Management) Regulations 2015, Management of Health and Safety at Work Regulations 1999 & Health and Safety Guidance publication 151.

When the control measures detailed in Section 3 are applied, this decreases and mitigates the risk of unauthorised valve tower access and/or risk of drowning, with the residual risk assessment valve being greatly reduced.

5. Conclusion

The safety of the public in proximity to the valve tower at Havant Thicket Reservoir has been addressed through a carefully considered and multi-layered strategy that integrates deterrent, preventative, and life-saving measures. This document has outlined a comprehensive scheme that not only meets the requirements of the respective planning conditions of the Phase 3 Reserved Matters permissions, but also reflects best practice in water safety management and infrastructure design.

Control measures applied have been carefully designed in alignment with national safety standards and with knowledge of the valve tower's location, structure, and operational context. Deterrent strategies such as ISO-compliant signage, CCTV surveillance, and community education initiatives are designed to raise awareness and discourage unsafe behaviours before they occur. These are complemented by robust preventative measures, including secure access controls, hostile architecture (such as riprap) and physical barriers that restrict access to the water's edge and the valve tower itself.

The valve tower's design has also been optimised to eliminate climbing opportunities, with smooth concrete finishes and anti-climb fencing that extends 2.7m above the reservoir's Top Water Level. These features ensure that even in the unlikely event of unauthorised water entry, the structure remains inaccessible. Furthermore, in the event any person gets into difficulty after entering the water, life-saving measures such as strategically placed throwlines, grab chains, and the availability of AEDs and first aid equipment provide critical support in emergency scenarios.

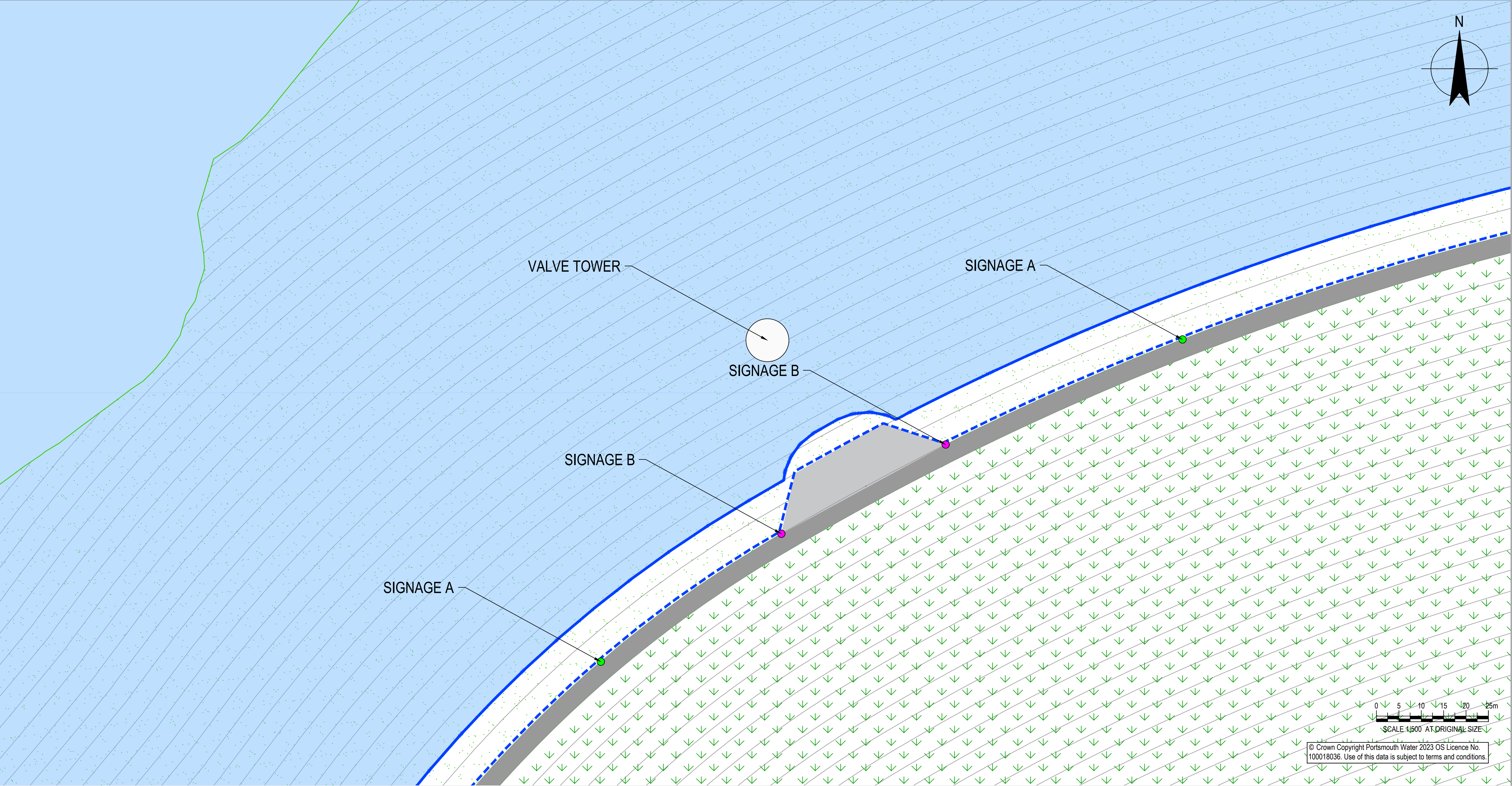
In conclusion, the public safety strategy for the valve tower at Havant Thicket Reservoir represents a proactive, integrated, and sustainable approach to risk management. It prioritises prevention, in line with UK National Water Safety Forum guidance, while ensuring preparedness for emergency response, thereby fulfilling regulatory obligations and safeguarding the public.

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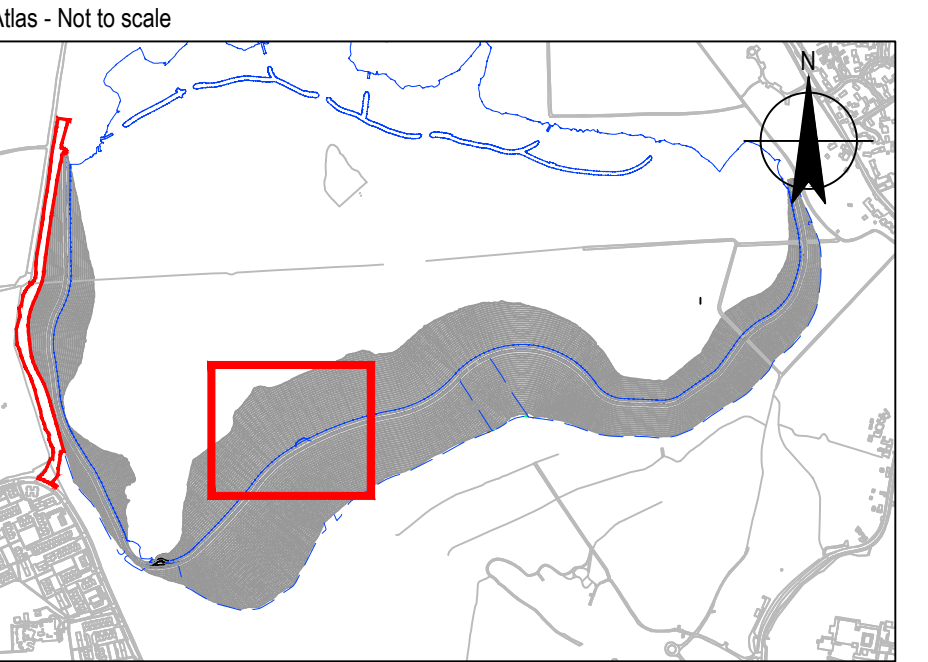
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Appendices

Appendix A : Valve Tower Safety Signage Plan



1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE (UNO).
2. ALL LEVELS ARE IN METRES TO ORDNANCE DATUM UNO.
3. TWL = TOP OF WATER LEVEL.
4. ALL SIGNS TO BE MOUNTED ON 140mm DIA. ALUMINUM SIGNPOSTS TO ENGINEER'S DESIGN OR OTHER HIGHWAYS SPEC. APPROVED.
- Key
- Signage A - See Detail Provided
- Signage B - See Detail Provided
- 39.5 contour - top water level for main reservoir
- Wildflower Seeding Mix EMS
- Wet and Water Edge Mix
- Stockproof Fencing



SIGNAGE A

SIGNAGE B

Havant Thicket Reservoir | South Embankment

Adjacent to Reservoir Valve Tower

The water may be **DEEP** and **COLD** all year round.

There may be **HAZARDS UNDER** the **WATER** at this location.

This **WILL** affect your ability to swim or help others.

Danger Deep Water

Danger Submerged Objects

No Sailing

No Swimming

Call 999 in an emergency and ask for: **Fire Service**

Emergency Location Ref: **SU 71352 09456**

For non emergency queries please contact
XXXXX XXXXXX (Mon – Fri 09:00 to 17:00
XXXXX XXXXXX (All other times

Portsmouth Water

Excellence Integrity Future Focus

EMERGENCY THROWLINE

DO NOT INTERFERE WITH LIFE SAVING EQUIPMENT – A LIFE MAY DEPEND ON IT

Keep out of the water

To access throwline in an emergency:
DIAL 999
Ask for **FIRE SERVICE**
Quote Location:
Havant Thicket Reservoir
SU 71352 09456

INSTRUCTIONS FOR USE:

1. Use the lock code you have been given to open the box

2. Remove throwline

3. Pull the neck of the bag open

4. Grab open end of bag with throwing hand

5. KEEPING HOLD OF THE END OF THE ROPE throw the bag to person in water

6. Stay low and use whistle to attract attention of other people

DO NOT PUT YOURSELF IN DANGER

Stay out of the water

Avoid leaning over the water

No Unauthorized Swimming
Cold Water Shock

P01	FIRST ISSUE - PLANNING DISCHARGE	LS	DR	26/06/2025
Rev	Description	Checked	Approved	Date
Author	DR	Drafting Check	DR	
Designer	DR	Design Check	LS	

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Client	PORTSMOUTH WATER	Status Code	S2
Project	HAVANT THICKET RESERVOIR		
Status	FOR INFORMATION		
Drawing Title	SOUTHERN EMBANKMENT EMERGENCY SIGNAGE PLAN	Size	A1
Drawing No.	HTR-FUW-EM-CL-SK-W-3156	Rev	P01

Plot Date: Plotted by: File Name:

Appendix B: Valve Tower Risk Assessment Matrix

Hazard	Risk of	Persons at Risk	Matrix Risk Assessment				Additional Controls	Residual Risk Rating
			Severity	Likelihood	Risk Rating	Current controls within design		
Valve tower	Falls from height into water Injuries from jumping/diving into water Drowning	Members of the public especially young males	5	4	20	No swimming Barriers around top of valve tower Rip Rap	Locked barrier on operational slipway Anti climb barriers around edge of valve tower Anti climb measures and signs CCTV on valve tower Patrols Grab chains/lines PRE Signage	12
Submerged objects - submerged debris around valve tower	Contusion Abrasion Laceration	Members of the public especially young males	3	3	9	Planned draw-down and maintenance No swimming Barriers around top of valve tower 'Drowning Risk Review and Control Measures' document RipRap CCTV on visitor centre AEDs School visits/community education	Locked barriers on vehicle access points Locked barrier on operational slipway Anti climb barriers around edge of valve tower Anti climb measures and signs CCTV on valve tower Patrols Grab chains/lines PRE Signage	8

						Liaison with Fire Brigade Discharge alarm during drawdown Barrier between path and valve tower		
Intake	Entrapment Drowning	Members of the public especially children	5	4	20	Grille over intake Grille design discussed with LPA Rate of drawdown not believed to be sufficient to pull someone under Planned draw-down and maintenance No swimming Barriers around top of valve tower 'Drowning Risk Review and Control Measures' document Rip Rap CCTV on visitor centre AEDs School visits/community education Liaison with Fire Brigade Discharge alarm during drawdown Barrier between path and valve tower	Locked barriers on vehicle access points Locked barrier on operational slipway Anti climb barriers around edge of valve tower Anti climb measures and signs CCTV on valve tower Patrols Grab chains/lines PRE Signage	12
Shallow water around valve tower when levels low	Falls from height into shallow water Spinal injuries from jumping/ diving into shallow water	Members of the public especially young males	5	3	15	Top of valve tower only accessible at high water levels No swimming Barriers around top of valve tower	Locked barriers on vehicle access points Locked barrier on operational slipway Anti climb barriers around edge of valve tower Anti climb measures and signs	10

						'Drowning Risk Review and Control Measures' document RipRap CCTV on visitor centre AEDs School visits/community education Liaison with Fire Brigade Discharge alarm during drawdown Barrier between path and valve tower	CCTV on valve tower Patrols Grab chains/lines PRE Signage	
Strong currents during drawdown	Drowning/ Secondary drowning	Members of the public especially young males	5	4	20	Rate of drawdown not believed to be sufficient to pull someone under No swimming Drowning Risk Review and Control Measures' document RipRap CCTV on visitor centre AEDs School visits/community education Liaison with Fire Brigade Discharge alarm during drawdown Barrier between path and valve tower	Anti climb barriers around edge of valve tower Anti climb measures and signs CCTV on valve tower Patrols Grab chains/lines PRE Signage Temporary signage	10
Open/ deep water	Drowning / Secondary drowning	Members of the public especially	5	4	20	No swimming Barriers around top of valve tower	Locked barriers on vehicle access points Locked barrier on operational slipway	15

		young males				'Drowning Risk Review and Control Measures' document RipRap CCTV on visitor centre AEDs School visits/community education Liaison with Fire Brigade Discharge alarm during drawdown Barrier between path and valve tower	Anti climb barriers around edge of valve tower Anti climb measures and signs CCTV on valve tower Patrols Grab chains/lines PRE Signage Temporary signage	
Ice / Cold Water Shock	Falls through ice Drowning Secondary drowning	Members of the public especially children	3	5	15	No swimming Barriers around top of valve tower 'Drowning Risk Review and Control Measures' document RipRap CCTV on visitor centre AEDs School visits/community education Liaison with Fire Brigade Discharge alarm during drawdown Barrier between path and valve tower	Anti climb barriers around edge of valve tower Anti climb measures and signs CCTV on valve tower Patrols Grab chains/lines PRE Temporary signage	10
Mud	Entrapment	Members of the public especially	4	3	12	No swimming RipRap	Anti climb barriers around edge of valve tower	8

		y children				CCTV on visitor centre AEDs School visits/community education Liaison with Fire Brigade Barrier between path and valve tower	Anti climb measures and signs CCTV on valve tower Patrols Grab chains/lines PRE Temporary signage	
Biological hazards/contaminated water	Illness or disease from contact/ingestion of contaminated water Weils Disease Skin eye irritation	Anyone entering water	3	3	9	Unlikely when reservoir full No swimming RipRap CCTV on visitor centre AEDs School visits/community education Liaison with Fire Brigade Barrier between path and valve tower	Anti climb barriers around edge of valve tower Anti climb measures and signs CCTV on valve tower Patrols Signage	6

Appendix C: Risk Assessment Scoring

Risk Matrix:

Risk Ratings are calculated by determining the Likelihood of the identified hazard and undesired event happening and the Impact this would then have on the persons identified at risk or the environment. Both Likelihood and Impact are rated 1-5 using the risk matrix below. The Risk Rating is the Likelihood x the Impact, 1 being the lowest and 25 the highest.

		Impact				
		Negligible (1)	Minor (2)	Moderate (3)	Major (4)	Extreme (5)
Likelihood	Almost Certain (5)	5	10	15	20	25
	Likely (4)	4	8	12	16	20
	Possible (3)	3	6	9	12	15
	Unlikely (2)	2	4	6	8	10
	Rare/Remote (1)	1	2	3	4	5

Key:

Risk Rating 1-5 Risk is deemed safe, and no further action or measures need to be implemented

Risk Rating 6-12 Risk is deemed mostly safe, but requires additional or regular control measures

Risk Rating 15-25 Risk is deemed not safe and will require enhanced control measures to reduce the risk